

February 10, 2025

Lolo National Forest
C/O Martin Jacob
24 Fort Missoula Road
Missoula, MT 59804

Re: Lolo National Forest Forestwide Prescribed Fire Project

Comments sent via email to <https://www.fs.usda.gov/project/hlcnf/?project=63783>

Dear Mr. Jacob,

Please accept these comments from me on behalf of the Alliance for the Wild Rockies, Council on Wildlife and Fish, Center for Biological Diversity, and Native Ecosystems Council on the proposed Lolo National Forest Forestwide Prescribed Fire Project.

The Alliance for the Wild Rockies, Council on Wildlife and Fish, Center for Biological Diversity, and Native Ecosystems Council (collectively “Alliance”) submit the following comments to guide the development of the environmental analysis for the proposal. The Forest Service must complete a full environmental impact statement (EIS) for this Project because the scope of the Project will likely have a significant individual and

cumulative impact on the environment. Alliance has reviewed the statutory and regulatory requirements governing National Forest Management projects, as well as the relevant case law, and compiled a check-list of issues that must be included in the EIS for the Project in order for the Forest Service's analysis to comply with the law. Following the list of necessary elements, Alliance has also included a general narrative discussion on possible impacts of the Project, with accompanying citations to the relevant scientific literature. These references should be disclosed and discussed in the EIS for the Project.

I. NECESSARY ELEMENTS FOR PROJECT EIS: A. Disclose all Lolo National Forest Plan requirements for logging/burning projects and explain how the Project complies with them;

B. Disclose the acreages of past, current, and reasonably foreseeable logging, grazing, and road-building activities within the Project area;

C. Solicit and disclose comments from the Montana Department of Fish, Wildlife and Parks regarding the impact of the Project on wildlife habitat;

D. Solicit and disclose comments from the Montana Department of Environmental Quality regarding the impact of the Project on water quality;

E. Disclose the biological assessment for the candidate, threatened, or endangered species with potential and/or actual habitat in the Project area;

F. Disclose the biological evaluation for the sensitive and management indicator species with potential and/or actual habitat in the Project area;

G. Disclose the snag densities in the Project area, and the method used to determine those densities;

H. Disclose the current, during-project, and post-project road densities in the Project area;

I. Disclose the Lolo National Forest's record of compliance with state best management practices regarding stream sedimentation from ground-disturbing management activities;

J. Disclose the Lolo National Forest's record of compliance with its monitoring requirements as set forth in its Forest Plan;

K. Disclose the Lolo National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSI and RODs on the Lolo National Forest;

L. Disclose the results of the field surveys for threatened, endangered, sensitive, and rare plants in each of the proposed units;

M. Disclose the level of current noxious weed infestations in the Project area and the cause of those infestations;

N. Disclose the impact of the Project on noxious weed infestations and native plant communities;

O. Disclose the amount of detrimental soil disturbance that currently exists in each project area from previous cutting, burning and grazing activities;

P. Disclose the expected amount of detrimental soil disturbance in each unit after ground disturbance and prior to any proposed mitigation/remediation;

Q. Disclose the expected amount of detrimental soil disturbance in each unit after proposed mitigation/ remediation;

R. Disclose the analytical data that supports proposed soil mitigation/remediation measures;

S. Disclose the timeline for implementation;

T. Disclose the funding source for non-commercial activities proposed;

U. Disclose the current level of old growth forest in each third order drainage in the Project area;

V. Disclose the method used to quantify old growth forest acreages and its rate of error based upon field review of its predictions;

W. Disclose the historic levels of mature and old growth juniper in the Project area;

X. Disclose the level of mature and old growth juniper necessary to sustain viable populations of dependent wildlife species in the area;

Y. Disclose the amount of mature and old growth juniper that will remain after implementation;

Z. Disclose the amount of current habitat for juniper- sagebrush dependent species in the Project area;

AA. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security during Project implementation;

BB. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security after implementation;

CC. Disclose the method used to determine big game hiding cover, winter range, and security, and its rate of error as determined by field review;

DD. Disclose and address the concerns expressed by the ID Team in the draft Five-Year Review of the Forest Plan regarding the failure to monitor population trends of MIS, the inadequacy of the Forest Plan old growth juniper standard, and the failure to compile data to establish a reliable inventory of sensitive species on the Forest;

EE. Disclose the actions being taken to reduce fuels on private lands adjacent to the Project area and how those activities/or lack thereof will impact the efficacy of the activities proposed for this Project;

FF. Disclose the efficacy of the proposed activities at reducing wildfire risk and severity in the Project area in the future, including a two-year, five-year, ten-year, and 20- year projection;

GG. Disclose when and how the Lolo National Forest (LNF) made the decision to suppress natural wildfire in the Project area and replace natural fire with logging and prescribed burning;

HH. Disclose the cumulative impacts on the Forest-wide level of the LNF's policy decision to replace natural fire with logging and prescribed burning;

II. Disclose how Project complies with the Roadless Rule;

JJ. Disclose the impact of climate change on the efficacy of the proposed treatments;

KK. Disclose the impact of the proposed project on the carbon storage potential of the area;

LL. Disclose the baseline condition, and expected sedimentation during and after activities, for all streams in the area;

MM. Please disclose how this project will enhance wildlife habitat;

NN. Please disclose how this project will degrade wildlife habitat;

OO. Please explain the cumulative impacts of this proposed project;

PP. Please disclose Maps of the Wildland Urban Interface for the project area and an explanation of how the Wildland Urban Interface was defined and mapped;

QQ. Disclose maps of the area that show the following elements:

1. Past, current, and reasonably foreseeable logging and burning

units in the Project area;

2. Past, current, and reasonably foreseeable grazing allotments in the Project area;

3. Density of human residences within 1.5 miles from the Project unit boundaries;

4. Hiding cover in the Project area according to the Forest Plan definition;

5. Old growth forest in the Project area;

6. Big game security areas;

7. Moose winter range;

Page 1 of the scoping letter states: “The Forest Service invites your comments on the Lolo Prescribed Fire Project, this includes all National Forest System lands within the Lolo National Forest boundary and portions of adjacent Bureau of Land Management (BLM) and The Nature Conservancy (TNC) lands in the Black-foot Corridor, except designated Wilderness Areas, Research Natural Areas, and ongoing NEPA projects. This encompasses an analysis area of approximately 1,664,112 acres”

Please tell the public where, when and how the burning will occur? To not do so would be a violation of NEPA’s hard look requirement and also a violation of NFMA, APA and the ESA.

The EIS must fully and completely analyze the impacts to bull trout critical habitat and westslope cutthroat trout habitat. What is the standard for sediment in the Forest Plan? Sediment is one of the key factors impacting water quality and fish habitat. [See USFWS 2010].

The scoping notice does not even mention bull trout.

The introduction of sediment in excess of natural amounts can have multiple adverse effects on bull trout and their habitat (Rhodes et al. 1994, pp. 16-21; Berry, Rubinstein, Melzian, and Hill 2003, p. 7). The effect of sediment beyond natural background conditions can be fatal at high levels. Embryo survival and subsequent fry emergence success have been highly correlated to percentage of fine material within the stream-bed (Shepard et al. 1984, pp. 146, 152). Low levels of sediment may result in sublethal and behavioral effects such as increased activity, stress, and emigration rates; loss or reduction of foraging capability; reduced growth and resistance to disease; physical abrasion; clogging of gills; and interference with orientation in homing and migration (McLeay et al. 1987a, p. 671; Newcombe and MacDonald 1991, pp. 72, 76, 77; Barrett, Grossman, and Rosenfeld 1992, p. 437; Lake and Hinch 1999, p. 865; Bash et al. 2001n, p. 9; Watts et al. 2003, p. 551; Vondracek et al. 2003, p. 1005; Berry, Rubinstein, Melzian, and Hill 2003, p. 33). The effects of increased suspended sediments can cause changes in the abundance and/or type of food organisms, alterations in fish habitat, and long-term impacts to fish populations (Anderson et al. 1996, pp. 1, 9, 12, 14, 15; Reid and Anderson 1999, pp. 1,

7-15). No threshold has been determined in which fine sediment addition to a stream is harmless (Suttle et al. 2004, p. 973). Even at low concentrations, fine-sediment deposition can decrease growth and survival of juvenile salmonids.

Aquatic systems are complex interactive systems, and isolating the effects of sediment to fish is difficult (Castro and Reckendorf 1995d, pp. 2-3). The effects of sediment on receiving water ecosystems are complex and multi-dimensional, and further compounded

by the fact that sediment flux is a natural and vital process for aquatic systems (Berry, Rubinstein, Melzian, and Hill 2003, p. 4). Environmental factors that affect the magnitude of sediment impacts on salmonids include duration of exposure, frequency of exposure, toxicity, temperature, life stage of fish, angularity and size of particle, severity/magnitude of pulse, time of occurrence, general condition of biota, and availability of and access to refugia (Bash et al. 2001m, p. 11). Potential impacts caused by excessive suspended sediments are varied and complex and are often masked by other concurrent activities (Newcombe 2003, p. 530). The difficulty in determining which environmental variables act as limiting factors has made it difficult to establish the specific effects of sediment impacts on fish (Chapman 1988, p. 2). For example, excess fines in spawning gravels may not lead to smaller populations of adults if the amount of juvenile winter habitat limits the number of juveniles that reach adulthood. Often there are multiple independent variables with complex interrelationships that can influence population size.

The ecological dominance of a given species is often determined by environmental variables. A chronic input of sediment could tip the ecological balance in favor of one species in mixed salmonid populations or in species communities composed of salmonids and nonsalmonids (Everest et al. 1987, p. 120). Bull trout have more spatially restrictive biological requirements at the individual and population levels than other salmonids (US-FWS (U.S. Fish and Wildlife Service) 1998, p. 5). Therefore, they are especially vulnerable to environmental changes such as sediment deposition.

Aquatic Impacts

- Classify and analyze the level of impacts to bull trout and westslope cutthroat trout in streams, rivers and lakes from sediment and other habitat alterations:

Lethal: Direct mortality to any life stage, reduction in egg-to-fry survival, and loss of spawning or rearing habitat. These effects damage the capacity of the bull trout to produce fish and sustain populations.

Sublethal: Reduction in feeding and growth rates, decrease in habitat quality, reduced tolerance to disease and toxicants, respiratory impairment, and physiological stress. While not leading to immediate death, may produce mortalities and population decline over time.

Behavioral: Avoidance and distribution, homing and migration, and foraging and predation. Behavioral effects change the activity patterns or alter the kinds of activity usually associated with an unperturbed environment. Behavior effects may lead to immediate death or population decline or mortality over time.

Direct effects:

Gill Trauma - High levels of suspended sediment and turbidity can result in direct mortality of fish by damaging and clogging gills (Curry and MacNeill 2004, p. 140).

Spawning, redds, eggs - The effects of suspended sediment, deposited in a redd and potentially reducing water flow and smothering eggs or alevins or impeding fry emergence, are related to sediment particle sizes of the spawning habitat (Bjornn and Reiser 1991, p. 98).

Indirect effects:

Macroinvertebrates - Sedimentation can have an effect on bull trout and fish populations through impacts or alterations to the macroinvertebrate communities or populations (Anderson, Taylor, and Balch 1996, pp. 14-15).

Feeding behavior - Increased turbidity and suspended sediment can affect a number of factors related to feeding for salmonids, including feeding rates, reaction distance, prey selection, and prey abundance (Barrett, Grossman, and Rosenfeld 1992, pp. 437, 440; Henley, Patterson, Neves, and Lemly 2000, p. 133; Bash et al. 2001d, p. 21).

Habitat effects - All life history stages are associated with complex forms of cover including large woody debris, undercut banks, boulders, and pools. Other habitat characteristic impor-

tant to bull trout include channel and hydrologic stability, substrate composition, temperature, and the presence of migration corridors (Rieman and McIntyre 1993, p. 5).

Physiological effects - Sublethal levels of suspended sediment may cause undue physiological stress on fish, which may reduce the ability of the fish to perform vital functions (Cederholm and Reid 1987, p. 388, 390).

Behavioral effects - These behavioral changes include avoidance of habitat, reduction in feeding, increased activity, redistribution and migration to other habitats and locations, disruption of territoriality, and altered homing (Anderson, Taylor, and Balch 1996, p. 6; Bash et al. 2001, pp. 19-25; Suttle, Power, Levine, and McNeely 2004, p. 971).

- How will this project affect native fish? What is the current condition in the riparian areas?
How will this project protect rather than adversely impact fish habitat and water quality? No logging or road building should be done in riparian areas. There should not be any stream crossings. Roads should be decommissioned and removed, not upgraded and rebuilt.
- Hauer, et al. (1999) found that bull trout streams in wilderness habitats had consistent ratios of large to small and attached to unattached large woody debris. However, bull trout streams in

watersheds with logging activity had substantial variation in these ratios. They identified logging as creating the most substantive change in stream habitats.

“The implications of this study for forest managers are twofold: (i) with riparian logging comes increased unpredictability in the frequency of size, attachment, and stability of the LWD and (ii) maintaining the appropriate ratios of size frequency, orientation, and bank

attachment, as well as rate of delivery, storage, and transport of LWD to streams, is essential to maintaining historic LWD characteristics and dynamics. Our data suggest that exclusion of logging from riparian zones may be necessary to maintain natural stream

morphology and habitat features. Likewise, careful upland management is also necessary to prevent cumulative effects that result in altered water flow regimes and sediment delivery regimes. While not specifically evaluated in this study, in general, it appears that patterns of upland logging space and time may have cumulative effects that could additionally alter the balance of LWD delivery, storage, and transport in fluvial systems.

These issues will be critical for forest managers attempting to prevent future detrimental environmental change or setting restoration goals for degraded bull trout spawning streams.”

Muhlfeld, et al. (2009) evaluated the association of local habitat features (width, gradient, and elevation), watershed characteris-

tics (mean and maximum summer water temperatures, the number of road crossings, and road density), and biotic factors (the distance to the source of hybridization and trout density) with the spread of hybridization between native westslope cutthroat trout *Oncorhynchus clarkii lewisi* and introduced rainbow trout *O. mykiss* in the upper Flathead River system in Montana and British Columbia.

They found that hybridization was positively associated with mean summer water temperature and the number of upstream road crossings and negatively associated with the distance to the main source of hybridization. Their results suggest that hybridization is more likely to occur and spread in streams with warm water temperatures, increased land use disturbance, and proximity to the main source of hybridization.

The EIS must use the best available science to analyze how logging riparian habitat will impact native fish and water quality.

The following article from the 9/25/15 Missoulian disagrees with the Forest Service and says it is habitat destruction causing bull trout declines.

http://missoulian.com/news/local/montana-fwp-biologist-despite-successes-bull-trout-populations-still-in/article_2798e4c6-0658-522f-be4c-4274f903129e.html

Montana FWP biologist: Despite successes, bull trout populations still in peril Ladd Knotek is disturbed by the lack of attention being paid to the many western Montana streams where bull trout populations are struggling to survive.

The fisheries biologist with Montana Fish, Wildlife and Parks knows people love to latch on to the success stories from streams like Fish Creek and several Blackfoot tributaries, where bull trout populations are viable.

“But what nobody talks about is all these other populations that, 50 years ago, these were all viable populations,” he said Tuesday as part of a presentation on bull trout in Rattlesnake Creek. “You know, Gold Creek, Belmont Creek, Trout Creek, there’s a whole list of them. There’s a whole bunch of them that are just basically on the verge of disappearing. And what we like to talk about are the ones that are doing OK. But in places like Lolo Creek and some Bitterroot tributaries, bull trout there are just barely hanging on.”

Bull trout have faced a long, slow decline over the past century, to the point where they are now listed as a threatened species under the Endangered Species Act. Success is a relative term even in the places where they are doing well.

“They’re nowhere near what they were historically,” Knotek said of the tributaries where the populations are

relatively healthy. “But they have a fair number of adult spawners coming in. People see them in the fishery. But we need to start looking at all these other tributaries that used to be bull trout spawning tributaries and recognize what’s going on in the bigger picture. We’re just looking at a very thin slice instead of looking at the whole thing. A lot of this stuff is just symptoms of what’s going on at the larger scale. Bull trout are the canary. They’re very susceptible to environmental change, whether it’s temperature, whether it’s physical, whether it’s sediment. There’s something going on in these drainages and the symptoms we’re seeing are the bull trout distribution is shrinking, we’re losing populations and we’re seeing expansion of nonnatives.”

Bull trout – which are native to the Columbia River Basin and are only found west of the Continental Divide in Montana – need clear, cold mountain waters to spawn and require clean gravel beds, deep pools, complex cover, good in-stream flows in the fall and large systems of interconnected waterways for their migrations. Rising temperatures and falling water levels trigger their migration to spawning tributaries in June, and they hang out until they spawn in the fall. They are much more susceptible to warming temperatures and habitat change than nonnative species such as brown and rainbow trout.

Knotek was the featured presenter Friday for a discussion on restoration efforts and the importance of Rattlesnake

Creek as a bull trout habitat. The event was organized by the Clark Fork Coalition, a nonprofit in Missoula that aims to protect water quality for the 22,000-square-mile Clark Fork River Basin.

Knotek explained that because Rattlesnake Creek is south-facing and doesn't have much groundwater recharging, it has much less of a buffer against a warming climate than other streams.

"The water temperatures are significantly higher than they were 10 years ago," he said. "The types of temperatures we're seeing in late summer and early fall, we never saw those 10 to 15 years ago. Water temperature is driving a lot of what we're talking about. It's definitely stressful on fish. It doesn't spell good news for bull trout."

Knotek said it's a common misconception that brown trout and rainbows are driving out bull trout, and he explained that those nonnative species are simply moving in because the native species is dying off.

"It's replacement rather than displacement," he said.

In Rattlesnake Creek, biologists have conducted redd counts of the migratory population in the lower reaches since 1999. There is a healthy resident population in the upper reaches, but researchers are more interested in the fish that actually migrate to the Clark Fork River.

The results have been disturbing.

They found a high of 36 in 2006 and 24 in 2008, before Milltown Dam was removed. There was an expected drop to just four redds – spawning beds – after the dam was removed in 2009, because of the massive disturbance. However, the number of redds has not bounced back since, and researchers found just six last year.

“That tells us that it wasn’t just the dam removal that caused it, because they should be recovering by now,” Knotek said. “And there are lots of populations like this stream that are not doing well but need more attention. We’ve got a problem here, but it’s not inconsistent with other tributaries. There’s something bigger going on.”

Knotek said that Rattlesnake Creek was historically braided before the area was developed, and that eliminated a lot of the back channels the juvenile fish need to grow.

“You need complexity,” he said. “When you have a straight ditch in a system that used to be braided, it ain’t good.”

He’s also seen much more algae growth in the upper sections, something that is obviously related to higher temperatures and added nutrients.

“We have browns and rainbows progressing upstream, and we attribute that to water temperature,” he said. “That’s consistent with other streams, too. It’s very obvious something is going on here.”

Knoteck believes that a “ramping up” of current conservation work is the only thing that can save bull trout populations. Fish screens, the removal of dams, awareness of anglers and water conservation – especially by people using stream irrigation to water their lawns – is crucial.

“Bull trout are the canary,” he said. “But there are a lot of other species that we could be looking at as indicators as well. A lot of research needs to be done. There’s a lot of species being affected.”

As Knoteck pointed out, bull trout need clear, cold mountain waters to spawn and require clean gravel beds, deep pools, complex cover, good in-stream flows in the fall and large systems of interconnected waterways for their migrations.

The project is in violation of the Cleanwater Act, NFMA, NEPA, the ESA, the Forest Plan and the APA because it the project is not working to recover bull trout and bull trout critical habitat. Sediment and stream degradation from the on going grazing is not addresses and the project will put more sediment into bull trout habitat.

Critical habitat receives protection under section 7 of the Endangered Species Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. There is no exception for the short run.

The EA does not characterize or evaluate the project area watersheds based on the Watershed Condition Framework or the baseline condition developed for bull trout. We do not know what the current condition of streams are in the project area, i.e., are they functioning acceptably, at risk or at unacceptable risk? And for what ecosystem parameters? How will this project affect stream function, i.e., degrade, maintain, restore?

- The project relies on BMPs to protect water quality and fish habitat. First, there is no evidence that application of BMPs actually protects fish habitat and water quality.
- Second, BMPs are only maintained on a small percentage of roads or when there is a logging project.

BMPs fail to protect and improve water quality because of the allowance for “naturally occurring degradation.” In Montana, “naturally-occurring degradation” is defined in ARM 16.20.603(11)

as that which occurs after application of “all reasonable land, soil and water conservation practices have been applied.” In other words, damage caused directly by sediment (and other pollution) is acceptable as long as BMPs are applied. The result is a never-ending, downward spiral for water quality and native fish.

Here's how it works:

- Timber sale #1 generates sediment damage to a bull trout stream, which is “acceptable” as long as BMPs are applied to project activities.
- “Natural” is then redefined as the stream condition after sediment damage caused by Timber Sale #1.
- Timber sale #2 – in the same watershed – sediment damage would be acceptable if BMPs are applied again – same as was done before.
- “Natural” is again redefined as the stream condition after sediment damage caused by Timber Sale#2.

The downward spiral continues with disastrous cumulative effects on bull trout, westslope cutthroat trout and most aquatic life. BMPs are not “reasonable.” Clearly, beneficial uses are not being protected. In Montana, state water quality policy is not being followed. § 75-5-101 et seq. and ARM 16.20.701 et seq.

- Please include an analysis of climate change and how that will impact the project and how the project will impact climate change.

The U.S. Fish and Wildlife Service found that bull trout are exceptionally sensitive to the direct, indirect, and cumulative effects of roads. Dunham and Rieman demonstrated that disturbance from roads was associated with reduced bull trout occur-

rence. They concluded that conservation of bull trout should involve protection of larger, less fragmented, and less disturbed (lower road density) habitats to maintain important strongholds and sources for naturally recolonizing areas where populations have been lost. (USFS 2000, page 3-82.

Hitt and Frissell showed that over 65% of waters that were rated as having high aquatic biological integrity were found within wilderness-containing subwatersheds.

Trombulak and Frissell concluded that the presence of roads in an area is associated with negative effects for both terrestrial and aquatic ecosystems including changes in species composition and population size. (USFS 2000, pages 3-80-81).

"High integrity [forests] contain the greatest proportion of high forest, aquatic, and hydrologic integrity of all are dominated by wilderness and roadless areas [and] are the least altered by management. Low integrity [forests have] likely been altered by past management are extensively roaded and have little wilderness." (USFS 1996a, pages 108, 115 and 116).

"Much of this [overly dense forest] condition occurs in areas of high road density where the large, shade-intolerant, insect-, disease- and fire-resistant species have been harvested over the past 20 to 30 years. Fires in unroaded areas are not as severe as in the roaded areas because of less surface fuel, and after fires at least some of the large trees survive to produce seed that regenerates the area. Many of the fires in the unroaded areas produce a forest structure that is consistent with the fire regime, while the fires in the roaded areas commonly produce a forest structure that is not in sync with the fire regime. In general, the effects of wildfires in these areas are much lower and do not result in the chronic sediment delivery hazards exhibited in areas that have been roaded." (USFS 1997a, pages 281-282).

"Increasing road density is correlated with declining aquatic habitat conditions and aquatic integrity An intensive review of the literature concludes that increases in sedimentation [of streams] are unavoidable even using the most cautious roading methods." (USFS 1996b, page 105).

"This study suggests the general trend for the entire Columbia River basin is toward a loss in pool habitat on managed lands and stable or improving conditions on unmanaged lands." (McIntosh et al 1994).

"The data suggest that unmanaged systems may be more structurally intact (i.e., coarse woody debris, habitat diversity, riparian vegetation), allowing a positive interaction with the stream processes (i.e., peak flows, sediment routing) that shape and maintain high-quality fish habitat over time." (McIntosh et al 1994).

"Although precise, quantifiable relationships between long-term trends in fish abundance and land-use practices are difficult to obtain (Bisson et al. 1992), the body of literature concludes that land-use practices cause the simplification of fish habitat." (McIntosh et al 1994).

"Land management activities that contributed to the forest health problem (i.e., selective harvest and fire suppression) have had an equal or greater effect on aquatic ecosystems.

If we are to restore and maintain high quality fish habitat, then protecting and restoring aquatic and terrestrial ecosystems is essential." (McIntosh et al 1994).

"Native fishes are most typically extirpated from waters that have been heavily modified by human activity, where native fish assemblages have already been depleted, disrupted, or stressed []." (Moyle et al 1996).

"Restoration should be focused where minimal investment can maintain the greatest area of high-quality habitat and diverse aquatic biota. Few completely roadless, large watersheds remain in the Pacific Northwest, but those that continue relatively undisturbed are critical in sustaining sensitive native species and important ecosystem processes (Sedell, et. al 1990; Moyle and Sato 1991; Williams 1991; McIntosh et al. 1994;

Frissell and Bayles 1996). With few exceptions, even the least disturbed basins have a road network and history of logging or other human disturbance that greatly magnifies the risk of deteriorating riverine habitats in the watershed." (Frissell undated). Also please see the attached comments by Frissell on the bull trout recovery plan.

"[A]llocate all unroaded areas greater than 1,000 acres as Strongholds for the production of clean water, aquatic and riparian-dependent species. Many unroaded areas are isolated, relatively small, and most are not protected from road construction and subsequent timber harvest, even in steep areas. Thus, immediate protection through allocation of the unroaded areas to the production of clean water, aquatic and riparian-dependent resources is necessary to prevent degradation of this high quality habitat and should not be postponed." (USFWS et al 1995).

"Because of fire suppression, timber harvest, roads, and white pine blister rust, the moist forest PVG has experienced great changes since settlement of the project area by Euroamericans. Vast amounts of old forest have converted to mid seral stages."(USFS/BLM 2000, page 4-58).

"Old forests have declined substantially in the dry forest PVG []. In general, forests showing the most change are those that have been roaded and harvested. Large trees, snags, and coarse woody debris are all below historical levels in these areas."

(USFS/BLM 2000, page 4-65).

"High road densities and their locations within watersheds are typically correlated with areas of higher watershed sensitivity to erosion and sediment transport to streams. Road density also is correlated with the distribution and spread of exotic annual grasses, noxious weeds, and other exotic plants. Furthermore, high road densities are correlated with areas that have few large snags and few large trees that are resistant to both fire and infestation of insects and disease. Lastly, high road densities are correlated with areas that have relatively high risk of fire occurrence (from human caused fires), high hazard ground fuels, and

high tree mortality." (USFS 1996b, page 85, parenthesis in original).

In simpler terms, the Forest Service has found that there is no way to build an environmentally benign road and that roads and logging have caused greater damage to forest ecosystems than has the suppression of wildfire alone. These findings indicate that roadless areas in general will take adequate care of themselves if left alone and unmanaged, and that concerted reductions in road densities in already roaded areas are absolutely necessary.

Indeed, other studies conducted by the Forest Service indicate that efforts to "manage" our way out of the problem are likely to make things worse. By "expanding our efforts in timber harvests to minimize the risks of large fire, we risk expanding what are well established negative effects on streams and native salmonids. The perpetuation or expansion of existing road networks and other activities might well erode the ability of [fish] populations to respond to the effects of large scale storms and other disturbances that we clearly cannot change." (Reiman et al 1997).

The following quotes demonstrate that trying to restore lower severity fire regimes and forests through logging and other management activities may make the situation worse, compared to allowing nature to reestablish its own equilibrium. These statements are found in “An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, Volume 3 (ICBEMP):

“Since past timber harvest activities have contributed to degradation in aquatic ecosystems, emphasis on timber harvest and thinning to restore more natural forests and fire regimes represent risks of extending the problems of the past.” (ICBEMP page 1340).

“Proposed efforts to reduce fuel loads and stand densities often involve mechanical treatment and the use of prescribed fire. Such activities are not without their own drawbacks -- long-term negative effects of timber harvest activities on aquatic ecosystems are well documented (see this chapter; Henjum and others 1994; Meehan 1991; Salo and Cundy 1987).” (ICBEMP page 1340).

“Species like bull trout that are associated with cold, high elevation forests have probably persisted in landscapes that were

strongly influenced by low frequency, high severity fire regimes. In an evolutionary sense, many native fishes are likely well acquainted with large, stand-replacing fires.” (ICBEMP page 1341).

“Attempts to minimize the risk of large fires by expanding timber harvest risks expanding the well-established negative effects on aquatic systems as well. The perpetuation or expansion of existing road networks and other activities might well erode the ability of populations to respond to the effects of fire and large storms and other disturbances that we cannot predict or control (National Research Council 1996). (ICBEMP page 1342).

“Watersheds that support healthy populations may be at greater risk through disruption of watershed processes and degradation of habitats caused by intensive management than through the effects of fire.” (ICBEMP page 1342).

"Timber harvest, through its effects on forest structure, local microclimate, and fuels accumulation, has increased fire severity more than any other recent human activity. If not accompanied by adequate reduction of fuels, logging (including salvage of dead and dying trees) increases fire hazard by increasing surface dead fuels and changing the local microclimate. Fire intensity

and expected fire spread rates thus increase locally and in areas adjacent to harvest". (USFS 1996c, pages 4-61-72).

"Logged areas generally showed a strong association with increased rate of spread and flame length, thereby suggesting that tree harvesting could affect the potential fire behavior within landscapes...As a by-product of clearcutting, thinning, and other tree-removal activities, activity fuels create both short- and long-term fire hazards to ecosystems. Even though these hazards diminish over time, their influence on fire behavior can linger for up to 30 years in dry forest ecosystems of eastern Oregon and Washington". (Huff et al 1995).

The answer, therefore, is not to try managing our way out of this situation with more roads and timber harvest/management. In summary:

- Roads have adverse effects on aquatic ecosystems. They facilitate timber sales which can reduce riparian cover, increase water temperatures, decrease recruitment of coarse woody debris, and disrupt the hydrologic regime of watersheds by changing the timing and quantity of runoff. Roads themselves disrupt hydrologic processes by intercepting and diverting flow and contributing fine sediment into the stream channels which clogs spawn-

ing gravels. High water temperatures and fine sediment degrade native fish spawning habitat.

According to the U.S. Forest Service 82% of all bull trout populations and stream segments range-wide are threatened by degraded habitat conditions. Roads and forest management are a major factor in the decline of native fish species on public lands in the Northern Rockies and Pacific Northwest.

The EA provides little additional information on where burnings will be or how the specifics on how the burning will occur. The EA is programmatic in that they want to log whenever and wherever for the next 20 years with no public oversight of their activities. This is a violation of NEPA, NFMA, the Clean Water Act, the APA, and the ESA.

Please see the article below for a ruling on a similar error by the Forest Service.

Federal court blocks timber sale in Alaska's Tongass National Forest

<https://www.adn.com/alaska-news/2020/06/25/federal-court-blocks-timber-sale-in-alaskas-tongass-national-forest/>

JUNEAU — A federal judge has blocked what would have been the largest timber sale in Alaska's Tongass National Forest in decades.

Wednesday's ruling ends the U.S. Forest Service's plan to open 37.5 square miles of old-growth forest on Prince of Wales Island to commercial logging, Coast Alaska [reported](#).

The ruling by Judge Sharon L. Gleason also stops road construction for the planned 15-year project.

Conservationists had already successfully blocked the federal government's attempt to clear large amounts of timber for sale without identifying specific areas where logging would have occurred.

Gleason allowed the forest service to argue in favor of correcting deficiencies in its review and moving forward without throwing out the entire project, but ultimately ruled against the agency.

Gleason's ruling said the economic harm of invalidating the timber sales did not outweigh "the seriousness of the errors" in the agency's handling of the project.

The method used in the Prince of Wales Landscape Level Analysis was the first time the agency used it for environmental review on an Alaska timber sale.

The forest service, which can appeal the decision, did not return calls seeking comment.

Gleason's decision affects the Prince of Wales Island project and the Central Tongass Project near Petersburg and Wrangell.

The ruling triggers a new environmental review under the National Environmental Policy Act, said Meredith Trainor, executive director of the Southeast Alaska Conservation Council.

The ruling in the lawsuit brought by the council includes a requirement for public input on specific areas proposed for logging, Trainor said.

Tessa Axelson, executive director of the Alaska Forest Association, said in a statement that the ruling “threatens the viability of Southeast Alaska’s timber industry.”

Please see the following article by the American bar Association about the use of Condition-Based Management.

May 10, 2021

The U.S. Forest Service’s Expanding Use of Condition-Based Management: Functional and Legal Problems from Short-Circuiting the Project-Planning and Environmental Impact Statement Process

Andrew Cliburn, Paul Quackenbush, Madison Prokott, Jim Murphy, and Mason Overstreet

https://www.americanbar.org/groups/environment_energy_resources/publications/fr/20210510-the-us-forest-services-expanding-use-of-condition-based-management/

Condition-based management (CBM) is a management approach that the U.S. Forest Service has increasingly used to authorize timber harvests purportedly to increase flexibility, discretion, and efficiency in project planning, analysis, and implementation. The agency believes it needs this [flexible](#) approach because sometimes conditions on the ground can change more quickly than decisions can be implemented. In practice, however, CBM operates to circumvent the National Environmental Policy Act (NEPA) review framework by postponing site-specific analysis until the Forest Service implements the project, which effectively excludes the public from site-specific decisions, reduces transparency, and removes incentives for the agency to avoid harming localized resources. The practice should be curtailed by the Biden administration

*NEPA requires federal agencies including the Forest Service to provide the public with “notice and an opportunity to be heard” in the analysis of “specific area[s] in which logging will take place and the harvesting methods to be used.” *Ohio Forestry Ass’n v. Sierra Club*, 523 U.S. 726, 729–30 (1998). Site-specific public involvement can significantly improve projects because the agency may be unaware of harmful impacts or resource concerns until the public flags them during*

the environmental analysis process. Nationally, the Forest Service drops about one out of every five acres it proposes for timber harvest based on information or concerns presented during the NEPA process, often due to public comments regarding site-specific information. [Public Lands Advocacy Coalition, Comments on Proposed Rule, National Environmental Policy Act \(NEPA\) Compliance \(June 13, 2019\)](#) (analyzing 68 projects that relied on environmental assessments).

The Forest Service appears to be abandoning the site-specific analysis model in favor of CBM. CBM projects use an overarching set of “goal variables”—predetermined management criteria that guide implementation—that Forest Service staff apply to on-the-ground natural resource “conditions” encountered during the course of project implementation, a period that can span years or even decades: essentially, when the Forest Service finds X resource condition on the ground, it applies Y timber harvest prescription. However, basic information regarding the project’s details—such as unit location, timing, roadbuilding, harvesting methods, and site-specific environmental effects—is not provided at the time the Forest Service conducts its NEPA environmental review (when the public can weigh in), nor when it gives its final approval to a project (when the public can seek administrative review). Instead, site-level disclosures are made after NEPA environmental and administrative review is complete, depriving the public of opportunities to comment and influence the decision based on localized conditions.

While CBM is not a new management tool, the Forest Service has employed it for over a decade and it was used sparingly

during the Obama administration. However, its use accelerated during the Trump administration and shows no sign of slowing. To date, dozens of Forest Service projects across the country have used CBM. See, e.g., [Red Pine Thinning Project](#), Ottawa National Forest; [Medicine Bow Landscape Vegetation Analysis](#), Medicine Bow-Routt National Forest; [Sage Hen Integrated Restoration Project](#), Boise National Forest.

*As the Forest Service's use of CBM continues, questions remain about its legality. Public-lands advocates argue that CBM violates NEPA's mandate that agencies take a hard look at the consequences of their actions before a project commences. This "look before you leap" approach was the primary purpose of NEPA and remains the statute's greatest strength. NEPA works by requiring an agency to consider alternatives and publicly vet its analysis whenever its proposal may have "significant" environmental consequences, 42 U.S.C. § 4332(2)(C), or implicates "unresolved conflicts" about how the agency should best accomplish its objective. *Id.* at § 4332(2)(E). However, CBM allows the Forest Service to circumvent the effects analysis process when exercising discretion about where and how to log decisions that often may have "significant" environmental consequences.*

*Only two federal cases have addressed CBM's legality. In *WildEarth Guardians v. Connor*, 920 F.3d 1245 (10th Cir. 2019), the Tenth Circuit approved a CBM approach for a logging project in southern Colorado in Canada lynx habitat. The environmental assessment utilized CBM and analyzed three different alternatives, one of which was a worst-case scenario. For the worst-case scenario, the Forest Service assumed that*

the entire lynx habitat in the project area would be clear-cut. The Forest Service “took the conservative approach” because it “did not know precisely” where it would log in the lynx habitat areas. WildEarth Guardians, 920 F.3d at 1255. Based on this conservative approach, coupled with a comprehensive, region-wide lynx management agreement and its associated environmental impact statement, the court agreed with the Forest Service that its future site-specific choices were “not material” to the effects on lynx—i.e., that no matter where logging occurred, “there would not be a negative effect on the lynx.” Id. at 1258–59.

However, a second case addressing CBM found that site-specific analysis was needed to satisfy NEPA’s “hard-look” standard. In Southeast Alaska Conservation Council v. U.S. Forest Service, 443 F. Supp. 3d 995 (D. Ak. 2020), the court held that the Forest Service’s Prince of Wales Landscape Level Analysis Project—a 15-year logging project on Prince of Wales Island in the Tongass National Forest—violated NEPA. The project would have authorized the logging of more than 40,000 acres, including nearly 24,000 acres of old growth, along with 643 miles of new and temporary road construction, but it “d[id] not include a determination—or even an estimate—of when and where the harvest activities or road construction . . . w[ould] actually occur.” Id. at 1009. The court found that this analysis was not “specific enough” without information about harvest locations, methods, and localized impacts. Id. at 1009–10. The court further held that a worst-case analysis could not save the project, because site-specific differences were consequential. Id. at 1013.

The Forest Service's widespread use of CBM also creates compliance challenges under the Endangered Species Act (ESA). Section 7(a)(2) of the ESA requires federal agencies to consult with the Fish and Wildlife Service and/or National Marine Fisheries Service whenever a proposed action "may affect" listed species or destroy or adversely modify its critical habitat to ensure that the action is "not likely to jeopardize" these species. 16 U.S.C. § 1536. CBM conflicts with that statutory requirement because it does not allow agencies to properly determine whether an action "may affect" or is "likely to jeopardize" a listed species when the consulting agencies do not know the specifics of when or where the action will be implemented, or what the site-specific impacts of the action may be.

For some projects, the Forest Service has tried to avoid this tension by conducting section 7 consultation prior to each phase of a CBM project, but this approach has run headlong into the general rule against segmenting project consultation duties under the ESA. See, e.g., Conner v. Burford, 848 F.2d 1441, 1457 (9th Cir. 1988). With few exceptions, section 7 consultation must cover the overall effects of the entire project at the initial stage before the project can commence. Thus, regardless of whether agencies choose to consult up front or to consult in stages, the Forest Service is likely to face significant legal hurdles when its CBM project "may affect" listed species.

CBM is not only legally dubious, but also unnecessary. The Forest Service already has NEPA-compliant methods to deal with situations that require a nimble response to the needs of a dynamic landscape. In these cases, the Forest Service can complete a [single "programmatic" analysis](#) to which future

site-specific decisions will be tiered. This programmatic approach allows the Forest Service to speed the consideration and implementation of site-specific, step-down proposals. Unlike CBM, this approach allows for public review of site-specific decision-making and administrative review of those decisions.

Surveying the regulatory horizon, the future of CBM in the Forest Service system is uncertain. The national forests face a host of complex challenges including climate-related crises, insect and forest pestilence, protecting and restoring biodiversity, and wildfire management. These challenges are made [worse](#) by budget and staff restrictions. Without adequate funding, the Forest Service must rely on imperfect tools like commercial logging, which can cause more harm than good in the wrong places.

But this is not the time to shortchange the most consequential decisions that the agency must make: determining where and how to act. During the final two years of the Trump administration, the Forest Service attempted to explicitly codify CBM provisions in [revisions to its NEPA regulations](#), although those provisions were dropped from the [final rule](#). Simultaneously, other federal land-management agencies like the Bureau of Land Management have started to use [CBM analogues in their NEPA-related planning documents](#). Although it is still early, the Biden administration's newly appointed Council on Environmental Quality team has yet to weigh in on CBM. If use of CBM continues in a manner that undermines public participation and NEPA's "hard look" standard, some of our riskiest

land management projects may not receive proper environmental oversight.

The project is not taking a hard look as required by NEPA. Please show in the EA or EIS the site specific prescriptions and unit boundaries.

Please find attached the Federal District Court of Alaska's ruling on condition-based management.

What scientific proof do you have that show the project will increase resilience of existing vegetation, restore or maintain proper ecological function to native vegetation communities and wildlife habitats, and improve firefighter and public safety?

How long will this increased resilience last? Please find attached, Scott L. Stephens et al. "Fire Treatment Effects on Vegetation Structure, Fuels, and Potential Fire Severity in Western U.S. Forests," *Ecological Applications* 19 (2009): p. 305-320, "found that forests are capable of returning in a wind driven wildfire just a year or two after a prescribed fire." Hanson, "Smokescreen, Debunking Myths to Save our Forests and our Climate."

This happens because the material that drives fires, needles, leaves and twigs, returns very quickly. (Knapp et al. 2007). Please find Knapp et al. 2007 attached.

According to Philip Higuera, professor of fire ecology at the University of Montana: "It's true that if cut, there is less fuel in the forests. But in a lot of cases, there is what's called slash — woody debris — left on the ground that will carry fire across the

forest floor, which is what you need for it to spread. The simple answer — if you want to eliminate fire, then pave it and there will be no fire.” But one reason President Teddy Roosevelt created national forests was to protect watersheds and wildlife habitat — and neither clearcuts nor pavement makes for great watersheds or wildlife habitat.

How will the enormously high level of fire conducted across the forest affect the ecosystem, wildlife and forest carbon storage levels?

How effective will the project be at stopping wind driven, crown wildfires?

How will all of the smoke the burning will produce over the 20 year life of the project affect people’s health?

What time of year will the prescribed fires be lit? How will the prescribed fires effect nesting birds and cavity nesting species?

Is the project in compliance with the Migratory Bird Treaty Act?

Which species and processes the prescribed fires harm?

Which species and processes the prescribed fires help?

What evidence do you have that this prescribed burning will make the forest healthier for fish and wildlife?

What about the role of mixed severity and high severity fire – what are the benefits of those natural processes?

How have those processes (mixed and high severity fire) created the ecosystems we have today?

Over how many millennia have mixed and high severity fire have been occurring without human intervention?

What beneficial ecological roles do beetles play? If the project does make the forest more resilient to crown fires how can the forest survive without beetles? How will this affect woodpeckers?

How will the project improve watershed health?

How will the project affect blackjack woodpeckers who depend on blacken trees from crown fires to hide from raptor predators?

Schoennagel et al. 2004 found:

The historical fire regime in these forests is complex, in including both low-severity surface fires and infrequent high-severity crown fires.

- ***Both fuels and climate have major influences on the frequency, severity, and size of fires.***
- ***Fire suppression has had variable effects on fuel densities in mixed-severity fire regimes, with the greatest impacts on sites that formerly supported open woodlands.***

- *The occurrence of high-severity crown fires is not outside the historical range of variability, although their size and frequency may be increasing.*
- *Extreme climate and weather conditions can over-ride the influence of stand structure and fuels on fire behavior.*
- *Fuel-reduction treatments (mechanical thinning and prescribed burning) may effectively reduce fire severity under moderate weather conditions, but these treatments may not effectively mitigate fire behavior under extreme weather conditions and may not restore the natural complexity of historical stand and landscape structure.*
-

What evidence do you have that the natural fire regime has been altered? What is the regular fire cycle?

Schoennagel et al. 2004 wrote: *The historical fire regime in these forests is complex, including both low-severity surface fires and infrequent high-severity crown fires.*

The scoping notice ignores that the LNF has infrequent high-severity fires.

The scoping notice also ignores that Schoennagel et al. found:
Fuel-reduction treatments (mechanical thinning and prescribed burning) may effectively reduce fire severity under moderate weather conditions, but these treatments may not effectively mitigate fire behavior under extreme weather conditions and may not restore the natural complexity of historical stand and landscape structure.

The project is violating NEPA, NFMA, and the APA for misleading the public by claiming that the project will meet the purpose and need by making the LNF more resilient to fires, insects and disease. Please show that the project will make the LNF more resilient to fires, insects and disease.

Please show the public in the final EA or EIS that shows the the high-density forest structure class is above the natural range of variation (NRV).

Please find attached Baker et al. 2023 which disagrees with your statement that the LNF is unnaturally thick.

Baker et al. 2023 is the best available science since it was published and peer reviewed. USDA FS 2021 appears to be an unpublished internal Forest Service document that was not peer reviewed not did it under go NEPA and take public comment. There for the project is violating NEPA and NFMA

Weeds

Will this Project exacerbate existing noxious weed infestations and start new infestations?

Please show a map of past prescribed burn areas and the amount of weed infestation in these areas.

Page 3 of the scoping notice states: “Under the Proposed Action, LNF and partners would implement annual prescribed fire to approximately 10,000 acres and up to a maximum of 45,000 acres annually for the next 20 years.”

Since the scoping notice states the project will burn at a maximum (45,000 acres a year for 10-20 years) does this mean the proposed alternative calls for 900,000 acres of cutting and burning? If so you appear to be hiding this from the public in violation of NEPA.

Will any of the logging be commercial logging? If so how much of the logging will be commercial logging.

How many miles of fire line and fuel breaks will be bulldozed? Since the fuel breaks can be used at motorized trails and roads are you counting them as roads?

Native plants are the foundation upon which the ecosystems of the Forest are built, providing forage and shelter for all native wildlife, bird and insect species, supporting the natural processes of the landscape, and providing the context within which the public find recreational and spiritual opportunities. All these uses or values of land are hindered or lost by conversion of plants. The ecological threats posed by noxious weed infestations are so great that a former chief of the Forest Service called the invasion of noxious weeds “devastating” and a “biological disaster.” Despite implementation of Forest Service “best management practices” (BMPs), noxious weed infestation on the Forest is getting worse and noxious weeds will likely overtake native plant populations if introduced into areas that are not yet infested. The Forest Service has recognized that the effects of noxious weed invasions may be irreversible. Even if weeds are eliminated with herbicide treatment, they may be replaced by other weeds, not by native plant species.

Invasive plant species, also called noxious weeds, are one of the greatest modern threats to biodiversity on earth. Noxious weeds cause harm because they displace native plants, resulting in a loss of diversity and a change in the structure of a plant community. By removing native vegetative cover, invasive plants like knapweed may increase sediment yield and surface runoff in an ecosystem. As well knapweed may alter organic matter distribution and nutrient through a greater ability to uptake phosphorus

over some native species in grasslands. Weed colonization can alter fire behavior by increasing flammability: for example, cheatgrass, a widespread noxious weed on the Forest, cures early and leads to

Weed colonization can also deplete soil nutrients and change the physical structure of soils. The Forest Service's own management activities are largely responsible for noxious weed infestations; in particular, logging, prescribed burns, and road construction and use create a risk of weed infestations.

How much logging will you do before you burn? The introduction of logging equipment into the Forest creates and exacerbates noxious weed infestations. Are roadsides throughout the project area are infested with noxious

weeds? Once established along roadsides, invasive plants will likely spread into adjacent grasslands and forest openings.

Will prescribed burning activities within the analysis area cumulatively contribute to increases to noxious weed distribution and populations?

As a disturbance process, fire has the potential to greatly exacerbate infestations of certain noxious weed species, depending on burn severity and habitat type (Fire Effects Information System 2004).

Dry site vegetation types and road corridors are extremely vulnerable, especially where recent ground disturbance has occurred.

Please provide an alternative that eliminates units that have noxious weeds present on roads within units from fire management proposals.

Please address the ecological, social and ascetic impact of current noxious weed infestations within the project area. Include an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations. What treatment methods will be used to address growing noxious weed problems?

What noxious weeds are currently and historically found within the project area? Please include a map of current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's-tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the Montana COUNTY NOXIOUS WEED LIST. 1975).

Are yellow and orange hawkweeds present within the project area?

Please address the cumulative, direct and indirect effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influenced by the following management actions: burning and cutting of trees and shrubs

Noxious weeds are not eradicated with single herbicide treatments. A onetime application may kill an individual plant but dormant seeds in the ground can still sprout after herbicide treatment. Thus, herbicides must be used on consistent, repetitive schedules to be effective.

What commitment to a long-term, consistent strategy of application is being proposed for each weed infested area within the proposed action area? What long term monitoring of weed populations is proposed?

When areas treated with herbicides are reseeded on national forest land, they are usually reseeded with exotic grasses, not native plant species. What native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project? Will disturbed areas including burn units be planted or reseeded with native plant species?

The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest Service concedes that preventing the introduction of weeds into uninfested areas is “the most critical component of a weed management program.” The Forest Service’s national management strategy for noxious weeds also recommends “develop[ing] and implement[ing] forest plan standards . . .

.” and recognizes that the cheapest and most effective solution is prevention. Which units within the project area currently have no noxious weed populations within their

boundaries? What minimum standards are in the HLCNF Forest Plan to address noxious weed infestations? Please include an alternative in the that includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation. The failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native plant communities.

Additionally, the omission of an alternative that includes preventive measures would violate NEPA because the Forest Service would fail to consider a reasonable alternative.

Rare Plants

The ESA requires that the Forest Service conserve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which

population viability is a concern as “sensitive species” designated by the Regional Forester (FSM 2670.44). The response of each of the sensitive plant species to management activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural

processes such as fire, insect and disease infestations, and wind-throw. Any management or lack of management that causes these natural processes to be altered may have impacts on native vegetation, including threatened and sensitive plants. Herbicide application – intended to eradicate invasive plants – also results in a loss of native plant diversity because herbicides kill native plants as well as invasive plants. Although native species have evolved and adapted to natural disturbance such as fire on the landscape, fires primarily occur in mid to late summer season, when annual plants have flowered and set seed. Following fall fires, perennial root-stocks remain underground and plants emerge in the spring. Spring and early summer burns could neg-

actively impact emerging vegetation and destroy annual plant seed.

What threatened, endangered, rare and sensitive plant species and habitat are located within the proposed project area? What standards will be used to protect threatened, rare, sensitive and culturally important plant species and their habitats from the management actions proposed in this project?

Describe the potential direct and indirect effect of the proposed management actions on rare plants and their habitat. Will prescribed burning occur in the spring and early summer; please give justifications for this decision using current scientific studies as reference.

The implementation of an EA does not free the Forest Service from the requirements of the National Environmental Policy Act (NEPA). The basis for a determination that this fuels project will improve habitat for wildlife was never provided. In addition, the term “wildlife” includes a large suite of wildlife species.

Page 18 of the scoping notice states:

Minimize impacts to migratory birds and wildlife species by designing treatments and implementing prescriptions and practices that promote a mosaic burn pattern and retention of small, unburned pockets within burn areas and retention of snags >15 inches diameter at breast height not posing a hazard to fire operations.

Demonstrating that all wildlife species will be benefited by this project would seem to require some rather extensive documentation to the public, none of which was provided in the scooping notice. We believe that the NEPA requires the agency to adequately demonstrate that the determination that this project will benefit all wildlife species needs to be included in the public involvement process.

Use of an EA for this project is also invalid because the proposed vegetation treatments would occur within Inventoried Roadless Areas (IRA). This qualifies as an extraordinary circumstance that invalidates use of a EA. Although the presence of an extraordinary circumstance does not automatically preclude use of a EA, application of a EA requires documentation . It is the existence of a cause-effect relationship between a proposed action and the potential effects on these resource conditions and if such a relationship exists, the degree of the potential effects of a proposed action on these resource conditions that determine whether extraordinary circumstances exist (36 CFR 220.g(b)).

Please include an analysis in the EA or EIS that defines why forest thinning and prescribed burning will not significantly affect the area's value to wildlife. We contend that the proposed thinning and burning will have significant adverse impacts on many wildlife species, impacts that are not currently present within IRAs. Please identify any adverse impacts that have been identified to wildlife from the current habitat conditions in IRAs. Since the current conditions are beneficial to wildlife, and the proposed conditions will be detrimental to wildlife, this means that the proposed action will eliminate existing values of the

IRA. This would be a cause-effect relationship, invalidating the use of an EA.

Please explain include a discussion of the following:

1. Baker and Shinneman. 2004. Fire rotation for high- severity fire in juniper is estimated at 400-480 years.
2. Floyd and others. 2004. Stand replacing fires in juniper 400 years or longer.
3. Bauer and Weisberg. 2009. The fire cycle in pinyon- juniper was estimated at 427 years.

What evidence do you have that shows fire has been suppressed in the area?

Baker and Shinneman (2004), Bauer and Weisberg (2009), and Floyd et al. 2004) that demonstrate that the fire cycle in juniper woodlands is very long, up to 400 years or longer, and has not been impacted by any fire suppression actions since settlement. In addition, Coop and Magee (Undated) noted that low-severity fire is not generally considered to have played an important role in shaping patterns of pre- settlement pinyon-juniper woodland structure, where fire regimes were mostly characterized by rare stand-replacing fire; as a result, they noted that direct management interventions such as thinning or fuel reductions may not represent ecological restoration.

Please identify why thinning forests and juniper and shrubs enhances wildlife habitat,

Please defines define why a lack of fire has degraded wildlife habitat. One has to assume that the presence of juniper wood-

lands is considered an adverse impact on wildlife, and if burned up, would improve wildlife habitat. We have cited a number of publications, just as examples, that in fact identify the high value of juniper woodlands to wildlife. This value includes forage for mule deer, a species that is to be emphasized on this identified winter range. The value of juniper species to mule deer was identified long ago. For example, Lovaas (1958) reported that the primary winter forage for mule deer in the Little Belt Mountains of Montana were several species of juniper. More recently, this importance was again identified in a published research article. Coe et al. (2018) reported that juniper trees are important to mule deer on their winter ranges in Oregon. There is no information in the notice that indicates why juniper removal will benefit mule deer or elk or any wildlife.

Juniper woodlands are also important habitat for many nongame birds (Coop and Magee undated; Reinkensmeyer 2000; Magee et al. 2019).. Coop and Magee (undated) noted that juniper removal treatments substantially reduced the occupancy of pinon-juniper specialists and conifer obligate species, including the pinyon jay. There One such species, the pinyon jay, is a species of conservation concern who is associated with juniper habitats (Boone et al. 2018); this paper warns of the detrimental impacts to this declining species due to juniper thinning projects. More recently, Magee et al. (2019) reported that juniper removal projects resulted in decreased occupancy of many associated bird species, including the pinyon jay. These research reports are consistent with a 2000 report by Reinkensmeyer that juniper woodlands provide important habitat for many bird species, with bird species diversity and density increasing as woodlands progress into old growth juniper. Given the documented high

value of old growth juniper forests to wildlife, the EA at a minimum needed to discuss how old growth juniper is being managed in this landscape. The Intermountain Region recognizes old growth juniper (Hamilton 1993). How much old growth juniper is believed as essential for optimal nongame bird management, and where is this old growth juniper going to be maintained in this IRA and project?

Please address the likely adverse impacts of climate change on the persistence of juniper woodlands and forests as carbon sinks.

Please analyze how climate change could affect the long-term persistence of juniper woodlands and forests in the LNF. If the persistence of these woodlands and forests will be adversely impacted by climate change, juniper thinning operations will promote the long-term demise of this important conifer. This impact was noted by Coop and McGee (Undated). Indeed, a recent newspaper article by Maffly (2018) reported on the mystery of why junipers are dying in Utah; widespread loss of junipers would have far-reaching consequences for southern Utah's fragile desert environments.

In addition to the concern about juniper mortality resulting from climate change, we also note that forest thinning in general exacerbates climate change. Milman (2018) recently reported on this issue, noting that scientists say halting deforestation is just as urgent as reducing emissions to address climate change, given the function they provide as a carbon sink. Forest thinning reduces this carbon sink function.

The impact of juniper treatments on the spread of noxious weeds was generally ignored and downplayed in the EA, even though this is very likely a significant adverse impact of this proposal.

There is a considerable awareness today regarding the problems of noxious weed infestations on public lands. One activity that is clearly promoting noxious weeds are fuels reduction and prescribed burning projects. We cite only a few examples at this time. One example is a Joint Fire Science Report by Coop and Magee (Undated), where they note that fuels and juniper reduction treatments resulted in rapid, large and persistent increases in the frequency, richness and cover of 20 non-native plant species including cheatgrass; exotic plant expansion appeared linked to the disturbance associated with treatment activities, reduction

in tree canopy, and alterations to ground cover; exotic species were much more frequently encountered at treated than control sites, occurring at 86% of sample plots in treatments and 51% of untreated sample plots; richness of exotic species in treatments was more than double that of controls. What is also interesting in this study is that cheatgrass showed a negative effect of tree canopy, which means that cheatgrass was benefited by canopy removal. They noted that models for cheatgrass alone and all non-native species together indicate strong negative associations with tree canopies, indicating that increased light availability, or perhaps below-ground resources such as moisture or nitrogen, enhance colonization and growth in treatments. Increases in exotic plant species in treatment areas was one of the reasons these researchers concluded that managers need to be cautious about implementing treatments in light of the persistent, negative ecological impacts that accompany woodland thinning in

pinyon pine- juniper ecosystems; this includes an increase in fire frequency.

Kerns and Day (2014) also reported that juniper treatments resulted in at least a short-term conversion of juniper woodlands to an exotic grassland. And Kerns (undated) reported similar findings in another Joint Fire Science Program report; she stated that it is a significant challenge for land managers to apply thinning and burning fuel treatments in a manner that does not exacerbate existing weed and associated resource problems due to the reduction of ecological resistance that fuel reduction activities created, combined with the aggressive nature of exotic species present. Kerns also noted that weed problems were also caused in slash pile burning, which is planned for the Rowley Canyon project.

Perchemlides et al. (2008) reported similar problems with juniper thinning projects in Oregon; exotic annual grass cover increased, whereas cover by native perennial grasses did not, in treatment areas; they noted that fuel reduction thinning may have some unintended negative impacts, including expansion of exotic grasses, reduction in native perennial species cover, persistent domination of annuals, and increased surface fuels.

Please provide any documentation that conversion of juniper woodlands or forests to grasslands, including cheatgrass, improves habitat for all wildlife species.

The agency notes that the project will not only reduce trees but various shrubs as well. Although we noted above that juniper woodlands have a very high value to many wildlife species, it is not clear that replacing juniper with grasses, including cheat-

grass, balances out the loss of wildlife species removed due to juniper removal by replacement with other wildlife species that use only grasses as habitat. For example, the scooping notice did not identify that mule deer on this winter range use grasses as winter forage. The value of cheatgrass to elk in the winter is also not demonstrated. Cheatgrass seeds are extremely sharp, and use by elk in the winter seems unlikely. Cheatgrass use by wildlife in the summer is also unlikely after early spring, since this grass cures out by summer. The seeds of cheatgrass are also responsible to mortality through blinding of grassland birds (McCrary and Bloom 1984).

General comments on the proposal are as follows:

Parts of this very large project area are big game winter range as per the Forest Plan. Please define what the specific habitat objectives are for this winter range, including hiding and thermal cover, as well as forage. Juniper and sagebrush are key forage plants for big game on winter ranges. What are the objectives for these forage species? The Forest Plan direction for this management area is binding. If the agency is going to claim that the Forest Plan is being implemented, you need to specifically define how this is being done, instead of simply claiming that juniper and shrub removal is improvement on big game winter range. Also, the science and monitoring behind this claim need to be provided. Currently mule deer populations have been in decline across the western U.S.. We haven't seen any science that reported increases of mule deer populations following removal of juniper and shrubs on their winter ranges.

Please explain shrubs are present, and will be targeted for masticating and burning. Do these control efforts include sagebrush?

There is extensive documentation that sagebrush is highly valuable to both elk and deer on winter ranges (Wambolt 1998, Petersen 1993). Removing sagebrush to increase grasses on winter range, as is suggested in the EA, does not promote mule deer and elk. Sagebrush has a high protein content of almost 13% in the winter, while dormant grasses have a protein content of less than 4% (Peterson 1993). There can be no valid reason to remove sagebrush and replace it with grasses for big game winter forage. The actual replacement species the agency claims are going to be managed for are never identified. But at a minimum, the rationale for removing shrubs and replacing them with grasses on winter range needs to be documented, as is required by the NEPA.

The claim that this project will increase diversity is pure unsupported rhetoric. There is no definition as to what constitutes diversity. What criteria are being used to measure diversity, and why isn't this information provided to the public? For example, what is the criteria for a diversity of age classes in juniper woodlands or sagebrush, and what is this based on? The NEPA requires that the agency provide reliable, valid information to the public on projects. This claim that removing juniper and shrubs will improve diversity is a clear violation of the NEPA, as there is no actual basis for it. Worse, it is not clear why eliminating trees and shrubs increases diversity as per the standard definitions. What science claims that a grassland has higher habitat diversity than a woodland or forest, or shrubland? One likely factor driving the proposed project is not promotion of big game species and wildlife, but instead is being done for livestock. This may be why there is no

actual discussion in the EA of current livestock grazing practices in this landscape.

The claim that thinning and removing trees will increase resiliency of this area is highly questionable. First, these forests are not highly flammable as per the current science. Second, thinning will likely increase flammability by increasing wind speeds and vegetation drying due to a reduction of shade. Third, flammability will surely be increased over current conditions due to an increase of grasses, including exotic species as cheatgrass. Please provide any actual science to indicate that prescribed burning will reduce fires, and thereby increase “resiliency” of this winter range.

Please provide any monitoring data on the effect of the fire on a winter range, or how this fire affected the extent of exotic vegetation, such as cheatgrass and other weeds. Since the proposed actions will be somewhat similar in effect, it would seem to be important for the agency to provide this information to the public.

Please provide any monitoring data, or references any current science, as to what the specific problems are in this landscape for wildlife. How did the agency determine that the current conditions are causing problems for wildlife? In general, one would not expect trees to be a problem for wildlife, especially juniper which is a highly valuable resource for wildlife, not just for forage, including berries, but as hiding and thermal cover. How has the agency determined that hiding cover are too high in this winter range? What are the objectives for hiding and thermal cover which are the target for management intervention?

Please provide important information, such as what species of shrubs are going to be slashed and burned. Why aren't these shrubs being used by wildlife? Please demonstrate that these shrubs will be replaced with seedlings of "desirable" plant species for wildlife. Please explain what these plant species are, and why they will have more value to wildlife than the existing shrubs and trees that are to be removed.

Please explain why this project will benefit wildlife. This project is defined as "wildlife habitat improvement activities." At a minimum, the agency needs to demonstrate to the public that this is in fact the case. The EA also did not provide any information as to how the resource specialists determined that the project will not lead to any significant effects on wildlife. These conclusions need to be documented for the public, including criteria that were used and evaluated to measure levels of significant impact. As just one question, if the Forest Plan standard to manage this area to promote big game species on their winter range is not being followed, this would most likely trigger significant impacts. It seems like that this is an intentional Forest Plan violation to promote livestock grazing over wildlife in this landscape. Juniper removal has been a long-standing practice to promote livestock grazing, not wildlife. The EA did not discuss the current grazing use of this area by livestock. This information needs to be included as important information to the public. Please explain why these activities are being planned in the IRAs without analysis of the impact of the project on wilderness characteristics and where they will be.

Please explain how this project complies with the Roadless Rule.

This is clearly a violation of the Roadless Area Conservation Rule, as the agency is imposing artificial management activities in areas that are to be maintained via natural processes. The scientific basis for implementing management actions in this IRA needs to be fully provided to the public. In particular, the massive increase of exotic grasses within an IRA is hardly a restoration activity.

Are you building fire lines and fuel breaks in roadless areas using mechanical means such as motorized vehicles such as bulldozers the project is in violation of the roadless rule?

The EA is unclear how the Forest Service will access the Project units in the Roadless Area. Although the Forest Service states that it will not build new roads in the Roadless Area, B2c:0005510, the transportation map does not show that Project units could be accessed by existing roads in the Roadless Area, and the Forest Service has avoided answering the question of how it will access those units, B2c:0005513. This Court recently addressed a similar issue. *Hunters v. Marten*, 470 F.Supp.3d 1151, 1167-1169 (D. Mont. 2020). This Court held: “It is simply not true that the Forest Service had no duty to communicate its transportation plan to the public. NEPA imposes upon the agency the duty to take a ‘hard look’ when it plans its actions and ‘to provide for broad dissemination of relevant environmental information.’”

The Court further held:

[Plaintiffs] contend that the final EIS is inadequate because it is misleading. []. The Court agrees with the latter. Having already discussed at length why the Forest Service’s treatment of

the roadwork in the final EIS is inadequate and indicates bad faith, there is little more to say on the second issue. On remand, the Forest Service will be required to thoroughly develop its plan to bring heavy machinery into the roadless area.

The same type of analysis is necessary in this case as well. Please take hard look and provide accurate information and analysis to the public regarding Roadless Rule compliance, in violation of the Roadless Rules NFMA, NEPA and the APA.

Since the preferred alternative calls for bulldozing fire lines and fuel breaks please demonstrate that the project complies with the roadless rule since using bulldozers in inventoried roadless areas clearly is a violation of the roadless rule.

Page 19 of the scoping notice states:

Helicopter or UAS use for aerial ignition of prescribed fires would be limited to two days per activity and two activities per year in grizzly bear secure habitat/core and would not occur from February 15 to May 15 in modeled wolverine maternal denning habitat.

Please formally consult with the US FWS on how the project will effect grizzlies, wolverines, lynx, lynx critical habitat, and whitebark pine.

The Interagency Grizzly Bear Guidelines (IGBC 1986)

document directs the FS to manage for “multiple land use

benefits” to the extent that these uses are compatible with grizzly recovery.

The Lolo National Forest has occupied grizzly bear habitat though out. Management must focus on grizzly bear habitat maintenance, improvement and minimization of grizzly-human-conflict. Since grizzly are listed as threatened under the Endangered Species Act, management decisions shall favor the needs of the grizzly bear when grizzly habitat and other land use values compete. Please disclose if adverse project or cumulative impacts are consistent with the requirement to prioritize the needs of the grizzly bear for the applicable Management Situations.

Additional direction in the Interagency Grizzly Bear Guidelines (IGBG) (1986) for MS1 habitat included the following for timber management:

Logging and/or fire management activities which will adversely affect grizzly bear populations and/or their habitat will not be permitted; adverse population effects are population reductions and/or grizzly positive conditions; adverse habitat effects are reduction in habitat quantity and/or quality.

Schwartz et al. (2010) noted that management for grizzly bears requires not only the provision of security area, but control of open road densities between security areas. Otherwise, grizzly bear mortality risks will be high as bears attempt to move across highly roaded landscapes to another security area. There needs to be direction regarding existing road densities located outside of and between security areas.

Grizzly bears are winter-sleepers rather than true hibernators. If high density motorized routes are known to disturb, displace, habituate, and raise mortalities among grizzlies in spring, summer, and fall, there's no logical, or scientific reason to believe they don't do the same to sleeping bears in winter.

The Revised Plan's desired condition for patches which includes a range of larger opening sizes may result in adverse effects if lack of cover leads to under use of foraging habitat or increased risk of human-grizzly bear conflicts causing mortality of a grizzly bear. Openings created by timber harvest, depending on site conditions, may retain features that interrupt the line of sight and provide cover for bears (J. Anderson 03/12/2012 pers. comm.).

The EA fails to show that the openings to be newly created by the project don't exceed levels of current incidental take.

The current management strategy allows "temporary" reductions in Core and "temporary" increases in road density as if the habitat would then get reprieve from such "temporary" adverse effects. However, the FS recognizes no genuine limitations on how much, how often and for how long these "temporary" current protections by allowing such harmful activities in Security Core as the opening of roads to public motorized uses like firewood gathering, unlimited amounts of non-motorized trails and human activity, and logging projects that reduce Security Core for half a decade.

Moreover, excusing logging roads from limits on Total Motorized Route Density even though they have not been decommissioned, have not been removed from the road system, and are in-

stead being “stored” for future logging—which also makes them more vulnerable to continued use as trails. (Hammer, 2016.)

Within these comments, we incorporate AWR’s February 12, 2018 Objection to the draft Record of Decision for the Amendments to the Forest Plans of the Lolo, Kootenai, and Helena-Lewis and Clark National Forests concerning habitat management direction for the Northern Continental Divide Ecosystem grizzly bear population in the North Big Belts grizzly bear analysis unit. This is necessary because the 2020 Forest Plan will be implementing the forest plan as amended by those Amendments (here- in after, “Grizzly Amendments” or “Grizzly Amendment”) and subsequent to our Objection, the Forest Service (FS) did not provide adequate relief to rectify the deficiencies in law, policy and regulation our Objection identified.

Please note that AWR’s Objection to the Grizzly Amendments itself incorporated other objections and comments, and so those are likewise incorporated herein. Those include the objections by Swan View Coalition (SVC), Friends of the Wild Swan (FOWS), and Brian Peck found at:

http://www.swanview.org/reports/Brian_Peck_Forest_Plan_Objection.pdf,

http://www.swanview.org/reports/FOWS_Forest_Plan_Objection.pdf,

That was also an Objection to the Flathead National Forest Land and Resource Management Plan and the Flathead National Forest Species of Conservation Concern determination and list, and to the degree the science, law, and policy we discuss Project.

http://www.swanview.org/reports/SVC_Forest_Plan_Objection.pdf and previous comments and other communications from AWR, SVC, FOWS, and Brian Peck concerning the Grizzly Amendments.

For your convenience, the SVC DEIS comment letters (which AWR's comments on the Grizzly Amendments DEIS incorporated by permission) are located at:

http://www.swanview.org/articles/whats-new/svcs_comments_on_draft_flathead_forest_plan/230

In sum, the Grizzly Amendments remain controversial and contested. We believe the FS has not applied best available science in adopting the Grizzly Amendments and therefore is not in compliance with NEPA, NFMA, and the ESA.

The DROD and FEIS fails to disclose how effective road closures are for the purpose of eliminating human access behind the closures.

We incorporate and attach the Amended Complaint and order for case

CV-18-67-DWM for the purposes of explaining how roads affect wildlife and that ineffective closures on national forest land how are all too common.

Please consider loss of vegetative cover from the massive clearcutting that the LNF has been doing, which has affected security for grizzly bears and other wildlife depending upon seclusion from humans.

This 2020 Forest Plan abandons a longstanding Forest Service commitment to limit road development in key grizzly bear habitat in the HLC National Forest and to limit human uses of grizzly bear secure habitat. The Forest Service and FWS have sought to dismiss the impact of this new management direction by asserting that the Forest Service will maintain the habitat conditions, but the agencies ignored that the amendment does not constrain the construction of new road mileage as long as the Service takes minimal measures to block or obscure the entrances to the new roads even though the federal district court just ruled that Forest Service road closures are not effective.

Please see the order for case 9:18-cv-00067-DWM.

By law, the logging roads and illegal user-created roads on National Forests are supposed to be securely and effectively closed. Unfortunately, the Forest Service has interpreted this require-

ment to allow it to put a pile of dirt in front of the road and call it good. We showed the court that this strategy is failing.

Road use on closed roads and illegal user-created roads is a pervasive and chronic problem and it is keeping these endangered grizzly bears on the brink of extinction.

This represents a major departure from prior management requirements and threatens to significantly degrade grizzly bear habitat security. The revised Plan also abandons limits on human uses of roads and trails in secure bear habitat.

FWS and the Forest Service violated the ESA by arbitrarily dismissing the threat to grizzly bears and bull trout posed by road-building and the proliferation of human use of roads and trails permitted under the final Record of Decision for the Forest Plan Amendments (Helena – Lewis and Clark, Kootenai, and Lolo National Forests).

The Forest Service must reconsult with the USFWS on the impact of the 2020 Forest Plan and the Grizzly Amendments (Helena – Lewis and Clark, Kootenai, and Lolo National Forests) to Incorporate Habitat Management Direction for the Northern Continental Divide Ecosystem Grizzly Bear Population on grizzly bears and the North Big Belts grizzly bear analysis unit. The Forest Service must also give the public a chance to comment on this consultation. It is a violation of NEPA, NFMA, the APA, and the ESA to not do so.

The Interagency Grizzly Bear Guidelines (IGBC 1986)

document directs the FS to manage for “multiple land use benefits” to the extent that these uses are compatible with grizzly recovery.

The Lolo National Forest has occupied grizzly bear habitat though out. Management must focus on grizzly bear habitat maintenance, improvement and minimization of grizzly-human-conflict. Since grizzly are listed as threatened under the Endangered Species Act, management decisions shall favor the needs of the grizzly bear when grizzly habitat and other land use values compete. The Forest Plan does not disclose if adverse project or cumulative impacts are consistent with the requirement to prioritize the needs of the grizzly bear for the applicable Management Situations. Please disclose this in the EA or EIS for this project.

Additional direction in the Interagency Grizzly Bear Guidelines (IGBG) (1986) for MS1 habitat included the following for timber management:

Logging and/or fire management activities which will adversely affect grizzly bear populations and/or their habitat will not be permitted; adverse population effects are population reductions and/or grizzly positive conditions; adverse habitat effects are reduction in habitat quantity and/or quality.

Schwartz et al. (2010) noted that management for grizzly bears requires not only the provision of security area, but control of open road densities between security areas. Otherwise, grizzly bear mortality risks will be high as bears attempt to move across highly roaded landscapes to another security area. There needs

to be direction regarding existing road densities located outside of and between security areas.

Grizzly bears are winter-sleepers rather than true hibernators. If high density motorized routes are known to disturb, displace, habituate, and raise mortalities among grizzlies in spring, summer, and fall, there's no logical, or scientific reason to believe they don't do the same to sleeping bears in winter.

The Forest Plan's desired condition for patches which includes a range of larger opening sizes may result in adverse effects if lack of cover leads to under use of foraging habitat or increased risk of human-grizzly bear conflicts causing mortality of a grizzly bear. Please show that the openings to be newly created by the project don't exceed levels of current incidental take.

The current management strategy allows "temporary" reductions in Core and "temporary" increases in road density as if the habitat would then get reprieve from such "temporary" adverse effects. However, the FS recognizes no genuine limitations on how much, how often and for how long these "temporary" current protections by allowing such harmful activities in Security Core as the opening of roads to public motorized uses like firewood gathering, unlimited amounts of non-motorized trails and human activity, and logging projects that reduce Security Core for half a decade.

Page 18 of the scoping notice states:

To protect carnivore natal and maternal sites: A 0.25-mile radius seasonal no-activity buffer will be place around all active

wolf (4/1-7/1), grizzly bear (11/15-3/30), lynx (4/15-8/1), fisher (2/15- 8/1) or wolverine (2/1-5/1) natal and maternal (e.g., rendezvous sites) sites known to occur within the project area or discovered during layout or implementation.

Please consider loss of vegetative cover from the massive burning, thinning and clearcutting proposed, which will affect security for grizzly bears and other wildlife depending upon seclusion from humans.

Please show that this is a big enough buffer to not take or displace these species.

Please search the entire forests for wolves, grizzlies, lynx, fisher, wolverines, and white bark pine.

Please tell the public where they plan to cut down trees, set fires, build fire lines and fuel breaks with bulldozers, or the project will be in violation of NEPA, NFMA, the ESA and the APA.

By law, the logging roads and illegal user-created roads on National Forests are supposed to be securely and effectively closed. Unfortunately, the Forest Service has interpreted this requirement to allow it to put a pile of dirt in front of the road and call it good. Road use on closed roads and illegal user-created roads is a pervasive and chronic problem and it is keeping these endangered grizzly bears on the brink of extinction.

This represents a major departure from prior management requirements and threatens to significantly degrade grizzly

The Forest Service is violating the ESA by arbitrarily dismissing the threat to grizzly bears posed by roadbuilding.

How many road closure violations have occurred in the Lolo N.F. in the last 5 years?

The Forest Service must consult with the USFWS on the impact of the project on grizzly bears and show exactly where all of the burning, fire lines, fuel breaks, and clearcuts will be and give the public a chance to comment on it. It is a violation of NEPA, NFMA, the APA, and the ESA to not do so.

This is strong reason that the Forest Service should write an EIS for this project.

Management Direction for the Northern Continental Divide

Ecosystem Grizzly Bear Population and the North Big Belts grizzly bear analysis unit which is part of the Northern Continental Divide Ecosystem Grizzly Bear Population.

This is strong reason that the Forest Service should write an EIS for this project.

There is no information ever provided as to what the vegetation types are in the areas not proposed for treatment.

Please explain to the public as to why this project enhances wildlife habitat, or is needed to maintain natural ecosystem processes within an IRA. It is clear that this project requires much more information to be provided to the public, and much more documentation to justify vegetation management within IRAs. And as previously noted, the criteria which the resource specialists used to estimate the level of impact needs to be provided, as well, to the public. It seems readily apparent that this project requires at a minimum an environmental impact statement in order to comply with the NEPA, including the provision of valid, reliable information to the public when the Forest Service is planning resource management activities.

The best available science, Christensen et al (1993), recommends elk habitat effectiveness of 70% in summer range and at least 50% in all other areas where elk are one of the primary resource considerations. According to Figure 1 in Christensen et al (1993), this equates to a maximum road density of approximately 0.7 mi/sq mi. in summer range and approximately 1.7 mi/sq mi. in all other areas.

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Do any of the 6 Code watersheds in the Project area meet either of these road density thresholds? It appears the Project area as a whole also far exceeds these thresholds. Please disclose this type of Project level or watershed analysis on road density.

Christensen et al (1993) state that if an area is not meeting the 50% effectiveness threshold of 1.7 mi/sq mi, the agency should admit that the area is not being managed for elk: “Areas where habitat effectiveness is retained at lower than 50 percent must be recognized as making only minor contributions to elk management goals. If habitat effectiveness is not important, don't fake it. Just admit up front that elk are not a consideration.” The Project EIS does not make this admission.

The Forest Service should provide an analysis of how much of the Project area, Project area watersheds, affected landscape areas, or affected Hunting Districts provide “elk security area[s]” as defined by the best available science,

Christensen et al (1993) and Hillis et al (1991), to be comprised of contiguous 250 acre blocks of forested habitat 0.5 miles or more from open roads with these blocks encompassing 30% or more of the area.

Please provide a rational justification for the deviation from the Hillis security definition and numeric threshold that represent the best available science on elk security areas.

What best available science supports the action alternatives?

What evidence to you have that supports your contention that the area used to have a frequent fire regime that burned light surface fuel?

Schoennagel et al (2004) states: “we are concerned that the model of historical fire effects and 20th-century fire suppression

in dry ponderosa pine forests is being applied uncritically across all Rocky Mountain forests, including where it is inappropriate.

Schoennagel et al (2004) states: “High-elevation subalpine forests in the Rocky Mountains typify ecosystems that experience infrequent, high-severity crown fires []. . . The most extensive subalpine forest types are composed of Engelmann spruce (*Picea engelmannii*), subalpine fir (*Abies lasiocarpa*), and lodgepole pine (*Pinus contorta*), all thin-barked trees easily killed by fire. Extensive stand-replacing fires occurred historically at long s (i.e., one to many centuries) in subalpine forests, typically in association with infrequent high-pressure blocking systems that promote extremely dry regional climate patterns.”

Schoennagel et al (2004) states: “it is unlikely that the short period of fire exclusion has significantly altered the long fire intervals in subalpine forests. Furthermore, large, intense fires burning under dry conditions are very difficult, if not impossible, to suppress, and such fires account for the majority of area burned in subalpine forests.

Schoennagel et al (2004) states: “Moreover, there is no consistent relationship between time elapsed since the last fire and fuel abundance in subalpine forests, further undermining the idea that years of fire suppression have caused unnatural fuel buildup in this forest zone.”

Schoennagel et al (2004) states: “No evidence suggests that spruce–fir or lodgepole pine forests have experienced substantial shifts in stand structure over recent decades as a result of fire suppression. Overall, variation in climate rather than in fuels ap-

pears to exert the largest influence on the size, timing, and severity of fires in subalpine forests [].

We conclude that large, infrequent standreplacing fires are ‘business as usual’ in this forest type, not an artifact of fire suppression.”.

Schoennagel et al (2004) states: “Contrary to popular opinion, previous fire suppression, which was consistently effective from about 1950 through 1972, had only a minimal effect on the large fire event in 1988 []. Reconstruction of historical fires indicates that similar large, high-severity fires also occurred in the early 1700s []. Given the historical range of variability of fire regimes in high-elevation subalpine forests, fire

behavior in Yellowstone during 1988, although severe, was neither unusual nor surprising.”

Schoennagel et al (2004), please find attached, states: “Mechanical fuel reduction in subalpine forests would not represent a restoration treatment but rather a departure from the natural range of variability in standstructure.”

Schoennagel et al (2004) states: “Given the behavior of fire in Yellowstone in 1988, fuel reduction projects probably

will not substantially reduce the frequency, size, or severity of wildfires under extreme weather conditions.”

Schoennagel et al (2004) states: “The Yellowstone fires in 1988 revealed that variation in fuel conditions, as measured by stand age and density, had only minimal influence on fire behavior. Therefore, we expect fuel- reduction treatments in high-eleva-

tion forests to be generally unsuccessful in reducing fire frequency, severity, and size, given the overriding importance of extreme climate in controlling fire regimes in this zone. Thinning also will not restore subalpine forests, because they were dense historically and have not changed significantly in response to fire suppression. Thus, fuel-reduction efforts in most Rocky Mountain subalpine forests probably would not effectively mitigate the fire hazard, and these efforts may create new ecological problems by moving the forest structure outside the historic range of variability.”

Likewise, Brown et al (2004) states: “At higher elevations, forests of subalpine fir, Engelmann spruce, mountain hemlock, and lodgepole or whitebark pine predominate. These forests also have long fire return intervals and contain a high proportion of fire sensitive trees. At periods

averaging a few hundred years, extreme drought conditions would prime these forests for large, severe fires that would tend to set the forest back to an early successional stage, with a large carry-over of dead trees as a legacy of snags and logs in the regenerating forest natural ecological dynamics are largely preserved because fire suppression has been effective for less than one natural fire cycle. Thinning for restoration does not appear to be appropriate in these forests. Efforts to manipulate stand structures to reduce fire hazard will not only be of limited effectiveness but may also move systems away from pre-1850 conditions to the detriment of wildlife and watersheds.” “Fuel levels may suggest a high fire ‘hazard’ under conventional assessments, but wildfire risk is typically low in these settings.”

Likewise, Graham et al (2004) states: “Most important, the fire behavior characteristics are strikingly different for cold (for example, lodgepole pine, spruce, subalpine fir), moist (for example, western hemlock, western redcedar, western white pine), and dry forests. Cold and moist forests tend to have long fire- return intervals, but fires that do occur tend to be high- intensity, stand-replacing fires. Dry forests

historically had short intervals between fires, but most important, the fires had low to moderate severity.”

According to Graham et al (2004), thinning may also increase the likelihood of wildfire ignition in the type of forests in this Project area: “The probability of ignition is strongly related to fine fuel moisture content, air temperature, the amount of shading of surface fuels, and the occurrence of an ignition source (human or lightning caused) There is generally a warmer, dryer microclimate in more open stands (fig. 9) compared to denser stands. Dense stands (canopy cover) tend to provide more shading of fuels, keeping relative humidity higher and air and fuel temperature lower than in more open stands. Thus, dense stands tend to maintain higher surface fuel moisture contents compared to more open stands. More open stands also tend to allow higher wind speeds that tend to dry fuels compared to dense stands. These factors may increase probability of ignition in some open canopy stands compared to dense canopy stands.”

Please analyze the wilderness characteristic of the both the inventoried and uninventoried areas and wilderness study areas in the project area. The roadless areas are proposed as wilderness in the Northern Rockies Ecosystem Protection Act, S. 1531.

The Forest Service recognizes the value of forestland unencumbered by roads, timber harvest, and other development. Sometimes these areas are known as “inventoried roadless areas” if they have been inventoried through the agency’s various Roadless Area Review Evaluation processes, or “unroaded areas” if they have not been inventoried but are still of significant size and ecological significance such that they are eligible for congressional designation as a Wilderness Area.

Roadless areas provide clean drinking water and function as biological strongholds for populations of threatened and endangered species. Special Areas; Roadless Area Conservation; Final Rule, 66 Fed. Reg. 3,244, 3,245 (Jan. 12, 2001) (codified at 36 C.F.R. Part 294). They provide large, relatively undisturbed landscapes that are important to biological diversity and the long-term survival of many at-risk species. *Id.* Roadless areas provide opportunities for dispersed outdoor recreation, opportunities that diminish as open space and natural settings are developed elsewhere. *Id.* They also serve as bulwarks against the spread of non-

native invasive plant species and provide reference areas for study and research. *Id.*

Other values associated with roadless areas include: high quality or undisturbed soil, water, and air; sources of public drinking water; diversity of plant and animal communities; habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land; primitive, semi-primitive non-motorized, and semi-primitive motorized classes of dispersed recreation; refer-

ence landscapes; natural appearing cultural properties and sacred sites; and other locally identified unique characteristics.

Page 1 of the Roadless Report for this project states: ***There would be no openings over 75 acres (forest plan standard) in inventoried roadless areas. Refer to the vegetation report in the project record.***

Which means the proposed alternative calls for clearcuts up to 75 acres in size in roadless areas.

Page 6 of the Roadless Report states:

- ***Issues Addressed***

The proposed action includes activities that are not prohibited under the 2001 Inventoried Roadless Rule (Roadless Rule) such as prescribed fire or activities falling under one or more exceptions allowing the cutting, sale, or removal of “generally small diameter tree cutting”. The roadless areas, proposed acres and anticipated allowable treatments exceptions to prohibitions for these areas are outlined below:

- ***294.13 (b)(1)(ii) to maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period, along with prescribed fire, a non-prohibited activity.***

- *294.13 (b)(2) the cutting, sale or removal of timber is incidental to implementation of management activity not otherwise prohibited*
- *No temporary roads are being proposed in inventoried roadless areas.*

How many miles of temporary roads will be built outside of roadless areas?

Will you be using motorized vehicles in roadless areas in violation of the roadless rule?

In the late 1990s, the Forest Service reached several findings regarding roads on National Forest lands: (1) use of the National Forests had “shifted substantially toward recreation,” (2) there were insufficient funds to maintain existing roads, and (3) there was an “accumulation of new scientific information” suggesting that “ecological impacts from existing roads are more extensive than previously thought.” *Alaska v. USDA*, 273 F.Supp.3d 102, 108 (D.D.C. 2017)(quoting 63 Fed. Reg. 4350, 4350 (Jan. 28, 1998)). Subsequently, on January 12, 2001, the Forest Service published the final Roadless Rule. 66 Fed.

Reg. 3244 (Jan. 12, 2001). The Roadless Rule prohibits road construction and tree cutting in designated “Inventoried Roadless Areas” subject to limited exceptions. See *Alaska*, 273 F.-Supp.3d at 108.

For over 15 years, the Roadless Rule was the subject of litigation. See, e.g., *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1126 (9th Cir. 2002); *California ex rel. Lockyer v. USDA*,

575 F.3d 999, 1007 (9th Cir. 2009); *Wyoming v. USDA*, 661 F.3d 1209, 1272 (10th Cir. 2011); *Organized Vill. of Kake v. USDA*, 795 F.3d 956, 962 (9th Cir. 2015) (en banc); *Alaska*, 273 F.Supp.3d at 108–12. The Roadless Rule withstood these legal challenges. In relevant part, regarding the prohibition on tree cutting, the Roadless Rule mandates:

Prohibition on timber cutting, sale, or removal in inventoried roadless areas.

(a) Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section.

(b) Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.

(1) The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.

(i) To improve threatened, endangered, proposed, or sensitive species habitat; or

(ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;

(2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited by this subpart;

... .

36 C.F.R. §294.13 (2005)(emphases added).

The Roadless Rule further explains the meaning of the phrase “incidental to” in subsection (b)(2) above as follows:

Paragraph (b)(2) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by this rule. Examples of these activities include, but are not limited to trail construction or maintenance; removal of hazard trees adjacent to classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule.

66 Fed. Reg. 3258.

In this project, the Project area is located though out the Lolo National Forest including in Inventoried Roadless Areas.

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Please show that the entire Lolo National Forest is outside of the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period.

It is unclear whether the Forest Service will be reconstructing old roads, using illegal user-created roads, or using roads already closed by the Travel Plan in the Inventoried Roadless Area in order to conduct these activities. Please show the public where firelines and roads will be constructed and how they will be constructed.

There is no explanation on how bulldozes that will be used to build firelines will get into roadless areas, nor how the fire lines and fuel breaks will not be turned into illegal roads other than the fire lines and fuel breaks will be restored. What does restored mean?

One exception to the ban on tree-cutting in a Roadless Area is the allowance for tree cutting when it “is needed . . . [t]o maintain or restore the characteristics of ecosystem composition and structure . . . within the range of variability that would be expected to occur under natural disturbance regimes. . . .” 36 C.F.R. §294.13 (b)(1)(ii). Thus, in order to determine whether the “outside historic range of variability” exception applies, it is necessary to compare the existing condition to the historic range.

Tree-cutting is not “incidental to” another management activity; it is the management activity. The Forest Service fails to acknowledge that the Roadless Rule provides a narrow definition of the phrase “incidental to” in the (b)(2) exemption:

Paragraph (b)(2) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by this rule. Examples of these activities include, but are not limited to trail construction or maintenance; removal of hazard trees adjacent to

classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule.

66 Fed. Reg. 3258.

Every one of these examples in the roadless rule that allows exceptions shows that the management activity itself is not any form of vegetation management, i.e. tree-cutting – instead the management activities are things like trail management, road management, firefighting, land surveys, ski runs, utility corridors, or lawful road construction. In contrast, here the management activity itself is vegetation management, i.e. tree-cutting such as clearcuts as big as 75 acres which is a violation of the roadless rule.

The Forest Service's interpretation of exemption (b)(2) is contrary to the explanation of "incidental to" in the Roadless Rule, and if adopted, would swallow the rule. The Forest Service could simply avoid the tree-cutting ban by labeling every tree-cutting activity in a Roadless Area as something other than tree-cutting – such as "restoration" – and thereby circumvent the ban with euphemisms. This is clearly not the intent of the Roadless Rule. 66 Fed. Reg. 3258. Accordingly, the (b)(2) exemption does not apply here.

Please consider the cumulative impacts on wildlife from logging and burning roadless areas.

Please analyze an alternative that would reduce fire suppression in roadless areas and remote roaded areas since the EA concludes that fire suppression is a problem.

Will the HLCNF continue to suppress fires?

Schoennagel et al. 2004 (attached) states on page 666: ***We conclude that large, infrequent stand-replacing fires are “business as usual” in this forest type, not an artifact of fire suppression.*** Therefore the scoping notice is in violation of NEPA and is also violating the purpose and need because of its assumptions that fire suppression has been the problem.

There is also a huge problem with the current Forest Plan direction for the Northern Rockies Lynx Management Direction. This amendment will be applied to the South Plateau project. The deficiencies of this Amendment need to be addressed prior to project analysis, since the NRLMD does not address, or provide, criteria for habitat

fragmentation and minimum levels of lynx winter habitat. Will the project create movement barriers for the lynx? Does the NRLMD does not prohibit this severe impact? Does the

NRLMD d prevent prescribed burning and forest thinning in recruitment winter habitat for lynx, even if existing levels of this key habitat are insufficient as per historical levels?

As per the NRLMD, it is not clear in the why extensive pre-commercial thinning is planned, and how this is allowed under the NRLMD. It is also not clear exactly what types of areas are being thinned, such as if they are natural forest or old harvest units. Since the agency did not actually address this important issue in the EA, the general public may not be aware of the conflicts of the proposed actions with existing Forest Plan direction. This lack of transparency is an important NEPA issue with us.

We are specifically requesting that the agency provide the biological assessment and the biological opinion, including terms and conditions and allowed incidental take of grizzly bears and lynx, PRIOR to the objection process, so that the public can see how the Forest Service is going to manage these species with project implementation.

The project is far too large to provide meaningful information or analysis to the public, and thus prevents agency transparency in management of public lands. It is not clear why the Forest Service believes that such a large project is either needed, or can be meaningfully understood and reviewed by the public.

It is clear from the massive impacts proposed in grizzly bear and Canada lynx habitat that an environmental impact statement is needed for each individual project area.

The project is not following the best available science and therefore is in violation of NEPA, NFMA, the APA and the ESA. The best available science is now Kosterman's masters Thesis, Cor-

relates of Canada Lynx Reproductive Success in Northwestern Montana

Please find Kosterman attached. Kosternman finds that 50% of lynx habitat must be mature undisturbed forest for it to be optimal lynx habitat where lynx can have reproductive success and no more than 15% of lynx habitat should be young clearcuts, i.e. trees under 4 inched dbh. This contradicts the agency's assumption in the Lynx Amendment that 30% of lynx habitat can be clearcut, and that no specific amount of mature forest needs to be conserved. It is now the best available science out there that describes lynx habitat in the Northern Rockies related to lynx viability and recovery. Kosterman's study demonstrates that the Lynx Amendment standards are not adequate for lynx viability and recovery, as previously assumed by the Forest Service.

Please see the attached paper titled: "Management of forests and forest carnivores: Relating landscape mosaics to habitat quality of Canada lynx at their range periphery" by Holbrook et al. 2019. It states that all lynx habitat has to be monitored for lynx.

The vast majority of the project area is in lynx critical habitat. The project will "Likely to adversely affect lynx which means that listed resources are likely to be exposed to the action or its environmental consequences and will respond in a negative manner to the exposure.

The project does not have a take permit from the U.S. F.W.S. and is in violation of the E.S.A., NFMA, the APA and NEPA.

The ESA (Section 3) defines take as "to harass, harm, pursue, hunt, shoot, wound, trap, capture,

USFWS further defines "harm" as "significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering", and "harass" as "actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not

Since this is now the best available science we are hereby formally requesting that the Forest Service write a supplemental EIS for the Northern Rockies Lynx Management Direction and reinitiate consultation with the FWS for the Lynx Amendment to publicly disclose and address the findings of this study, and to allow for further public comment on this important issue of lynx recovery.

We request a careful analysis of the impacts to fisheries and water quality, including considerations of sedimentation, increases in peak flow, channel stability, risk of rain-on-snow events, and increases in stream water temperature. Please disclose the locations of seeps, springs, bogs and other sensitive wet areas, and the effects on these areas of the project activities. Where livestock are permitted to graze, we ask that you assess the present condition and continue to monitor the impacts of grazing activities upon vegetation diversity, soil compaction, stream bank stability and subsequent sedimentation. Livestock grazing occurs in the Project area and causes sediment impacts, trampled or destabilized banks, increased nutrient loads, and decreased density, diversity, and function of riparian vegetation that may lead to in-

creased stream temperatures and further detrimental impacts to water quality.

This project is a violation of the National Environmental Policy Act (NEPA). It is far too large for the agency to provide adequate information to the public, and far too large for the public to understand how the project will impact natural resources. As an example, we expect that there will not be anything close to valid wildlife surveys, including for the goshawk, great gray owl, black-backed woodpecker, and other sensitive/management indicator species and Montana Species of Concern, as the brown creeper and Cassin's finch, and several species of bats.

This information needs to be provided to the public before a decision is made so that the public can understand how the agency is managing these wildlife resources. Saying that surveys will be completed later denies the public the information as to occupancy of the project areas by wildlife, which is a NEPA violation.

The Project will violate the NEPA if there are no valid snag surveys done for the project area both within and outside proposed harvest units.

The project will violate the NEPA if there are no valid surveys for old growth habitat within each project area, as identified by Green et al. 1992; old growth types need to be defined and quantified by timber types, such as lodgepole pine, Douglas-fir, mixed conifer, spruce, subalpine fir, and limber pine.

The project will likely violate the NEPA if the mitigation measures for MIS, sensitive species, and Montana Species of Con-

cern (birds, mammals including bats) are not clearly defined, and demonstrated to be effective as per the current best science.

The project will violate the Forest Plan by constructing new roads for timber management in MA 15. Production of timber is not planned for MA 15 as well, except adjacent to existing roads.

The project will violate the ESA by creating adverse impacts to the grizzly bear from motorized route management; take of grizzly bears as a result will be illegal.

The project will violate the Forest Plan by increasing open and total road densities in grizzly bear Recovery habitat as per current Forest Plan direction in the Travel Plan BiOp.

FAILURE TO REVIEW AND PROTECT CULTURAL AND HISTORICAL RESOURCES

Consultation with the State Historic Preservation Office (SHPO) must be completed prior to a decision being signed. Any required protection measures provided from SHPO will be incorporated into my final decision.

Crucial to the preservation of the historical and cultural foundations of the nation, Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 C.F.R. Part 800 (PDF) (revised August 5, 2004) require Federal agencies to consider the effects of projects they carry out, approve, or fund on historic properties. Additionally, Federal agencies must provide the Advisory Council on Historic Preservation (ACHP) opportunity to comment on such projects prior to the agency's final decision.

A Federal project that requires review under Section 106 is defined as an "undertaking." An undertaking means a project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license, or approval.

Section 110 of the NHPA

Added to the NHPA in 1992, Section 110 requires Federal agencies to emphasize the preservation and enhancement of cultural resources. Section 110 directs agencies to initiate measures necessary to direct their policies, plans, and programs in such a way that federally-owned sites, structures, and objects of historical architectural or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the public. The agencies are also encouraged to institute (in consultation with the ACHP) procedures to assure Federal plans and programs contribute to the preservation and enhancement of non-Federally owned sites, structures, and objects of historical, architectural, and archaeological significance.

The MT SHPO has not yet received this survey. Currently this project is in violation of the National Historic Preservation Act and NEPA. The cultural surveys need to be done before the NEPA and NHPA process can be completed, which has not occurred. The project must be approved by the SHPO and the public needs to be given a chance to comment on this.

Did the Forest Service conduct NEPA analysis (i.e. an EA or EIS) for the Fire Plan the Forest is using for this project? To not respond to this in violation of NEPA, NFMA, and the APA.

If the Forest Service did not conduct NEPA for the Fire Plan, please immediately start that NEPA process.

Please provide a map showing the Wildland Urban Interface (WUI) and the locations of all homes in comparison to the project area. Please show that the WUI complies with the definition of the WUI in the healthy Forest Restoration Act.

If the Forest Service did not conduct NEPA for the Fire Plan, please disclose the cumulative effects of Forest-wide implementation of the Fire Plan in the South Plateau project EIS, or EA if you refuse to write an EIS, to avoid illegally tiering to a non-NEPA document. Specifically analyze the decision to prioritize mechanical, human- designed, somewhat arbitrary treatments as a replacement for naturally-occurring fire.

Did the Forest Service conduct ESA consultation for the Fire Plan?

How effective have BMPs been at stopping (i.e. preventing) new weed infestations from starting during prescribed burning and related road operations?

Is it true that new roads are the number one cause of new noxious weed infestations?

Why isn't the Forest Service considering a Forest Plan amendment in this Project to amend the Forest Plan to

include binding legal standards that address noxious weeds?

Is it true that noxious weeds are one of the top threats to biodiversity on our National Forests?

How can the Forest Service be complying with NFMA's requirement to maintain biodiversity if it has no legal standards that address noxious weeds?

What MIS did you find, how many and how did you look for these MIS?

How will the decreased elk security and thermal cover affect wolverines? Please formally consult with the US FWS on the impact of this project on wolverines. You are in violation of the ESA.

Which wildlife species and ecosystem processes, if any, does fire-proofing benefit?

Which species and processes do fire-proofing harm?

What evidence do you have that this prescribed will make the forest healthier for fish and wildlife? What about the role of mixed severity and high severity fire – what are the benefits of those natural processes? You didn't answer this.

How have those processes (mixed and high severity fire) created the ecosystems we have today?

Over how many millennia have mixed and high severity fire have been occurring without human intervention?

What beneficial ecological roles do beetles play? Can the forest survive without beetles?

Will all WQLS streams in the project area have completed TMDLs before a decision is signed?

Page 9 of the EA states:

Watersheds: The project area includes 109 category 4a streams and 120 category 5 streams, which are listed as impaired water quality and require a TMDL on the 2018/2020 303(d) list for sediment or other parameters (State of Idaho, 2018)

Will this project leave enough snags to follow the Forest Plan requirements and the requirements of sensitive old growth species such as flammulated owls and goshawks?

Is this Project consistent with “research recommendations (Krankina and Harmon 2006) for protecting carbon gains against the potential impacts of future climate change? That study recommends “[i]ncreasing or maintaining the forest area by avoiding deforestation,” and states that “protecting forest from logging or clearing offer immediate benefits via prevented emissions.”

Please list each visual quality standard that applies to each unit and disclose whether each unit meets its respective visual quality standard.

Please disclose whether you have conducted surveys in the Project area for this Project for bull tro pine, wolverines, pine martins, northern goshawk and lynx, grizzly bears as required by the Forest Plan.

The project appears to violate the best available science on road density in grizzly bear habitat. Will the project comply with the 19/19/68 standards? Please consult with the US FWS on the impact of the project before the draft ROD is signed so the public has a chance to comment as provided by in NEPA.

Please disclose the last time the Project area was surveyed for whitebark pine, monarch butterfly, wolverines, bull trout, pine martins, northern goshawk, grizzly bears and lynx.

Please disclose how often the Project area has been surveyed for whitebark pine, bull trout, wolverines, pine martins, monarch butterfly, northern goshawks, grizzly bears and lynx.

Would the habitat be better for whitebark pine, wolverines, pine martins, bull trout, northern goshawks, grizzly bears, monarch butterflies, and lynx if roads were removed in the Project area?

Please provide us with the full BA for the bull trout, bull trout critical habitat, whitebark pine, wolverines, monarch butterflies, pine martins, northern goshawks, grizzly bears, lynx critical habitat, and lynx.

Please formally consult with the U.S. FWS on the impact of the project on bull trout, bull trout critical habitat, whitebark pine, wolverines, monarch butterflies, grizzly bears, lynx critical habitat, and lynx

Weeds

Native plants are the foundation upon which the ecosystems of the Forest are built, providing forage and shelter for all native

wildlife, bird and insect species, supporting the natural processes of the landscape, and providing the context within which the public find recreational and spiritual opportunities. All these uses or values of land are hindered or lost by conversion of vegetation to invasive and noxious plants. The ecological threats posed by noxious weed infestations are so great that a former chief of the Forest Service called the invasion of noxious weeds “devastating” and a “biological disaster.”

Despite implementation of Forest Service “best management practices” (BMPs), noxious weed infestation on the Forest is getting worse and noxious weeds will likely overtake native plant populations if introduced into areas that are not yet infested. The Forest Service has recognized that the effects of noxious weed invasions may be irreversible. Even if weeds are eliminated with herbicide treatment, they may be replaced by other weeds, not by native plant species.

Invasive plant species, also called noxious weeds, are one of the greatest modern threats to biodiversity on earth. Noxious weeds cause harm because they displace native plants, resulting in a loss of diversity and a change in the structure of a plant community. By removing native vegetative cover, invasive plants like knapweed may increase sediment yield and surface runoff in an ecosystem. As well knapweed may alter organic matter distribution and nutrient through a greater ability to uptake phosphorus over some native species in grasslands. Weed colonization can alter fire behavior by increasing flammability: for example, cheatgrass, a widespread noxious weed on the Forest, cures early and leads to more frequent burning. Weed colonization can

also deplete soil nutrients and change the physical structure of soils.

The Forest Service's own management activities are largely responsible for noxious weed infestations; in particular, logging, prescribed burns, and road construction and use create a risk of weed infestations. The introduction of

logging equipment into the Forest creates and exacerbates noxious weed infestations. The removal of trees through logging can also facilitate the establishment of noxious weed infestations because of soil disturbance and the reduction of canopy closure. In general, noxious weeds occur in old clearcuts and forest openings, but are rare in mature and old growth forests. Roads are often the first place new invader weeds are introduced. Vehicle traffic and soil disturbances from road construction and maintenance create ideal establishment conditions for weeds. Roads also provide obvious dispersal corridors. Roadsides throughout the project area are infested with noxious weeds. Once established along roadsides, invasive plants will likely spread into adjacent grasslands and forest openings.

Prescribed burning activities within the analysis area would likely cumulatively contribute to increases to populations. As a disturbance process, fire has the potential to greatly exacerbate infestations of certain noxious weed species, depending on burn severity and habitat type (Fire Effects Information System 2004). Soil disturbance, such as that resulting from low and moderate burn severities from prescribed fire and fire suppression related disturbances (dozer lines, drop spots, etc.), provide optimum conditions for noxious weed invasion. Dry site vegetation types and road corridors are recent ground disturbance

(timber management, road construction) has occurred. Units proposed for burning within project area may have closed forest service access roads (jammers) located within units.

These units have the highest potential for noxious weed infestation and exacerbation through fire activities. Please provide an alternative that eliminates units that have noxious weeds present on roads within units from fire management proposals.

Please address the ecological, social and ascetic impact of current noxious weed infestations within the project area. Include an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations. What treatment methods will be used to address growing noxious weed problems? What noxious weeds are currently and historically found within the project area? Please include a map of current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's- tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the Montana COUNTY NOXIOUS WEED LIST. State-listed Category 2 noxious weed species yellow and orange hawkweeds are recently established (within the last 5 to 10 years) in Montana and are rapidly expanding in established areas. They can invade undisturbed areas where native plant communities are intact. These species can persist in shaded conditions and often grow underneath shrubs making eradication very difficult. Their stoloniferous (growing at the surface or below ground) habit can create dense mats that can persist and spread to densities of 3500 plants per square mile (Thomas and Dale

1975). Are yellow and orange hawkweeds present within the project area?

Please address the cumulative, direct and indirect effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influenced by the following management actions: road construction including new permanent and temporary roads, and skid trails proposed within this project; opening and decommissioning of roads represented on forest service maps; ground disturbance and traffic on forest service template roads, mining access routes, and private roads; removal of trees through prescribed burns. What open, gated, and decommissioned Forest Service roads within the project area proposed as haul routes have existent noxious weed populations and what methods will be used to assure that noxious weeds are not spread into the proposed action units?

Noxious weeds are not eradicated with single herbicide treatments. A onetime application may kill an individual plant but dormant seeds in the ground can still sprout after herbicide treatment. Thus, herbicides must be used on consistent, repetitive schedules to be effective.

What commitment to a long-term, consistent strategy of application is being proposed for each weed infested area

within the proposed action area? What long term monitoring of weed populations is proposed?

When areas treated with herbicides are reseeded on national forest land, they are usually reseeded with exotic grasses, not native plant species. What native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project? Will disturbed areas including road corridors, skid trails, and burn units be planted or reseeded with native plant species?

The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest Service concedes that preventing the introduction of weeds into uninfested areas is “the most critical component of a weed management program.” The Forest Service’s national management strategy for noxious weeds also recommends “develop[ing] and implement[ing] forest plan standards” and recognizes that the cheapest and most effective solution is prevention. Which units within the project area currently have no noxious weed populations within their boundaries? What minimum standards are in the Custer National Forest Plan to address noxious weed infestations? Please include an alternative in the DEIS that includes land management standards that will prevent new weed infestations by addressing the

causes of weed infestation. The failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native alternative that includes preventive measures would violate NEPA because the Forest Service would fail to consider a reasonable alternative.

Rare Plants

The ESA requires that the Forest Service conserve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which population viability is a concern as “sensitive species” designated by the Regional Forester (FSM 2670.44). The response of each of the sensitive plant species to management activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural processes such as fire, insect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be altered may have impacts on native vegetation, including threatened and sensitive plants. Herbicide application – intended to eradicate invasive plants – also results in a loss of native plant diversity because herbicides kill native plants as well as invasive plants. Although native species have evolved and adapted to natural disturbance such as fire on the landscape, fires primarily occur in mid to late summer season, when annual plants have flowered and set seed. Following fall fires, perennial root-stocks remain underground and plants emerge in the spring. Spring and early summer burns could negatively impact emerging vegetation and destroy annual plant seed.

What threatened, endangered, rare and sensitive plant species and habitat are located within the proposed project area? What standards will be used to protect threatened, rare, sensitive and culturally important plant species and their habitats from the management actions proposed in this project?

Whitebark Pine

Not all ecosystems or all Rocky Mountain landscapes have experienced the impacts of fire exclusion. In some wilderness areas, where in recent decades natural fires have been allowed to burn, there have not been major shifts in vegetation composition and structure (Keane et al. 2002). In some alpine ecosystems, fire was never an important ecological factor. In some upper subalpine ecosystems, fires were important, but their rate of occurrence was too low to have been significantly altered by the relatively short period of fire suppression (Keane et al. 2002). For example, the last 70 to 80 years of fire suppression have not had much influence on subalpine landscapes with fire intervals of 200 to several hundred years (Romme and Despain).

Consequently, it is unlikely that fire exclusion has yet to significantly alter stand conditions or forest health within Rocky Mountain subalpine ecosystems.

Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning, would experience mortality from project activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the presence of adequate seed source and dispersal mechanisms (Clarks Nutcracker or humans planting whitebark pine seedlings).

White pine blister rust, an introduced disease, has caused rapid mortality of whitebark pine over the last 30 to 60 years. Keane and Arno (1993) reported that 42 percent of whitebark pine in western Montana had died in the previous 20 years with 89 percent of remaining trees being infected with blister rust. The ability of whitebark pine to reproduce naturally is strongly affected by blister rust infection; the rust kills branches in the upper cone bearing crown, effectively ending seed production.

Whitebark pine seedlings and saplings are very likely present in the subalpine forests proposed for burning and logging. In the absence of fire, this naturally occurring whitebark pine regeneration would continue to function as an important part of the subalpine ecosystem. Since 2005, rust resistant seed sources have been identified in the Northern Rockies (Mahalovich et al 2006). Due to the severity of blister rust infection within the region, natural whitebark pine regeneration in the project area is prospective rust resistant stock.

Although prescribed burning can be useful to reduce areas of high-density subalpine fir and spruce and can create favorable ecological conditions for whitebark pine regeneration and growth, in the absence of sufficient seed source for natural regeneration maintaining the viability and function of whitebark pine would not be achieved through burning. Planting of rust-resistant seedlings would likely not be sufficient to replace whitebark pine lost to fire activities.

What surveys have been conducted to determine presence and abundance of whitebark pine re-generation? If whitebark pine

seedlings and saplings are present, what measures will be taken to protect them? Please include an alternative that excludes burning in the presence of whitebark pine regeneration (consider 'Daylighting' seedlings and saplings as an alternative restoration method). Will restoration efforts include planting whitebark pine? Will planted seedling be of rust- resistant stock? Is rust resistant stock available? Would enough seedlings be planted to replace whitebark pine lost to fire activities? Have white pine blister rust surveys been accomplished? What is the severity of white pine blister rust in proposed action areas?

The project will violate the ESA by using outdated management direction for the grizzly bear as per the Forest Plan Biological Opinion from 1986; management of roads is not addressed in that BiOp. The Travel Plan BiOp does not address specific habitat management for the bear, except for roads and security management.

Road densities are a key habitat requirement for grizzly bears as per the current best science; security will not be maintained or enhanced with the project; the claimed benefits of grizzlies to logging must be weighed against the disturbance, displacement, and increased mortality risks for an overall measure of impact; logging of white bark pine will degrade grizzly bear habitat; logging will not maintain and improve the quality and quantity of big game forage.

The project will be a NFMA violation because it will promote the demise of aspen stands by burning out conifers without providing protection from livestock browsing.

The agency is violating the NEPA by claiming that conifer encroachment needs to be removed to promote aspen, when live-stock grazing is almost always the problem with aspen failure to regenerate.

The agency is violating the NEPA by promoting fuel reduction projects as protection of the public from fire, when this is actually a very unlikely event; the probability of a given fuel break to actually have a fire in it before the fuels reduction benefits are lost with conifer regeneration are extremely remote; forest drying and increased wind

speeds in thinned forests may increase, not reduce, the risk of fire.

The agency is violating the NEPA by providing false reasons for prescribed burning to the public by claiming that insects and disease in forest stands are detrimental to the forest by reducing stand vigor (health) and increasing fire risk. There is no current science that demonstrates that insects and disease are bad for wildlife, including dwarf mistletoe, or that these increase the risk of fire once red needles have fallen.

The agency is violating the NEPA by claiming that prescribed burning is needed to create a diversity of stand structures and age classes; this is just agency rhetoric to conceal the

The agency is violating the NEPA by using vague, unmeasurable terms to rationalize the proposed burning to the public. How can the public measure “resiliency?” What are the specific criteria used to define resiliency, and what are the ratings for each proposed logging unit before and after treatment? How is the risk of fire as affected by the project being measured so that

the public can understand whether or not this will be effective? How is forest health to be measured so that the public can see that this is a valid management strategy? What specifically constitutes a diversity of age classes, how is this to be measured, and how are proposed changes measured as per diversity? How are diversity measures related to wildlife (why is diversity

needed for what species)? If the reasons for logging cannot be clearly identified and measured for the public, the agency is not meeting the NEPA requirements for transparency.

The agency is violating the NEPA by claiming that prescribed burning will benefit wildlife; the EA does not identify what habitat objectives will be addressed with burning, so the public is unable to understand how to comment on this claim.

The agency is violating the NEPA and the ESA by claiming that prescribed burning will benefit the grizzly bear.

The agency is violating the Roadless Area Rule by burning in inventoried roadless lands; specific measurable criteria were not provided as to why these treatments will promote natural processes and wildlife.

The agency is violating the Roadless Area Rule by proposing prescribed burning to control fire in adjacent landscapes; this rationale would allow the treatment of all IRAs and make the purpose of the Roadless Area Conservation Rule meaningless, since the main function of IRAs would be fire management of adjacent landscapes.

The agency will violate the NFMA by failing to ensure that old growth forests are well-distributed across the landscape with a

Forest Plan amendment; although not provided in the EA for public comment, the agency is amending the Forest Plan to allow logging of old growth rather than preserving it.

Please include an easily understandable accounting of all costs for the various types of treatments, including burning within the IRA. For commercial logging, fuels reduction, and prescribed burning, we would like to know what the estimated cost is “per acre” for that particular treatment. We would also like to know the costs for construction of new temporary roads, reconstruction of existing roads, and road obliteration and/or decommissioning per mile of road.

The U.S. District Court just ruled that the Forest Service has to formally consult with the U.S. FWS on the Northern Rockies Lynx Management Direction effect on lynx and lynx critical habitat. Have you done this? If not please do so.

Have you removed any lynx analysis units in the project area without taking public comment? If so, please withdraw the EA and first take public comment on why you want to remove lynx analysis units. You removed lynx analysis units (LAUs) without taking comment in the Middleman project.

THE AGENCIES MUST REINITIATE CONSULTATION ON THE NORTHERN

ROCKIES LYNX MANAGEMENT DIRECTION.

The Northern Rockies Lynx Management Direction is inadequate to ensure conservation and recovery of lynx. The amend-

ments fail to use the best available science on necessary lynx habitat elements, including but not limited to, failing to include standards that protect key winter habitat.

The Endangered Species Act requires the FS to insure that the the Lolo Forestwide burning project is not likely to result in the destruction or adverse modification of critical habitat. 16 U.S.C. §1536(a) (2). Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for lynx. 74 Fed. Reg. 8644. The Northern Rockies Lynx Management Direction (NRLMD) as applied in the project violates the ESA by failing to use the best available science to insure no adverse modification of critical habitat. The NRLMD carves out exemptions from Veg Standards

S1, S2, S5, and S6. In particular, fuel treatment projects may occur in the WUI even though they will not meet standards Veg S1, S2, S5, or S6, provided they do not occur on more than 6% of lynx habitat on each National Forest. See NRLMD ROD, Attachment 1, pages 2-3. Allowing the agency to destroy or adversely modify any lynx critical habitat has the potential to appreciably reduce the conservation value of such habitat. The agency cannot simply set a cap at 6% forest- wide without looking at the individual characteristics of each LAU to determine whether the project has the potential to appreciably reduce the conservation value. The ESA requires the use of the best available science at the site-specific level. It does not allow the agencies to make a gross determination that allowing lynx critical habitat to be destroyed forest-wide while not appreciably reduce the conservation value.

The FS violated NEPA by applying the above-mentioned exception without analyzing the impacts to lynx in the individual LAUs. The Project violates the NFMA by failing to insure the viability of lynx. According to the 1982 NFMA regulations, fish and wildlife must be managed to maintain viable populations of Canada lynx in the planning area. 36 C.F.R. 219.19. The FS has not shown that lynx will be well-distributed in the planning area. The FS has not addressed how the project's adverse modification of denning and foraging habitat will impact distribution. This is important because the agency readily admits that the LAUs already contain a "relatively large percentage of unsuitable habitat." The NRLMD ROD at 40 states that:

The national forests subject to this new direction will provide habitat to maintain a viable population of lynx in the northern Rockies by maintaining the current distribution of occupied lynx habitat, and maintaining or enhancing the quality of that habitat.

The FS cannot insure species viability here without addressing the impacts to the already low amount of suitable habitat. By cutting in denning and foraging habitat, the agency will not be "maintaining or enhancing the quality of the habitat."

This project is in Canada lynx habitat. In order to meet the requirements of the FS/USFWS Conservation Agreement, the FS agreed to insure that all project activities are consistent with the Lynx Conservation Assessment and

Strategy (LCAS) and the requirements of protecting lynx critical habitat. The FS did not do so with its project analysis. This project will adversely affect lynx critical habitat in violation of the Endangered Species Act. The BA/BE needs to be rewritten

to reflect this information to determine if this project will adversely modify proposed critical habitat for lynx and if so conference with USFWS.

On March 31, 2008 Gloria Manning, Reviewing Officer for the Chief, issued instructions to the Forest Service regarding two of appellants' claims regarding the Northern Rockies Lynx Management Direction appeal.

Claim 1 in the appeal submitted by Friends of the Wild Swan, Alliance for the Wild Rockies and Friends of the Clearwater alleged that the Forest Service violated the National Environmental Policy Act and Administrative Procedures Act by selecting arbitrary criteria to determine whether habitat was occupied. Neither the FEIS nor the amended Conservation Agreement contains any justification for the criteria used to determine whether lynx occupy habitat on National Forests.

Ms. Manning reviewed the appeal record and "found no specific explanation for the selection of this date or indication of whether records of earlier sightings had been reviewed for their relevance or why those earlier records would not be otherwise considered in determining occupied lynx habitat."

She instructed the Forest Service to "provide documentation for the record that more fully describes the rationale for establishing that verified lynx not earlier, may be used as a basis for determining occupied lynx habitat. This documentation must be provided to all appellants. If the documentation was not in existence at the time the ROD was signed you will utilize Forest Service Handbook 1909.15, Chapter 18 to determine any subsequent actions that may be necessary as a result of this new information."

Likewise in the Montanans for Multiple Use appeal Ms. Manning instructed the Forest Service "to supplement the FEIS with an analysis of the economic effects associated with commercial timber harvest, in accordance with NEPA regulations at 40 CFR 1502.9. Utilize Forest Service Handbook 1909.15, Chapter 18, to determine any subsequent actions that may be necessary as a result of the new information."

Because of instructions in the Northern Rockies Lynx Management Direction appeal decision the Forest Service is required to consult with the US Fish and Wildlife Service. This was not done in violation of the Endangered Species Act.

The LNF is home to the Canada lynx, listed as a Threatened species under the Endangered Species Act (ESA). In December 1999, the Forest Service and Bureau of Land Management completed their "Biological Assessment Of The Effects Of National Forest Land And Resource Management Plans And Bureau Of Land Management Land Use Plans On Canada

Lynx" (Programmatic Lynx BA). The Programmatic Lynx BA concluded that the current programmatic land management plans "may affect, and are likely to adversely affect, the subject population of Canada lynx."

The Lynx BA team recommended amending or revising Forest Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects on lynx. The Programmatic Lynx BA's determination means that Forest Plan implementation is a "taking" of lynx, and makes Section 7 formal consultation on the CGNF Plan mandatory, before actions such as the proposed project are approved.

Continued implementation of the Forest Plan constitutes a “taking” of the lynx. Such taking can only be authorized with an incidental take statement, issued as part of a Biological Opinion (B.O.) during of Section 7 consultation. The CGNF must incorporate terms and conditions from a programmatic B.O. into a Forest Plan amendment or revision before projects affecting lynx habitat, such as this one, can be authorized.

Thank you for your time and consideration of our comments.

The project does not meet the purpose and need of the project. Please see the attached paper by Baker et al. 2023. This landmark study found a pattern of "Falsification of the Scientific Record" in government-funded wildfire studies.

This unprecedented [study](#) was published in the peer-reviewed journal *Fire*, exposing a broad pattern of scientific misrepresentations and omissions that have caused a "falsification of the scientific record" in recent forest and wildfire studies funded or authored by the U.S. Forest Service with regard to dry forests of the western U.S. Forest Service related articles have presented a falsified narrative that historical forests had low tree densities and were dominated by low-severity fires, using this narrative to advocate for its current forest management and wildfire policies.

However, the new study comprehensively documents that a vast body of scientific evidence in peer-reviewed studies that have directly refuted and discredited this narrative were either misrepresented or omitted by agency publications. The corrected scien-

tific record, based on all of the evidence, shows that historical forests were highly variable in tree density, and included "open" forests as well as many dense forests. Further, historical wildfire severity was mixed and naturally included a substantial component of high-severity fire, which creates essential snag forest habitat for diverse native wildlife species, rivaling old-growth forests.

These findings have profound implications for climate mitigation and community safety, as current forest policies that are driven by the distorted narrative result in forest management policies that reduce forest carbon and increase carbon emissions, while diverting scarce federal resources from proven community wildfire safety measures like home hardening, defensible space pruning, and evacuation assistance.

"Forest policy must be informed by sound science but, unfortunately, the public has been receiving a biased and inaccurate presentation of the facts about forest density and wildfires from government agencies," said Dr. William Baker in their press release announcing the publication of their paper.

"The forest management policies being driven by this falsified scientific narrative are often making wildfires spread faster and more intensely toward communities, rather than helping communities become fire-safe," said Dr. Chad Hanson, research ecologist with the John Muir Project in the same press release. "We need thinning of small trees adjacent to homes, not backcountry management."

"The falsified narrative from government studies is leading to inappropriate forest policies that promote removal of mature, fire-resistant trees in older forests, which causes increased carbon emissions and in the long-run contributes to more fires" said, Dr. Dominick A. DellaSala, Chief Scientist, Wild Heritage, a Project of Earth Island Institute concluded in the press release.

Following is a summary of their paper.

Landmark Study Finds Pattern of "Falsification of the Scientific Record" in Government-Funded Wildfire Studies

Short Summary of the Newly Release Study

"Countering Omitted Evidence of Variable Historical Forests and Fire Regime in Western USA Dry Forests: The Low-Severity-Fire Model Rejected":

An unprecedented new study, Baker et al. (2023), published in the peer-reviewed journal Fire, exposed a broad pattern of scientific misrepresentations and omissions by government forest and wildfire scientists. This "falsification of the scientific record" is driving bad policies and government mismanagement of public forests, including clearcutting and commercial logging of mature and old-growth trees under deceptive euphemisms like "thinning", "restoration", and "fuel reduction". In particular, studies funded by the U.S. Forest Service, an agency that financially benefits from commercial logging on public lands, have presented a falsified narrative that historical forests had low tree densities and were heavily dominated by low-severity fires, using this narrative to push for increased commercial logging.

While Baker et al. (2023) documents a broad pattern of scientific omissions by Forest Service studies, it focuses on Hagmann et al. (2021), a Forest Service study that has received much media attention and has been used as the justification for a series of unprofessional public attacks and character assassination efforts by Forest Service-funded scientists against independent forest/fire scientists. Centrally, Baker et al. (2023) found that, while Hagmann et al. (2021) was presented ostensibly as a review, that paper listed a series of studies by independent scientists, and then listed the Forest Service's published critiques of those studies, but never mentioned the stacks of reply studies by independent scientists that completely refuted and discredited the Forest Service critiques. Through this glaring omission of a huge body of scientific evidence, Hagmann et al. (2021) created the false appearance that the Forest Service critiques were the last word on the subject. The scientific reply studies by independent scientists note that the Forest Service critiques do not challenge the central evidence or conclusions of the initial studies, and the reply articles provide exhaustive evidence documenting why the tangential critiques in the Forest Service articles are unfounded and inaccurate—all of which was concealed by Hagmann et al. (2021). The corrected scientific record, based on all of the evidence, shows that historical forests were highly variable in tree density, and included "open" forests as well as many dense forests. Further, historical wildfire severity was mixed and naturally included a substantial component of high-severity fire, which creates essential snag forest habitat that rivals old-growth forest in terms of native biodiversity. These findings have profound implications for climate change mitigation and commu-

nity safety, as current forest policies that are driven by the distorted narrative result in forest management policies that reduce forest carbon and increase carbon emissions, while diverting scarce federal resources away from proven community wildfire safety measures like home hardening, defensible space pruning, and evacuation assistance.

Why is this project not in violation of NEPA because the HLC-NF appears to be using the same false narrative that Baker et al. criticize?

The project as proposed is in violation of NEPA, NFMA and the APA because it is claiming that historical were not highly variable in tree density.

Baker et al. 2023 state in their abstract: *Management is guided by current conditions relative to the historical range of variability (HRV). Two models of HRV, with different implications, have been debated since the 1990s in a complex series of papers, replies, and rebuttals. The “low-severity” model is that dry forests were relatively uniform, low in tree density, and dominated by low- to moderate-severity fires; the “mixed-severity” model is that dry forests were heterogeneous, with both low and high tree densities and a mixture of fire severities.*

What HRV model is the IPNF using?

Baker et al. 2023 also state in their abstract: *Here, we simply rebut evidence in the low-severity model's latest review, including its 37 critiques of the mixed-severity model. A central finding of high-severity fire recently exceeding its historical rates was not supported by evidence in the review itself. A large body of published evidence supporting the mixed-severity model was omitted. These included numerous direct observations by early scientists, early forest atlases, early newspaper accounts, early oblique and aerial photographs, seven paleo-charcoal reconstructions, ≥ 18 tree-ring reconstructions, 15 land survey reconstructions, and analysis of forest inventory data. Our rebuttal shows that evidence omitted in the review left a falsification of the scientific record, with significant land management implications. The low-severity model is rejected and mixed-severity model is supported by the corrected body of scientific evidence.*

What areas of the forest are outside of the normal range of variability?

What scientific literature are you referring to when the scoping notice states:

The scientific literature is exceedingly clear that the most effective way to reduce fire spread rates and severity is with some combination of management that includes prescribed fire.

How will wildlife habitat and watershed function be improved?

What species will be hurt by this project?

What species will benefit from this project?

How will the project help protect high-quality scenery and recreation infrastructure?

The scoping notice states: ***Fireline would be constructed where existing features such as roads, trails, or wet drainages, are not sufficient to meet prescribed fire control objectives.***

Where will these firelines be built and how will they be built?
Will they be built with motorized equipment? Will they be built in roadless areas?

How close will they be build to streams.

How will the firelines effect water quality?

Will constructing the firelines spread noxious weeds?

Page 4 of the scoping notice states: ***Planned management that include tree cutting would only proceed within inventoried roadless areas if the activity complies with one of the exceptions to the 2001 Roadless Rule.***

How will the public know if the project is complying with the roadless rule if you are not telling the public where and when you are going to burn in roadless areas?

Please clearly tell the public when and where you are going to burn and specifically what exception to the 2001 Roadless Rule you are using and why?

Please explain to the public what wildlife species will be benefited by this project and what species will be harmed/ We believe that the NEPA requires the agency to adequately demonstrate that the determination that this project will benefit all wildlife species needs to be included in the public involvement process, which in this case is scoping.

Use of an EA for this project is also invalid because the proposed vegetation treatments would occur within Inventoried Roadless Areas (IRA). This qualifies as an extraordinary circumstance that invalidates use of a EA. It is the existence of a cause- effect relationship between a proposed action and the potential effects on these resource conditions and if such a relationship exists, the degree of the potential effects of a proposed action on these resource conditions that determine whether extraordinary circumstances exist (36 CFR 220.g(b)).

In relevant part, regarding the prohibition on tree cutting, the Roadless Rule mandates:

Prohibition on timber cutting, sale, or removal in inventoried roadless areas.

(a) Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section.

(b) Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.

(1) The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.

(i) To improve threatened, endangered, proposed, or sensitive species habitat; or

(ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;

(2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited by this subpart;
36 C.F.R. §294.13 (2005).

The Roadless Rule further explains the meaning of the phrase “incidental to” in subsection (b)(2) above as follows:

Paragraph (b)(2) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by this rule. Examples of these activities include, but are not limited to trail construction or maintenance; removal of hazard trees adjacent to classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule.

Page 4 of the scoping notice states: “Use of prescribed fire is proposed on the remaining national forest system lands within the Forest, which includes inventoried roadless areas.” It appears that the Project authorizes tree cutting on in roadless areas, the Project EA is not clear how the Forest Service will access those units. It is unclear whether the Forest Service will be reconstructing old roads, using illegal user-created roads, or using roads already closed by the Travel Plan in the Inventoried Roadless Area in order to conduct these activities.

Tree-cutting is not “incidental to” another management activity; it is the management activity. The Forest Service fails to acknowledge that the Roadless Rule provides a narrow definition of the phrase “incidental to” in the (b)(2) exemption:

Paragraph (b)(2) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by this rule. Examples of these activities include, but are not limited to trail construction or maintenance; removal of hazard trees adjacent to classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule.

66 Fed. Reg. 3258.

Every one of these examples shows that the management activity itself is not any form of vegetation management, i.e. tree-cutting – instead the management activities are things like trail management, road management, firefighting, land surveys, ski runs, utility corridors, or lawful road construction. In contrast, here the management activity itself is vegetation management, i.e. tree-cutting.

The Forest Service’s interpretation of exemption (b)(2) is contrary to the explanation of “incidental to” in the Roadless Rule, and if adopted, would swallow the rule. The Forest Service could simply avoid the tree-cutting ban by labeling every tree-cutting activity in a Roadless Area as something other than tree-cutting – such as “restoration” – and thereby circumvent the ban

with euphemisms. This is clearly not the intent of the Roadless Rule. 66 Fed. Reg. 3258. Accordingly, the (b)(2) exemption does not apply here.

The Montana federal district court recently addressed a similar issue. *Hunters v. Marten*, 470 F.Supp.3d 1151, 1167-1169 (D. Mont. 2020). The Court held: “It is simply not true that the Forest Service had no duty to communicate its transportation plan to the public. NEPA imposes upon the agency the duty to take a ‘hard look’ when it plans its actions and ‘to provide for broad dissemination of relevant environmental information.’” *Id.* The Court further held:

“[Plaintiffs] contend that the final EIS is inadequate because it is misleading. [.] The Court agrees with the latter. Having already discussed at length why the Forest Service’s treatment of the roadwork in the final EIS is inadequate and indicates bad faith, there is little more to say on the second issue. On remand, the Forest Service will be required to thoroughly develop its plan to bring heavy machinery into the roadless area.”

What scientific analysis did the Forest Service do to find that the National Forest System lands on the Dixie are departed from the natural range of variability?

Please see the attached paper by Dr. William Baker titled:

“Are High-Severity Fires Burning at Much Higher Rates Recently than Historically in Dry-Forest Landscapes of the Western USA?”

Dr. Baker writes: “Programs to generally reduce fire severity in dry forests are not supported and have significant adverse ecological impacts, including reducing habitat for native species dependent on early-successional burned patches and decreasing landscape heterogeneity that confers resilience to climatic change.”

Dr. Baker concluded: “Dry forests were historically renewed, and will continue to be renewed, by sudden, dramatic, high-intensity fires after centuries of stability and lower-intensity fires.”

The purpose of this project is the need to restore a fire regime to the landscape. Based on Dr. Baker’s paper, the proposed action will not meet the purpose and need of the project.

Dr. Baker’s paper is the best available science. Please explain why this project is not following the best available science.

Much of the acreage that has burned in the Rockies is higher elevation lodgepole pine and subalpine fir forests that have long fire rotations of hundreds of years and have not been influenced to any great degree by fire suppression.

Furthermore, fuel treatment often enhances fire advancement by increasing the fine fuels (needles, branches, grass growth) on the surface. Plus, opening the forest by thinning can lead to greater drying and wind penetration, both major factors in fire spread.

The advocates for thinning continue to ignore that most large fires around the West, including those in mixed conifer and pon-

derosa pine, have occurred in lands under "active forest management." That includes the Dixie Fire and Bootleg Fires, which were among the two largest blazes this past summer in California and Oregon.

For instance, 75% of the Bootleg fire, which burned over 400,000 acres, had previously been "treated" by some form of "fuels management" with no discernible effect on fire spread.

There is plenty of proof from numerous fires where active forest management had no apparent effect on fire behavior or fire spread.

A review of 1500 fires across the West found that as a generalization, areas under "active forest management," which includes thinning and prescribed burning, tend to burn at higher severity than lands like wilderness areas where "fuel treatments" are prohibited.

There is an equally strong consensus among scientists that wild-fire is essential to maintain ecologically healthy forests and native biodiversity. This includes large fires and patches of intense fire, which create an abundance of biologically essential standing dead trees (known as snags) and naturally stimulate regeneration of vigorous new stands of forest. These areas of "snag forest habitat" are ecological treasures, not catastrophes, and many native wildlife species, such as the rare black-backed woodpecker, depend on this habitat to survive.

Fire or drought kills trees, which attracts native beetle species that depend on dead or dying trees. Woodpeckers eat the larvae of the beetles and then create nest cavities in the dead trees, because snags are softer than live trees. The male woodpecker cre-

ates two or three nest cavities each year, and the female picks the one she likes the best, which creates homes for dozens of other forest wildlife species that need cavities to survive but cannot create their own, such as bluebirds, chickadees, chipmunks, flying squirrels and many others.

[More than 260](#) scientists wrote a letter to Congress in 2015 opposing legislative proposals that would weaken environmental laws and increase logging on National Forests under the guise of curbing wildfires, noting that snag forests are "quite simply some of the best wildlife habitat in forests."

We can no more suppress forest fires during extreme fire weather than we can stand on a ridgetop and fight the wind. It is hubris and folly to even try. Fires slow and stop when the weather changes. It makes far more sense to focus our resources on protecting rural homes and other structures from fire by creating "defensible space" of about 100 feet between houses and forests. This allows fire to serve its essential ecological role while keeping it away from our communities.

For all of these reasons, the Project violates the Roadless Rule and the Project EA fails to take hard look and provide accurate information and analysis to the public regarding Roadless Rule compliance, in violation of the APA and NEPA.

Please explain why forest thinning and prescribed burning will not significantly affect the area's value to wildlife. We contend that the proposed thinning and burning will have significant adverse impacts on many wildlife species, impacts that are not cur-

rently present within IRAs. Please explain any adverse impacts that have been identified to wildlife from the current habitat conditions in IRAs. Since the current conditions are beneficial to wildlife, and the proposed conditions will be detrimental to wildlife, this means that the proposed action will eliminate existing values of the IRA. This would be a cause-effect relationship, invalidating the use of a EA.

What evidence do you have that shows fire has been suppressed in the area?

Please explain why a lack of fire has degraded wildlife habitat.

There is a considerable awareness today regarding the problems of noxious weed infestations on public lands. One activity that is clearly promoting noxious weeds are fuels reduction and prescribed burning projects. We cite only a few examples at this time. One example is a Joint Fire Science Report by Coop and Magee (Undated), where they note that fuels treatments resulted in rapid, large and persistent increases in the frequency, richness and cover of 20 non-native plant species including cheatgrass; exotic plant expansion appeared linked to the disturbance associated with treatment activities, reduction in tree canopy, and alterations to ground cover; exotic species were much more frequently encountered at treated than control sites, occurring at

86% of sample plots in treatments and 51% of untreated sample plots; richness of exotic species in treatments was more than double that of controls. What is also interesting in this study is that cheatgrass showed a negative effect of tree canopy, which means that cheatgrass was benefited by canopy removal. They noted that models for cheatgrass alone and all non- native species together indicate strong negative associations with tree canopies, indicating that increased light availability, or perhaps below-ground resources such as moisture or nitrogen, enhance colonization and growth in treatments. Increases in exotic plant species in treatment areas was one of the reasons these researchers concluded that managers need to be cautious about implementing treatments in light of the persistent, negative ecological impacts that accompany woodland thinning this includes an increase in fire frequency.

General comments on the proposal are as follows:

Parts of this very large project area are big game winter range as per the Forest Plan. Please define what the specific habitat objectives are for this winter range, including hiding and thermal cover, as well as forage.

The Forest Plan direction for this management area is binding. If the agency is going to claim that the Forest Plan is being imple-

mented, you need to specifically define how this is being done, instead of simply claiming that tree removal is improvement on big game winter range. Also, the science and monitoring behind this claim need to be provided. Currently mule deer populations have been in decline across the western U.S.. We haven't seen any science that reported increases of mule deer populations following removal of trees on their winter ranges.

Please explain what shrubs are present, and will be targeted for masticating and burning. The actual replacement species the agency claims are going to be managed for are never identified. But at a minimum, the rationale for removing shrubs and replacing them with grasses on winter range needs to be documented, as is required by the NEPA.

The claim that this project will increase diversity is pure unsupported rhetoric. There is no definition as to what constitutes diversity. What criteria are being used to measure diversity, and why isn't this information provided to the public? The NEPA requires that the agency provide reliable, valid information to the public on projects. This claim that removing trees and shrubs will improve diversity is a clear violation of the NEPA, as there is no actual basis for it. Worse, it is not clear why eliminating trees and shrubs increases diversity as per the standard definitions. What science claims that a grassland has higher habitat

diversity than a woodland or forest, or shrubland? One likely factor driving the proposed project is not promotion of big game species and wildlife, but instead is being done for livestock. Please explain in the EA or EIS the impact of current livestock grazing practices in this landscape.

The claim that burning will increase resiliency of this area is highly questionable. First, these forests are not highly flammable as per the current science. Second, thinning will likely increase flammability by increasing wind speeds and vegetation drying due to a reduction of shade. Third, flammability will surely be increased over current conditions due to an increase of grasses, including exotic species as cheatgrass. Please provide evidence that any actual published scientific papers that show that prescribed on such a large scale will reduce fires, and thereby increase “resiliency” of this winter range.

Please provide in the EA or EIS monitoring data on the effect of the fire on as winter range, or how this fire affected the extent of exotic vegetation, such as cheatgrass and other weeds. Since the proposed actions will be somewhat similar in effect, it would seem to be important for the agency to provide this information to the public.

Please provide in the EA or EIS any monitoring data, or references any current science, as to what the specific problems are in this landscape for wildlife. How did the agency determine that the current conditions are causing problems for wildlife? In general, one would not expect trees to be a problem for wildlife, especially juniper which is a highly valuable resource for wildlife, not just for forage, including berries, but as hiding and thermal cover. How has the agency determined that hiding cover are too high in this winter range? What are the objectives for hiding and thermal cover which are the target for management intervention?

Please explain what species of shrubs are going to be slashed and burned. Why aren't these shrubs being used by wildlife?

NEPA requires that the Forest Service provide the public is provided information as to why this project will benefit wildlife. At a minimum, the agency needs to demonstrate to the public that this is in fact the case. The EA or EIS must document any scientific information as to how the resource specialists determined that the project will not lead to any significant effects on wildlife. These conclusions need to be documented for the public, including criteria that were used and evaluated to measure levels of significant impact. As just one question, if the Forest Plan standard to manage this area to promote big game species on their winter range is not being followed, this would most

likely trigger significant impacts. It seems like that this is an intentional Forest Plan violation to promote livestock grazing over wildlife in this landscape.

Please discuss the current grazing use of this area by livestock. This information needs to be included as important information to the public.

The project will violate NEPA activities are being planned in the IRAs are done without an analysis of the impact of the project on wilderness characteristics.

Please provided as to what the vegetation types are in the areas not proposed for treatment. What was the basis for determining areas for treatment? It seems likely that the nontreatment areas lack any shrubs and trees. If this is the case, the claims that diversity will be increased by expanding treeless areas in this winter range

Please provide information to the public as to why this project enhances wildlife habitat, or is needed to maintain natural ecosystem processes within an IRA. It is clear that this project requires much more information to be provided to the public, and much more documentation to justify vegetation management within IRAs. And as previously noted, the criteria which the resource specialists used to estimate the level of impact

needs to be provided, as well, to the public. It seems readily apparent that this project requires at a minimum an environmental assessment in order to comply with the NEPA, including the provision of valid, reliable information to the public when and where the Forest Service is planning resource management activities.

The best available science, Christensen et al (1993), recommends elk habitat effectiveness of 70% in summer range and at least 50% in all other areas where elk are one of the primary resource considerations. According to Figure 1 in Christensen et al (1993), this equates to a maximum road density of approximately 0.7 mi/sq mi. in summer range and approximately 1.7 mi/sq mi. in all other areas.

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Do any of the 6 Code watersheds in the Project area meet either of these road density thresholds? It appears the

Project area as a whole also far exceeds these thresholds. Please disclose this type of Project level or watershed analysis on road density.

Christensen et al (1993) state that if an area is not meeting the 50% effectiveness threshold of 1.7 mi/sq mi, the agency should admit that the area is not being managed for elk: "Areas where

habitat effectiveness is retained at lower than 50 percent must be recognized as making only minor contributions to elk management goals. If habitat effectiveness is not important, don't fake it. Just admit up front that elk are not a consideration.” The Project EIS does not make this admission.

The Forest Service should provide an analysis of how much of the Project area, Project area watersheds, affected landscape areas, or affected Hunting Districts provide “elk security area[s]” as defined by the best available science,

Christensen et al (1993) and Hillis et al (1991), to be comprised of contiguous 250 acre blocks of forested habitat 0.5 miles or more from open roads with these blocks encompassing 30% or more of the area.

Please provide a rational justification for the deviation from the Hillis security definition and numeric threshold that represent the best available science on elk security areas.

What best available science supports the action alternatives?

Schoennagel et al (2004) states: “we are concerned that the model of historical fire effects and 20th-century fire suppression in dry ponderosa pine forests is being applied uncritically across all Rocky Mountain forests, including where it is inappropriate.

Schoennagel et al (2004) states: “High-elevation subalpine forests in the Rocky Mountains typify ecosystems that experience infrequent, high-severity crown fires []. . . The most extensive subalpine forest types are composed of Engelmann spruce (*Picea engelmannii*), subalpine fir (*Abies lasiocarpa*), and lodgepole pine (*Pinus contorta*), all

thin-barked trees easily killed by fire. Extensive stand-replacing fires occurred historically at long intervals (i.e., one to many centuries) in subalpine forests, typically in association with infrequent high-pressure blocking systems that promote extremely dry regional climate patterns.”

Schoennagel et al (2004) states: “it is unlikely that the short period of fire exclusion has significantly altered the long fire intervals in subalpine forests. Furthermore, large, intense fires burning under dry conditions are very difficult, if not impossible, to suppress, and such fires account for the majority of area burned in subalpine forests.

Schoennagel et al (2004) states: “Moreover, there is no consistent relationship between time elapsed since the last fire and fuel abundance in subalpine forests, further undermining the idea that years of fire suppression have caused unnatural fuel buildup in this forest zone.”

Schoennagel et al (2004) states: “No evidence suggests that spruce–fir or lodgepole pine forests have experienced substantial shifts in stand structure over recent decades as a result of fire suppression. Overall, variation in climate rather than in fuels appears to exert the largest influence on the size, timing, and severity of fires in subalpine forests [].

We conclude that large, infrequent standreplacing fires are ‘business as usual’ in this forest type, not an artifact of fire suppression.”.

Schoennagel et al (2004) states: “Contrary to popular opinion, previous fire suppression, which was consistently effective from about 1950 through 1972, had only a minimal effect on the large fire event in 1988 []. Reconstruction of historical fires indicates that similar large, high-severity fires also occurred in the early 1700s []. Given the historical range of variability of fire regimes in high-elevation subalpine forests, fire behavior in Yellowstone during 1988, although severe, was neither unusual nor surprising.”

Schoennagel et al (2004), please find attached, states: “Mechanical fuel reduction in subalpine forests would not represent a restoration treatment but rather a departure from the natural range of variability in standstructure.”

Schoennagel et al (2004) states: “Given the behavior of fire in Yellowstone in 1988, fuel reduction projects probably will not substantially reduce the frequency, size, or severity of wildfires under extreme weather conditions.”

Schoennagel et al (2004) states: “The Yellowstone fires in 1988 revealed that variation in fuel conditions, as measured by stand age and density, had only minimal influence on fire behavior. Therefore, we expect fuel- reduction treatments in high-elevation forests to be generally unsuccessful in reducing fire frequency, severity, and size, given the overriding importance of extreme climate in controlling fire regimes in this zone. Thinning also will not restore subalpine forests, because they were dense historically and have not changed significantly in response to fire suppression. Thus, fuel- reduction efforts in most Rocky Mountain subalpine forests probably would not effectively mitigate the fire hazard, and these efforts may create new ecological problems by moving the forest structure outside the historic range of variability.”

Likewise, Brown et al (2004) states: “At higher elevations, forests of subalpine fir, Engelmann spruce, mountain hemlock, and lodgepole or whitebark pine predominate. These forests also

have long fire return intervals and contain a high proportion of fire sensitive trees. At periods

averaging a few hundred years, extreme drought conditions would prime these forests for large, severe fires that would tend to set the forest back to an early successional stage, with a large carry-over of dead trees as a legacy of snags and logs in the regenerating forest natural ecological dynamics are largely preserved because fire suppression has been effective for less than one natural fire cycle. Thinning for restoration does not appear to be appropriate in these forests. Efforts to manipulate stand structures to reduce fire hazard will not only be of limited effectiveness but may also move systems away from pre-1850 conditions to the detriment of wildlife and watersheds.” “Fuel levels may suggest a high fire ‘hazard’ under conventional assessments, but wildfire risk is typically low in these settings.”

Likewise, Graham et al (2004) states: “Most important, the fire behavior characteristics are strikingly different for cold (for example, lodgepole pine, spruce, subalpine fir), moist (for example, western hemlock, western redcedar, western white pine), and dry forests. Cold and moist forests tend to have long fire-return intervals, but fires that do occur tend to be high-intensity, stand-replacing fires. Dry forests

historically had short intervals between fires, but most important, the fires had low to moderate severity.”

According to Graham et al (2004), thinning may also increase the likelihood of wildfire ignition in the type of forests in this Project area: “The probability of ignition is strongly related to fine fuel moisture content, air temperature, the amount of shading of surface fuels, and the occurrence of an ignition source (human or lightning caused) There is generally a warmer, dryer microclimate in more open stands (fig. 9) compared to denser stands. Dense stands (canopy cover) tend to provide more shading of fuels, keeping relative humidity higher and air and fuel temperature lower than in more open stands. Thus, dense stands tend to maintain higher surface fuel moisture contents compared to more open stands. More open stands also tend to allow higher wind speeds that tend to dry fuels compared to dense stands. These factors may increase probability of ignition in some open canopy stands compared to dense canopy stands.”

Please analyze the wilderness characteristic of the both the inventoried and uninventoried roadless areas and wilderness study areas in the project area.

The Forest Service recognizes the value of forestland unencumbered by roads, timber harvest, and other development. Some-

times these areas are known as “inventoried roadless areas” if they have been inventoried through the agency’s various Roadless Area Review Evaluation processes, or “unroaded areas” if they have not been inventoried but are still of significant size and ecological significance such that they are eligible for congressional designation as a Wilderness Area.

Roadless areas provide clean drinking water and function as biological strongholds for populations of threatened and endangered species. Special Areas; Roadless Area Conservation; Final Rule, 66 Fed. Reg. 3,244, 3,245 (Jan. 12, 2001) (codified at 36 C.F.R. Part 294). They provide large, relatively undisturbed landscapes that are important to biological diversity and the long- term survival of many at-risk species.

Roadless areas provide opportunities for dispersed outdoor recreation, opportunities that diminish as open space and natural settings are developed elsewhere. *Id.* They also serve as bulwarks against the spread of non-native invasive plant species and provide reference areas for study and research. *Id.*

Other values associated with roadless areas include: high quality or undisturbed soil, water, and air; sources of public drinking water; diversity of plant and animal communities; habitat for threatened, endangered, proposed, candidate, and sensitive

species and for those species dependent on large, undisturbed areas of land; primitive, semi-primitive non-motorized, and semi-primitive motorized classes of dispersed recreation; reference landscapes; natural appearing cultural properties and sacred sites; and other locally identified unique characteristics.

The Roadless Rule mandates:

Prohibition on timber cutting, sale, or removal in inventoried roadless areas.

(a) Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section.

(b) Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.

(1) The cutting, sale, or removal of generally small diameter timber is needed for one of the following purposes and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.

(i) To improve threatened, endangered, proposed, or sensitive species habitat; or

(ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would

be expected to occur under natural disturbance regimes of the current climatic period;

(2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited by this subpart;

... .

36 C.F.R. §294.13 (2005)(emphases added).

The Roadless Rule further explains the meaning of the phrase “incidental to” in subsection (b)(2) above as follows:

Paragraph (b)(2) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by this rule. Examples of these activities include, but are not limited to trail construction or maintenance; removal of hazard trees adjacent to classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule.

66 Fed. Reg. 3258.

The project is far too large to provide meaningful information or analysis to the public, and thus prevents agency transparency in management of public lands. It is not clear why the Forest Service believes that such a large project is either needed, or can be meaningfully understood and reviewed by the public.

We request a careful analysis of the impacts to fisheries and water quality, including considerations of sedimentation, increases in peak flow, channel stability, risk of rain-on-snow events, and increases in stream water temperature. Please disclose the locations of seeps, springs, bogs and other sensitive wet areas, and the effects on these areas of the project activities. Where livestock are permitted to graze, we ask that you assess the present condition and continue to monitor the impacts of grazing activities upon

vegetation diversity, soil compaction, stream bank stability and subsequent sedimentation. Livestock grazing occurs in the Project area and causes sediment impacts, trampled or destabilized banks, increased nutrient loads in streams, and decreased density, diversity, and function of riparian vegetation that may lead to increased stream temperatures and further detrimental impacts to water quality.

This project is a violation of the National Environmental Policy Act (NEPA) since it is far too large for the agency to provide adequate information to the public, and far too large for the public to understand how the project will impact natural resources. As an example, we expect that there will not be anything close to valid wildlife surveys, including for the goshawk, great gray

owl, black-backed woodpecker, and other sensitive/management indicator species and Montana Species of Concern, as the brown creeper and Cassin's finch, and several species of bats.

Please identify specifically where the prescribed burns will be and where before a decision is made so that the public can understand how the agency is managing these wildlife resources.

Saying that they will decide later denies the public the information needed to make informed comments and as to occupancy of the project areas by wildlife, which is a NEPA violation.

The Project will violate the NEPA if there are no valid snag surveys done for the project area both within and outside proposed harvest units.

The project will violate the NEPA if there are no valid surveys for old growth habitat within each project area, old growth types need to be defined and quantified by timber types, such as lodgepole pine, Douglas-fir, mixed conifer, spruce, subalpine fir, and limber pine.

The project will likely violate the NEPA if the mitigation measures for MIS, sensitive species, and Utah Species of Concern (birds, mammals including bats) are not clearly defined, and demonstrated to be effective as per the current best science.

This is a violation of NEPA to not identifying specific areas where logging would have occurred and where roads and how many roads will be built.

The scoping notice indicates that the Forest Service will use “condition-based management” scheme, an approach that does not meet the minimum requirements of NEPA as enacted by the United States Congress and has been soundly rejected by the courts. Condition-based management means the Forest Service authorized the Project before identifying specific locations for logging, road construction, prescribed burns, and other fuel reduction activities.

The “condition-based management” approach will not adequately address the direct, indirect, and cumulative effects of the Project on the human environment. Please the provide the public a clear basis for choice among alternatives. Please give the public sufficient information to foster informed decision-making or informed public participation. Failing to do so will violate NEPA, 42 U.S.C. § 4332(2)(C), and is therefore “not in accordance with law” under 5 U.S.C. § 706(2)(A) and “without observance of procedure required by law” under 5 U.S.C. § 706(2)(D).

Please see the article below about a similar project in Alaska which a federal district court ruled was illegal. I have attached the court’s order for your information.

Federal court blocks timber sale in Alaska's Tongass National Forest

<https://www.adn.com/alaska-news/2020/06/25/federal-court-blocks-timber-sale-in-alaskas-tongass-national-forest/>

JUNEAU — A federal judge has blocked what would have been the largest timber sale in Alaska's Tongass National Forest in decades.

Wednesday's ruling ends the U.S. Forest Service's plan to open 37.5 square miles of old-growth forest on Prince of Wales Island to commercial logging, CoastAlaska [reported](#).

The ruling by Judge Sharon L. Gleason also stops road construction for the planned 15-year project.

Conservationists had already successfully blocked the federal government's attempt to clear large amounts of timber for sale without identifying specific areas where logging would have occurred.

Gleason allowed the forest service to argue in favor of correcting deficiencies in its review and moving forward without throwing out the entire project, but ultimately ruled against the agency.

Gleason's ruling said the economic harm of invalidating the timber sales did not outweigh "the seriousness of the errors" in the agency's handling of the project.

The method used in the Prince of Wales Landscape Level Analysis was the first time the agency used it for environmental review on an Alaska timber sale.

The forest service, which can appeal the decision, did not return calls seeking comment.

Gleason's decision affects the Prince of Wales Island project and the Central Tongass Project near Petersburg and Wrangell.

The ruling triggers a new environmental review under the National Environmental Policy Act, said Meredith Trainor, executive director of the Southeast Alaska Conservation Council.

The ruling in the lawsuit brought by the council includes a requirement for public input on specific areas proposed for logging, Trainor said.

Tessa Axelson, executive director of the Alaska Forest Association, said in a statement that the ruling “threatens the viability of Southeast Alaska’s timber industry.”

The project is in violation of NEPA, NFMA, the Clean Water Act, the APA and the ESA.

FAILURE TO REVIEW AND PROTECT CULTURAL AND HISTORICAL RESOURCES

Consultation with the State Historic Preservation Office (SHPO) must be completed prior to a decision being signed. Any re-

quired protection measures provided from SHPO will be incorporated into my final decision.

Crucial to the preservation of the historical and cultural foundations of the nation, Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 C.F.R. Part 800 (PDF) (revised August 5, 2004) require Federal agencies to consider the effects of projects they carry out, approve, or fund on historic properties. Additionally, Federal agencies must provide the Advisory Council on Historic Preservation (ACHP) opportunity to comment on such projects prior to the agency's final decision.

A Federal project that requires review under Section 106 is defined as an "undertaking." An undertaking means a project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license, or approval.

Section 110 of the NHPA

Added to the NHPA in 1992, Section 110 requires Federal agencies to emphasize the preservation and enhancement of cultural resources. Section 110 directs agencies to initiate measures nec-

essary to direct their policies, plans, and programs in such a way that federally-owned sites, structures, and objects of historical architectural or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the public. The agencies are also encouraged to institute (in consultation with the ACHP) procedures to assure Federal plans and programs contribute to the preservation and enhancement of non-Federally owned sites, structures, and objects of historical, architectural, and archaeological significance.

The UT SHPO has not yet received this survey. Currently this project is in violation of the National Historic Preservation Act and NEPA. The cultural surveys need to be done before the NEPA and NHPA process can be completed, which has not occurred. The project must be approved by the SHPO and the public needs to be given a chance to comment on this.

Did the Forest Service conduct NEPA analysis (i.e. an EA or EIS) for the Fire Plan the Forest is using for this project? To not respond to this in violation of NEPA, NFMA, and the APA.

If the Forest Service did not conduct NEPA for the Fire Plan, please immediately start that NEPA process.

Please provide a map showing the WUI and the locations of all homes in comparison to the project area.

If the Forest Service did not conduct NEPA for the Fire Plan, please disclose the cumulative effects of Forest-wide implementation of the Fire Plan in the South Plateau project EIS, or EA if you refuse to write an EIS, to avoid illegally tiering to a non-NEPA document. Specifically analyze the decision to prioritize mechanical, human- designed, somewhat arbitrary treatments as a replacement for naturally-occurring fire.

Did the Forest Service conduct ESA consultation for the Fire Plan?

Will the Forest Service be considering binding legal standards for noxious weeds in its revision of the Dixie Forest Plan?

How effective have BMPs been at stopping (i.e. preventing) new weed infestations from starting during prescribed burning and related road operations?

Is it true that new roads are the number one cause of new noxious weed infestations?

Why isn't the Forest Service considering a Forest Plan amendment in this Project to amend the Forest Plan to include binding legal standards that address noxious weeds?

Is it true that noxious weeds are one of the top threats to biodiversity on our National Forests?

How can the Forest Service be complying with NFMA's requirement to maintain biodiversity if it has no legal standards that address noxious weeds?

What MIS did you find, how many and how did you look for these MIS?

Which wildlife species and ecosystem processes, if any, does prescribed fire benefit?

Which species and processes does prescribed fire harm?

What evidence do you have that this prescribed fire will make the forest healthier for fish and wildlife? What about the role of mixed severity and high severity fire – what are the benefits of those natural processes?

How have those processes (mixed and high severity fire) created the ecosystems we have today?

Over how many millennia have mixed and high severity fire have been occurring without human intervention?

What beneficial ecological roles do beetles play? Can the forest survive without beetles?

Will all WQLS streams in the project area have completed TMDLs before a decision is signed?

Will this project leave enough snags to follow the Forest Plan requirements and the requirements of sensitive old growth species such as flammulated owls and goshawks?

Is this Project consistent with “research recommendations (Krankina and Harmon 2006) for protecting carbon gains against the potential impacts of future climate change? That study recommends “[i]ncreasing or maintaining the forest area by avoiding deforestation,” and states that “protecting forest from logging or clearing offer immediate benefits via prevented emissions.”

Please list each visual quality standard that applies to each unit and disclose whether each unit meets its respective visual quality standard.

Please disclose whether you have conducted surveys in the Project area for this Project for whitebark pine, wolverines, pine martins, northern goshawk, yellow-billed Western cuckoo, *Erigeron maguirei*, *Aliciella cespitosa*, Mexican Spotted Owl, Monarch Butterfly, and *Pediocactus despainii*.

Please disclose the last time the Project area was surveyed for whitebark pine, wolverines, pine martins, northern goshawk, yellow-billed Western cuckoo, *Erigeron maguirei*, *Aliciella ce-*

spitosa, Mexican Spotted Owl, Monarch Butterfly, and *Pediocactus despainii*.

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Please disclose how often the Project area has been surveyed for whitebark pine, wolverines, pine martins, northern goshawk, yellow-billed Western cuckoo, *Erigeron maguirei*, *Aliciella cespitosa*, Mexican Spotted Owl, Monarch Butterfly, and *Pediocactus despainii*.

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Would the habitat be better for whitebark pine, wolverines, pine martins, northern goshawk, yellow-billed Western cuckoo, *Erigeron maguirei*, *Aliciella cespitosa*, Mexican Spotted Owl, Monarch Butterfly, and *Pediocactus despainii*?

Please provide us with the full BA for the whitebark pine, wolverines, pine martins, northern goshawk, yellow-billed Western cuckoo, *Erigeron maguirei*, *Aliciella cespitosa*, Mexican Spotted Owl, Monarch Butterfly, and *Pediocactus despainii* and any other threatened, endangered or proposed species in the Dixie National Forest.

Weeds

Native plants are the foundation upon which the ecosystems of the Forest are built, providing forage and shelter for all native wildlife, bird and insect species, supporting the natural processes of the landscape, and providing the context within which the public find recreational and spiritual opportunities. All these uses or values of land are hindered or lost by conversion of vegetation to invasive and noxious plants. The ecological threats posed by noxious weed infestations are so great that a former chief of the Forest Service called the invasion of noxious weeds “devastating” and a “biological disaster.”

Despite implementation of Forest Service “best management practices” (BMPs), noxious weed infestation on the Forest is getting worse and noxious weeds will likely overtake native plant populations if introduced into areas that are not yet infested. The Forest Service has recognized that the effects of noxious weed invasions may be irreversible. Even if weeds are eliminated with herbicide treatment, they may be replaced by other weeds, not by native plant species.

Invasive plant species, also called noxious weeds, are one of the greatest modern threats to biodiversity on earth. Noxious weeds cause harm because they displace native plants, resulting in a loss of diversity and a change in the structure of a plant community. By removing native vegetative cover, invasive plants like

knapweed may increase sediment yield and surface runoff in an ecosystem. As well knapweed may alter organic matter distribution and nutrient through a greater ability to uptake phosphorus over some native species in grasslands. Weed colonization can alter fire behavior by increasing flammability: for example, cheatgrass, a widespread noxious weed on the Forest, cures early and leads to more frequent burning. Weed colonization can also deplete soil nutrients and change the physical structure of soils.

The Forest Service's own management activities are largely responsible for noxious weed infestations; in particular, logging, prescribed burns, and road construction and use create a risk of weed infestations. The technical equipment into the Forest creates and exacerbates noxious weed infestations. The removal of trees through logging can also facilitate the establishment of noxious weed infestations because of soil disturbance and the reduction of canopy closure. In general, noxious weeds occur in sites where prescribed fire previously occurred and forest openings from logging, but are rare in mature and old growth forests. Roads are often the first place new invader weeds are introduced. Vehicle traffic and soil disturbances from road construction and maintenance create ideal establishment conditions for weeds. Roads also provide obvious dispersal corridors. Road-

sides throughout the project area are infested with noxious weeds. Once established along roadsides, invasive plants will likely spread into adjacent grasslands and forest openings.

Will the prescribed burning activities within the analysis area likely cumulatively contribute to increases to populations of weeds? As a disturbance process, fire has the potential to greatly exacerbate infestations of certain noxious weed species, depending on burn severity and habitat type (Fire Effects Information System 2004). Soil disturbance, such as that resulting from low and moderate burn severities from prescribed fire and fire suppression related disturbances (dozer lines, drop spots, etc.), provide optimum conditions for noxious weed invasion. Dry site vegetation types and road corridors are recent ground disturbance (timber management, road construction) has occurred. Units proposed for burning within project area may have closed forest service access roads (jammers) located within units.

These units have the highest potential for noxious weed infestation and exacerbation through fire activities. Please provide an alternative that eliminates units that have noxious weeds present on roads within units from fire management proposals.

Please address the ecological, social and ascetic impact of current noxious weed infestations within the project area. Include

an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations. What treatment methods will be used to address growing noxious weed problems? What noxious weeds are currently and historically found within the project area? Please include a map of current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's- tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the Utah COUNTY NOXIOUS WEED LIST. State-listed Category 2 noxious weed species yellow and orange hawkweeds are recently established (within the last 5 to 10 years) in Montana and are rapidly expanding in established areas. They can invade undisturbed areas where native plant communities are intact. These species can persist in shaded conditions and often grow underneath shrubs making eradication very difficult. Their stoloniferous (growing at the surface or below ground) habit can create dense mats that can persist and spread to densities of 3500 plants per square mile (Thomas and Dale

1975). Are yellow and orange hawkweeds present within the project area?

Please address the cumulative, direct and indirect effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influenced by the following management actions: road construction including new permanent and temporary roads, and skid trails proposed within this project; opening and decommissioning of roads represented on forest service maps; ground disturbance and traffic on forest service template roads, mining access routes, and private roads; removal of trees through prescribed burns. What open, gated, and decommissioned Forest Service roads within the project area proposed as haul routes have existent noxious weed populations and what methods will be used to assure that noxious weeds are not spread into the proposed action units?

Noxious weeds are not eradicated with single herbicide treatments. A onetime application may kill an individual plant but dormant seeds in the ground can still sprout after herbicide treatment. Thus, herbicides must be used on consistent, repetitive schedules to be effective.

What commitment to a long-term, consistent strategy of application is being proposed for each weed infested area within the

proposed action area? What long term monitoring of weed populations is proposed?

When areas treated with herbicides are reseeded on national forest land, they are usually reseeded with exotic grasses, not native plant species. What native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project? Will disturbed areas including road corridors, skid trails, and burn units be planted or reseeded with native plant species?

The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest Service concedes that preventing the introduction of weeds into uninfested areas is “the most critical component of a weed management program.” The Forest Service’s national management strategy for noxious weeds also recommends “develop[ing] and implement[ing] forest plan standards” and recognizes that the cheapest and most effective solution is prevention. Which units within the project area currently have no noxious weed populations within their boundaries? What minimum standards are in the Dixie National Forest Plan to address noxious weed infestations? Please include an alternative in the DEIS that includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation. The

failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native

alternative that includes preventive measures would violate NEPA because the Forest Service would fail to consider a reasonable alternative.

Rare Plants

The ESA requires that the Forest Service conserve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which population viability is a concern as “sensitive species” designated by the Regional Forester (FSM 2670.44).

The response of each of the sensitive plant species to management activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural processes such as fire, insect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be altered may have impacts on native vegetation, including threatened and sensitive plants. Herbicide application – intended to eradicate invasive plants – also results in a loss of native plant diversity because herbicides kill native plants as well as invasive

plants. Although native species have evolved and adapted to natural disturbance such as fire on the landscape, fires primarily occur in mid to late summer season, when annual plants have flowered and set seed. Following fall fires, perennial root-stocks remain underground and plants emerge in the spring. Spring and early summer burns could negatively impact emerging vegetation and destroy annual plant seed.

What threatened, endangered, rare and sensitive plant species and habitat are located within the proposed project area? What standards will be used to protect threatened, rare, sensitive and culturally important plant species and their habitats from the management actions proposed in this project?

Please disclose the last time the Project area was surveyed for whitebark pine, grizzly bears, wolverines, monarch butterflies, whitebark pine, pine martins, northern goshawk, and lynx.

Please disclose how often the Project area has been surveyed for whitebark pine, grizzly bears, wolverines, monarch butterflies, whitebark pine, pine martins, northern goshawks, and lynx.

Would the habitat be better for whitebark pine, grizzly bears, monarch butterflies, whitebark pine, wolverines, pine martins, northern goshawks, and lynx if roads were removed in the Project area?

Please provide us with the full BA for the whitebark pine, wolverines, monarch butterflies, whitebark pine, grizzly bears, pine martins, northern goshawks, and lynx.

Whitebark Pine

Have you surveyed the entire forest for whitebark pine? This must be done before a draft decision is signed so the public has a chance to comment. Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning,

would experience mortality from project activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the presence of adequate seed source and dispersal mechanisms (Clarks Nutcracker or humans planting whitebark pine seedlings).

White pine blister rust, an introduced disease, has caused rapid mortality of whitebark pine over the last 30 to 60 years. Keane and Arno (1993) reported that 42 percent of whitebark pine in western Montana had died in the previous 20 years with 89 percent of remaining trees being infected with blister rust. The ability of whitebark pine to reproduce naturally is strongly affected by blister rust infection; the rust kills branches in the upper cone bearing crown, effectively ending seed production.

Whitebark pine seedlings and saplings are very likely present in the subalpine forests proposed for burning and logging. In the absence of fire, this naturally occurring whitebark pine regeneration would continue to function as an important part of the subalpine ecosystem. Since 2005, rust resistant seed sources have been identified in the Northern Rockies (Mahalovich et al 2006). Due to the severity of blister rust infection within the region, natural whitebark pine regeneration in the project area is prospective rust resistant stock.

Although prescribed burning can be useful to reduce areas of high-density subalpine fir and spruce and can create favorable ecological conditions for whitebark pine regeneration and growth, in the absence of sufficient seed source for natural re-

generation maintaining the viability and function of whitebark pine would not be achieved through burning. Planting of rust-resistant seedlings would likely not be sufficient to replace whitebark pine lost to fire activities.

What surveys have been conducted to determine presence and abundance of whitebark pine re-generation? If whitebark pine seedlings and saplings are present, what measures will be taken to protect them? Please include an alternative that excludes burning in the presence of whitebark pine regeneration (consider 'Daylighting' seedlings and saplings as an alternative restoration method). Will restoration efforts include planting whitebark pine? Will planted seedling be of rust-resistant stock? Is rust-resistant stock available? Would enough seedlings be planted to replace whitebark pine lost to fire activities? Have white pine blister rust surveys been accomplished? What is the severity of white pine blister rust in proposed action areas?

Since Whitebark pine are now listed as threatened the ESA, you must formally consult with the FWS on the impact of the project on whitebark pine and consult with the FWS on the revised Forest Plan's effect on whitebark pine. To do this the Forest Service will need to have a complete and recent survey of the entire project area for whitebark pine and consider planting whitebark pine as the best available science by Keene et al. states is the only way to get new whitebark pine to grow. How many whitebark pine trees will the project kill?

Please analyze the cumulative impacts of this project with other activities on National Forest or adjacent lands. Since you have done no surveys of whitebark pine what is the basis of the "No

effect” statement? Please formally consult with the FWS on the impact of the project on Whitebark pine. Since whitebark pine are very slow growing trees and take years to mature, what scientific evidence do you have to back up the following statement on page 29? “Some immature trees may be lost, but this would not result in a trend toward federal listing.”

Thank you for your time.

Sincerely yours,

/s/

Mike Garrity

Executive Director

Alliance for the Wild Rockies

P.O. Box 505

Helena, MT 59624

And for

Sara Johnson,

Director Native Ecosystems Council

PO Box 125

Willow Creek, MT 59760

And for

Steve Kelly

Council on Wildlife and Fish

P.O. Box 4641

Bozeman, MT 59772

And for

Kristine Akland

Center for Biological Diversity

P.O. Box 7274 Missoula, MT 59807

kakland@biologicaldiversity.org