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Bitterroot National Forest

Matt Andersen, Forest Supervisor

1801 N. First Street

Hamilton, MT 59840

RE: COMMENTS ON THE PROPOSED BITTERROOT FRONT PROJECT

Hello,

Native Ecosystems Council, the Alliance for the Wild Rockies, the Council on Wildlife and Fish, Yellowstone to Uintas Connection, and Center for Biological Diversity would like to submit the following comments on the proposed Bitterroot Front Project as defined in the recently released draft Environmental Assessment (EA). Please note that these comments include one appendix, Appendix A, that contains relevant portions of publications and/or reports cited with these comments.

1. The application of an Emergency Action Determination (EAD) for the Bitterroot Front Project requires multiple legal violations, and as such, is an illegal action in itself.

As we will address in the following comments, there is essentially no analysis of project impacts on wildlife for the Bitterroot Front Project or climate change.

Thus, the agency has failed to provide a reasonable amount of information on this project to the public so that the public can provide effective comments on the proposed action before a decision via an EAD is made on the project. In effect, the agency is not required to consider any public comments submitted on the draft EA because a failure to do so will have no repercussions since the public is not being allowed to provide objections. If the agency is not required to actually consider public comments on the draft EA, then the agency is not required to adhere to the National Environmental Policy Act (NEPA), since the purpose of these public comments is to identify public concerns and issues. Providing these issues and concerns is meaningless if the agency is not required to respond to them by denying further recourse in the administrative process by the public. Since no further public involvement is allowed on the project, there is no reason for the agency to further consider these public issues and concerns.

It is unclear as to what the specific category is for an agency action that is apparently a categorical exclusion, but with completion of an Environmental Assessment (EA) instead of a Decision Memo (DM). Also, this new category is apparently different from a DM is that the public may potentially not be allowed to challenge the action in court. This is not clear as per the information provided in the draft EA. If this is the case, then the application of an EAD is not only a violation of the NEPA, for public participation, but it would also trigger violations of the National Forest Management Act (NFMA) as Forest Plan direction would not have to be followed. This would be a violation of the categorical exclusion direction, which requires adherence to a Forest Plan. Failure to allow public challenges of agency decisions would also be a violation of the Endangered Species Act (ESA), whereby the agency would not be required to actually adhere to this law as it is only enforced via public legal action.

We would also note that the draft EA provided to the public provided no actual information as to how the 216 square mile Bitterroot Front Project Area has been classified as a fire emergency, including within Inventoried Roadless Areas with remaining areas largely outside any Wildland Urban Interface as defined by the Healthy Forest Restoration Act (HFRA). How can vast acres of IRAs be defined as a

fire emergency for human safety and protection of structures, when these structures are not located in communities-at-risk, and also are miles and miles away from the areas identified as emergency fire risks? Without any actual support for these claims that the entire 216 square mile landscape of the Bitterroot Front area is an emergency fire risk for humans and their communities at-risk, the agency is violating the requirements of the NEPA to support conclusions with actual data. This type of information must be provided to the public for proposed projects that have been identified as a "high risk western fireshed." The critical hazardous fuels conditions that exist within the 216 square mile Bitterroot Front project area have never been defined to the public. The actual criteria as to what constitutes an emergency fire risk are not defined to the public. The specific areas that actually constitute an emergency fire risk are not mapped. How is it possible that the entire 216 square mile project area all has the exact same emergency fire risk? These include a large variety of various forest types as well as previously-burned areas and previously-logged areas. How can they all have the exact same emergency fire hazard/risk? In particular, if previously logged areas are determined to have the same emergency fire risk as natural forests, what is the point of logging to reduce fire risk? Also, what is the human safety risk within IRAs, and outside WUIs? What is the specific emergency for human safety in these areas?

At a minimum as per the NEPA, the agency is required to provide the specific criteria as to how emergency fire risk is being identified and measured. These areas need to include reasonable descriptions of the existing vegetation, including if and when the area was previously logged or previously burned via prescribed burning or wildfire. The level of emergency risk per vegetation type needs to be rated for the public, including previously-logged areas. This is especially important public information as the agency seems to suggest that once an area is logged it will be protected from future more severe fire effects. The fire risk potential for logged conditions needs to be provided to the public, in order for them to understand specifically how fire risk is going to be significantly reduced for how many years post-logging. Simply claiming that logging and prescribed burning will reduce the potential for severe fires is a violation of the NEPA. How this has been determined must be provided to the public.

2. The proposed project is a violation of the 2000 Roadless Area Conservation Rule because it will destroy wildlife ecosystems, including for grizzly bears, neotropical migratory birds, and whitebark pine.

The proposed burning and logging within IRAs is claimed to be consistent with the Roadless Rule because ecological systems will be restored with these treatments. The claim that treatments within IRAs will restore ecosystems with logging and prescribed fire is never actually supported with any data or analysis, which is also a NEPA violation. The public is not provided with any actual information as to what wildlife habitats will be restored with the proposed treatments. In fact, we are not aware of any wildlife habitats that will be restored with logging and burning, while almost all wildlife habitats will actually be destroyed and/or degraded with logging and burning. Examples of wildlife habitat that will be destroyed include a potential loss of an unidentified acreage of old growth forests due to either logging and or slashing and burning. This will destroy and/or degrade habitat for up to and over 31 associated wildlife species (USDA 2018; USDA 1990). Also, the current recruitment potential for whitebark pine will be severely reduced on up to 57,928 acres due to logging and/or prescribed burning. These treatments will destroy whitebark pine seedlings and saplings which are essential for whitebark pine recruitment, and may be decades or hundreds of years old (USFWS 2023). No analysis was provided by the agency to identify why the loss of whitebark recruitment that has developed over decades or hundreds of years qualifies as "restoration," when in fact this is removal of an essential component of whitebark pine persistence. Destruction of decades and/or hundreds of years of whitebark recruitment will severely reduce the persistence of this threatened species where ever this recruitment is removed.

Also, secure areas for the grizzly bear will be disturbed via both logging and prescribed burning throughout most of the IRAs due to all the pretreatment, implementation, and posttreatment activities, including extensive motorized activity, required to burn many thousands of IRA lands over many years. These treatments will require massive, long-term disturbance, eliminating these areas that currently provide secure habitat for the grizzly bears within this landscape.

And also, IRA treatments will result in massive losses of forage, hiding cover, and thermal cover for roughly 67 species of western forest birds on all acres logging and/or burned IRA acres, since burning also includes killing of forest patches throughout the burn area in addition to just slashing and burning the understory. The fragmentation of forests in these IRAs from killing forest patches will also increase the levels of cowbird parasitism to these 67 species of western forest b birds (Robinson et al. 1992). The agency did not define why the IRA areas currently contain "too much vegetation, including too many trees" for western forest birds, whereby reducing these trees will improve their habitat. These bird species include over a dozen Montana Species of Concern. In addition to the long-term loss of forest habitat for these birds, the agency actions will trigger an untold number of direct bird deaths via smoke toxicity, as well as indirect bird deaths due to reduced fitness caused by smoke toxicity (Defiance Canyon Raptor Rescue 2022). These bird deaths will likely be much higher than the birds/nestlings that are killed when their nesting sites are burned and/or slashed.

The agency claims that fuels management is consistent with the Roadless Area Conservation Rule because it prevents catastrophic or uncharacteristic fire. However, these types of fires are never defined, nor does the agency define where they have previously occurred on the Bitterroot National Forest. Without some type of analysis, it is highly questionable that the agency can claim that entire landscapes of IRAs in the Bitterroot Front project area can burn catastrophically. In fact, even the allowed exemption in the Roadless Area Rule exemptions that include preventing catastrophic fire do not include any descriptions of how these are to be identified. Until these areas are actually identified for specific IRAs, including acres and mapping of the conditions that will create catastrophic fires, this exemption cannot be applied. This is no different than stating that burning IRAs will improve wildlife habitat. This is a meaningless claim unless the actual analysis for this claim is provided to the public.

One issue ignored by the agency in regards to fuels reduction activities in wildlife habitat is that forest thinning eliminates the key habitat features that many wildlife species require in high severity fires, or dense forests (Hutto 1995).

3. The stated rationale for burning in IRAs and elsewhere for the Bitterroot Front Project, which is to prevent "catastrophic or uncharacteristic fire," is an unsubstantiated purpose, in violation of the NEPA as well as the Roadless Area Rule.

The standard justification for burning in IRAs, and actually, for burning across the entire 216 square mile project area is to prevent "catastrophic or uncharacteristic fire." To date, the Bitterroot National Forest has not actually defined what constitutes "catastrophic or uncharacteristic fire," including for wildlife. It is unclear, for example, why fire is defined as catastrophic for wildlife (e.g., draft EA at 115), since many wildlife species depend heavily on the occurrence of forest fires that are severe enough to kill many large patches of forest (Hutto 1995). So apparently the agency is defining catastrophic or uncharacteristic fire as a problem for both wildlife and humans. Yet what actually qualifies as an "uncharacteristic or catastrophic fire" has never been defined by the agency. As a result, the rationale for defining the entire Bitterroot Front project area as having a catastrophic and/or uncharacteristic fire potential that needs to be treated with emergency action remains undefined to the public, in violation of the NEPA. The NEPA requires the agency not to just provide conclusions (e.g., the Bitterroot Front area in its entirety has a catastrophic fire risk to humans and wildlife) but to provide substantiating information as to how the conclusion was derived. Yet this information could be provided to the public. This could be done based on past fires that have occurred on this forest in the Bitterroot Front Project Area. The project draft EA at 115 lists major fires that have occurred in the recent past in portions of the project area. These include the 2000 Blodgett fire, the 2005 Rockin fire, the 2006 Gash fire, the 2009 Kootenai fire, the 2012 Sawtooth fire, the 2016 Roading Lion fire, the 2017 Lolo Peak firer, and the 2022 Blodget/Mill complex fire. The EA goes on to state that many of these fires burned at moderate to high fire severity and demonstrate how uncharacteristic wildfire poses a primary threat to wildlife, including special status species and their habitats. Almost all fires include a mix of fire severities, including moderate and severe fire, so this alone would not trigger a catastrophic or uncharacteristic fire. Fire severity is currently measured by the percentage of the fire area that was burned by low, moderate or high severity (USDA 2018). Low fire severity occurs when less than

35% of the dominant overstory vegetation was killed. Moderate fire severity occurs when 35-75% of the dominant overstory vegetation was killed. High severity fire occurs when greater than 75% of the dominant overstory is killed; this is also referred to as "stand replacing fire." The percentage of area within a burn that qualifies as severe fire could be defined for each of these 8 past fires in the Bitterroot Front Project area, to provide examples of what the average burn severity results were for these fires. The percentage of the burn area that occurred in the high severity category is apparently what would trigger "catastrophic" conditions, even though these stand-replacing fires are essential for many forest wildlife species (Hutto 1995). The percentages of low, moderate and severe burn areas was not been defined for any of the 8 past fires in the general landscape of the Bitterroot Front Project, however, so the agency has ignored providing supporting documentation that this landscape will burn catastrophically. Also, it is unclear how the data for how these fire severity levels have been measured in historic fires, in order to define "characteristic historic fire levels," was obtained. Without comparisons between historic (pre-1850 fires) and more current fire burn severities, it is unclear how any current fire could be defined as "uncharacteristic." Since there is no such analysis in the Bitterroot Front NEPA documents, claims that current fires would be uncharacteristic in comparison to historical fires (pre-1850) are unsubstantiated and a violation of the NEPA.

In conclusion, the agency is providing an unsupported, potentially false rationale for the vast numbers of treatments proposed for the Bitterroot Front Project, which is to prevent uncharacteristic and/or catastrophic fire to the detriment of both wildlife and humans. This includes fuels treatments within IRAs, even though there are no human structures located within them, so there can be no actual loss of human structures even if treatments do not occur. The actual effect of these treatments is that wildlife habitat will be devastated by the loss of forage, hiding and thermal cover for 67 species of western forest birds. Also, the treatments will reduce the potential for severe fire effects that many forest species are highly dependent upon, as the black-backed woodpecker (Hutto 1995). These essential habitat conditions are not created in prescribed fires. *Id.*

4. The Bitterroot Front Project will have severe impacts on wildlife species associated with old growth forests, an impact that was concealed by the agency in violation of the NEPA and MBTA.

The Bitterroot Front Project area has approximately 15% old growth forests (Project Wildlife Report at 20). These are identified as 22,290 acres. Historical levels of old growth in the Northern Rockies has been estimated as ranging from 20-50% (Lesica 1996). This project area is thus below both historical levels of old growth forests, but is also below the recommended level of old growth for wildlife, which ranges from 20-25% for neotropical migratory birds (Montana Partners in Flight), 25% for the goshawk (Reynolds et al. 1992), and 25% for the pileated woodpecker (Bull and Holthausen 1993); this woodpecker is an MIS on the Bitterroot National Forest. None of these old growth forests are protected from degradation from either/or logging, slashing and burning. The Forest Plan amendment allows heavy logging and/or understory removal in old growth forests, down to as few as 5 larger trees per acre, depending on forest types. This may be fewer trees than are left within clearcuts.

The rationale for heavy logging in old growth is that the Green et al. (1992) definitions for old growth define these conditions for old growth forests. However, the actual Green et al. (1992) minimum criteria are to be used as screening criteria to identify potential old growth stands. The presence of the remaining characteristics found in old growth forests have to be present before they actually are identified as old growth forests. This entire definition of old growth as per Green et al. (1992) is consistent with another Region 1 Forest Service description of old growth forests "as wildlife habitat" (USDA 1990 by Warren). Since this agency definition of old growth was specifically based on wildlife habitat conditions, it is more relevant to management of wildlife habitat. The Green et al. (1992) definitions of old growth do not define how they meet wildlife habitat needs. Also, the Forest Plan amendment for old growth does not define how logged old growth will maintain values for associated wildlife species, which include up to 30 or more wildlife species in the Northern Rockies (USDA 2018). Eleven of the species identified as old-growth associates in the USDA

(2018) as noted to required "dense" old growth, such as the pine marten, boreal owl, brown creeper, fisher, northern goshawk, and pileated woodpecker. Two of these species, the pine marten and pileated woodpecker, are Management Indicator Species (MIS) on the Bitterroot National Forest. The pileated woodpecker is also noted as requiring dense forest habitat by another Forest Service document (Bull et al. 1997). The fact that these 2 MIS require dense, unlogged old growth is further noted in the Bitterroot Front project wildlife report. This report at 20-21 includes the following information on pine marten:

the forest plan identifies the marten as a MIS for old-growth forests; suitable habitat includes multistoried structure components; implementation of vegetation treatments could cause a loss in the quantity and quality of marten habitat; this is primarily due to reductions in canopy cover and coarse woody debris resulting from the various treatments and subsequent burning; the resulting stands would generally provide insufficient canopy closures and coarse woody debris to qualify as marten habitat; due to prescribed burning, components of the multistoried forest structure would most likely be lost in portions of suitable habitat, depending on the fire behavior; implementation of the proposed project could reduce the project area's carrying capacity for marten to some extent; treatments within marten habitat would reduce marten habitat quality. This report then claims that over the long term, pine marten habitat would be improved. It would take 100 or more years for a logged old growth stand to recover much of its previous forest structure and density, so this would be eventual, long-term restoration, not improvement, provided more fuels/logging treatments were not implemented. Impacts on old growth could potentially be permanent loss of old growth characteristics due to repeated fuel treatments every 10-20 years.

This report at 21-22 includes the following information regarding project impacts on the MIS pileated woodpecker:

the forest plan defines the pileated woodpecker as a MIS for old-growth forests; implementation of vegetation treatments could have short-term, negative impacts on the quality of pileated woodpecker nesting and foraging habitat; vegetation treatments also could reduce the project area's carrying capacity for pileated woodpeckers to some extent; pileated woodpecker numbers could be reduced in the short term. Claims that impacts would only be "short-term" were not defined. If old growth stands are logged, it would take likely 100 or more years for them to recovery the stand density and structure required for old growth, which would not be a short-term effect. Logging old growth would be a long-term effect on pileated woodpeckers.

The effect of logging old growth forests on all wildlife species will be an increase in forest temperature variables (greater extremes of both heat and cold), due to a loss of shade and dense canopy, or what would be termed "thermal cover." This may be why Hutto (1995) identified 16 Montana bird species that select relatively older, more dense undisturbed forests as habitat. The adverse impacts of severe weather events has been creating devastating effects of neotropical migratory birds, as happened in the fall of 2020, where hundreds of thousands of birds migrating through New Mexico died from various causes related to severe weather, including starvation and hypothermia (D'Ammassa 2020, USGI 2020). Given the current vulnerable status of North American landbirds, logging old growth forests is clearly a significant adverse action. Since the 1970s, these birds have lost over 3 billion in populations, with 64% of 67 species of western forest birds in decline (Rossenberg et al 2020). More recent reports of bird declines by the North American Bird Conservation Initiative (2022) show that about half of these western forest birds are in decline.

The effects of logging old growth forests will also affect many forest raptors, including those that are easily heat-stressed in the summer. These include two old growth-associated owls, the boreal owl (Hayward 1997; Carlson 1991) and the great gray owl (Koshmrl 2013). The great gray owl is a Montana Species of Concern. Both species are associated with old growth (USDA 2018; USDA 1990 by

Warren). Logging old growth will not only degrade habitat for these forest owls, but for forest wildlife in general. A recent article in the Montana Outdoors (March-April 2023), created by the Montana Fish, Wildlife and Parks, noted that over the past 65 years, Montana's temperatures have increased an average of 0.42 degrees per decade while the national average has been 0.26 per decade; the greater rate of change is due to Montana's higher altitude, making it more sensitive to temperature fluctuations; by mid-century, computer models predict a 5-degtree temperature increase in eastern and north-central Montana; also by mid-century, western Montana will see 10 to 15 additional days of 90-degree-plus temperatures.

There are at least 4 other old growth associated wildlife species that occur in the Bitterroot Front project area that depend upon relatively dense old growth, especially for nesting sites. The flammulated owl selects nesting areas with a canopy cover over 55% and has 2.5 canopy layers (Bull et al. (1990). The northern goshawk nesting stands should have a recommended canopy cover level of from 50-70%, depending upon forest type (Reynolds et al. 1992). Dense forest habitat in large blocks of 250 acres or more are identified as required habitat for the brown creeper (Wiggins 2005). And dense forest stands with a complex forest structure are recommended for the fisher (Sauder and Rachlow 2014). All of these species are Montana Species of Concern.

In summary, the Bitterroot Forest Plan, including the recent amendments, does not define how logging and burning old growth forests will maintain wildlife habitat. Rather this is just a conclusion, provided without any substantiating analysis, in violation of the NEPA. This claim is also a violation of the NFMA, since the agency failed to demonstrate that logging and burning old growth will maintain persistent populations of wildlife. As such, the environmental impacts of the proposed logging and burning of an undisclosed acreage of old growth forests for the Bitterroot Front Project are unknown, but potentially devastating to wildlife. It is recommended that old growth habitat be provided within each 10,000 acre watershed (Suring et al. 1993; USDA 1990 by Warren). This requires both identification of current old growth, and a conservation strategy to ensure it

remains well distributed on the landscape for wildlife, including that it is retained in large enough blocks for meet wildlife needs, even for a forest songbird as the brown creeper, with a recommended block size of old growth of 250 acres (Wiggins 2005).. Without any analysis as to what current and planned levels of natural wildlife old growth will be in the Bitterroot Front Project Area, impacts to associated species are unknown.

5. The Bitterroot Front Project will have devastating impacts on forest wildlife associated with forested snag habitat, in violation of the NFMA; since this impact has not been disclosed to the public, this is also a violation of the NEPA; failure to conserve neotropical migratory birds is a violation of the MBTA.

The Bitterroot Forest Plan, including recent amendments, lacks a valid conservation strategy for wildlife associated with standing and fallen dead trees. The strategy that the plan calls for is leaving a few snags within harvest units, even though these snags are unlikely to stand for more than a decade. And these snags lack of surrounding forest conditions that are required by wildlife. Birds associated with snags are estimated to comprise at least 25% of all western forest birds (Bull et al. 1997). The USDA (2018) summary for 42 species of birds that use snags, over a dozen of these are associated with old growth forests. This list also includes 10 species of mammals, including the marten and fisher, species that clearly require more than a dead tree as habitat. A recent article in Montana Outdoors by Horowitz (2023) stated that there are more than 60 species of wildlife in Montana that use dead trees and logs for feeding, nesting, roosting, denning, or drumming. One of these is an MIS for the Bitterroot National Forest, the pine marten; this species requires high levels of downed logs as winter habitat in order to access prey as well as thermal cover (Sherburne and Bissonnette 1994).

The wildlife conservation strategy used for those associated with snags and logs in the Bitterroot Forest Plan, including the updated amendment, was demonstrated to be an invalid conservation strategy almost 30 years ago, not only by the Forest Service Pacific Northwest Research Station (Bull et al. 1997), but by a woodpecker study in Oregon (Goggans et al. 1987). Yet the Bitterroot National Forest has continued to claim that leaving a few snags, possibly in logging units, will maintain all these wildlife species. The proxy for this large suite of wildlife, from birds to mammals, for viability is the number of snags per acre. This proxy has yet to be validated by the Bitterroot National Forest, and as such, is a violation of the NEPA and the NFMA. This proxy for a large suite of wildlife associated with forested snags and logs has been used for the Bitterroot Front Project to support claims that this project will not have significant adverse impacts on wildlife associated with snags. Without any substantiation with analysis and data, this claim is simply an unsupported conclusion that is a violation of the NEPA.

As has been noted by Goggans et al. (1987) and more recently by Horowitz (2023), the management of wildlife associated with snags requires the management of woodpecker populations, the keystone species that create snags for all other wildlife users. And as noted by Goggans et al. (1987), this requires the provision of large tracts of undisturbed forest habitats that have cycles of insects and diseases that provide forage for woodpeckers, who in turn create nesting cavities for other wildlife. The proposed Bitterroot Front Project has not identified any such woodpecker management areas in the roughly 121 square miles of planned management. As such, this proposed management plan will continue what has clearly been an ongoing loss of forest woodpecker habitat that a huge number of other wildlife species depend upon. It is highly likely that past logging activities have severely reduced wildlife associated with snag forests, and this impact will be greatly increased with landscape treatments across the entire project area. The agency claims that prescribed burning will create replacement snag habitat was not supported with any actual analysis, including monitoring of large snag density before and after prescribed burning, including whether these snags contain cavities. As was noted by Hutto (1995), snags suitable for cavity construction are generally present before a fire, not afterwards. This means that both forest thinning, as well as prescribed burning, will not produce the natural snag levels present within undisturbed older forest stands. Also, forest thinning in

itself can reduce natural snag densities by over 50% (Holloway and Malcolm 2006).

The continued use of the Bitterroot Forest Plan snag direction, as recently amended, is incapable of conserving wildlife species that use snags for various reasons. Application of this forest plan direction to the Bitterroot Front project will clearly trigger violations of both the NEPA and NFMA, as well as the MBTA in its complete failure to ensure habitat is provided for persistent populations of all these wildlife species.

The agency is violating the NEPA, the NFMA and the Endangered Species Act (ESA) by planning expansive treatments in areas where whitebark pine is present.

The draft EA suggests that logging and burning in whitebark pine represent restoration, without citing any actual monitoring results on the forest or published science that demonstrates that these activities promote viability of whitebark pine. There are several problems with this unsubstantiated claim, the first being that research on treatments in whitebark pine by Keane and Parson (2010) have not found any significant successful recruitment in treated whitebark pine stands since treatment for up to 40 years post treatment. As well, research on pine trees and the mountain pine beetle suggest that thinning competing conifers away from mature whitebark pine trees will of course increase their growth, but this will increase their subsequent susceptibility to pine beetle mortality (Cooper et al. 2018; Six et al. 2014; Six et al. 2021). In addition, logging and prescribed burning, either post-logging or as just a prescribed burning treatment alone, will kill most of the smaller and younger whitebark pine in the understory, including trees 3 inches in diameter or smaller. Claims that protecting these smaller trees are highly questionable in treatment units. But more importantly, these smaller whitebark trees will comprise many decades of whitebark recruitment on that site. As was noted in the USFWS (2023) standing analysis completed on whitebark pine, these trees can remain suppressed within

a forest understory for decades, and grow when conditions become right for more light, such as a pine beetle epidemic, or if these smaller trees survive a fire. These trees may eventually become suppressed again, which will stagnate their growth for another period of time. These periods of growth and stagnation may cover many hundreds of years, which can be expected for a tree that lives up to a thousand or more years.

The loss of smaller whitebark pine due to logging and prescribed fire will have significant population impacts on that location for whitebark pine, as these smaller trees will contain the recruitment potential for this stand that has been occurring for decades or more. This will be a cumulative loss of whitebark pine recruitment that has developed over a very long period of time. The suggestion that this lost pool of whitebark pine recruitment will be miraculously restored with new recruitment after treatment remains to be demonstrated (Keane and Parson 2010). At the same time, logging and thinning of other conifers around mature whitebark pine will increase their eventual vulnerability to pine beetles. So overall, the proposed "restoration" treatments of whitebark pine will achieve the opposite of promoting recovery of this threatened species. In effect, the agency is violating the ESA, the NEPA, the NFMA, and finally, the Administrative Procedures Act (APA) by claiming logging and burning will restore whitebark pine, when the science clearly demonstrates the opposite.

7. The proposed project will have likely have severe significant adverse effects on the MIS elk, impacts that were not disclosed by the agency.

The agency's conclusions that the Bitterroot Front Project will have no adverse impacts on elk, but will actually benefit the local elk population, is based on the measure of elk impacts as per the Bitterroot Forest Plan, and it's recent amendment on elk habitat. There are not actual standards for elk on this forest based on any of the current best science. For example, the habitat effectiveness measures defined in a Forest Service document Christenson et al. (1993) is not required in this plan. Measures of elk security, with a minimum 30% level

recommended, as defined in 2 reports (Hillis et al. 1991; Lowrey et al. 2019) is not required by the forest plan. No thermal cover is required on big game winter ranges, although the reference used to justify this direction by Cook and others has been discredited 10 years ago by a collaborative group of forest service and Montana Fish, Wildlife and Parks biologists (USDA/MFWP 2013). The Bitterroot Forest Plan and amendment does not require any level of hiding cover on elk habitat, even though a 15 year joint elk-logging study between the Forest Service and MFWP reported that good elk hiding cover levels should be 66% of the total landscape, with poor elk hiding cover reported as only 33% of the entire landscape. Finally, the Bitterroot National Forest claims that logging and burning will increase the forest's elk population by increasing forage. Although some research papers were cited to support the lack of forage for elk on this forest, none were specific that forage is a key limiting factor for the project area's elk population. And the 2013 USDA/MFWP collaborative study specifically noted that logging opens forest stands up and results in drying out of elk forage later in the summer and fall, which thus reduces the quality of forage. And if forage is supposed to be a key factor for this elk population, access to this forage will clearly be reduced by the massive amounts of activity required for the Bitterroot Front Project, including active motorized routes. The USDA/MFWP 2013 Collaborative study noted that motorized activity of just 2-4 vehicle trips per 12 hours displaces elk. So if the agency actually wanted to increase elk access to forage, motorized route densities would be controlled. Also, the Bitterroot Forest noted that the elk population is higher than it has ever been, which hardly supports a lack of forage for this population. The fact that high elk population numbers has been identified as an indicator of a lack of elk security on public lands (USDA/MFWP 2013) was never identified by the Forest Service for this proposal.

We note there was no action alternative proposed to reduce livestock grazing in the Bitterroot Front Project Area since forage has been determined to be limiting to the elk population. Reducing livestock use would certainly be an important factor in managing forage for elk. This alternative action would address this problem, and since it was not actually considered by the agency, it seems to indicate that forage for elk is not actually believed to be a limiting factor for this population.

8. The Bitterroot Front Project is a violation of the NEPA and the NFMA due to a failure to provide high quality information to the public in regards to onthe-ground implementation of the project, and because this project will escape the requirements of Forest Plan monitoring required by the NFMA.

The public has not been informed as to how this project has been designed based on wildlife surveys. Some wildlife habitats for MIS have been quantified, but not mapped. It is not clear what the basis of these habitat estimates were, including from actual surveys. The agency is claiming that vegetation treatments on over 200 square miles of the project area will have no significant adverse impacts on wildlife, without providing any basis for this claim. At the same time, the agency acknowledges that there will be short-term adverse impacts to MIS, the pine marten and pileated woodpecker. Claims of long-term improvements were not defined. There was no information provided on any wildlife surveys for MIS in claimed habitats. It is unknown if these claimed habitats for MIS are actually occupied, which would require surveys. There was no mapping of elk habitats, including security, and no reporting of expected habitat effectiveness levels on summer range, or thermal cover to be maintained on elk winter ranges. Levels of hiding cover pre- and post-treatment were not identified, even though this has important effects on elk habitat, including security (Hillis et al. 1991; Lowrey et al. 2019). It appears that there will be no surveys required for low density forest raptors, as the northern goshawk, great gray owl, boreal owl, flammulated owl, northern saw-whet owl, northern pygmy owl, Cooper's hawk, and sharp-shinned hawk. So the potential impact on these low density forest raptors with treatments on over 200 square miles of habitat is clearly significant. There was no analysis of project impacts on 67 species of western forest birds, yet impacts were identified as insignificant on over 200 square miles of habitat. There was no mapping of old growth forests in the project area, even though a significant number of wildlife species, including many Montana Species of Concern, are associated with old growth forests.

Since this is a long-term project, lasting longer than a Forest Plan planning period, this project will not be subject to Forest Plan monitoring results, even though this is a purpose of forest plan monitoring. This program also extends beyond the timeliness requirement of the NEPA, which is around 5 years. The agency is assuming that during the life of this project, no new scientific information will be developed that would alter project treatments, or no new requirements for the agency to address climate change will occur. In effect, this project is being designed to escape the NEPA, the NFMA, and the climate change crisis that is occurring at present. In addition, the long-term timeline for this project violates the ESA, as the USFWS is in the process of developing a conservation strategy for grizzly bears moving into the Bitterroot Recovery Area. The criteria for grizzly bear management when developed needs to be applied to the Bitterroot Front landscape upon completion, instead of never applied in the next 20 more years for which the project decision is expected to cover.

9. This project is a violation of the ESA.

The proposed project will adversely affect the threatened grizzly bear by failing to implement accepted conservation measures for this threatened species as defined by the current best science. Proctor et al. (20200 authored by 6 grizzly b bear experts, states that to maintain and promote grizzly bear use, the active motorized route density should be under a mile per section, and grizzly bear security, defined by at least 2500 acres of undisturbed habitat blocks, should contain at least 60% of the landscape. None of these measures appear to have been applied, nor will they be applied, to the Bitterroot Front Project. As a result, this project will not promote the recovery of this threatened population, as in effect grizzly bear use will be discouraged for the next several decades. Access to the entire Bitterroot Recovery Area includes through the Bitterroot Front Project, so management of this landscape is important for management of the Bitterroot Recovery Area.

The Bitterroot Front Project also violates the ESA because the actual impacts of the project to the grizzly bear cannot be measured since the project is generally not planned on the ground. This raises the question as well as to how the USFWS can provide a valid estimate of the allowed "take" of grizzly bears that will be triggered by this project. The agency is also violating the ESA by falsely claiming that this area is not occupied by grizzly bears. A recent court decision has acknowledged that grizzly bears are in the Bitterroot Mountains.

This project will also violate the ESA in regards to maintaining lynx habitat to achieve future recovery. The current best science as per Holbrook et al. 2017, Holbrook et al. 2018, Holbrook et al. 2019, and Kosterman et al. 2018 has not been applied to this project because this science post-dates the Northern Rockies Lynx Management Direction. The proposed treatments also will not maintain habitat connectivity in this landscape for lynx, given that openings present travel barriers to lynx (Squires et al. 2010), as do all new vegetation treatment activities that reduce and disturb forest cover (Holbrook et al. 2018). Fragmentation of this large landscape of over 200 square miles will also limit the potential for lynx to move into this landscape, again discouraging recovery in this historical habitat. Although lynx are stated to not be present at this time, this project essentially ensures that they will never be present. This was never noted by the agency, in violation of the NEPA. The rationale for not managing for future lynx occupancy was not addressed by the agency for this project, even though this information should have been provided to the public as a part of agency management objectives for this broad landscape.

Regards,

Sara Johnson, Native Ecosystems Council, PO Box 125, Willow Creek, MT 59760;

phone 406-579-3286; sijohnsonkoa@yahoo.com

Mike Garrity, Alliance for the Wild Rockies, PO Box 505, Helena, MT 59624; phone 406-459-5936; wildrockies@gmail.com.

Steve Kelly, Director, Council on Wildlife and Fish, PO Box 4641, Bozeman, MT 59772; phone 406-920-1381; troutcheeks@gmail.com.

Jason Christensen, Director, Yellowstone to Uintas Connection, PO Box 363, Paris, ID 83261; phone 435-881-6917; jason@yellowstoneuintas.org.

Kristine Akland, Center for Biological Diversity, PO Box 7274, Missoula, MT 59807; phone 406-544-9863; kakland@biologicaldiversity.org.