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RE: COMMENTS ON THE MUD CREEK PROJECT DRAFT ENVIRONMENTAL ASSESSMENT

Hello,

Native Ecosystems Council, the Alliance for the Wild Rockies, and the Friends of the Bitterroot would like to provide the following comments and questions regarding the draft Environmental Assessment (EA) released for public review and comment.

Grizzly Bears

The agency claims the area is not occupied by grizzly bears. However, the draft EA Appendix B at 37 states that the agency will document any reported grizzly bear/human interactions between contractors and other personnel during the implementation period. The agency clearly recognizes that grizzly bears may be present in the project area over the next 20 years.

As of 2018, an article in the July/August 2020 issue included a map showing the distribution of verified and possible grizzly bear locations. This map includes 5 verified grizzly bear sightings only about 10 miles east of the Mud Creek Project (verified since 2005) and 2 possible sightings since 2011. It is clearly possible that grizzly bears are also present in the Mud Creek landscape in the last 3 years.

Since this is a 20-year project, how is the agency going to evaluate project area occupancy by grizzly bears for this time period? In addition, how can the U.S. Fish and Wildlife Service (FWS) make any findings of possible adverse impacts of this 20-year project? A Biological Opinion that covers 20

years is likely invalid, since future habitat use of this area by grizzly bears, including female grizzly bears, cannot be known. However, it is very likely, if bears are not already present.

There is no analysis in the Mud Creek EA as to how motorized road and trail use would impact grizzly bears. The agency needs to define what the open and total motorized route density will be in the 4 sub-project areas over each of the next 20 years, or at least during each 5-year time period required by the NEPA. Also, the agency needs to define how these road densities during the 20 years of project implementation will compare to the Montana Fish, Wildlife and Parks (MFWP) recommendation that open road density in occupied grizzly bear habitat be limited to no more than one mile per section. Where will security areas be provided for this time frame? The expected illegal motorized use needs to be considered in this analysis as well.

Whitebark Pine

There is no information provided on the acres of whitebark pine forests that will be logged and/or prescribed burned in this 20-year project. There are no maps that show where forests with whitebark pine occur in the project area. There is no information provided as to why logging and burning whitebark pine will improve these forests. For example, the existing research on treatments of whitebark pine was not discussed. This research shows severe adverse impacts on whitebark pine with logging and burning, with little to no regeneration likely for up to 40 years post-treatment. This proposal will likely have similar effects. The purpose is supposedly to enhance remaining whitebark pine trees by killing some of them, and also to increase whitebark regeneration. Yet whitebark pine trees under 3 inches dbh will not be protected. Older whitebark pine trees will be protected “to the extent possible” (noted in Appendix A-29). There is no analysis provided as to when this direct mortality of young and old whitebark pine will result in increased cone production of remaining and new trees.

Whitebark pine is highly sensitive to fire, due to thin bark. The draft EA does not define why prescribed burning will be used to kill an undisclosed number of whitebark pine trees, including cone producing trees.

There may be 40-acre openings or larger created in forests containing whitebark pine. All of the existing whitebark pine trees in these openings

will be removed. Yet these large openings are noted to be "optimal" for whitebark pine regeneration. Killng existing whitebark pine trees in order to grow new whitebark trees in the future is a false, invalid claim of "restoration." Whitebark pine can live up to a 1000 years or more. They don't reach optimum cone production until they are 200 years old. Whitebark pine grow achingly slow; trees planted in Glacier National Park 20 years ago are not only about hip high. It will be 30 more years until they're able to reproduce and shed cones of their own. It could be centuries before the agency's attempt to grow new whitebark trees will provide any significant level of whitebark pine nuts.

Logging stands with whitebark pine in them, besides directly killing a species proposed for listing under the Endangered Species Act (ESA), is a direct adverse impact on grizzly bears. This direct adverse impact needs to be identified in a biological assessment and biological opinion on project impacts to the grizzly bear. Red squirrels are reduced in the same relative proportion as the trees removed. Optimal red squirrel habitats are dense forest stands with a high diversity of tree species, which increases the availability of pine cones any given year. Red squirrels are the only reason whitebark pine nuts are available to grizzly bears. So thinning whitebark pine stands will remove red squirrels, and thus make whitebark pine nuts unavailable to grizzly bears.

The agency is providing false claims that logging and thinning of whitebark pine is needed to restore historical densities. Even though the Mud Creek NEPA documents frequently reference "habitat types," the agency ignores the entire concept of habitat types in the proposed vegetation treatments, including for whitebark pine. As per Pfister et al. (1976), the BIBLE of habitat types, all the various whitebark pine habitats in Montana have a very high density, referred to as "basal area." Pfister et al. (1976) identifies these average basal areas in Appendix E-1 at page 167. Basal areas for 3 whitebark pine habitat types range from 199-256 square feet per acre. These are very high basal areas, or stand densities. These stand densities are constant through time, including historical times, except for stand recovery after fires. So thinning whitebark pine stands to restore historical conditions is a direct misrepresentation of the science by the agency to the public, in order to justify logging forest stands containing whitebark pine. The agency provides a photo of a "restored" whitebark pine stand in Appendix A-20. The treated whitebark pine stand should be compared to photos of whitebark pine stands in Pfister et al. (1976). These include Figure 41 at 107, figure 42

at 112, and figure 44 at 114. The photo display provided as colored examples of habitat types, included as an attachment to Pfister et al. (1977) includes several other displays of habitat types containing whitebark pine. Of note is one photo that shows high elevation whitebark pine old growth trees that are barely 30 feet tall because of harsh growing conditions. Managing these sites like regular forest types that produce timber is clearly not possible. Pfister et all. (1977) noted that whitebark pine habitat types are very low in productivity, and recommends that they be left alone.

The agency claims that as per the 4(d) rule, exceptions to protection of proposed species are allowed when activities result in "restoration." The data is never provided to show that killing all ages of whitebark pine with chainsaws and fire qualifies as "restoration."

Migratory Landbirds

There is no analysis in the draft EA in regards to migratory landbirds. There are approximately 50 species of western forest birds present in Mud Creek forests. A majority of these western forest birds have also been in decline since the mid-1970s. These western forest birds are dependent upon at least 4 types of forests, all of which will be removed in the Mud Creek Project. These include at least 20 species associated with old growth forests, at least 25 species associated with snag habitat within forests, at least 15 species associated with relatively undisturbed older forest stands, and at least 17 species that feed on conifer seeds. Science has documented that at least 30 of these species of western forest birds decline in logged forests. These adverse impacts on habitat loss include not only the creation of large openings, which completely removes their habitat, the thinning of forests which creates significant degradation of their habitat, including increasing of cowbirds, and finally the vast acreage of prescribed burning, and possible associated slashing of understory trees, which provide essential hiding cover, thermal cover, and foraging substrates for all forest birds.

The Migratory Bird Treaty Act (MBTA) and associated Memorandum of Understandings with the FWS require the Forest Service to evaluate project impacts on migratory birds. This includes the Mud Creek Project. In addition to an analysis of project impacts on habitat of migratory birds, the agency needs to estimate the number of bird nests that will be destroyed from logging and prescribed burning, and obtain a "take permit" from the FWS for this killing.

Forest Plan Amendment for Snag Management is Required to Ensure Conservation of Cavity-nesting Birds

The Mud Creek analysis of snag habitat is nonexistent. As we noted above, there are roughly 25 species of western forest birds that require snags as part of their nesting habitat. The Mud Creek draft EA suggests that snags will be retained in harvest units. This is an invalid, long-outdated snag management strategy, one that has been invalided by research from the Forest Service Pacific Northwest Research Station in 1997. Other research has also demonstrated that older, undisturbed forest is essential to cavity nesting birds, including the sensitive black-backed woodpecker. The failure of the Bitterroot National Forest to update the 1987 Forest Plan to implement a valid conservation strategy for 25 species of western forest birds is a violation of the NEPA and the NFMA. Conservation of these species required the retention of vast areas of natural undisturbed forests, including those that have natural levels of insects, disease, and mistletoe. There is currently a devastating conflict in the Forest Plan between timber management and wildlife management of cavity nesting birds. As indicated in the Mud Creek project, the agency is obsessed with cutting down any forests that have insects and disease, the same habitat essential for 25 species of western forest birds. The failure of the Forest to have a valid conservation strategy for 25 species of cavity-nesting birds, while implementing vast timber management programs that remove their essential habitat, means that the current Forest Plan FEIS does not identify the severe impacts this Forest Plan is having on these bird species, in violation of the NEPA. The Forest Plan and FEIS need to be amended to disclose that without retaining large patches of older, diseased forests, 25 species of cavity nesting birds are being eliminated across vast stretches of the Bitterroot National Forest. This severe environmental impact has never been identified to the public. The urgency of this significant need to implement valid conservation strategies for cavity nesting birds is evident in the noted declines of the majority of species of western forest birds in 2020.

Until the Forest amends the standard for viability of 25 species of cavity-nesting birds, there should be no more logging on the Bitterroot National Forest. Loss of trees roughly at least 100 years in age, when suitable snags develop, is basically an irretrievable impact for forest birds, especially those currently in decline.

Amendment to Change Old Growth Definition is not only Flawed, but Fails to Correct the Huge Deficiency of the Existing Forest Plan Standard

The proposed amendment to change the Forest Plan definition of old growth to the minimum criteria of Green et al. (1991) failed to provide any comparison of the value of these 2 different old growth strategies to wildlife. This is required as per the standard NEPA process for Forest Plan amendments. Basically, the agency is eliminating the requirement to provide old growth habitat to wildlife in the Mud Creek Project Area, because the minimum old growth criteria for Green et al. (1991) only include a minimum number of large, old trees. This means that any type of commercial harvest in old growth forests will maintain these minimum criteria, which require only from 8-30 trees per acre. The current Forest Plan direction prevents any timber management activities in old growth based on old growth criteria, which include retention of 75% of the site potential canopy cover, multiple age classes, 25 tons/acre of coarse woody debris, 2 larger snags per acre, and many trees with heart rot and broken tops. These requirements cannot be met with timber production. An example of what the amendment for old growth on management can be seen in the EA Appendix A-5. A few large older trees can be classified as old growth.

As noted previously, there are at least 20 species of western forest birds associated with old growth forests. There was no analysis ever provided to support the agency's claim that logging old growth will not affect it values to wildlife, including these 20 species (Appendix D-9). As just one example, bird monitoring in Region 1 has identified the pileated woodpecker, a Management Indicator Species (MIS) for the Bitterroot National Forest, as needing relatively undisturbed older forests. The pine marten, a second MIS for old growth on this forest depends heavily on old growth forests as winter habitat. Logging and burning old growth forests will remove these as winter habitat for this MIS. At a minimum, the agency is required to define why logging and burning old growth forests will not reduce their value to the 2 old growth MIS for the forest.

Since the proposed amendment for old growth management will eliminate habitat conditions for the 2 MIS for old growth on the Forest, this amendment also needs to change the old growth MIS to species that can use logged old growth stands and are not subject to cowbird parasitism.

The agency also claims that the amendment for old growth is "site specific." However, it is noted similar amendments have been done, including for the Gold Butterfly, Bitterroot Front Projects (EA Appendix D-2), Piquette Creek Project, and the Como Forest Health Protection Project (EA 73, 44). We note that the change of the old growth definition for the Piquette Creek Project would have been a violation of categorical exclusion requirements, if this has been done. Also, the monitoring results of the Como project are not provided to the public, to demonstrate that wildlife values are maintained with timber harvest.

The EA at 72 states that the agency cannot manage old growth habitat without changing the definition of Forest Plan old growth definition. In other words, the agency is eliminating the requirement for wildlife old growth forests so that these areas can be logged. This effect of this amendment needs to be clearly defined to the public, as is required by the NEPA.

The current condition for Forest Plan adherence to old growth is not addressed in the Mud Creek EA. There are 385 3rd order drainages on the Bitterrroot National Forest, and there are 28 3rd order drainages in the Mud Creek Project Area. The current level of old growth across the Forest, and especially in these 28 3rd order drainages is never provided to the public. The past adherence to this forest plan direction across the Forest needs to be addressed as to measure the significance of any further failures to provide for old growth as required by the Forest Plan. And if the old growth standards are not being met across the project area and the forest as a whole, what evidence does the agency have that old growth MIS are being maintained? Unless this monitoring information is available, the agency has no basis for amending the old growth definition that excludes suitability for the old growth MIS.

The expected impact of the proposed elimination of any old growth management requirements for wildlife, which instead will be managed as "paper old growth" instead of wildlife old growth, also needs to be addressed in the EA in regards to old growth MIS. The current direction for 3rd order drainages across the Forest, including in the Mud Creek Project Area, is supposed to provide from 3% to 8% old growth for associated species, including the pileated woodpecker. However, the current recommended level of old growth for the pileated woodpecker, an MIS for old growth on the Bitterroot National Forest, is 25%. This is almost a

minimum level of the historical levels identified for the Northern Rockies of 20-50%. Also, for migratory birds, the minimum level of old growth is 20-25%. It is 20% for the goshawk. Thus the current requirement for old growth on the Bitterroot Forest is clearly extremely marginal to ensure viability of wildlife. Since the current standard is clearly ineffective, and the agency has not shown that even this marginal standard is being met, including in the Mud Creek project area, the agency has failed to provide a valid analysis for the proposed amendment for old growth, in violation of the NEPA.

There was no action alternative developed that would maintain the current Forest Plan definition of old growth for the Mud Creek project, or an alternative that would strive to meet the 3rd order old growth requirements in the Forest Plan. The public has no basis for comparing how this old growth would be managed without and with the proposed amendment (for wildlife or timber production), in violation of the NEPA.

It appears that some of the proposed treatments in old growth will actually violate the proposed amendment. The EA at 73 indicates that openings will be created in old growth. This would be clearcutting old growth, or complete elimination, in violation of the proposed amendment.

The claim that logging old growth will restore historical conditions is a violation of the NEPA by providing the public with a false rationale for logging and burning. As we noted previously, Pfister et al. (1977) has provided an extensive description of what the typical stand density will be for various forest habitat types. Stand basal area includes all sizes of trees, from small to large. If the agency is going to claim that existing stand densities of old growth are unnatural, the habitat types for each of these stands needs to be identified, including the average basal area identified in Pfister et al. (1977) in Appendix E. The average basal area of a forest habitat type will not change over time, which means it would not have been lower in historical times, as is being falsely claimed by the agency.

The agency needs to identify all existing old growth stands in the Mud Creek Project Area, and define their individual patch size, and map their locations across the project area. The agency also needs to identify what the proposed logging and/or burning treatment is for each of these old growth stands, is required by the NEPA for project decisions.

The existing Forest Plan standard for old growth is severely deficient, as defined by recommended habitat needs of the MIS pileated woodpecker (25%) and by historical levels of old growth, estimated at 20-50%. This invalid standard needs to be increased so that it serves to maintain the 2 old growth MIS on the Forest, as is required by the NFMA. No further vegetation management actions should occur until this standard is corrected, as loss of old growth is generally irretrievable for wildlife, especially when forest birds are already in significant decline.

The Amendment to Eliminate the Winter Range Thermal Cover Standard is a serial exemption designed to escape the Bitterroot Forest Plan requirements

The proposed elimination of the thermal cover standard for big game winter range requirements of the Bitterrroot Forest Plan is a violation of the NEPA and NFMA because the agency is not proposing to amend this standard but to remove it (termed "set aside, Appendix D-6). There were no alternatives identified for this site-specific amendment, as is required by the NEPA. Also, there is no process in NEPA that allows removal of a Forest Plan standard, including for up to 20 years. NEPA requires that the proposed change be identified as a new replacement standard. As an example, the proposed amendment for old growth includes a replacement standard for the Mud Creek Project. So why hasn't the agency done a similar process for thermal cover and habitat effectiveness? The agency needs to identify what the habitat effectiveness and thermal cover standards are being amended to for this project. In fact, the agency recognizes that Forest Plan standards have to be amended, not "set aside." In the Como Forest Health project analysis in Appendix F-6, it is noted that the Forest is working on an amendment to alter the thermal cover standard. This is different from removing a standard, as is proposed for the Mud Creek project.

There is no analysis as to why the Forest Plan requirements for thermal cover create adverse impacts to elk and mule deer, as is noted in the Mud Creek EA. The agency claims that there is not enough forage for big game on winter ranges, so that thermal cover needs to be reduced. The one reference used to justify this claim was a study on elk winter range use in pens, where they were fed (Cook et al. 1998). This report concluded that thermal cover does not appreciably enhance the energetic status of elk in climates similar to those of our study areas. This report has since been

identified as an invalid means of claiming that big game do not use thermal cover on winter range by elk experts, including Mike Thompson, Ross Baty, and Les Marcum (2005). They clearly stated that thermal cover is a very important habitat on big game winter ranges, especially in severe winters with deep snow. The agency's failure to include this report, as well as many others that note the high value of thermal cover on winter ranges, is a violation of the NEPA, since conflicting information is not being provided to the public. In addition, science is defined as a "body of evidence." The agency cannot just take one paper and claim that it is the current best science.

The 15 year Montana Elk-Logging Study stated that clearcutting does not improve elk habitat, and that management of thermal cover on winter ranges was more important that managing for forage. The Forest Plan requires consideration of this study, but it was not mentioned in the Mud Creek analysis.

The agency provided no data to demonstrate why there is a shortage of big game forage in the Mud Creek winter ranges. No monitoring results were provided based on past Forest Plan monitoring that reductions of thermal cover below 25% on winter ranges increased big game populations due to increases in forage. In order to justify setting aside a Forest Plan standard within a management area the agency needs to provide a reasonable level of information to justify this deletion. Otherwise Forest Plan direction can just be arbitrarily changed at any time.

There is no map of the big game winter range in the Mud Creek Project area, or any information of where remaining thermal cover exists, or where it will be removed with this project. The current condition of thermal cover in this project area is important information to the public, as it demonstrates how the agency is implementing the forest plan. The draft EA states that in the hunting district, thermal cover on winter range is only 11%, but the level in the project area winter ranges is never provided. It seems likely that the agency has to date not implemented the existing Forest Plan direction for thermal cover. Since the agency is proposing to amend the Forest Plan, the public needs to be provided information as to how this standard has been implemented over the planning period, and if there are significant cumulative effects already from a failure to provide 25% thermal cover on elk and mule deer winter ranges. The EA at appendix D-6 notes that there have been 9 previous Forest Plan amendments for thermal cover. There is no

actual information as to where these previous amendments were implemented, or how they affected big game quality of winter range. This type of information is needed for the agency to define the significance of the currently-proposed amendment. It is also key to the claim being made by the agency that forage, not thermal cover, is lacking on big game winter range. How were previous deletions of thermal cover evaluated in the Forest Plan monitoring program, and where is this information being provided in the Mud Creek EA?

The use of serial Forest Plan amendments to escape the Forest Plan is a violation of both the NEPA and the NFMA, and the agency needs to demonstrate to the public that this is not the purpose of site-specific amendments to the Forest Plan.

It is noted that the West Fork elk herd is currently below MFWP objectives (Appendix D-6). This does not demonstrate that any failures in the past to meet the thermal cover standard has had no impacts on elk. Why is there only a small number of hunting licenses provided for hunting district 250?

There is no information provided on what level of hiding cover will be maintained on these big game winter ranges due to the removal of the thermal cover requirements. Hiding cover is noted in the Forest Plan as an important component of big game winter ranges.

The NEPA analysis for the Como Forest Health Project, which includes a deletion of the thermal cover standard in the Forest Plan, noted that changes the thermal cover standard requires a replacement standard as per the Forest Plan amendment process.

The deletion of the Forest Plan thermal cover standard on big game winter is a significant change to the Forest Plan, since it is not a minor change in a standard, but instead is a deletion of a significant standard. Maintaining 25% thermal cover on big game winter ranges entails a quarter of all big game winter ranges. In addition, the Forest Service has not provided any data to demonstrate that eliminating this thermal cover standard has maintained big game winter range use and populations in the many areas this standard has already been deleted. We believe that deleting the thermal cover standard significantly changes the multiple use objectives for big game winter ranges, since a critical habitat feature is being eliminated. The objective of maintaining big game populations can likely not be met with deletion of this

standard. It is the responsibility of the Forest Service to demonstrate this standard has had not value to big game winter ranges, and thus is not needed, based on the current best science and Forest Plan monitoring of implementation.

Elimination of the Habitat Effectiveness Standard is an Ongoing Strategy of the Forest to Escape Forest Plan Standards

The agency is also proposing to set aside the Forest Plan standard for habitat effectiveness in the Mud Creek Project Area, in violation of the NEPA. As we noted previously there is no NEPA process for site-specific elimination of Forest Plan standards. Instead, various alternatives that would change a standard are required, all of which still promote the purpose of the Forest Plan or management area objectives. An analysis as to how the Travel Plan affects any amendments to the Forest Plan, if road effects are involved, is also required. The EA at 99 states that the project will not bring the 3rd order drainages into compliance with the Travel Plan (draft EA 99). What is the status of the 50% HE required for the 3rd order drainages of the Mud Creek Project Area, and how do these compare to the Travel Plan? If the Travel Plan FEIS is inaccurate, does this need to be amended so that false travel management information is not being provided to the public? If deletions of Forest Plan standards implement direction that is different from the Travel Plan, these conflicts need to be addressed and corrected. However, in the Mud Creek analysis, the effects of the Travel Plan were completely ignored. The existing condition for the habitat effectiveness in each 3rd order drainage (28 of them) for the project area as required by the Travel Plan is never identified. It is unknown how the Travel Plan has been implemented for this landscape. If the Travel Plan FEIS results are not being achieved in the Mud Creek landscape, what are the impacts on big game species? How is the effectiveness of the Travel Plan being monitored? If failure of the Travel Plan to be implemented has not impacted big game species as per road densities, this would support changing the habitat effectiveness requirements to a lower level. But the data for such a reduction needs to be provided by the agency. What data indicates this habitat effectiveness standard is meaningless for big game populations? This seems to be the claim being made by the agency in the Mud Creek EA. Appendix D-6 states that the proposed set aside of the habitat effectiveness standard will not degrade the

habitat effectiveness in the Mud Creek Project. No actual data is provided for this claim.

As with the set aside for thermal cover, the agency claims this is a "site specific" amendment. The EA Appendix D-6 notes that there have been 12 previous amendments deleting the habitat effectiveness standard. So the proposed deletion for the Mud Creek Project is not just site specific deletion. It is instead an ongoing pattern of the agency failing to implement the forest plan as well as failing to complete a Forest-wide amendment in order to change existing Forest Plan direction, in violation of the NFMA and the NEPA. The Como Forest Health Project, in Appendix F, notes that the agency is considering a Forest-wide amendment to the habitat effectiveness standard. Thus this NEPA requirement is recognized by the agency. This would be a significant amendment that needs to go through full public involvement, including the various alternatives that would be developed.

The Mud Creek EA needs to provide the current habitat effectiveness levels for the 28 3rd order drainages in the project area, as well as provide what these will be for at least every 5 years of the planned 20-year project, in order to meet the requirements of the NEPA.

The rationale for the set aside for the Project is that the agency cannot log and treat the vegetation without getting rid of the road restriction (draft EA at 34). The agency claims that this is acceptable because the increase in forage for big game will offset the adverse impacts of road effects (draft EA 100). The issue is that even if forage is increased from treatments, which has never actually been demonstrated, a large percentage of this forage will be unavailable to elk due to displacement from roads in the summer, and displacement of elk from the forest to private lands in the fall hunting season. This will be exacerbated by the failure of the agency to ensure that screening cover is retained adjacent to roads (draft EA 101). In addition, a collaborative set of recommendations by MFWP and the Helena-Lewis and Clark National Forest, and the Custer-Gallatin National Forest, noted that forest thinning and openings result in earlier desiccation of forage for big game in comparison for more dense forest areas. In addition, there is no analysis of hiding cover levels at present, or if hiding cover will be maintained within 600 feet of forage areas, as is recommended by the current best science. The standard habitat recommendations for elk include both levels of hiding cover and forage areas. Just increasing openings to increase forage will not manage big game habitat, since essential hiding coer

will be removed. The agency did not define how these 2 key definitions of elk and mule deer habitat are being managed in the Mud Creek Project Area. Instead, the agency is telling the public that there is no limit to the amount of forage that needs to be provided for big game, since hiding cover is apparently irrelevant. We note there is no information ever addressed as per hiding cover that currently exists, or what will exist within each of the 4 sub-project areas in 20 years of logging and burning.

The Relationship between Habitat Effectiveness and Elk Security has to be Addressed in Forest Plan Amendments

The agency correctly defines elk security as per the Hillis Paradigm, as areas of cover over 250 acres in size and over 0.5 miles from roads. The inclusion of cover as a part of big game security has also been recently demonstrated by a study of elk use of security in the hunting season in the Elkhorn Mountains on the Helena-Lewis and Clark National Forest. However, the analysis of project effects on elk security are invalid for the Mud Creek project, as the removal of hiding cover due to burning and logging is not considered an effect. Instead, the agency claims there are currently 7,202 acres of big game security (draft EA 100), which is 15% security, and this will change to 7,423 acres of security (15%) upon project completion in 20 years. The removal of thousands of acres of hiding cover, including in thousands of acres of clearcuts, is clearly not included in the analysis of elk security, in violation of the NEPA.

There are no maps provided of where existing or planned security areas will be in the Mud Creek project area, in violation of the NEPA. There is also no analysis of how only 15% security (at best) is affecting elk displacement to private lands, given a minimum of 30% security is recommended by the current best science. The agency claims there is no impact of this lack of security based on the current best science (draft EA 99-100). It is not clear how there can be a huge increase in the number of motorized routes in the Mud Creek Project Area, as well, and still maintain what is the current level of big game security. This may be in part due to the apparent agency method of measuring roading impacts to elk by excluding any road which is closed to public use, and as such, administrative access, including logging traffic, is not identified as eliminating big game security. Because the agency claims there will actually be a slight increase in their measure of elk security once the project is done, the project will benefit elk vulnerability. The provision

of a level of security prior to the project, and then 20 years later, at the end of the project, is hardly a valid measure of project impacts on elk security. None of the 20 years of logging and road construction is identified as having an impact on elk vulnerability, in violation of the NEPA.

The Montana Fish, Wildlife and Parks (MFWP) has standard methods to measure elk vulnerability, such as the bull/cow ratios. There is no analysis in the Mud Creek draft EA to define the vulnerability level of the local elk populations by any MFWP standards. Since this project will have massive impacts on elk security, and thus vulnerability, the failure of the Forest Service to define current measures of elk vulnerability is clearly a means of avoiding such disclosures, in violation of the NEPA. The ongoing trends of bull/cow ratios for the Mud Creek Project Area, as well as the affected hunting district, needs to be provided so that a full disclosure of elk vulnerability is provided to the public. In addition, the agency noted there may be "some" increased displacement of elk to private lands in the hunting season. This does not provide a valid measure of how the project will impact elk displacement, a significant management issue for MFWP at this time. AT a minimum, what is likely a misrepresentation of 15% elk security falls well below recommended levels to address elk displacement. It is also likely that the proposed project will create highly significant increases of elk displacement to private lands. This impact needs to be fully addressed by the Forest Service.

Failure of the Agency to Identify that Noxious and Invasive Weed Populations will Drastically Increase as a Result of the Mud Creek Project

It is clear that the Mud Creek Project, with massive disturbances created on the landscape from logging, burning, skid trails, landings, road construction and reconstruction, fire lines, fuel breaks, burn piles, etc. will result in huge increases in noxious and invasive weeds and grasses, as cheatgrass. The acres that will require weed treatment before project implementation, the acres that will require treatment after implementation, need to be provided, as well as how many years of these areas treatments will be required in order to eradicate these weed populations. The agency claims that any new populations of such will be "suppressed." However, the draft EA Appendix B-15 notes that weed treatments will be prioritized and weeds will be controlled "as necessary" prior to project implementation; treatments will

"reduce" expansion of invasive weeds; they will only survey weeds in high risk areas. This information makes it clear that weed management is not a high priority for this project, and as such, massive increases in weeds can be expected as a result.

This lack of any priority for weed treatment in the Mud Creek Project appears to be a standard procedure for the agency to manage weeds. It is clear that weeds are not currently being eradicated from this landscape. Appendix A-24, for example, states that all weed populations along existing roads will be treated prior to project implementation, and it is also noted at A-40 that all haul routes will be treated prior to and following project implementation. So why are these weeds still here, and why should the public expect them to be removed anywhere else in the project area? At a minimum, the agency needs to provide a full inventory of these weeds that currently exist in the project area, so that the public can see how weed management has been implemented thus far. This is a fairly good reference as to how weed management with this project will also be done. If current weed management programs are not very effective, why is this expected to change with the Mud Creek Project, which involves massive disturbances on many thousands of acres of lands. Unless intensive weed surveys are done prior to project implementation, it is not clear how the agency will address current weed infestations, if their locations are unknown. The draft EA claims that weed treatments will be completed on weed populations PRIOR to implementation of the project. Elsewhere in Appendix A-39, it is noted that "high risk" weed populations will be treated prior to implementation, and that areas of Priority weeds 1A, 1B, 2A of Montana listed species will be avoided. Why are they going to be avoided instead of eradicated? We also note that cheatgrass is not identified as one of these priority weeds, and apparently will not be treated in this Mud Creek Project. The State of Montana has indicated that the huge increases of cheatgrass in recent years is a management concern that needs to be addressed.

In regards to roads that will be decommissioned, how will access be maintained in order to continue to treat weed populations along these roads, given roads are the most likely location for weeds? Decommissioning roads does not eliminate the impacts of these roads.

One critical issue in regards to weed management is what will be massive increases in the person-power and funds needed to address the planned increase in monitoring and weed control, not just in the thousands of acres of

logging and burning units, but along all the proposed new roads. There is no actual information in the Mud Creek draft EA that addresses the massive increases in costs that will be associated with this project, including what appears to be a huge increase in employees to do the surveys and treatments. Unless the agency can provide detailed information to the public to demonstrate that weed control will be effective, the NEPA analysis needs to inform the public that weed control is a low priority and as a result, only incidental weed control efforts are likely for this project. The relative dollars that will be budgeted for weed management versus other management efforts needs to be fully identified in the NEPA analysis.

Openings Over 40 Acres

There was no information in the draft EA as to the public review and comment period for openings over 40 acres. The initiation of this 60-day public comment period needs to be identified to the public, so that they can provide comments during this 60-day period. These comments need to be provided in the NEPA document when a draft decision is made, including the agency's response to these comments. The Forest Service manual direction for Region 1, at 2471.1 states that creation of openings larger than 40 acres requires 60-day public review. In a description of the required process regarding openings over 40 acres, #3 notes that there is a requirement of a statement of when the 60-day public notice began or when it will begin, and a summary of public comments received. When will this process begin for the Mud Creek Project? When this is initiated, the agency needs to provide the size and number of all openings planned over 40 acres, including maps, so that the public has adequate information on which to submit comments.

As a part of the analysis the agency is required to provide in the project file and to the Regional Forester, there is to be a concise statement that summarizes why it is deemed desirable to treat units larger than 40 acres, including the specific situation involved in openings management. The NEPA document must contain an effects analysis on resources, including how this effects analysis supports the creation of openings exceeding 40 acres. This information provided to the Regional Forest, and thus as well to the public for their 60-day review period, needs to include a list of each proposed openings and cutting units, including opening number, cutting unit number, stand identification, treatment acreages, and type of cutting method

describe, and a map illustrating the proposed opening units and their relationship to adjacent units. There is no such information provided in the draft EA for the Mud Creek Project. This information needs to be provided to the public in their 60-day public review period, so that they comments can be specific to this proposed action.

The agency's rationale for creating openings over 40 acres in size appears to be a general strategy to reduce insects and disease, something that would not be unique to the Mud Creek Project Area. Insects and diseases in forests are generally a standard characteristic of forests, including those in the Mud Creek landscape, which is why these forests have up to 50 species of forest birds. There are no wildlife benefits for trying to reduce these insect and disease processes. There is no actual information ever provided as to how large openings will maintain the 25 cavity-nesting species that benefit from, and actually require insects and disease as a key factor in their habitat. The agency's rationale for large clearcuts to reduce insects and disease as per wildlife is thus never actually provided to the public. There is a direct conflict between reducing insect and disease processes to increase timber production, as this requires a direct and long term (100 years or more) loss of habitat for 25 species of cavity-nesting birds. At a minimum, the agency's analysis of the impact of large openings on 25 species of cavity nesting birds needs to identify where currently-suitable habitat exists for these 25 species, how much it will be reduced by the proposed clearcutting, and whether this will be enough localized habitat to maintain these species.

The agency makes a false claim that large clearcuts are needed to reduce insects and disease mortality of trees. Supposedly large openings will reduce insects and disease in adjacent forests that are not clearcuts. What is never addressed by the agency's claim that these treatments will reduce tree mortality created by insects and disease is that the proposed action by the agency will create vastly greater levels of tree mortality than would occur naturally from insects and disease. The actual expected levels of mortality, as well as basal area that would be killed by insects versus chainsaws, needs to be provided to the public as per the NEPA, which requires high-quality information in NEPA documents. The agency needs to support their claims that tree mortality will be reduced, rather than increased, by creating large clearcuts.

The agency also claims in the EA at 41 that large openings mimic natural fire. We have yet to see any reports that clearcuts contain the diverse post-

fire bird communities that natural burned areas provide. As just one example, there is no data that shows that a sensitive species on the Bitterrroot National Forest, the black-backed woodpecker, uses both burned forest habitat and clearcuts as reproductive habitat. Any claims that clearcuts mimic natural burned forest habitats is preposterous!

The standard excuse for clearcutting, to create a diversity of age classes, is also provided as justification for large clearcuts. The public is never provided any criteria as to what constitutes a diversity of age classes, including when the desired condition for this diversity is met. The downside of such an objective, or habitat fragmentation of high quality older forest habitats critical for roughly 50 species of western forest birds, is never included in rationales regarding a diversity of age classes. The 4 priority habitats for 50 species of western forest birds, including old growth forests, snag forests, undisturbed older forests, and older forests with high cone production, are not provided by young age classes, including clearcuts.

The Forest Service then claims that large clearcuts are needed to reduce the potential for wildfires in this landscape. First, the reason that wildfires need to be prevented in this landscape is never provided, as this is a key natural process for many species, including the sensitive black-backed woodpecker and 25 species of cavity nesting birds in western forests. Second, clearcuts quickly increase the risk of wildfires once young trees are regenerating. The current best science defines clearcuts as “fire bombs.” The creation of large clearcuts in a landscape will clearly dramatically increase the risks of wildfire, not reduce it. Even young clearcuts without developing regeneration create large wind tunnels that promote fire spread across the landscape. There is also no current science that shows that dead trees in a forest, such as those killed by pine beetles, increase the potential for wildfires. Research has shown there is no increase in fire activity between forests with and without extensive mortality from insects and disease.

The Forest Service needs to complete a Forest Plan amendment to change the 2 MIS for old growth forests, the pileated woodpecker and pine marten, in portions of the forest where large clearcuts are going to be implemented. Both species depend upon large tracts of older, undisturbed forests. The current recommendations for the pileated woodpecker calls for 2700-acre blocks of older forest, with no clearcutting, that would provide habitat for 3 nesting pairs. The pine marten is identified in Region 1 reports that the average home range of a female pine marten is about 2 square miles. When

large clearcuts are made within this home range, it will no longer be suitable as pine marten habitat, especially as old, complex winter habitat will be reduced, and fragmentation will reduce availability of what older, complex forest habitat remains within a territory. Even the MFWP publication, Montana Outdoors, has included an article on pine marten which notes that clearcuts remove pine marten habitat, and at some point, heavily-clearcut habitat will be abandoned. Also, a long-term monitoring program on the pileated woodpecker reported that as the area of clearcuts within their home range increases, the probability of occupancy by this species is reduced. Extensive clearcutting in an landscape in Oregon resulted in an 80% decline of pileated woodpeckers.

If large clearcuts are going to be created, there is an automatic decline in the amount of older, dense forest habitats that will be available to wildlife. These remaining habitat patches will be smaller in size, and connectivity between them will be limited by openings. The management of larger blocks of older forest habitat for wildlife must be planned along with clearcutting, to meet the requirements of the NFMA. As already noted, there are at least 20 species of wildlife associated with old growth forests, and the level of old growth recommended on the total landscape ranges from 20-25%, which is near the lower measure of historical old growth of 20-50%. Even for the small forest songbird, the brown creeper, a minimum old growth block of 250 acres is recommended. Some wildlife species that depend upon unfragmented larger blocks of older forest habitat in addition to the pine marten and pileated woodpecker, include the red-backed vole, the northern flying squirrel, the Canada lynx, northern goshawk, three-toed and black-backed woodpeckers, snowshoe hares, and red squirrels. There can be no valid assessment of the impact of openings without a corresponding analysis of how remaining older forest blocks will be affected for wildlife.

An analysis of the impact of large openings on wildlife in the Mud Creek project also requires addressing how elk security and elk vulnerability will be affected. The Hillis Paradigm, that requires hiding cover as security, was based on several research projects on elk habitat use in the fall hunting season. This Paradigm has been more recently verified by elk use of cover in the fall hunting season in the Elkhorn Mountains of Montana. So the impact of large clearcuts will directly remove elk security. The Mud Creek proposal for numerous large openings, up to 200 acres, needs to provide an analysis for each of the 4 sub-project areas as to where elk security currently exists, and where it can be provided post-project with the removal of many

thousands of acres of hiding cover from logging due to clearcutting, as well as forest thinining and slashing and burning.

The indirect requirement for setting aside (exempting) this Mud Creek Project from the Forest Plan habitat effectiveness, and Travel Plan direction, in order to create large clearcuts for timber production, also needs to be evaluated as per the impact of large openings on wildlife. As is noted in the Mud Creek NEPA analysis, dropping the Forest Plan habitat effectiveness standard for this project is necessary in order to maximize vegetation treatments, which are actually timber production. With the high total road density that will be required for this huge timber production project, the potential for elk security will be severely reduced due to roads. So in effect, the agency's plan to create many large openings to promote timber harvest is requiring a Forest Plan amendment for wildlife.

Violation of the NEPA

This proposal is a violation of the NEPA because there has been no "hard look" at how the proposed vegetation treatments and roads will impact other resources, including wildlife. Currently, there have been no inventories for key wildlife habitats, including snag forests, old growth forests, hiding cover, open road densities, elk and mule deer thermal cover on winter ranges, or elk security, for example. The status of Forest MIS and sensitive species in the project area appears unknown, as there have been no surveys at this time. Since the current conditions for wildlife and their habitat are unknown for the project area, the impacts of vegetation treatments and roads cannot be assessed. In addition, none of the proposed treatments have been defined as well, except for vague descriptions of the acres that may be treated by various measures. So the manner in which wildlife habitat, currently undefined, will change with the proposed project cannot be measured as well.

Instead of evaluating how the overall Mud Creek Project will impact resources, the Forest Service instead will implement a complicated process whereby they will hold meetings to keep the public informed about how vegetation treatments are proceeding. Although publics may identify concerns and issues at these meetings, there is no requirement for the Forest Service to address such, since the period for public participation ends when a decision for the project is signed. So the agency is proposing to implement a massive, 20-year vegetation treatment and road construction project without

ever evaluating impacts to resources. This is a clear violation of the NEPA. The public is to be informed as to likely environmental impacts prior to the implementation of a decision, not afterwards.

This project is also a clear violation of the NEPA due to its massive size. Most of the entire project area of over 48,000 acres is planned for vegetation treatments. There is no way any public can possibly review even a minor portion of the estimated treatment areas prior to an agency decision. As just one example, the maps identifying existing and planned new road locations include 18 individual maps! Such a large project means there cannot be a reasonable level of public involvement, as is required by the NEPA.

The project is a violation of the NEPA due to a planned 20-year implementation period. NEPA decisions must be timely as per implementation, which is usually 5 years. In addition to limiting the timeline of projects to one that is reviewable by the public, and that changed conditions are not ignored due to long-term impacts of decisions that have already been implemented. One example is the use of the Mud Creek Project Area by grizzly bears. It is highly likely that if some bears are not already using this landscape, they will be present within the next 5 years. Project planning and implementation must be limited to periods that can be responsible to changed conditions and changed science. Another example is the recent significant declines of western forest birds. Certainly a project that can proceed for 20 years without any additional analysis could not address issues such as this. Clearly, the future of most if not all resources is unknown, which means that project impacts cannot be reasonably measured into the future as well.

The timeliness requirement of the NEPA also ensures that the current best science is applied to the project, and as well, that Forest Plan monitoring also addresses vegetation management activities. Most monitoring periods are no longer than 5 years, and certainly none are 20 years in length. In fact, the estimated period for Forest Plan is 15 years. A 20-year project period for implementing a project decision cannot adhere to the Forest Plan monitoring requirements of the NFMA. In fact, a 20-year timeline makes any Forest Plan monitoring irrelevant. The Mud Creek NEPA analysis did not define how Forest Plan monitoring would be addressed over the 20-year project.

Instead of adhering to the NEPA, whereby public input based on high quality information is required prior to agency implementation of a decision,

the Forest Service is switching to new process, where project impacts are potentially provided to the publics at various stages after various projects are implemented over the next 20 years. At various intervals, the public will be allowed to provide comments to the agency, based on information the agency provides to the public as to how vegetation treatments are being implemented. The actual framework of this new process is not identified in any Forest Service manual guidelines. This new process is apparently supposed to replace the requirements of the NEPA for public involvement. The current law that allows this replacement of NEPA requirements for public involvement was never identified in the Mud Creek analysis.

Another significant violation of the NEPA for the Mud Creek project is the failure of the Forest Service to demonstrate that various proposed mitigation measures will actually be implemented and/or be effective. One example is the claim that wildlife surveys may be done in certain areas of the project sometime during the 20-year project period. It is questionable that high quality surveys, including for difficult species for nest location, such as the flammulated owl, will actually be done. Since the agency claims that MIS and sensitive species will be protected from adverse impacts of the planned vegetation treatments, they need to demonstrate that this will actually occur, not just claim it will happen. There is no guarantee to the public that any surveys will be done, let alone high quality surveys, including for sensitive species and MIS. So the public has no idea that there will be any coordination between wildlife habitat needs and proposed vegetation treatments, because this coordination was not demonstrated in the NEPA process. The project area needs to be thoroughly surveyed for MIS and sensitive species PRIOR to a decision being implemented, so that the public can see how wildlife needs will be coordinated with vegetation treatments, as is required by the NEPA. The NEPA is not just a process whereby the agency says what they will do. The only way the agency can assure the pubic that vegetation treatments will be carefully coordinated with wildlife is to complete thorough surveys before a decision is implemented.

In regards to wildlife surveys, it will clearly require a massive increase in wildlife personnel in order for the Forest Service to conduct valid, multi-year wildlife surveys in order to cover all proposed treatment areas. There is no mention in the Mud Creek NEPA analysis that there will be huge increases in wildlife personnel in order to conduct the tremendous survey requirements needed for wildlife. The lack of any such recognition in the draft EA in this regards lends the claim that wildlife surveys will be done

"later" somewhat suspect. As well, without any existing survey data on wildlife, there is no ability of the agency to define the current condition in the project area for wildlife. These surveys clearly need to be done during the NEPA analysis, not afterwards.

It is also clear that the Forest Service has no intention of preventing massive increases of noxious weeds and invasive grasses, such as cheatgrass, as the Mud Creek project is implemented. Currently, this area is infested with weeds, since treatments will be required along many existing roads. Appendix A-24 and A-40 notes that the agency will treat all weeds on all existing roads and haul routes, including before and after vegetation treatments. A-39 also notes that areas of high risk invasive species will be treated prior to vegetation treatments. A-40 notes that monitoring will occur on treated sites. Vegetation treatments will avoid areas of Montana Priority weeds 1A, 1B, and 2A. The location of these areas is not identified in the Mud Creek EA, so it is not clear where these areas are, or how they will be avoided by the massive vegetation treatments. Since no weed inventories have yet been done, the public is not informed as to where these priority weed locations are, to indicate they will be avoided by vegetation treatments.

The treatment of weeds prior to implementing this project is clearly a massive undertaking, since the agency has not currently controlled noxious weeds in this project area. Nor does it appear that the agency has any actual intentions to prevent massive increases in weeds with the Mud Creek Project. Why will only high risk areas be treated prior to project treatments (A-39)? Appendix B-15 notes that the agency will prioritize weed treatment areas, which means many areas will not be treated. This Appendix B at 15 also notes that the agency "will control weeds as necessary" prior to vegetation treatments. What does "as necessary mean? Appendix A at 39 also talks about "suppression and containment" of weeds. This is not the same as saying that any new weed infestations will be eradicated. Eradication is clearly not a priority of the agency, since weeds currently exist across this project area, although the level of infestation is not identified in the Mud Creek analysis.

Overall, the required identification, treatment(s) and follow-up monitoring of weeds in the Mud Creek area, if done adequately, would require a massive increase in the agency personnel and dollars needed in order for a responsible attempt to control weeds to be done. This would require what may be multiple treatments along an undisclosed mileage of existing roads,

what are likely multiple treatments along all new roads to be created, monitoring and treatment of all fire lines, fuel breaks, and burn piles, monitoring and treatment of all skid trails, surveys and treatment of all existing weeds in the thousands of acres of proposed logging and burning units before and after vegetation treatments. One could wonder if adequate weed management for the Mud Creek area would take a large portion of the agency's forest budget. Yet these massive requirements and expenses for weed management that would result from the Mud Creek project are completely ignored in the NEPA analysis, which means that the agency will not prevent a massive increase in noxious weeds as a result of this project. This impact is never disclosed to the public, in violation of the NEPA.

The agency is also violating the NEPA by providing false information to the public to justify logging. The agency claims that historically, all the forests in the project area were open forest stands, and as the result of fire suppression, they have grown "unnaturally dense" and thus are at a high risk of burning. Although the agency makes many references to "habitat types" in the Mud Creek NEPA documents, and are therefore aware of how habitat types define forest density, they are deliberately misleading the public by claiming that the current forest densities are abnormal. A given habitat type will have an average stand density, or what is referred to as "basal area." In fact, the average basal area for Montana forest habitat types is summarized in Pfister et al. (1977) in Appendix E. This document also provides many photos, including colored photos, of representative forest habitat types of Montana forests. One can look at these photos to understand what they typically should look like, something that would not be different from historical times. This average basal area will not change for a given habitat type, including between historical and current times. It is a permanent characteristic of a given habitat type. The agency's proposition to the public that stand densities have abnormally increased since historical times is clearly known to be false by the agency, which leads them to falsely claim that logging is necessary to "restore" historical conditions.

The agency uses false assumptions to justify logging and burning by claiming the dense forest stands have a high vulnerability to insects and disease than thinned stands. No current science was cited to justify this claim. On the other hand, there is new science that demonstrates this assumption is not actually true. This is one example of why a 20-year project cannot use any new science in regards to management of public forests; it

will be impossible to use new science when a project decision is supposed to last for 20 years.

The one valid need for restoration of public forests, including in the Mud Creek landscape, is restoration of nature. The evidence of declining wildlife populations and natural, undisturbed ecosystems, including those without noxious weeds and invasive grasses, is overwhelming. The Forest Service needs to include an action alternative that implements a restoration process for wildlife and natural ecosystems. This would be consistent with the claimed restoration purpose of this project.

The agency also provides false information to the public in regards to climate change, in violation of the NEPA. The Mud Creek analysis claims that logging reduces carbon levels in the atmosphere, and thus is an activity that reduces global warming. This is clearly a false claim, one once again that is used to promote the agency agenda of logging and burning. We would like to add that the NEPA analysis of climate change needs to include an assessment of how severe weather is impacting western forest birds. Recently, potentially millions of these birds died due to a severe weather event in the southwestern United States.

Regards,

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