Brian Anderson
Wallowa Valley District Ranger
PO Box 905
Joseph, OR 97846

RE: Morgan Nesbit Forest Resiliency Project

Dear Ranger Anderson;

Thank you for this opportunity to comment. Please accept these attached comments in pdf format from me on behalf of the Alliance for the Wild Rockies, Native Ecosystems Council, Council on Fish and Wildlife, Center for Biological Diversity, Yellowstone to Uintas Connection, and Wildlands Defense on the proposed Morgan Nesbit Forest Resiliency Project.

We believe because of the size of the project and the cumulative effects of past current and future logging by the Forest Service and private logging, grazing and mining in the area the Forest Service must complete a full environmental impact statement (EIS) for this Project. 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.

I. NECESSARY ELEMENTS FOR

PROJECT EIS or EA if you refuse to write an EIS:

A. Disclose all Wallowa-Whitman National Forest Plan requirements for logging/burning projects and explain how the Project complies with them;

B. Will this project comply with forest plan big game hiding cover standards?

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

D. Solicit and disclose comments from the Oregon Department of Fish and Wildlife regarding the impact of the Project on fish and wildlife habitat;

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

F. Disclose the biological assessment for the candidate, threatened, or endangered species such as bull trout with potential and/or actual critical habitat in the Project area;

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

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

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

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

K. Disclose the Wallowa-Whitman National Forest's record of compliance with its monitoring requirements as set forth in its Forest Plan;

L. Disclose the Wallowa-Whitman National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the Wallowa-Whitman National Forest;

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

N. Please formally consult with the US FWS on the impacts of this project on candidate, threatened, or endangered species and plants;

O. Have you done NEPA on the Community Fire Plan that the project relies on?

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

Q. Do unlogged old growth forest store more carbon than the wood products that would be removed from the same forest in a logging operation?

R. What is the cumulative effect of National Forest logging on U.S. carbon stores? How many acres of National Forest lands are logged every year? How much carbon is lost by that logging?

S. 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 rec-

ommends “[i]ncreasing or maintaining the forest area by avoiding de- forestation,” and states that “protecting forest from logging or clearing offer immediate benefits via prevented emissions.” That study also states that “[w]hen the initial condition of land is a productive old-growth forest, the conversion to forest plantations with a short harvest rotation can have the opposite effect lasting for many decades . . . .” The study does state that thinning may have a beneficial effect to stabilize the forest and avoid stand-replacing wildfire, but the study never defines thinning. In this Project, where much of the logging is clear-cutting and includes removing large trees without any diameter limit, and where the removal of small diameter surface and ladder fuels is an unfunded man- date to the tune of over $3 million dollars, it is dubious whether the prescriptions are the same type of “thinning” en- visioned in Krankina and Harmon (2006).

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

quality standard. A failure to comply with visual quality Forest Plan standards violates NFMA.

U. For the visual quality standard analysis please define "ground vegetation," i.e. what age are the trees, "reestablishes," "short-term," "longer term," and "revegetate."

V. Please disclose whether you have conducted surveys in the Project area for this Project for Rocky Mountain bighorn sheep, wolves, bull trout, chinook salmon, whitebark pine, monarch butterflies, wolverines, pine martins, and northern goshawk as required by the Forest Plan.

W. Please disclose how often the Project area has been surveyed for Rocky Mountain bighorn sheep, wolves, bull trout, chinook salmon, whitebark pine, monarch butterflies, wolverines, pine martins, and northern goshawk.

X. Is it impossible for a Rocky Mountain bighorn sheep, wolves, bull trout, chinook salmon, whitebark pine, monarch butterflies,

wolverines, lynx, grizzly bears, pine martins, and northern goshawk to inhabit the Project area?

Y. Would the habitat be better for Rocky Mountain bighorn sheep, wolves, bull trout, chinook salmon, whitebark pine, monarch butterflies, wolverines, pine martins, and northern goshawk if roads were removed in the Project area?

Z. What is the U.S. FWS position on the impacts of this Project on Rocky Mountain bighorn sheep, wolves, bull trout, chinook salmon, whitebark pine, monarch butterflies, wolverines, pine martins, and northern goshawk? Have you conducted ESA consultation?

AA. Please provide us with the full Rocky Mountain bighorn sheep, wolves, bull trout, chinook salmon, whitebark pine, monarch butterflies, wolverines, pine martins, and northern goshawk

BB. What is wrong with uniform forest conditions?

CC. Has the beetle kill contributed to a diverse landscape?

DD. Why are you trying to exclude stand replacement fires when these fires help aspen and whitebark pine?

EE. Please disclose what is the best available science for restoration of whitebark pine.

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

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

HH. Disclose the amount of detrimental soil disturbance that currently exists in each pro- posed unit from previous logging and grazing activities;

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

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

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

LL. Disclose the timeline for implementation;

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

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

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

PP. Disclose the historic levels of mature and old growth forest in the Project area;

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

RR. Disclose the amount of mature and old growth forest that will remain after implementation;

SS. Disclose the amount of current habitat for old growth and mature forest dependent species in the Project area;

TT. Disclose the amount of habitat for old growth and mature forest dependent species that will remain after Project implementation;

UU. Disclose the method used to model old growth and mature forest dependent wildlife habitat acreages and its rate of error based upon field review of its predictions;

VV. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security currently available in the area;

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

XX. Disclose the amount of big game (moose and elk) hi- ding cover, winter range, and security after implementation;

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

ZZ. Disclose and address the concerns ex- pressed 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 standard, and the failure to compile data to

establish a reliable inventory of sensitive species on the Forest;

AAA. 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 activi- ties proposed for this Project;

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

CCC. Disclose when and how the Wallowa-Whitman National Forest made the decision to suppress natural wildfire in the Project area and replace natural fire with logging and pre- scribed burning;

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

EEE. Disclose how Project complies with the Roadless Rule;

FFF. Disclose the impact of climate change on the efficacy of the pro- posed treatments;

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

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

III. 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;

The best available science, Christensen et al (1993),recom- mends elk habitat effective- ness of 70% in summer range and at least 50% in all other areas where elk are one of the prima- ry resource considerations. Ac- cording to Figure 1 in Chri- stensen et al (1993), this equates to a maximum road den- sity of ap- proximately 0.7 mi/sq mi. in sum- mer range and approximately 1.7 mi/sq mi. in all other areas.

Do any of the 6th Code watersheds in the Project area meet ei- ther 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 man- aged for elk: “Areas where habitat effective- ness is retained at lower than 50 percent must be recognized as making only minor contri- butions to elk management goals. If habitat effectiveness is not important,

don't fake it. Just admit up front that elk are not a consid- eration." The Project EIS does not make this ad- mission.

The Forest Service should provide an analysis of how much of the Project area, Project area watersheds, affected land- scape areas, or affected Hunting Districts provide "elk secu- rity 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 en- compassing 30% or more of the area.

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

We believe that best available science shows that Commercial Logging does not reduce the threat of Forest Fires. What best available science supports the action alternatives?

Please find Schoennagel et al (2004) attached. Schoennagel states: “we are concerned that the model of historical fire effects and 20th-century fire suppression in dry ponderosa pine forests is being applied uncritical- ly 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 experi- ence infrequent, high-severity crown fires []. . . The most exten- sive subalpine forest types are composed of Engelmann spruce (Picea engelmannii), subalpine fir (Abies lasiocarpa), and lodgepole pine (Pinus contorta), all thin- barked trees ea- sily killed by fire. Extensive stand-replacing fires occurred histori- cally 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 pe- riod of fire exclusion has significantly altered the long fire inter-

vals in subalpine forests. Furthermore, large, intense fi- res 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 sub- stantial shifts in stand structure over recent decades as a re- sult 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 stand replacing 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 fo- rests, fire behavior in Yellow- stone during 1988, although se- vere, was nei- ther unusual nor surprising.”

Schoennagel et al (2004)(emphasis added) states: “Mechanical fuel reduction in sub- alpine forests would not represent a restoration treatment but rather a departure from the natural range of variability in stand structure.”

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 Yellow- stone 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 sub-alpine 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 hem- lock, 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 the- se 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 be- cause 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, Engelmann

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 fi- res, 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 rela- ted to fine fuel moisture content, air temperature, the amount of shad- ing of surface fuels, and the occurrence of an ignition source (human or lightning caused) . . . . There is generally a warmer, dryer microcli- mate in more open stands (fig. 9) compared to denser stands. Dense stands (canopy cover) tend to provide more shading of fuels, keep- ing 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 com- pared 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 in- crease probability of ignition in some open canopy stands com- pared to dense canopy stands."

A new study soon to be published by Dominick A. DellaSala et. al. found that re- viewed 1500 wildfires between 1984 and 2014 found that actively managed forests had the highest level of fire severity. While those forests in protected areas burned, on average, had the lowest level of fire severity. In other words, the best way to reduce severe fires is to protect the land as wilderness, not "manage" it.

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 sur- veys for old growth habitat within each project area, as iden- tified by Green et al. 1992; old growth types need to be defined and quan-

tified 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 Oregon Species of Concern (birds, mammals including bats) are not clearly defined, and demonstrated to be effective as per the current best science.

We request a careful analysis of the impacts to fisheries and water quality, including considerations of sedimentation, in-creases in peak flow, channel stability, risk of rain-on-snow events, and increases in stream water temperature. How will this project effect westslope cutthroat trout and their habitat?

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 in- creased stream temperatures and further detrimental impacts to water quality.

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 Oregon Species of Concern (birds, mammals including bats) are not clear- ly de- fined, 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) re- quire 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 re- sources. 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. Has the MT SHPO received this survey? 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? If you don't the project will be in violation of NEPA, NFMA, and the APA.

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

Since 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 project EIS, or EA if you refuse to write an EIS, to avoid illegally tiering to a non- NEPA docu-

ment. 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 Wallowa-Whitman Forest Plan?

How effective have BMPs been at stopping (i.e. preventing) new weed infestations from starting during logging 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 le- gal standards that address noxious weeds?

Is it true that noxious weeds are one of the top threats to bio- diversity 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?

Will this Project address all Project area BMP needs, i.e. will the BMP road maintenance backlog and needs from this Project all be met by this Project?

The scoping notice was not clear if any MIS were found. 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. The U.S. District Court ordered the USFWS to reconsider if wolverines should be listed untie ESA. Wolverines need secure habitat in big game winter range.

Which wildlife species and ecosystem processes, if any, does the fire-proofing in the proposed project benefit? Which species and processes do fire-proofing harm?

What is your definition of healthier?

What evidence do you have that this logging will make the for- est 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 with- out human intervention?

What beneficial ecological roles do beetles play? You didn't an- swer this in violation of NEPA, NFMA and the APA.

Can the forest survive without beetles?

Will the Forest Service quit suppressing fires in the project area?

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?

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

What scientific evidence to you have to show that logging makes a more resilient landscape?

Do unlogged old growth forests store more carbon than the wood products that would be removed from the same forest in a logging operation?

What is the cumulative effect of National Forest logging on U.S. carbon stores? How many acres of National Forest lands are logged every year? How much carbon is lost by that logging?

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 maintain- ing the forest area by avoiding deforestation,” and states that “protecting forest from logging or clearing offer immediate benefits via pre- vented emissions.”

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

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 con- version of na-

tive 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 re- moving native vegetative cover, invasive plants like knapweed may increase sediment yield and surface runoff in an

ecosystem. As well knapweed may alter organic matter dis- tribution 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, pre- scribed 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 be- cause 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 of- ten 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 grass- lands and forest openings.

Prescribed burning activities within the analysis area would likely cumulatively con- tribute 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). 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 extremely vulnerable, especially where 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 Oregon COUNTY NOXIOUS

WEED LIST. State-listed Category 2 noxious weed species yel- low and orange hawkweeds are recently established (within the last 5 to 10 years) in Oregon and are rapidly expand- ing in es- tablished areas. They can invade undisturbed areas where native plant communities are intact. These species can persist in shaded conditions and of- ten grow under- neath shrubs making eradica- tion 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 hawk- weeds present within the project area?

Please address the cumulative, direct and in- direct effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influ- enced 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, min- ing access routes, and private roads; removal of trees through commercial and pre-commercial logging and understory thinning; and pre-scribed burns. What open, gated, and de-commissioned 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 pro-posed action units?

Noxious weeds are not eradicated with single herbicide treat-ments. 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, repeti-tive schedules to be effective.

What commitment to a long-term, consistent strategy of ap- pli-cation is being proposed for each weed infested area wi- thin the

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

When areas treated with herbicides are re- seeded 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 un-infested 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 Gallatin National Forest Plan to ad- dress 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 plant communities. Additionally, the omission of an EIS alternative that includes preventive measures would violate NEPA because the Forest Ser- vice would fail to consider a reasonable alter- native.

Rare Plants

The ESA requires that the Forest Service con- serve 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 manage- ment 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, in- sect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be al- tered may have impacts on native vegetation, including threat- ened 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.

Whitebark Pine

Not all ecosystems or all Rocky Mountain landscapes have ex- perienced the impacts of fire exclusion. In some wilder- ness ar- eas, 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 eco- logical factor. In some upper subalpine ecosystems, fires were im- portant, 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 signifi- cantly alter stand conditions or forest health within Rocky Mountain sub- alpine ecosystems.

Whitebark pine seedlings, saplings and mature trees, present in subalpine forests pro- posed for burning, would experience mor- tality 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 pres-

ence of adequate seed source and dispersal mechanisms (Clarks Nutcracker or humans planting white- bark pine seedlings).

White pine blister rust, an introduced disease, has caused ra- pid 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.

Mountain pine beetle prefer large, older whitebark pine, which are the major cone producers. In some areas the few remaining whitebark that show the potential for blister rust resistance are being at- tacked and killed by mountain pine beetles, thus accelerating the loss of key mature cone- bearing trees.

Whitebark pine seedlings and saplings are very likely present in the subalpine forests proposed for burning and logging. In the

ab- sence of fire, this naturally occurring white- bark pine re- generation 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 re- gion, 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 favora- ble 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 suffi- cient to replace whitebark pine lost to fire activities.

What surveys have been conducted to deter-]mine presence and abundance of whitebark pine regeneration? 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?

Please see the attached report titled: "Have western USA fire suppression and megafire active management approaches become a contemporary Sisyphus?" By Dominick A. DellaSala[a,*], Bryant C. Baker[b,c], Chad T. Hanson[d], Luke Ruediger[e,f], William Baker [g]

The abstract of the paper states:

Fire suppression policies and "active management" in response to wildfires are being carried out by land managers globally, including millions of hectares of mixed conifer and dry ponderosa pine (Pinus

ponderosa) forests of the western USA that periodically burn in mixed severity fires. Federal managers pour billions of dollars into command-and-control fire suppression and the MegaFire (landscape scale) Active Management Approach (MFAMA) in an attempt to contain wildfires increasingly influenced by top down climate forcings. Wildfire suppression activities aimed at stopping or slowing fires include expansive dozerlines, chemical retardants and igniters, backburns, and cutting trees (live and dead), including within roadless and wilderness areas. MFAMA involves logging of large, fire-resistant live trees and snags; mastication of beneficial shrubs; degradation of wildlife habitat, including endangered species habitat; aquatic impacts from an expansive road system; and logging-related carbon emissions. Such impacts are routinely dismissed with minimal environmental review and defiance of the precautionary principle in environmental planning. Placing restrictive bounds on these activities, deemed increasingly ineffective in a change climate, is urgently needed to overcome their contributions to the global biodiversity and climate crises. We urge land managers and decision makers to address the root cause of recent fire increases by reducing greenhouse gas emissions across all sectors, reforming industrial forestry and fire suppression practices, protecting carbon stores in large trees and recently burned forests, working with wildfire for ecosystem benefits using minimum suppression tactics when fire is not threatening towns, and surgical application of thinning and prescribed fire nearest homes.

This conclusion of this paper is that the purpose and need of the project will not be met by your proposed management activities. This paper is now the best available science. Why does the Morgan Nesbit Forest Resiliency Project proposal not follow the best available science?

Thank you for your attention to these concerns.

Sincerely yours,

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