Data Submitted (UTC 11): 4/24/2021 11:00:00 AM
First name: Michael
Last name: Garrity
Organization: Alliance For The Wild Rockies
Title: Executive Director
Comments: Thank you for this opportunity to comment on the Fishlake National Forest Forestwide Prescribed Fire Restoration Project.

Dear Supervisor Elson,

Please accept these comments from me on behalf of the Alliance for the Wild Rockies (AWR), Yellowstone to Uintas Connection, and Native Ecosystems Council (NEC) on the proposed Forestwide Prescribed Fire Restoration Project.

The Alliance for the Wild Rockies, Yellowstone to Uintas Connection and Native Ecosystems Council (collectively [ldquo]Alliance[rdquo]) 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[rsquo]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 Fishlake

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 Utah Division of Wildlife Resources regarding the impact of the Project on wildlife habitat;

D. Solicit and disclose comments from the Utah 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 Fishlake National Forest[rsquo]s record of compliance with state best management practices

regarding stream sedimentation from ground-disturbing management activities;

J. Disclose the Fishlake National Forest[rsquo]s record of compliance with its monitoring requirements as set forth in its Forest Plan;

K. Disclose the Fishlake National Forest[rsquo]s record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the Fishlake 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 Fishlake National Forest 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 Fishlake[rsquo]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. Disclose maps of the area that show the following elements:

1. Past, current, and reasonably foreseeable logging 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;

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 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 [ldquo]devastating[rdquo] and a [ldquo]biological disaster.[rdquo] Despite implementation of Forest Service [ldquo]best management practices[rdquo] (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[rsquo]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[rsquo]s-tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the IDAHO 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 [ldquo]the most critical component of a weed management program.[rdquo] The Forest Service[rsquo]s national management strategy for noxious weeds also recommends [ldquo]develop[ing] and implement[ing] forest plan standards [rdquo] 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 Fishlake 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 EIS 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 [ldquo]sensitive species[rdquo] 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 [ndash] intended to eradicate invasive plants [ndash] 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, proposed, 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.

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 scoping 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, which in this case is scoping.

Use of a CE 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 CE. Although the presence of an extraordinary circumstance does not automatically preclude use of a CE, application of a CE 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).

There is no analysis in the scoping notice that defines why forest thinning and prescribed burning will not significantly affect the area[rsquo]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.

The scoping notice does not 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 a CE.

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.

There is no information in the scoping notice that defines define why a lack of fire has degraded wildlife habitat. One has to assume that the presence of juniper woodlands 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 scoping notice 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?

The agency does not address the likely adverse impacts of climate change on the persistence of juniper woodlands or values of forests as carbon sinks.

There is no mention in the scoping notice about how climate change could affect the long-term persistence of juniper woodlands. If the persistence of these woodlands 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[rsquo]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 scoping notice, 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 chestgrass 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.

The scoping notice failed to provide any documentation that conversion of juniper woodlands to grasslands, including cheatgrass, improves habitat for all wildlife species.

The agency notes that the project will not only reduce juniper, 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 cheatgrass, 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.

The scoping notice failed to 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[rsquo]t seen any science that reported increases of mule deer populations following removal of juniper and shrubs on their winter ranges.

One issue that is generally ignored in the scoping document is what 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 scoping notice, 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[rsquo]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 scoping notice of current livestock grazing practices in this landscape.

The claim that thinning and removing juniper 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. The scoping notice did not provide any actual science to indicate that thinning will reduce fires, and thereby increase [ldquo]resiliency[rdquo] of this winter range.

The scoping notice did not provide any 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.

The scoping notice never provides 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?

The scoping notice lacks some important information, such as what species of shrubs are going to be slashed and burned. Why aren[rsquo]t these shrubs being used by wildlife? The scoping notice states that these shrubs will be replaced with seedings of [ldquo]desirable[rdquo] plant species for wildlife. However, there is no formation as to what these plant species are, and why they will have more value to wildlife than the existing shrubs and juniper that are to be removed.

Overall, this scoping notice is a huge violation of the NEPA because the public is provided essentially no 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 scoping notice 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 scoping notice did not discuss the current grazing use of this area by livestock. This information needs to be included as important information to the public.

Finally, the scoping notice is a violation of the NEPA because the fact that these activities are being planned in the IRAs without and analysis of the impact of the project on wilderness characteristics is never specifically noted in the notice.

There is no explanation of why 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.

There is no information ever 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

Overall, the scoping notice is devoid of any useful information to the public as to why this project enhances wildlife habitat, or is needed to maintain natural ecosystem processes within an IRA. Iff juniper is so flammable, it is not clear why it has to be slashed before it can be burned. 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 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.

Do any of the 6th 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: [ldquo]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.[rdquo] 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 [ldquo]elk security area[s][rdquo] 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: [ldquo]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: [ldquo]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.[rdquo]

Schoennagel et al (2004) states: [ldquo]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: [ldquo]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.[rdquo]

Schoennagel et al (2004) states: [ldquo]No evidence suggests that spruce[ndash]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 [lsquo]business as usual[rsquo] in this forest type, not an artifact of fire suppression.[rdquo].

Schoennagel et al (2004) states: [ldquo]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.[rdquo]

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

Schoennagel et al (2004) states: [ldquo]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.[rdquo]

Schoennagel et al (2004) states: [ldquo]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.[rdquo]

Likewise, Brown et al (2004) states: [ldquo]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.[rdquo] [ldquo]Fuel levels may suggest a high fire [lsquo]hazard[rsquo] under conventional assessments, but wildfire risk is typically low in these settings.[rdquo]

Likewise, Graham et al (2004) states: [ldquo]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.[rdquo]

According to Graham et al (2004), thinning may also increase the likelihood of wildfire ignition in the type of forests in this Project area: [ldquo]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.[rdquo]

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. Sometimes these areas are known as [ldquo]inventoried roadless areas[rdquo] if they have been inventoried through the agency[rsquo]s various Roadless Area Review Evaluation processes, or [ldquo]unroaded

areas[rdquo] 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 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). 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[rsquo]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, 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.

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[rsquo]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 ID 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 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 Fishlake 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[rsquo]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[rsquo]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 [ndash] 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 [ldquo]research recommendations (Krankina and Harmon 2006) for protecting carbon gains against the potential impacts of future climate change?

That study recommends [ldquo][i]ncreasing or maintaining the forest area by avoiding deforestation,[rdquo] and states that [ldquo]protecting forest from logging or clearing offer immediate benefits via prevented emissions.[rdquo]

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 cespitosa, Mexican Spotted Owl, Monarch Butterfly, and Pediocactus despainii. 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.

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 Fishlake 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 [ldquo]devastating[rdquo] and a [ldquo]biological disaster.[rdquo]

Despite implementation of Forest Service [ldquo]best management practices[rdquo] (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[rsquo]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. 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[rsquo]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 [ldquo]the most critical component of a weed management program.[rdquo] The Forest Service[rsquo]s national management strategy for noxious weeds also recommends [ldquo]develop[ing] and implement[ing] forest plan

standards..... [rdquo]

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 Fishlake 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 [ldquo]sensitive species[rdquo] 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 [ndash] intended to eradicate invasive plants [ndash] 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 [lsquo]Daylighting[rsquo] 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 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 livestock 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, unmeasureable terms to rationalize the proposed burning to the public. How can the public measure [ldquo]resiliency?[rdquo] 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 speciese)?

If the reasons for burning 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 scoping document 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 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 scoping document 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 [ldquo]per acre[rdquo] 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.

Thank you for your time and consideration of our comments.