January 1, 2025

Kate Olsen, District Ranger, Pinedale Ranger District 29 East Fremont Lake Rd Pinedale, WY 82941.

Dear Ranger Olsen,

Thank you for considering our comments on the East Rim WUI Vegetation management project, hereafter East Rim project or project, from the Alliance for the Wild Rockies, Yellowstone to Uintas Connection, Native Ecosystem Council, Center for Biological Diversity, and Council on Wildlife and Fish, hereafter Alliance.

How can the Bridger-Teton National Forest justify building an undisclosed number of temporary roads in addition to commercial and mechanical logging in the inner and outer riparian zones, and clearcuts that are up to 40 acres in watersheds that are already impaired from logging and roads? An Environmental Impact Statement or at least an EA is necessary to analyze the impacts or better yet just drop this project.

NEPA requires that you inform the public of exactly where and how many miles of roads will be built even if they are so called temporary roads. Please analyze the cumulative impacts of this project on grizzly bears, lynx, lynx critical habitat, whitebark pine, wolverine, monarch butterflies, goshawks, and all native fish and wildlife in the Pinedale Ranger District.

The scoping notice did not adequately consider the cumulative impacts of the clearcutting, intensive logging, and road building on native species including lynx, lynx critical habitat, wolverines, white bark pine, grizzly bears and old growth dependent species.

The Pinedale Ranger District is one of the more heavily logged, clearcut and roaded forest in Wyoming and much of the Pinedale Ranger District is lynx critical habitat, wolverine habitat, and grizzly bear habitat. None of these species benefit from more logging roads and more clearcuts.

Recent scientific findings undermine the Forest Plan/NRLMD direction for management of lynx habitat. This creates a scientific controversy the FS fails to resolve, and in fact it essentially ignores it.

For one, Kosterman, 2014 found that 50% of lynx habitat must be mature undisturbed forest for it to be optimal lynx habitat where lynx can have reproductive success and no more than 15% of lynx habitat should be young clearcuts, i.e. trees under 4 inched dbh. Young regenerating forest should occur only on 10-15% of a female lynx home range, i.e. 10-15% of an LAU. This renders inadequate the agency's assumption in the Forest Plan/NRLMD that 30% of lynx habitat can be open, and that no specific amount of mature forest needs to be conserved. Kosterman, 2014 demonstrates that Forest Plan/NRLMD standards are not adequate for lynx viability and recovery. Also, the Forest Plan essentially assumes that persistent effects of vegetation manipulations other than regeneration logging and some intermediate treatments are essentially nil. However, Holbrook, et al., 2018 "used univariate analyses and hurdle regression models to evaluate the spatio-temporal factors influencing lynx use of treatments." Their analyses "indicated ...there was a consistent cost in that lynx use was low up to ~10 years after all silvicultural actions." (Emphasis added.) From their conclusions:

First, we demonstrated that lynx clearly use silviculture treatments, but there is a ~ 10 year cost of implementing any treatment (thinning, selection cut, or regeneration cut) in terms of resource use by Canada lynx. This temporal cost is associated with lynx preferring advanced regenerating andmature structural stages (Squires et al., 2010; Holbrook et al., 2017a) and is consistent with previous work demonstrating a negative effect of precommercial thinning on snowshoe hare densities for ~10 years (Homyack et al., 2007). Second, if a treatment is implemented, Canada lynx used thinnings at a faster rate post- treatment (e.g.,~20 years posttreatment to reach 50% lynx use) than either selection or regeneration cuts (e.g., ~34–40 years post-treatment to reach 50% lynx use). Lynx appear to use regeneration and selection cuts similarly over time suggesting the difference in vegetation impact between these treatments made little difference concerning the potential impacts to lynx (Fig. 4c). Third, Canada lynx tend to avoid silvicultural treatments when a preferred structural stage (e.g., mature, multi-storied forest or advanced regeneration) is

abundant in the surrounding landscape, which highlights the importance of considering landscape-level composition as well as recovery time. For instance, in an area with low amounts of mature forest in the neighborhood, lynx use of recovering silvicultural treatments would be higher versus treatments surrounded by an abundance of mature forest (e.g., Fig. 3b). This scenario captures the importance of post-treatment recovery for Canada lynx when the landscape context is generally composed of lower quality habitat. Overall, these three items emphasize that both the spatial arrangement and composition as well as recovery time are central to balancing silvicultural actions and Canada lynx conservation.

So Holbrook et al., 2018 fully contradict Forest Plan assumptions that clearcuts/regeneration can be considered useful lynx habitat as early as 20 years post-logging.Results of a study by Vanbianchi et al., 2017 also conflict with Forest Plan/NRLMD assumptions: "Lynx used burned areas as early as 1 year postfire, which is much earlier than the 2–4 decades postfire previously thought for this predator." The NRLMD erroneously assumes clearcutting/regeneration logging have basically the same temporal effects as stand-replacing fire as far as lynx re-occupancy.

Kosterman, 2014, Vanbianchi et al., 2017 and Holbrook, et al., 2018, Holbrook 2019 demonstrate that Forest Plan direction is not adequate for lynx viability and recovery, as the FS assumes. Holbrook 2019 such all lynx habitat must be surveyed. You have not done this.

Please write an EA or an EIS that fully complies with the law and and analyzes the cumulative effect of clearcutting on grizzly bears, lynx, lynx critical habitat, whitebark pine, wolverine, monarch butterflies, goshawks, and all native fish and wildlife in the Pinedale Ranger District.

We contend that 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. The EA and DDN do not adequately analyze the cumulative impacts of all of the logging in the Tally Lake Range District. 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. The project is in violation of NEPA, NFMA, the APA and the ESA.

The scoping notice does not adequately demonstrate that all

Forest Plan standards and requirements will be met.

Please demonstrate that the project is meeting all of the Bridger-

Teton National (BTNF) Forest Forest Plan's standards.

Public Law 117 - 58 - Infrastructure Investment and Jobs Act states(f) Exclusions.--An eligible activity may not be carried out under the Program--

(1) in a wilderness area or designated wilderness study area;

(2) in an inventoried roadless area;

(3) on any Federal land on which, by Act of Congress

or

Presidential proclamation, the removal of vegetation is restricted or prohibited; or

(4) in an area in which the eligible activity would be inconsistent with the applicable land and resource management plan.

The scoping notice does not demonstrate that the project follows of the requirements of Public Law 117-58 and the Forest Plan requirements. Public Law 117-58. Please do so.

The Wildland Urban Interface in the Healthy Forest Restoration Act states:

SEC. 101. ø16 U.S.C. 6511; DEFINITIONS.
In this title:
(1) AT-RISK COMMUNITY.—The term "at-risk community" means an area—
(A) that is comprised of—
(i) an interface community as defined in the notice entitled "Wildland Urban Interface Communities Within the Vicinity of Federal Lands That Are at High

Risk From Wildfire" issued by the Secretary of Agriculture and the Secretary of the Interior in accordance with title IV of the Department of the Interior and Related Agencies Appropriations Act, 2001 (114 Stat. 1009) (66 Fed. Reg. 753, January 4, 2001); or (ii) a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) within or adjacent to Federal land; (B) in which conditions are conducive to a large-scale wildland fire disturbance event; and (C) for which a significant threat to human life or property exists as a result of a wildland fire disturbance event.

Please provide a map of the Wildland Urban Interface (WUI) showing that it complies with the definition of a WUI in the Healthy Forest Act.

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(A) that has been approved for an extension of funding by the Secretary of Agriculture prior to the date of enactment of this Act; or
(B) that has been recommended for an extension

of

section

funding by the advisory panel established under

4003(e) of the Omnibus Public Land Management Act of 2009 (16 U.S.C. 7303(e)) prior to the date of enactment of this Act that the Secretary of Agriculture subsequently approves; and (3) select project proposals for funding under the Program in a manner that--(A) gives priority to a project proposal that will treat acres that--(i) have been identified as having very high wildfire hazard potential; and (ii) are located in--(I) the wildland-urban interface; or (II) a public drinking water source area;

The term ``wildland-urban interface'' has the meaning given the term in section

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101 of the Healthy Forests Restoration Act of 2003 (16 U.S.C. 6511).

The scoping notice does not demonstrate that the project follows of the requirements of Public Law 117-58 and the Forest Plan requirements.

The scoping notice does not adequately demonstrate that the project follows the Healthy Forest Restoration Act of 2003 definition of a wildland -urban interface which is 1 1/2 miles from a community.

Please demonstrate that the entire project area is a drinking water source area for the community.

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 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 checklist of issues that must be included in the EIS for he Project in order for the Forest Service's analysis to comply with the law. Following the list of necessary elements, Alliance has also included a general narrative discussion on possible impacts of the Project, with accompanying citations to the relevant scientific literature. These references should be disclosed and discussed in the EIS or for an EA for the Project.

I. NECESSARY ELEMENTS FOR

PROJECT EIS or EA:

A. Disclose all Bridger-Teton National Forest (BTNF) 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 and the eastside assessment?

C. Disclose the acreages of past, current, and reasonably foreseeable logging, grazing, mining, and road building activities within the Project area; D. Solicit and disclose comments from the WyomingDepartment of Game and Fish regarding the impact of theProject on wildlife habitat;

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

F. Disclose the biological assessment for the candidate, threatened, or endangered species with potential and/or actual 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 BTNF's record of compliance with state best management practices regarding stream sedimentation from ground-disturbing management activities;

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

L. Disclose the BTNF's record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the FNF;

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 USFWS on the impacts of this project on candidate, threatened, or endangered species and plants;

O. Please consult with the USFWS on the impacts of this project on lynx critical habitat and potential lynx critical habitat; 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 recommends "[i]ncreasing or maintaining the forest area by avoiding deforestation," and states that "protecting forest from logging or clearing offer immediate benefits via prevented emissions." 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.

T. Please list each visual quality standard that applies to each unit and disclose whether each unit meets its respective visual 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 wolverines, whitebark pine, grizzly bears, pine martins, northern goshawk and lynx as required by the Forest Plan.

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

X. Is it impossible for a wolverines, pine martins, monarch butterflies, northern goshawks, grizzly bears, whitebark pine and lynx to inhabit the Project area?

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

Z. What is the USFWS position on the impacts of this Project on wolverines, pine martins, monarch butterflies, northern goshawks, grizzly bears, whitebark pine and lynx? Have you conducted ESA consultation?

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

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?

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 proposed 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) hiding 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 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 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 activities 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, including a two-year, five-year, ten-year, and 20-year projection;

CCC. Disclose when and how the BTNF made the decision to suppress natural wildfire in the Project area and replace natural fire with logging and prescribed burning;

DDD. Disclose the cumulative impacts on the Forest-wide level of the BTNF's policy decision to replace natural fire with logging and prescribed burning; EEE. Disclose better how Project complies with the Roadless Rule and if there are any inventoried roadless areas in the project area;

FFF. Disclose the impact of climate change on the efficacy of the proposed 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:

 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),recommends elk habitat effectiveness of 70% in summer range and at least 50% in all other areas where elk are one of the prima- ry 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 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 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 man- aged for elk: "Areas where habitat effectiveness is retained at lower than 50 percent must be recognized as making only minor contributions to elk management goals. If habitat effectiveness is not important, don't fake it. Just admit up front that elk are not a consideration." The Project EIS does not make this 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 security area[s]" as defined by the best available science, Christensen et al (1993) and Hillis et al (1991), to be comprised of contiguous 250 acre blocks of forested habitat 0.5 miles or more from open roads with these blocks encompassing 30% or more of the area. Please provide a rational justification for the deviation from the Hillis security definition and numeric threshold that represent the best available science on elk security areas.

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?

The project does not demonstrate that it will meet the purpose and need of the project.

Please see the attached paper by Della-Sala 2022.

Please see the attached paper by Baker et al 2023.

Please see the column below by Dr. Chad Hanson.

https://thehill.com/blogs/congress-blog/energy-environment/ 590415-logging-makes-forests-and-homes-more-vulnerable-to

Logging makes forests and homes more vulnerable to wildfires

The West has seen some really big forest fires recently, particularly in California's Sierra Nevada and the Cascade Mountains of Oregon. Naturally, everyone is concerned and elected officials are eager to be seen as advancing solutions. The U.S. Senate is negotiating over the Build Back Better bill, which currently contains nearly \$20 billion in logging subsidies for "hazardous fuel reduction" in forests. This term contains no clear definition but is typically employed as a euphemism for "thinning", which usually includes commercial logging of mature and old-growth trees on public lands. It often includes clearcut logging that harms forests and streams and intensifies wildfires.

Logging interests stand poised to profit, as they tell the public and Congress that our forests are overgrown from years of neglect. Chainsaws and bulldozers are their remedy. Among these interests are agencies like the U.S. Forest Service that financially benefits from selling public timber to private logging companies.

In this fraught context, filled with a swirling admixture of panic, confusion, and opportunism, the truth and scientific evidence are all too often casualties. This, unfortunately, can lead to regressive policies that will only exacerbate the climate crisis and increase threats to communities from wildfire. We can no longer afford either outcome.

Many of the nation's top climate scientists and ecologists recently urged Congress to remove the logging subsidies from the Build Back Better bill. Scientists noted that logging now emits about as much carbon dioxide each year as does burning coal. They also noted that logging conducted under the guise of "forest thinning" does not stop large wildfires that are driven mainly by extreme fire-weather caused primarily by climate change. In fact, it can often make fires burn faster and more intensely toward vulnerable homes. Unprepared towns like Paradise and Grizzly Flats, Calif., unfortunately burned to the ground as fires raced through heavily logged surroundings.

Nature prepares older forests and large trees for wildfires. As trees age, they develop thick impenetrable bark and drop their lower limbs, making it difficult for fire to climb into the tree crowns. Older, dense forests used by the imperiled spotted owl burn in mixed intensities that is good for the owl and hundreds of species that depend on these forests for survival. Our national parks and wilderness areas also burn in lower fire intensities compared to heavily logged areas.

Occasionally even some of the largest trees will succumb to a severe fire but their progeny are born again to rapidly colonize the largest and most severe burn patches. Dozens of cavitynesting birds and small mammals make their homes in the fire-killed trees. Soon after fire in these forests, nature regenerates, reminiscent of the mythical phoenix, aided by scores of pollinating insects and seed carrying birds and mammals.

Wildfires are highly variable, often depending on what a gust of wind does at a given moment, and even the biggest fires are primarily comprised of lightly and moderately-burned areas where most mature trees survive. By chance, in any large fire there will always be some areas that were thinned by loggers that burned less intense compared to unthinned areas. Before the smoke fully clears, logging interests find those locations and take journalists and politicians to promote their agenda. What they fail to disclose are the many examples where managed forests burned hotter while older, unmanaged forests did the opposite.

This sort of self-serving show boating occurred after the 2020 Creek Fire in the Sierra National Forest in California, as news stories echoed the logging industry's "overgrown forests" narrative based on a single low-intensity burn area. When all of the data across the entire fire were analyzed, it turned out that logged forests, including commercial "thinning" areas, actually burned the most intensely.

In Oregon, The Nature Conservancy has been conducting intensive commercial thinning on its Sycan Marsh Preserve. Based on satellite imagery, the northern portion of the 414,000-acre Bootleg Fire of 2021 swept through these lands. Within days, TNC began promoting its logging program, focusing on a single location around Coyote Creek, where a "thinned" unit burned lightly. They failed to mention that nearly all of the dense, unmanaged forests burned lightly too in that area. Well-intentioned environmental reporters were misled by a carefully picked example.

Billions of dollars are being wasted to further this false logging industry narrative—funds that instead should be used to prepare communities for more climate-driven wildfires. Congress can instead redirect much needed support to damaged communities so they can build back better and adopt proven fire safety measures that harden homes and clear flammable vegetation nearest structures.

The path forward is simple, with two proven remedies that work. Protect forests from logging so they can absorb more carbon dioxide from the atmosphere and moderate fire behavior, and adapt communities to the new climate-driven wildfire era.

Please take a hard look at how the project effect the carbon storage of the project area and how the project effects climate change. The federal district court of Montana recently ruled against the Kootenai National Forest on the same boiler plate analysis, writing: *Ultimately, greenhouse gas reduction must happen quickly, and removing carbon from forests in the form of logging, even if trees are going to grow back, will take decades to centuries to re-sequester. Put more simply, logging causes immediate carbon losses, while re-sequestration happens slowly over time, time that the planet may not have.*

The Infrastructure Investment and Jobs Act (PL 117-58) requires:

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``(aa) documentation of an effective reforestation project plan; ``(bb) the ability to measure the progress and success of the project; and ``(cc) the ability of a project to provide benefits relating to forest function and health, soil health and productivity, wildlife habitat, improved air and water quality, carbon sequestration potential, resilience, job creation, and enhanced recreational opportunities.'

The project does not adequately demonstrate that it is improving the carbon sequestration potential and resilience of the project area.

How will the [roject make the forest more resilient?

Please follow NEPA and take a hard look at the impact of the project on climate change.

Please

- Disclose the biological assessment for the candidate, threatened, or endangered species with potential and/or actual habitat in the Project area;
- Disclose the biological evaluation for the sensitive and management indicator species with potential and/or actual

habitat in the Project area;

- Disclose the snag densities in the Project area, and the method used to determine those densities;
- Disclose the current, during-project, and post-project road densities in the Project area;
- Disclose the Bridger-Teton National Forest's record of compliance with state best management practices regarding stream sedimentation from ground-disturbing management activities;
- Disclose the Bridger-Teton National Forest's record of compliance with its monitoring requirements as set forth in its Forest Plan;
- Disclose the Bridger-Teton National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the Bridger-Teton National Forest;
- Disclose the results of the field surveys for threatened, endangered, sensitive, and rare plants in each of the proposed units;

- Disclose the level of current noxious weed infestations in the Project area and the cause of those infestations;
- Disclose the impact of the Project on noxious weed infestations and native plant communities;
- Disclose the timeline for implementation;
 - Disclose the amount of big game (moose and elk) hiding cover, winter range, and security currently available in the area;
- Disclose the amount of big game (moose and elk) hiding cover, winter range, and security during Project imple mentation;
 - Disclose the amount of big game (moose and elk) hiding cover, winter range, and security after implementation;
- Disclose the method used to determine big game hiding cover, winter range, and security, and its rate of error as determined by field review;
 - 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 and the failure to compile data to establish a reli able inventory of sensitive species on the Forest;

. Disclose how Project complies with the Roadless Rule; Are there any inventoried roadless areas in the project area?

Please include a complete cost benefit analysis for the project. Please consult with the Wyoming State Historic Preservation Office to ensure the project complies with the National Historic Preservation Act.

Please formally consult with the FWS on the impact of this project on wolverines, lynx, lynx critical habitat, monarch butterfly, whitebark pine, grizzly bears, bull trout, and bull trout critical habitat. Please fully address all relevant habitat standards for Bull Trout, and Bull Trout Designated Critical Habitat. How many openings over 40 acres are proposed?

There have been two groundbreaking articles about lynx. "Correlates of Canada Lynx Reproductive Success in Northwestern Montana" by Megan K. Kosterman.

And "Understanding and predicting habitat for wildlife conservation: the case of Canada lynx at the range periphery" by HOLBROOK et al that confirms Kosterman's findings.

Does the action alternative comply with Kosterman's and Holbrook's recommendations?

How any lynx analysis units been eliminated in the project area?

1) USFS needs to take a hard look at impacts to lynx under NEPA, apply the lynx conservation measures and standard, and consult on lynx via section 7 of the ESA b/c the best available science -- including recent tracking surveys conducted by WTU -- confirm lynx's presence and use of the area;

(3) USFS has failed to survey for lynx as required by the ESA, NEPA, and NFMA.

In order to meet the requirements of the FS/USFWS Conservation Agreement, the FS agreed to insure that all project activities are consistent with the Lynx Conservation Assessment and Strategy (LCAS).

LCAS requirements include:

Project planning—standards.

1. Within each LAU, map lynx habitat. Identify potential denning habitat and foraging habitat (primarily snowshoe hare habitat, but also habitat for important alternate prey such as red squirrels), and topographic features that may be important for lynx movement (major ridge systems, prominent saddles, and riparian corridors). Also identify non-forest vegetation (meadows), shrub-grassland communities, etc.) adjacent to and intermixed with forested lynx habitat that may provide habitat for alternate lynx prey species.

2. Within a LAU, maintain denning habitat in patches generally larger than 5 acres, comprising at least 10 percent of lynx habitat. Where less than 10 percent denning habitat is currently present within a LAU, defer any management actions that would delay development of denning habitat structure.

3. Maintain habitat connectivity within and between LAUs.

Programmatic planning-standards.

1. Conservation measures will generally apply only to lynx habitat on federal lands within LAUs.

2. Lynx habitat will be mapped using criteria specific to each geographic area to identify appropriate vegetation and

environmental conditions. Primary vegetation includes those types necessary to support lynx reproduction and survival. It is recognized that other vegetation types that are intermixed with the primary vegetation will be used by lynx, but are considered to contribute to lynx habitat only where associated with the primary vegetation. Refer to glossary and description for each geographic area.

3. To facilitate project planning, delineate LAUs. To allow for assessment of the potential effects on an individual lynx, LAUs should be at least the size of area used by a resident lynx and contain sufficient year-round habitat.

4. To be effective for the intended purposes of planning and monitoring, LAU boundaries will not be adjusted for individual projects, but must remain constant.

5. Prepare a broad-scale assessment of landscape patterns that compares historical and current ecological processes and vegetation patterns, such as age-class distributions and patch size characteristics. In the absence of guidance developed from such an assessment, limit disturbance within each as follows: if more than 30 percent of lynx habitat within an LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result o vegetation management activities by federal agencies.

Project planning-standards.

1. Management actions (e.g., timber sales, salvage sales) shall not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10- year period.

Programmatic planning-standards.

1. Identify key linkage areas that may be important in providing

landscape connectivity within and between geographic areas, across all ownerships.

2. Develop and implement a plan to protect key linkage areas on federal lands from activities that would create barriers to movement. Barriers could result from an accumulation of incremental projects, as opposed to any one project.

Please demonstrate that project activities are consistent with above and all other applicable programmatic and project requirements.

The U.S. Court of Appeals for the Ninth Circuit hold that "[o]nce an agency is aware that an endangered species may be present in the area of its proposed action, the ESA requires it to prepare a biological assessment" Thomas v. Peterson, 753 F. 2d 754, 763 (9thCir. 1985). If the biological assessment concludes that the proposed action "may affect" but will "not adversely affect" a threatened or endangered species, the action agency must consult informally with the appropriate expert agency. 50 C.F.R. §§ 402.14 (b)(1), 402.12(k)(1).

Canada lynx are listed under the ESA.

Canada lynx may be present in the project area and the proposed project may affect lynx by temporarily increasing road density, removing vegetative cover, and engaging in mechanized activities that could displace lynx.

Please complete a biological assessment for lynx and formally consult with USFWS regarding the project's potential impacts on lynx.
Grizzly Bears

In May 2019, the United Nations released a report finding that the current rate of species extinction "is already at least tens to hundreds of times higher than it has averaged over the past 10 million years."¹ The mountain caribou in the lower 48 states went extinct just a few months ago. Like the Selkirk grizzly bear, the mountain caribou lived primarily on National Forest land, had a population of less than 50 individuals, and was threatened by logging and roads.

Alliance reiterates this point here because the agencies issued similar assurances regarding the mountain caribou that they now issue for the grizzly bear. For example, in litigation to protect the mountain caribou in this Court, the agencies represented that they would "meet caribou needs" by using the best available science and applying forest plan protections, and not approving logging projects unless they concluded that the project was "not likely to adversely affect" the mountain caribou. Jayne v. Sherman, 706 F.3d 994, 1001 (9th Cir.2013)(quoting FWS Biological Opinion).

In Jayne, these statements were accepted as adequate protections for the mountain caribou. Now the mountain caribou is extinct. It is not too late to avoid the same fate for the Selkirk grizzly bear. As members of Congress stated when

¹https://www.ipbes.net/sites/default/files/downloads/ spm_unedited_advance_f or_posting_htn.pdf they passed the ESA: "The agencies of Government can no longer plead that they can do nothing about [the grizzly bear]. They can, and they must. The law is clear." Tennessee Valley Auth. v. Hill, 437 U.S. 153, 184 (1978) (quoting Congressional Record).

The preservation of endangered species takes "priority over the 'primary missions' of federal agencies." Accordingly, courts must "afford[] endangered species the highest of priorities," and act with "institutionalized caution" when reviewing ESA cases. Cottonwood Envtl. Law Ctr. v. USFS, 789 F.3d 1075, 1091 (9th Cir.2015). This Court holds that the "fundamental principle [of institutionalized caution] remains intact and will continue to guide district courts when confronted with requests for injunctive relief in ESA cases." Id. Although the district court did not apply this fundamental principle in this case, this Court may now remedy that error by issuing a temporary injunction pending appeal to preserve the status quo until a final decision is issued on the merits.

The project will not maintaining and enhancing grizzly habitat and will increase the potential for grizzly-human conflicts in violation of NFMA, NEPA, the APA and the ESA.

The Forest does not have a good track record of keeping closed roads closed. The Forest Service does not disclose the road mileage behind these ineffective closures; therefore it is unclear how many miles of additional open and total roads must be added to the existing condition calculations as a result of these ineffective closures. How many road closure violations have occurred in the Swan Lake Ranger District in the last 5 years?

Chronic recurring road closure breaches cannot reasonably be construed as "temporary."

Because of the serious impacts to grizzly bears, please demonstrate compliance with Forest Plan standards relevant to grizzly bears, and analyze the direct, indirect, and cumulative impacts to grizzly bears.

The Forest Service must comply with National Forest Management Act ("NFMA") and its implementing regulations. NFMA requires the Forest Service to ensure that site-specific management projects are consistent with the applicable forest plan. 16 U.S.C. § 1604(i). Thus, the Forest Service must ensure that all aspects of the proposed action comply with the Bridger-Teton National Forest Land Management Plan.

- 1. Will the Forest Service be considering binding legal standards for noxious weeds in its Land Management Plan?
- 2. Has the State Historic Preservation Office signed off that this project complies with the Historic Preservation Act? The project is involution of the National Historic Preservation Act if this is not done.
- 5. How effective has the Forest Service been at stopping (i.e. preventing) new weed infestations from starting during

logging and road building operations?

6. Is it true that new roads are the main cause of new noxious weed infestations?

- 7. Is it true that noxious weeds are one of the top threats to biodiversity on public lands?
- 8. How can the Forest Service be complying with NFMA's requirement to maintain biodiversity if it has no legal standards that address noxious weeds?

9. How will the decreased elk security affect wolverines and have you formally consulted with the FWS on the effects of this project on wolverines? The wolverine was recently determined to be warranted for listing under the ESA. 75 Fed.

Reg.78030 (Dec. 14, 2010). It is currently a candidate species, proposed for listing.. The USFWS found that "[s]ources of human disturbance to wolverines include . . . road corridors, and extractive industry such as logging". The Forest Service must go through ESA formal consultation for the wolverine for this project.

Please prepare a Biological Assessment and formally consult with the USFWS as required by law.

THE AGENCIES MUST COMPLETE A BIOLOGICAL ASSESSMENT, BIOLOGICAL OPINION, INCIDENTAL TAKE STATEMENT, AND MANAGEMENT DIRECTION AMENDMENT FOR THE RMP FOR THE WOLVERINE.

The agencies do not have in place any forest plan biological assessment, biological opinion, incidental take statement, and management direction amendment for wolverines.

THE AGENCIES MUST CONDUCT ESA CONSULTATION FOR THE

WOLVERINE.

Wolverines may be present in the Project area. The Forest Service concedes that the Project "may affect" wolverines. The agencies' failure to conduct ESA consultation for a species that may be present and may be affected by the Project violates the ESA. Wolverines are currently warranted for listing under the ESA. As the agencies are well aware, the scheduled, court ordered listing date for the wolverine is this year. In fact, FWS has recently filed the a document in federal court committing to a listing date for the wolverine. Accordingly, the wolverine will be listed under the ESA before the final decision is made to authorize and implement this Project, and long before any project activities commence. Regardless, even candidate species must be included in a biological assessment. Did the Forest Service survey for wolverines in the project area? Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area. Ruggierio et al 2000;

Wolverines generally scavenge for ungulates along valley bottoms and forage and den in remote, high-elevation areas (Hornocker and Hash 1981; Morgan and Copeland 1998). Thus if mangers wished to provide habitat for wolverines, they could pay particular attention in the planning process to ungulates winter range and other aspects of habitat quality for ungulates to provide a consistent supply of carcasses for wolverine to scavenge. In addition, wolverines generally avoid areas of human activity. To limit the threat of human-caused disturbance or mortality, managers could restrict access to portions of the landscape where wolverines are most likely to occur.

In order to meet this viability mandate, the 1982 NFMA planning regulations require that the Forest Service select "management indicator species" whose "population changes are believed to indicate the effects of management activities." 36 C.F.R. § 219.19 (1) (2000). 253.

The 1982 NFMA planning regulations require the Forest Service to monitor the population trends of these species and to state and evaluate land management alternatives

"in terms of both amount and quality of habitat and of animal population trends of the management indicator species." 36 C.F.R. § 219.19 (2),(6) (2000).

The wolverine was recently determined to be warranted for listing under the ESA. 75 Fed. Reg.78030 (Dec. 14, 2010). It is currently a proposed species, waiting for work to be completed on other species before it is officially listed. The USFWS found that "[s]ources of human disturbance to wolverines include . . . road corridors, and extractive industry such as logging" .The Forest Service admits that the wolverine and/ or its habitat are present within the project area and would be impacted by the project. The Forest Service must go through ESA consultation for the wolverine for this project.

Would native species such as grizzly bears, lynx, wolverine, elk, bull trout and bull trout critical habitat be better off if you instead spent this money removing roads in the project area?

Why did you not analyze a restoration only alternative that did not include logging?

Has the money already been appropriated to do restoration work called for in the EA?

Do the action alternatives comply with PACFISH-INFISH?

Are you meeting the INFISH Riparian Management Objectives for temperature, pool frequency, and sediment?

With all of the bull trout spawning streams and designated as critical habitat in the project area we would expect robust road decommissioning and culvert removals, and no logging in riparian areas of streams. Instead the project is a robust logging and roading project that will degrade, not improve aquatic ecosystems.

The best available science shows that roads are detrimental to aquatic habitat and logging in riparian areas is not restoration.

Fish evolved with fire, they did not evolve with roads and logging.

What are the redd counts in bull trout critical habitat in the project area? Please also provide the all the historical bull counts that you have in the project area?

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

The introduction of sediment in excess of natural amounts can have multiple adverse effects on bull trout and their habitat (Rhodes et al. 1994, pp. 16-21; Berry, Rubinstein, Melzian, and Hill 2003, p. 7). The effect of sediment beyond natural background conditions can be fatal at high levels. Embryo survival and subsequent fry emergence success have been highly correlated to percentage of fine material within the stream-bed (Shepard et al. 1984, pp. 146, 152). Low levels of sediment may result in sublethal and behavioral effects such as increased activity, stress, and emigration rates; loss or reduction of foraging capability; reduced growth and resistance to disease; physical abrasion; clogging of gills; and interference with orientation in homing and migration (McLeay et al. 1987a, p. 671; Newcombe and MacDonald 1991, pp. 72, 76, 77; Barrett, Grossman, and Rosenfeld 1992, p. 437; Lake and Hinch 1999, p. 865; Bash et al. 2001n, p. 9; Watts et al. 2003, p. 551; Vondracek et al. 2003, p. 1005; Berry, Rubinstein, Melzian, and Hill 2003, p. 33). The effects of increased suspended sediments can cause changes in the abundance and/or type of food organisms, alterations in fish habitat, and long-term impacts to fish populations (Anderson et al. 1996, pp. 1, 9, 12, 14, 15; Reid and Anderson 1999, pp. 1, 7-15). No threshold has been determined in which fine sediment addition to a stream is harmless (Suttle et al. 2004, p. 973). Even at low concentrations, fine-sediment deposition can decrease growth and survival of juvenile salmonids.

Aquatic systems are complex interactive systems, and isolating the effects of sediment to fish is difficult (Castro and Reckendorf 1995d, pp. 2-3). The effects of sediment on receiving water ecosystems are complex and multi-dimensional, and further compounded by the fact that sediment flux is a natural and vital process for aquatic systems (Berry, Rubinstein, Melzian, and Hill 2003, p. 4). Environmental factors that affect the magnitude of sediment impacts on salmonids include duration of exposure, frequency of exposure, toxicity, temperature, life stage of fish, angularity and size of particle, severity/magnitude of pulse, time of occurrence, general condition of biota, and availability of and access to refugia (Bash et al. 2001m, p. 11). Potential impacts caused by excessive suspended sediments are varied and complex and are often masked by other concurrent activities (Newcombe 2003, p. 530). The difficulty in determining which environmental variables act as limiting factors has made it difficult to establish the specific effects of sediment impacts on fish (Chapman 1988, p. 2). For example, excess fines in spawning gravels may not lead to smaller populations of adults if the amount of juvenile winter habitat limits the number of juveniles that reach adulthood. Often there are multiple independent variables with complex inter-relationships that can influence population size.

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

Aquatic Impacts

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

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

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

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

Direct effects:

Gill Trauma - High levels of suspended sediment and turbidity can result in direct mortality of fish by damaging and clogging gills (Curry and MacNeill 2004, p. 140). Spawning, redds, eggs - The effects of suspended sediment, deposited in a redd and potentially reducing water flow and smothering eggs or alevins or impeding fry emergence, are related to sediment particle sizes of the spawning habitat (Bjornn and Reiser 1991, p. 98).

Indirect effects:

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

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

Habitat effects - All life history stages are associated with complex forms of cover including large woody debris, undercut banks, boulders, and pools. Other habitat characteristic important to bull trout include channel and hydrologic stability, substrate composition,

temperature, and the presence of migration corridors (Rieman and McIntyre 1993, p. 5).

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

Behavioral effects - These behavioral changes include avoidance of habitat, reduction in feeding, increased activity, redistribution and migration to other habitats and locations, disruption of territoriality, and altered homing (Anderson, Taylor, and Balch 1996, p. 6; Bash et

al. 2001t, pp. 19-25; Suttle, Power, Levine, and McNeely 2004, p. 971).

• How will this project affect native fish? What is the current condition in the riparian areas?

How will this project protect rather than adversely impact fish habitat and water quality? No logging or road building should be done in riparian areas. There should not be any stream crossings. Roads should be decommissioned and removed, not upgraded and rebuilt.

The EIS or what ever analysis you do must use the best available science to analyze how logging riparian habitat will impact native fish and water quality.

How many native fish will be killed during the implementation of the project?

How will the East Rim WUI project make the waters clearer in the short term?

How will the East Rim project project make the waters colder in the short term?

How will the East Rim project project make the gravel beds of the streams int he project area cleaner in the short and long term?

How will the East Rim project project make the affect deep pools in streams in the project area in the short and long term?

How will the East Rim project project make the affect complex cover over the streams in the project area in the short and long term?

How will the East Rim project project make the affect the instream flows in the fall in the short and long term?

How will the East Rim project project make the affect large systems of interconnected waterways for native fish?

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

Will this project adversely modify lynx critical habitat in the short run?

How will the East Rim project project affect the temperature of the streams in the project area including bull trout critical habitat?

Will all of the proposed logging increase the temperature of the streams in the project area?

Will all of the proposed road building and road use by log truck, clearcutting, and other logging put more sediment into streams in the project area?

When was the last time the project area was surveyed for native fish?

What was the results of these surveys?

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

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

Please demonstrate that the project is following federal and Wyoming state water quality policy.

• The Notice of proposed action does not include an analysis of climate change and how that will impact the project.

• The Purpose and Need for this project is solely to prop up the timber industry at the expense of

wildlife, fish and water quality. This project is a money-loser, the logging portion should be

dropped and the road decommissioning in Alternative 4 should be implemented.

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

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

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

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

"Land management activities that contributed to the forest health problem (i.e., selective harvest and fire suppression) have had an equal or greater effect on aquatic ecosystems. If we are to restore and maintain high quality fish habitat, then protecting and restoring aquatic and terrestrial ecosystems is essential." (McIntosh et al 1994).

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

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

Frissell and Bayles 1996). With few exceptions, even the least disturbed basins have a road network and history of logging or other human disturbance that greatly magnifies the risk of deteriorating riverine habitats in the watershed." (Frissell undated).

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

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

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

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

"High road densities and their locations within watersheds are typically correlated with areas of higher watershed sensitivity to erosion and sediment transport to streams. Road density also is correlated with the distribution and spread of exotic annual grasses, noxious weeds, and other exotic plants. Furthermore, high road densities are correlated with areas that have few large snags and few large trees that are resistant to both fire and infestation of insects and disease. Lastly, high road densities are correlated with areas that have relatively high risk of fire occurrence (from human caused fires), high hazard ground fuels, and high tree mortality." (USFS 1996b, page 85, parenthesis in original).

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

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

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

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

"Timber harvest, through its effects on forest structure, local microclimate, and fuels accumulation, has increased fire severity more than any other recent human activity. If not accompanied by adequate reduction of fuels, logging (including salvage of dead and dying trees) increases fire hazard by increasing surface dead fuels and changing the local microclimate. Fire intensity and expected fire spread rates thus increase locally and in areas adjacent to harvest". (USFS 1996c, pages 4-61-72).

"Logged areas generally showed a strong association with increased rate of spread and flame length, thereby suggesting that tree harvesting could affect the potential fire behavior within landscapes...As a by-product of clearcutting, thinning, and other tree-removal activities, activity fuels create both shortand long-term fire hazards to ecosystems." (Huff et al 1995).

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

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

 An open road density (ORD) of one mile per square mile of land reduces elk habitat effectiveness to only 60% of potential. When ORD increases to six miles per square mile, habitat effectiveness for elk decreases to less than 20%. (Lyon 1984).

The Scoping Notice doesn't analyze or disclose the extent of snowmobiling across the project area. It merely mentions groomed trails. Effects of cross-country travel are not considered. These effects must be considered in the NEPA document.

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

The vast majority of the project area is in lynx critical habitat. The best available science is now Kosterman and Holbrook. Recent scientific findings undermine the Forest Plan/NRLMD direction for management of lynx habitat. This creates a scientific controversy the FS fails to resolve, and in fact it essentially ignores it. For one, Kosterman, 2014 found that 50% of lynx habitat must be mature undisturbed forest for it to be optimal lynx habitat where lynx can have reproductive success and no more than 15% of lynx habitat should be young clearcuts, i.e. trees under 4 inched dbh. Young regenerating forest should occur only on 10-15% of a female lynx home range, i.e. 10-15% of an LAU. This renders inadequate the agency's assumption in the Forest Plan/NRLMD that 30% of lynx habitat can be open, and that no specific amount of mature forest needs to be conserved. Kosterman, 2014 demonstrates that Forest Plan/NRLMD standards are not adequate for lynx viability and recovery. Also, the Forest Plan essentially assumes that persistent effects of vegetation manipulations other than regeneration logging and some intermediate treatments are essentially nil. However, Holbrook, et al., 2018 "used univariate analyses and hurdle regression models to evaluate the spatio-temporal factors influencing lynx use of treatments." Their analyses" indicated ... there was a consistent cost in that lynx use was low up to ~10 years after all silvicultural actions." The Forest Service did not provide any evidence that they have monitored lynx habitat for lynx in violation of the ESA, NFMA, NEPA and the APA.

The EA and DDN do not adequately analyze the cumulative impacts of all of the logging in the Tally Lake Range District.

Please include a no commercial logging alternative.

Please explain how the County community wildfire protection plan (CWPP) defines the Wildland Urban Interface

and if it complies with the Healthy Forest Restoration Act. NEPA "requires a federal agency such as the Forest Service to prepare a detailed EIS for all 'major Federal actions significantly affecting the quality of the human environment." Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1211–12 (9th Cir. 1998) (citing 42 U.S.C. § 4332(2)(C)). "Major reinforces but does not have a meaning independent of significantly []." 40 C.F.R. § 1508.18. "As a preliminary step, an agency may prepare an EA to decide whether the environmental impact of a proposed action is significant enough to warrant preparation of an EIS." Id.; 40 C.F.R. § 1501.2. Before reaching the question of significance, however, there must be an analysisof whether there is "federal action." See Envtl. Prot. Info. Ctr. v.

USFS, 2003 WL 22283969 *9, n.10 (N.D. Cal. 2003). The CEQ regulations state:

(b) Federal actions tend to fall within one of the following categories: ...

(2) Adoption of formal plans, such as official documents prepared or approved by federal agencies which guide or prescribe alternative uses of Federal resources, upon which future agency actions will be based.

... 40 C.F.R. § 1508.18.

Furthermore, in general, CEQ regulations allow agencies to "tier" from a site-specific NEPA analysis to a programmatic analysis "to eliminate repetitive discussions of the same issues" by "incorporat[ing] discussions from the broader statement by reference." 40 C.F.R. § 1502.20. "However, tiering to a document that has not itself been subject to NEPA review is not permitted, for it circumvents the purpose of NEPA." Kern v. BLM, 284 F.3d 1062, 1073 (9th Cir. 2002)). The CEQ regulations are binding on the Forest Service. See Trustees for Alaska v. Hodel, 806 F.2d 1378, 1382 (9th Cir. 1986). The Forest Service does not receive deference when implementing the CEQ regulations because those regulations were not issued by the Forest Service. See U.S. Dep't of Treasury, I.R.S. v. Fed. Labor Relations Auth., 996 F.2d 1246, 1250 (D.C. Cir. 1993) ("We generally do not grant any deference to the [an agency's] interpretation of regulations promulgated by other agencies.")In violation of NEPA, the Forest Service has not yet conducted a NEPA analysis for the Madison County Wildfire Plan. Other courts have found that other types of fire management plans adopted and implemented by the Forest Service are major federal actions under NEPA. For example, in People of Cal. ex rel. Lockyer v. USFS, the district court found "that the Fire Plan is a major federal action, and so defendant's decision not to conduct any environmental review was unreasonable." 2005 WL 1630020 *11 (N.D. Cal. 2005). Likewise, in Environmental Protection Information Center (EPIC) v. USFS, the district court held: "Defendant violated NEPA by failing to prepare an Environmental Assessment or an Environmental Impact Statement in connection with the issuance of the Six Rivers National Forest Fire Management Plan." 2003 WL 22283969, at *13 (N.D. Cal. 2003). In EPIC, the district court addressed a relevant Ninth Circuit case, Port of Astoria v. Hodel, in which the Ninth Circuit addressed whether a "regional proposal for development and distribution of power" was a federal action under NEPA. 595 F.2d 467, 477-78 (9th Cir. 1979). The proposal was called "Phase 2" and resulted "from an agreement between [the agency], its direct-service industrial

customers, and the public, cooperative, and investor-owned utilities in [the] region." Id. The agency argued that Phase 2 was not a federal program, but the Ninth Circuit rejected that argument: "although Phase 2 is a cooperative enterprise involving [the agency] and nonfederal participants, it is [the agency's] participation that integrates the entire program. . . . Without [the agency] it is doubtful that Phase 2 would ever have been developed or, if developed, would have become feasible." Id.Similarly, in this case, although the Wildfire Plan was developed by the Sublette County Steering Committee, which includes the Forest Service and other nonfederal participants, the bulk of the Wildfire Plan addresses fire management on National Forest lands in Sublette County, and therefore, "it is doubtful that [the Wildfire Plan] would ever have been developed or, if developed, would have become feasible," i.e., implemented, without the Forest Service's participation.

Alternatively or additionally, even if the Wildfire Plan did not require NEPA analysis at the time it was created, once the wildland urban interface designation from the Plan was used to justify and authorize this site-specific project, NEPA analysis was required under the doctrine of "tiering." The seminal Ninth Circuit case on this issue is Kern v. BLM, 284 F.3d 1062 (9th Cir. 2002). In Kern, the Ninth Circuit addressed the BLM's adoption of guidelines for management of a fungus affecting Port Orford cedar trees. In an earlier case, the Ninth Circuit had denied a claim that the guidelines themselves were a major federal action that required NEPA analysis.

The FS must have a detailed long-term program for maintaining

the allegedly safer conditions, including how areas will be treated in the future following proposed treatments, or how areas not needing treatment now will be treated as the need arises. The public at large and private landowners must know what the scale of the long-term efforts must be, including the amount of funding necessary, and the likelihood based on realistic fundingscenarios for such a program to be adequately and timely funded.

The FS must assess the fuel and fire risk situation across land ownership boundaries to understand, and disclose to the public, the likely fire scenarios across the area's landscape. Only then can the context of your proposal be adequately weighed on its merits and evaluated on its merits.

The FS (Cohen, 1999) reviewed current scientific evidence and policy directives on the issue of fire in the wildland/urban interface and recommended an alternative focus on structure ignitability rather than extensive wildland fuel management: The congruence of research findings from different analytical methods suggests that home ignitability is the principal cause of home losses during wildland fires... Home ignitability also dictates that effective mitigating actions focus on the home and its immediate surroundings rather than on extensive wildland fuel management. [Research shows] that effective fuel modification for reducing potential WUI fire losses need only occur within a few tens of meters from a home, not hundreds of meters or more from a home. This research indicates that homelosses can be effectively reduced by focusing mitigation efforts on the structure and its immediate surroundings. Those characteristics of a structure's materials and design and the surrounding flammables that determine the potential for a home to ignite during wildland fires (or any fires outside the home) will, hereafter, be referred to as home ignitability.

The evidence suggests that wildland fuel reduction for reducing home losses may be inefficient and ineffective. Inefficient because wildland fuel reduction for several hundred meters or more around homes is greater than necessary for reducing ignitions from flames. Ineffective because it does not sufficiently reduce firebrand ignitions (Cohen, 1999).

That research also recognizes "the imperative to separate the problem of the wildland fire threat to homes from the problem of ecosystem sustainability due to changes in wildland fuels" (Ibid).Please consider that thinning can result in faster fire spread than in the unthinned stand. Graham, et al., 1999a point out that fire modeling indicates:

For example, the 20-foot wind speed must exceed 50 miles per hour for midflame wind speeds to reach 5 miles per hour within a dense Stand (0.1 adjustment factor). In contrast, in an open stand (0.3 adjustment factor), the same midflame wind speeds would occur at only a 16-mile-perhour wind at 20 feet.

Graham, et al., 1999a also state: Depending on the type, intensity, and extent of thinning, or other treatment applied, fire behavior can be improved (less severe and intense) or exacerbated." ... Fire intensity in thinned stands is greatly reduced if thinning is accompanied by reducing the surface fuels created by the cuttings. Fire has been successfully used to treat fuels and decrease the effects of wildfires especially in climax ponderosa pine forests (Deeming 1990; Wagel and Eakle 1979; Weaver 1955, 1957). In contrast, extensive amounts of untreated logging slash contributed to the devastating fires during the late 1800s and early 1900s in the inland and Pacific Northwest forests.

In their conclusion, Graham, et al., 1999a state:Depending on intensity, thinning from below and possibly free thinning can most effectively alter fire behavior by reducing crown bulk density, increasing crown base height, and changing species composition to lighter crowned and fire-adapted species. Such intermediate treatments can reduce the severity and intensity of wildfires for a given set of physical and weather variables. But crown and selection thinning would not reduce crown fire potential. Since the scientific literature suggests that your thinning activities will actually increase the rate of fire spread, you need to reconcile such findings with the contradictory assumptions expressed in your scoping letter.

Please see the column below by Dr. Chad Hanson.

https://thehill.com/blogs/congress-blog/energy-environment/ 590415-logging-makes-forests-and-homes-more-vulnerable-to Logging makes forests and homes more vulnerable to wildfires The West has seen some really big forest fires recently, particularly in California's Sierra Nevada and the Cascade Mountains of Oregon. Naturally, everyone is concerned and elected officials are eager to be seen as advancing solutions. The U.S. Senate is negotiating over the Build Back Better bill, which currently contains nearly \$20 billion in logging subsidies for "hazardous fuel reduction" in forests. This term contains noclear definition but is typically employed as a euphemism for "thinning", which usually includes commercial logging of mature and old-growth trees on public lands. It often includes clearcut logging that harms forests and streams and intensifies wildfires.

Logging interests stand poised to profit, as they tell the public and Congress that our forests are overgrown from years of neglect. Chainsaws and bulldozers are their remedy. Among these interests are agencies like the U.S. Forest Service that financially benefits from selling public timber to private logging companies.

In this fraught context, filled with a swirling admixture of panic, confusion, and opportunism, the truth and scientific evidence are all too often casualties. This, unfortunately, can lead to regressive policies that will only exacerbate the climate crisis and increase threats to communities from wildfire. We can no longer afford either outcome.

Many of the nation's top climate scientists and ecologists recently urged Congress to remove the logging subsidies from the Build Back Better bill. Scientists noted that logging now emits about as much carbon dioxide each year as does burning coal. They also noted that logging conducted under the guise of "forest thinning" does not stop large wildfires that are driven mainly by extreme fire-weather caused primarily by climate change. In fact, it can often make fires burn faster and more intensely toward vulnerable homes. Unprepared towns like Paradise and Grizzly Flats, Calif., unfortunately burned to the ground as fires raced through heavily logged surroundings.Nature prepares older forests and large trees for wildfires. As

trees age, they develop thick impenetrable bark and drop their lower limbs, making it difficult for fire to climb into the tree crowns. Older, dense forests used by the imperiled spotted owl burn in mixed intensities that is good for the owl and hundreds of species that depend on these forests for survival. Our national parks and wilderness areas also burn in lower fire intensities compared to heavily logged areas.

Occasionally even some of the largest trees will succumb to a severe fire but their progeny are born again to rapidly colonize the largest and most severe burn patches. Dozens of cavitynesting birds and small mammals make their homes in the firekilled trees. Soon after fire in these forests, nature regenerates, reminiscent of the mythical phoenix, aided by scores of pollinating insects and seed carrying birds and mammals. Wildfires are highly variable, often depending on what a gust of wind does at a given moment, and even the biggest fires are primarily comprised of lightly and moderately-burned areas where most mature trees survive. By chance, in any large fire there will always be some areas that were thinned by loggers that burned less intense compared to unthinned areas. Before the smoke fully clears, logging interests find those locations and take journalists and politicians to promote their agenda. What they fail to disclose are the many examples where managed forests burned hotter while older, unmanaged forests did the opposite.

This sort of self-serving show boating occurred after the 2020 Creek Fire in the Sierra National Forest in California, as newsstories echoed the logging industry's "overgrown forests" narrative based on a single low-intensity burn area. When all of the data across the entire fire were analyzed, it turned out that logged forests, including commercial "thinning" areas, actually burned the most intensely.

In Oregon, The Nature Conservancy has been conducting intensive commercial thinning on its Sycan Marsh Preserve. Based on satellite imagery, the northern portion of the 414,000acre Bootleg Fire of 2021 swept through these lands. Within days, TNC began promoting its logging program, focusing on a single location around Coyote Creek, where a "thinned" unit burned lightly. They failed to mention that nearly all of the dense, unmanaged forests burned lightly too in that area. Wellintentioned environmental reporters were misled by a carefully picked example.

Billions of dollars are being wasted to further this false logging industry narrative—funds that instead should be used to prepare communities for more climate-driven wildfires. Congress can instead redirect much needed support to damaged communities so they can build back better and adopt proven fire safety measures that harden homes and clear flammable vegetation nearest structures. The path forward is simple, with two proven remedies that work. Protect forests from logging so they can absorb more carbon dioxide from the atmosphere and moderate fire behavior, and adapt communities to the new climate-driven wildfire era.Chad Hanson, Ph.D., is a research ecologist with the John Muir Project and is the author of the 2021 book, "Smokescreen: Debunking Wildfire Myths to Save Our Forests and Our Climate." Dominick DellaSala, Ph.D., is chief scientist with Wild Heritage and the author of Conservation Science and Advocacy for a Planet in Peril: Speaking Truth to Power. Please see the column below by Chad Hanson and myself. Opinion by Chad Hanson and Mike Garrity https://www.washingtonpost.com/opinions/no-we-cant--andshouldnt--stop-forest-fires/ 2017/09/26/64ff718c-9fbf-11e7-9c8d-cf053ff30921_story.html

September 26, 2017

Chad Hanson is a research ecologist with the John Muir Project and is co-editor and co-author of "The Ecological Importance of Mixed-Severity Fires: Nature's Phoenix." Mike Garrity is executive director of the Alliance for the Wild Rockies. The American West is burning, Sen. Steve Daines (R-Mont.) tells us in his recent Post op-ed. He and officials in the Trump administration have described Western forest fires as catastrophes, promoting congressional action ostensibly to save our National Forests from fire by allowing widespread commercial logging on public lands. This, they claim, will reduce forest density and the fuel for wildfires. But this position is out of step with current science and is based on several myths promoted by commercial interests. The first myth is the notion that fire destroys our forests and that we currently have an unnatural excess of fire. Nothing could be further from the truth. There is a broad consensus among scientists that we have considerably less fire of all intensities in our Western U.S. forests compared with natural, historical levels, when lightning-caused fires burned without humans trying to put them out.

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

Fire or drought kills trees, which attracts native beetle species that depend on dead or dying trees. Woodpeckers eat the larvae of the beetles and then create nest cavities in the dead trees, because snags are softer than live trees. The male woodpecker creates two or three nest cavities each year, and the female picks the one she likes the best, which creates homes for dozens of other forest wildlife species that need cavities to survive but cannot create their own, such as bluebirds, chickadees, chipmunks, flying squirrels and many others.

More than 260 scientists wrote to Congress in 2015 opposing

legislative proposals that would weaken environmental laws and increase logging on National Forests under the guise of curbingwildfires, noting that snag forests are "quite simply some of the best wildlife habitat in forests."

The FS must disclose its transparent, well thought-out long-term strategy for old-growth associated wildlife species viability in a properly-defined cumulative effects analysis area.

Since protection form wildfires in the WUI is the project's priority, the NEPA document must at least identify all the existing ecological liabilities caused by past management actions. This includes poorly located or poorly maintained roads, high-risk fuel situations caused by earlier vegetation manipulation projects,

wildlife security problems by open motorized roads and trails plus those that are closed but violated—and include all those impacts in the analyses.

Any desire to keep a road in the project area WUI must be in harmony with the alleged priority goals (again, to reduce the chances that fire will destroy private structures and harm people), not driven by timber production goals. The analysis must show how all roads will in fact be in harmony with the priority goals.

Proposed activities could artificialize the forest ecosystem. Lodgepole pine is particularly subject to blowdown, once thinned. And any forest condition that is maintained through mechanical manipulation is not maintaining ecosystem function.
The proposed management activities would not be integrated well with the processes that naturally shaped the ecosystem and resulted in a range of natural structural conditions. Thus, the need for standards guiding both the delineation of zones where artificializing fuel reduction actions may take place, and that also set snag and down woody debris retention amounts. That brings us to myth No. 2: that eliminating or weakening environmental laws — and increasing logging — will somehow curb or halt forest fires. In 2016, in the largest analysis ever on this question, scientists found that forests with the fewest environmental protections and the most logging had the highest — not the lowest — levels of fire intensity. Logging removes relatively noncombustible tree trunks and leaves behind flammable "slash debris," consisting of kindling-like branches and treetops.

This is closely related to myth No. 3: that dead trees, usually removed during logging projects, increase fire intensity in our forests. A comprehensive study published in the Proceedings of the National Academy of Sciences thoroughly debunked this notion by showing that outbreaks of pine beetles, which can create patches of snag forest habitat, didn't lead to more intense fires in the area. A more recent study found that forests with high levels of snags actually burn less intensely. This is because flames spread primarily through pine needles and small twigs, which fall to the ground and soon decay into soil shortly after trees die.

Finally, myth No. 4: that we can stop weather-driven forest fires. We can no more suppress forest fires during extreme fire weather than we can stand on a ridgetop and fight the wind. It is hubris and folly to even try. Fires slow and stop when the weather changes. It makes far more sense to focus our resources on protecting rural homes and other structures from fire by creating "defensible space" of about 100 feet between houses and forests. This allows fire to serve its essential ecological role while keeping it away from our communities.

Lawmakers in Congress are promoting legislation based on the mythology of catastrophic wildfires that would largely eliminate environmental analysis and public participation for logging projects in our National Forests. This would include removing all or most trees in both mature forests and in ecologically vital post-wildfire habitats — all of which is cynically packaged as "fuel reduction" measures.

The logging industry's political allies have fully embraced the deceptive "catastrophic wildfire" narrative to promote this giveaway of our National Forests to timber corporations. But this narrative is a scientifically bankrupt smoke screen for rampant commercial logging on our public lands. The American people should not fall for it.

Please see the letter from the 260 scientist to Congress which is mentioned in the column above, below.Open Letter to U.S. Senators and President Obama from Scientists Concerned about Post-fire Logging and Clearcutting on National Forests.

As professional scientists with backgrounds in ecological

sciences and natural resources management, we are greatly concerned that legislation which passed the House in July 2015, H.R. 2647, would suspend federal environmental protections to expedite logging of both post- fire wildlife habitat and unburned old forests on national forest lands. This legislation would also effectively eliminate most analysis of adverse environmental impacts, and prevent enforcement of environmental laws by the courts.

A similar measure, S. 1691, currently proposed in the U.S. Senate, would override federal environmental laws to dramatically increase post-fire logging, increase logging and clearcutting of mature forests, eliminate analysis of environmental impacts for most logging projects, and effectively

preclude enforcement of environmental laws. The bills propose these measures under the guise of "ecosystem restoration," ostensibly to protect national forests from fire.

Not only do these legislative proposals misrepresent scientific evidence on the importance of post-fire wildlife habitat and mature forests to the nation, they also ignore the current state of scientific knowledge about how such practices would degrade the ecological integrity of forest ecosystems on federal lands.

We urge you to vote against this legislation, and urge President Obama to veto these bills if they are passed in some form by Congress.National Forests were established for the public good and include most of the nation's remaining examples of intact forests. Our national forests are a wellspring of clean water for millions of Americans, a legacy for wildlife, sequester vast quantities of carbon important in climate change mitigation, and provide recreation and economic opportunities to rural communities if responsibly managed. Though it may seem at first glance that a post-fire landscape is a catastrophe, numerous scientific studies tell us that even in the patches where forest fires burn most intensely, the resulting wildlife habitats are among the most ecologically diverse on western forestlands and are essential to support the full richness of forest biodiversity. 1

Post-fire conditions also serve as a refuge for rare and imperiled wildlife species that depend upon the unique habitat features created by intense fire. These include an abundance of standing dead trees, or "snags," which provide nesting and foraging habitat for woodpeckers and many other plant and wildlife species responsible for the rejuvenation of a forest after fire.

The post-fire environment is rich in patches of native flowering shrubs that replenish soil nitrogen and attract a diverse bounty of beneficial insects that aid in pollination after fire. Small mammals find excellent habitat in the shrubs and downed logs, providing food for foraging spotted owls. Deer and elk browse on post-fire shrubs and natural conifer regeneration. Bears eat and disperse berries and conifer seeds often found in substantial quantities after intense fire, and morel mushrooms, prized by many Americans, spring from ashes in the most severely burned forest patches. 1 See <u>http://</u> <u>store.elsevier.com/The-Ecological-Importance-of-</u> Mixed-Severity-Fires/Dominick-DellaSala/isbn-

9780128027493/.

This post-fire renewal, known as "complex early seral forest," or

"snag forest," is quite simply some of the best wildlife habitat in

forests, and is an essential stage of natural processes that eventually become old-growth forests over time. This unique habitat is not mimicked by clearcutting, as the legislation incorrectly suggests. Moreover, it is the least protected of all forest habitat types, and is often as rare, or rarer, than oldgrowth forest, due to extensive fire suppression and damaging forest management practices such as those encouraged by this legislation. Much of the current scientific information on the ecological importance of post-fire habitat can be found in several excellent videos, including ways for the public to coexist with fires burning safely in the backcountry.

After a fire, the new forest is particularly vulnerable to logging disturbances that can set back the forest renewal process for decades. Post-fire logging has been shown to eliminate habitat for many bird species that depend on snags, compact soils, remove biological legacies (snags and downed logs) that are essential in supporting new forest growth, and spread invasive species that outcompete native vegetation and, in some cases, increase the flammability of the new forest.

While it is often claimed that such logging is needed to restore conifer growth and lower fuel hazards after a fire, many studies have shown that logging tractors often kill most conifer seedlings and other important re-establishing vegetation and actually increases flammable logging slash left on site. Increased

chronic sedimentation to streams due to the extensive road network and runoff from logging on steep slopes degrades aquatic organisms and water quality.

We urge you to consider what the science is telling us: that post-

fire habitats created by fire, including patches of severe fire, are

ecological treasures rather than ecological catastrophes, and that

post-fire logging does far more harm than good to public forests.

We urge Senators to vote against any legislation that weakens or

overrides environmental laws to increase post-fire logging or clearcutting of mature forest as degrading to the nation's forest

legacy. And, we urge President Obama to veto any such legislation that reaches his desk as inconsistent with sciencebased forest and climate change planning.

Sincerely (affiliations are listed for identification purposes only), Dominick A. DellaSala, Ph.D. Chief Scientist Geos Institute, Ashland, OR

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Veblen (2003) questions the premises the FS often puts forth to justify "uncharacteristic vegetation patterns" discussions, that being to take management activities to alter vegetation patterns in response to fire suppression:

The premise behind many projects aimed at wildfire hazard reduction and ecological restoration in forests of the western United States is the idea that unnatural fuel buildup has resulted from suppression of formerly frequent fires. This premise and its implications need to be critically evaluated by conducting area-specific research in the forest ecosystems targeted for fuels or ecological restorationprojects. Fire regime researchers need to acknowledge the limitations of fire history methodology and avoid overreliance on summary fire statistics such as mean fire interval and rotation period. While fire regime research is vitally important for informing decisions in the areas of wildfire hazard mitigation and ecological restoration, there is much need for improving the way researchers communicate their results to managers and the way managers use this information.

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 forest healthier for fish and wildlife? What about the role ofmixed severity and high severity fire – what are the bene- fits 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?

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

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.

Please disclose whether you have conducted surveys in the

Project area for this Project for whitebark pine, Monarch butterflies, wolverines, grizzly bears, pine martins, northern goshawk and lynx, as required by the Forest Plan. Please disclose the last time the Project area was surveyed for whitebark pine, Monarch butterflies, grizzly bears, wolverines, pine martins, northern goshawk, and lynx.

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

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

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

Please formally consult with the U.S. Fish and Wildlife Service on the impact of the project on whitebark pine, Monarch butterflies, grizzly bears, wolverines, pine martins, northern goshawks, lynx critical habitat, and lynx.

*I*n Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead Forest Plan was illegal because the Fish and Wildlife Service violated the ESA by not considering the impacts of ineffective road closures in its 2017 BiOp. The court also ruled that the FWS violated the ESA by using a flawed incidental take statement for grizzly bears and the core density standards and secure core habitat surrogate violate the ESA.

The Forest Plan and the East Rim WUI project weakens grizzly bear habitat protections by allowing new roadbuilding throughout the project area, without meaningful and permanent reclamation of other roads elsewhere in the Forest to compensate for the new road construction. The New roadbuilding in the project without meaningful reclamation to ensure no net increase in the road system presents a significant threat to grizzly bears, because motor vehicle users and other recreationists can trespass on the supposedly "impassable" roads and thus encroach on grizzly bear habitat. Further, even unused roads cause detrimental impacts to grizzly bear survival and reproduction, because grizzly bears are displaced from roaded habitat, regardless of whether the roads receive public or administrative use.

The Forest Service has failed to rationally determine, based on a consideration of all relevant factors, whether the Forest Plan's management direction will jeopardize the survival of grizzly bears in the BTNF and therefore the East Rim project.

How many road closure violations have been found in the Pinedale Ranger District in the last 5 years?

In Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead

Forest Plan was illegal because the Fish and Wildlife Service violated the ESA by not considering the impacts of ineffective road closures in its 2017 BiOp. The court also ruled that the FWS violated the ESA by using a flawed incidental take statement for grizzly bears and the core density standards and secure core habitat surrogate violate the ESA.

It is fair to assume that there are many more violations that regularly occur and are not witnessed and reported. It is also fair to assume that you have made no effort to request this available information from your own law enforcement officers, much less incorporate it into your analysis. Considering your own admissions that road density is the primary factor that degrades elk and grizzly habitat, this is a material and significant omission from your analysis– all of your ORD and HE calculations are wrong without this information. The veracity of the FS's inventory of system and nonsystem ("undetermined" or "unauthorized") roads is at issue here also. This is partly because the FS basically turns a blind eye to the situation with insufficient commitment to monitoring, and also because violations are not always remedied in a timely manner.

Will the project comply with the Forest Plan/Access standards, in spite of road closureviolations?

Please disclose how many years the existing core ares have provided the habitat benefits assumed under the Forest Plan.As pointed out, some has been lost (due to "private infrastructure development") and we're not told of other likely and for seeable reductions.

Please take a hard look as road closure violations.

Additionally, your emphasis on elk populations across entire hunting districts is disingenuous and has little relevance to whether you are meeting your Forest Plan obligations to maintain sufficient elk habitat on National Forest lands. What percentage of elk are currently taken on National Forest lands?

Have you asked Wyoming Game and Fish for this information? Any honest biologist would admit that high elk population numbers do not indicate that you are appropriately managing National Forest elk habitat; to the contrary, high elk numbers indicate that you are so poorly managing elk habitat on National Forest lands that elk are being displaced to private lands where hunting is limited or prohibited. Your own Forest Service guidance document, Christensen et al 1993 states: "Reducing habitat effectiveness should never be considered as a means of controlling elk populations."

What is the existing condition of linear motorized route density on National Forest System lands in the project area and what would it increase to during implementation.

Do your open road density calculations include the "nonsystem" i.e. illegal roads in the Project area?

Do your open road density calculations include all of the

recurring illegal road use documented in your own law enforcement incident reports?

Has the BTNF closed or obliterated all roads that were promised to be closed or obliterated in the your Travel Plans in the Pinedale Ranger District? Or, are you still waiting for funds to close or obliterate those roads? This distinction matters because you cannot honestly claim that you are meeting road density standards promised by the Travel Plan if you have not yet completed the road closures/obliterations promised by the Travel Plan. Furthermore, as noted above, you have a major problem with recurring, chronic violations of the road closures created by the Travel Plan, which means that your assumptions in the Travel Plan that all closures would beeffective has proven false. For this reason, you cannot tier to the analysis in the Travel Plan because it is invalid. You must either complete new NEPA analysis for the Travel Plan on this issue or provide that new analysis in the NEPA analysis for this Project. Either way, you must update your open road density calculations to include all roads receiving illegal use. Christensen et al (1993) states: "Any motorized vehicle use on roads will reduce habitat effectiveness. Recognize and deal with all forms of motorized vehicles and all uses, including administrative use." Please disclose this to the public and stop representing that roads closed to thepublic should not be included in habitat effectiveness calculations. The facts that (a) you are constructing or reconstructing over 40 miles of road for this project, (b) you have problems with recurring illegal use, and (c) you already admit that you found another 25 miles of illegal roads in the project area that you have not

committed to obliterating, means that your conclusion that this Project will have no effect on open road density or habitat effectiveness is implausible to the point of being disingenuous. You cannot exclude these roads simply because you say they are closed to the public. Every road receiving motorized use must be included in the HE calculation. You must consider allof this road use in order to take a hard look that is fully and fairly informed regarding habitat effectiveness. In the very least you must add in all "non-system" roads, i.e. illegal roads, as well as recurring illegal road use (violations) in your ORD calculations. Also, as a side note, your calculations in Christensen et al 1993 finds: "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 notimportant, don't fake it. Just admit up front that elk are not a consideration "

In Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead Forest Plan was illegal because the Fish and Wildlife Service violated the ESA by not considering the impacts of ineffective road closures in its 2017 BiOp. The court also ruled that the FWS violated the ESA by using a flawed incidental take statement for grizzly bears and the core density standards and secure core habitat surrogate violate the ESA.

The Revised Forest Plan and the East Rim project weakens grizzly bear habitat protections by allowing new roadbuilding

throughout the BTNF, without meaningful and permanent reclamation of other roads elsewhere in the Forest to compensate for the new road construction.

The New roadbuilding in the project area without meaningful reclamation to ensure no net increase in the road system presents a significant threat to grizzly bears, because motor vehicle users and other recreationists can trespass on the supposedly "impassable" roads and thus encroach on grizzly bear habitat. Further, even unused roads cause detrimental impacts to grizzly bear survival and reproduction, because grizzly bears are displaced from roaded habitat, regardless of whether the roads receive public or administrative use.

Has the Forest Service rationally determine, based on a consideration of all relevant factors, whether the Forest Plan's management direction will jeopardize the survival of grizzly bears in the BTNF and therefore the East Rim project.

Please disclose if the project is meeting:

(1) Forest Plan Standard 3 - Hiding Cover,

(2) Forest Plan Standard 3 - Thermal Cover,

(3) Forest Plan Standard 4a - Open Road

Density & Hiding Cover,

(4) Habitat Effectiveness,

(5) Hillis Elk Security at Elk Herd Unit level (i.e., including all lands), and

(6) Hillis-derived Elk Security at Elk Analysis Unit level (i.e., lands within National Forest boundary).

MT FWP has informed the Forest Service that total number of elk is not a correct measure of whether or not adequate secure big game habitat is available on Forest Service lands: "This is inappropriate because the correct measures of big game security are annual bull survival rates and the degree to which big game are retained on public land during the fall hunting season."

Please disclose or address the displacement of elk from public land to private land during hunting season due to inadequate security habitat on National Forests.FWP recommends that land managers provide enough secure habitat during fall to meet annual bull survival objectives cwhile maintaining general bull harvest opportunity. . . .

In contrast, the number of elk that spend the majority of the year on some nearby private lands has increased dramatically between 1986 and 2013.

Has WY Game and Fish urged the BTNF to increase functional fall habitat security on the Pinedale Ranger District?

Are you planning on issuing any amendments to the Forest Plan for this project. If so what?

Is there is a serious problem with elk being displaced from insecure National Forest lands onto private land during hunting season? Repeatedly exempting logging and roading projects from the only quantitative limits on logging and roading on this National Forest exacerbates this elk displacement problem and (a) results in a failure to comply with Forest Plan objectives andgoals to maintain elk habitat andhunter opportunity, (b) results in a major change to standards and guidelines intended to maintain elk habitat and hunter opportunity, (c)significantly limits hunter opportunity on this Forest, and (d) affects a large portion of this National Forest that is reasonably available to the public for hunting.

For these reasons, the Forest Service's practice of routinely exempting projects from Standards 3 and 4a amounts to a significant change to the Forest Plan, which requires analysis under 36 C.F.R. §219.10 (f) and 36 C.F.R. §219.12.

The preservation of endangered species takes "priority over the 'primary missions' of federal agencies." Accordingly, courts must "afford[] endangered species the highest of priorities," and act with "institutionalized caution" when reviewing ESA cases. Cottonwood Envtl. Law Ctr. v. USFS, 789 F.3d 1075, 1091 (9th Cir.2015). This Court holds that the "fundamental principle [of institutionalized caution] remains intact and will continue to guide district courts when confronted with requests for injunctive relief in ESA cases." Id. Although the district court did not apply this fundamental principle in this case, this Court may now remedy that error by issuing a temporary injunction pending appeal to preserve the status quo until a final decision is issued on the merits.

Measures implemented beginning in the 1990s for protection of the threatened grizzly bear have decreased the amount of road available for motorized public travel and management activities, while increasing security for grizzly bears as well as other wildlife species.

The well-established scientific consensus is that roads pose the most imminent risk to this grizzly population. Ninety percent of this population's Recovery Zone habitat is located on public National Forest lands. Thus, the federal government has the power to limit road density for grizzly bear protection on the vast majority of its habitat and thereby prevent the extinction of this grizzly population.

However, the U.S. Forest Service has prepared multiple years of monitoring reports regarding its implementation of road closuresin grizzly habitat. These monitoring reports establish that these road closures are routinely violated and therefore ineffective: members of the public regularly ignore signs, drive around gates or earthen berms, remove obstructions such as boulders or logs, or simply create their own new motorized routes.

The recurring problem of road closure failures undermines the foundation of the BTNF's Forest Plan management regime, which relies on these road closures to achieve certain densities of open and total roads both inside and outside the Recovery Zone. The agencies must address this problem and its impacts in an updated ESA consultation for theBTNF Forest Plan. The agencies must also address this problem and its impact in an updated ESA consultation and in the special use projects and is another reason that an EIS should be written for the spexial use Projects.

Please demonstrate that the East Rim project complies with the "best available science" on grizzly recovery, or the 2012 Planning Rule that required Forest to emphasize "Connectivity?"

The majority of the Great Yellowstone Ecosystem – is National Forest land, managed by the Forest Service. In terms of all of the human uses that affect grizzly bears, "[r]oads probably pose the most imminent threat togrizzly habitat today. The management of roads is one of the most powerful tools available to balance the needs of people with the needs of bears." Accordingly, the U.S. Fish & Wildlife Service (FWS) states: "It is strongly recommended that road management be given the highest priority within all recovery zones." Roads pose a threat to grizzly bears because roads provide humans with access into grizzly bear habitat, which leads to direct bear mortality from accidental shootings and intentional poachings.

Human access also leads to indirect bear mortality by creating circumstances in which bears become habituated to human food and are later killed by wildlife managers. Human access also results in indirect mortality by displacing grizzly bears from good habitat into areas that provide sub-optimal habitat conditions.

Displacement may have long term effects: "Females who have learned to avoid roads may also teach their cubs to avoid roads. In this way, learned avoidance behavior can persist for several generations of bears before they again utilize habitatassociated with closed roads." Both open and closed roadsdisplace grizzly bears: "grizzlies avoided roaded areas even where existing roads were officially closed to public use []. Females with cubs remained primarily in high, rocky, marginal habitat far from roads. Avoidance behavior by bears of illegal vehicular traffic, foot traffic, and/or authorized use behind road closures may account for the lack of use of areas near roads by female grizzly bears in this area. This research demonstrated that a significant portion of the habitat in the study area apparently remained unused by female grizzlies for several years. Since adult females are the most important segment of the population, this lack of use of both open-roaded and closed-roaded areas is significant to the population." In addition to having a significant impact on female grizzly bears, displacement may also negatively impact the survival rates of grizzly cubs: "survivorship of the offspring of females that lived in unroaded, high elevation habitat was lower than that recorded in other study areas in the [Northern Continental Divide Ecosystem].

The majority of this mortality was due to natural factors related to the dangers of living in steep, rocky habitats. This is important in that the effects of road avoidance may result not only in higher mortality along roads and in avoidance of and lack of use of the resources along roads, but in the survival of young when their mothers are forced to live in less favorable areas away from roads."

Current peer-reviewed science still finds that roads have the most significant impact on grizzly bear survival: "[o]f all the

covariates we examined, the amount of secure habitat and the density of roads in nonsecure habitat on public lands had the greatest effect on grizzly bear survival."

Roads, even if nominally "temporary," can still have longlasting generational displacement effects on grizzly bears because females teach their cubs to avoid these areas. These roads can therefore result in direct mortality, indirect mortality, and reduced cub survival. When applied to an extremely small, endangered2 population of fewer than 50 individuals that is already experiencing high mortality rates, failing recovery targets, and hovering at less than half the numbers needed for viability, these harms are amplified and create a great cause for concern for Alliance's members. Neither the "imminent harm" posed by roads nor the dire status of this population are acknowledged by the agencies.

The project will not maintaining and enhancing grizzly habitat and will increase the potential for grizzly-human conflicts in violation of NFMA, NEPA, the APA and the ESA. The Forest does not have a good track record of keeping closed roads closed. The Forest Service does not disclose the road mileage behind these ineffective closures; therefore it is unclear how many miles of additional open and total roads must be added to the existing condition calculations as a result of these ineffective closures.

There are at least three problems with the FNF's record of amount of roads. First, because "undetermined" is a subcategory of "unauthorized" roads, it is possible that the particular undetermined roads at issue in this case were created —without authorization from the Forest Service—in the interim between the measurement of the Forest Plans baseline and the Forest Service's survey of existing roads for the Project. All. for the Wild Rockies v. Savage, 897 F.3d 1025, 1036, n.18 (9th Cir. 2018). In light of these circumstances that (1) roadclosures/barriers are regularly breached but the Forest Service\ conducts no systematic monitoring to determine how many miles of illegal road use are occurring behind barriers each year, and (2) the Forest Service simply ignores illegal "undetermined" roads and does not include them in its calculations for open or total roads in the annual monitoring reports, the open and total road numbers in the monitoring reports are not accurately reflecting the conditions on the ground. It is therefore reasonable to assume that the baselines in the project area regularly exceeded because the reported conditions hover at or near the baseline.

Chronic recurring road closure breaches cannot reasonably be construed as "temporary;" and illegal road use does not fall within the scope of Forest Plan "temporary" roads. The Forest Service and FWS have acknowledge that road closure breaches (and resulting illegal road use) are not addressed in the BTNF Forest Plan. Nonetheless, the agencies argue that all road closure breaches regardless of whether they are chronically recurring and regardless of how long they last on the landscape must be construed as "temporary" road increases. Onto this premise, the agencies then bootstrap an additional argument that because certain specific types of temporary roads were addressed in the Forest Plan, that discussion must also apply to "temporary" road increases from illegal road use.

First, it is not reasonable to construe recurring illegal road use as "temporary" road density increases. The monitoring reports indicate that public users may repeatedly breach the same closure year after year. See, e.g., AR42:000059-62 (noting that boulders placed in 2015 have been removed and unauthorized users are again circumventing gate on Road 2236). Moreover, the Forest Service may take years to act on known violations. See, e.g., AR42:000061 ("The Clatter Creek gate (268) was included on the 2015 gate repair contract but after the bids came in the Clatter Creek gate was dropped due to repair costs for all gate repairs exceeding available funding. In BY2016 the gate remained damaged and ineffective."); see also AR43:000081-82 (note 2)(during planning for the Hanna Flats logging project in the Idaho Panhandle N.F., the Forest Service found illegal motorized use on 15.7 miles of road that were not included in the baseline but the agency postponed remedial action until implementation of the logging project; in the 2018 monitoring report, the agency concedes it has still not yet eliminated this illegal use); see also AR232:000767 (finding that four barriers did not effectively prevent motorized use but deferring any action to fix the problems).

Thus, while the Forest Service insists that all breaches are temporary, those same breaches may be recurring or may have lasted for many years prior to discovery and remedial action, resulting in a chronic situation. The situation is a good illustration of this problem S although the Forest Service insists that it fixes all breaches as soon as possible, many areas f the BTNF chronically fail to meet both the open and total road baseline conditions from the Forest Plan.Second, even assuming that illegal road use could be construed as "temporary," it still does not have the same effect as lawful temporary road use. A breach of a closure device that results in public motorized use in effect results in an open road. The Forest Plan severely restricts temporary increases in open roads: "immediately following completion of all mechanized harvest and post-harvest slash activities requiring use of the road, to allow motorized public use during the bear summer season prior to the fall bear hunt (i.e., June 16 - August 31) for activities such as personal firewood collection. This public access would only be provided in cases where the mechanized harvest and/or postharvest slash activities occurred during the same active bear year."

Moreover, illegal road use would also constitute an increase in total roads. However, temporary increases in total roads are only permitted if the roads are "effectively" gated to prevent public use during a project, (2) after project use, the roads are treated so as to "effectively prevent[] motorized access" and require no motorized access for maintenance for at least 10 years, and (3) upon project completion, the area is "returned to or below the baseline levels contained in Table 16" of the Forest Plan ROD. Obviously a road that has illegal road use is not "effectively" gated to prevent public use.

Thus, illegal road use does not comply with the restrictions set for lawful increases in temporary roads neither open nor closed in the Forest Plan and therefore cannot possibly have the same effects. It is simply implausible that unlimited illegal road use occurring at any time in any location would have the same effecton grizzly bears as Forest Plan temporary roads that are significantly restricted in both timing and location. Indeed, illegal road use is illegal precisely because the Forest Service has already closed these specific roads to protect grizzly bears. If illegal motorized use occurs on these roads that were closed to protect grizzly bears, it may displace grizzly bears from areas that they would otherwise not be displaced from. Because of the serious impacts to grizzly bears, please demonstrate compliance with Forest Plan standards relevant to grizzly bears, and analyze the direct, indirect, and cumulative impacts to grizzly bears.

The Forest Service must comply with National Forest Management Act ("NFMA") and its implementing regulations. NFMA requires the Forest Service to ensure that site-specific management projects are consistent with the applicable forest plan. 16 U.S.C. § 1604(i). Thus, the Forest Service must ensure that all aspects of the proposed action comply with the BTNF Land Management Plan.

Road density and habitat security standards used by the BT NF are patently deficient, partly because they are based on research that conflates behavioral phenomena such as avoidance and displacement with demographic phenomena, notably survival. The scale is wrong as well, given that exposure to mortality hazards logically accrues over years as a consequence of cumulative annual movements of bears vis-à-vis hazardous environs.

Compounding prospective problems with the project, proposed activities are concentrated in an area that is vital for facilitating movement of grizzly bears between core habitats. Project activities will diminish rather than enhance security needed not only to facilitate transit of bears, but also increase odds that exposed bears will survive.

The extent to which poaching, malicious killing, or other suspect circumstances are associated with human-caused deaths is also instructive regarding the overall effectiveness of conflict mitigation efforts during 1999-2017 to offset the problematic effects of road-access and poaching. By its nature, malicious killing/poaching is a criminal act undertaken by criminals. Such behavior is rooted in attitudes and outlooks that are notoriously unresponsive to education and 'outreach'. The phenomenon is about willful malfeasance. As such, limitations on road access coupled with improved law enforcement and successful prosecutions are logically the most appropriate redress—not, for example, conflict mitigation by a specialist who is not tasked primarily with law enforcement.

Before pursuing this any farther, some clarification of obfuscations in the dead bear database is needed. During 1999-2017 a number of deaths were ascribed to 'Undetermined' human causes, 'Poaching' or listed as 'Under investigation'. The first and last categories are not explicit, but nonetheless strongly suggestive. Certainly, 'Under investigation' suggests that the death occurred under suspicious circumstances warranting investigation—with a strong likelihood of either poaching or other unwarranted lethal action by the involved people. Such suspicions are rarely definitively resolved. 'Undetermined' is also more suggestive of malfeasance rather than innocence on the part of the involved people. Given the alternatives, such deaths are more defensibly allocated to causes more resistant than not to 1) malicious or otherwise suspect causes account for a large portion—if not majority—of grizzly bear deaths in the Northern Continental Divide Ecosystem; (2) that aggressive limitations to road access by the USFS are needed, especially in areas with concentrations of productive habitat (Proctor et al. 2015, 2017).

F. Access Management is Critical to Limiting Malicious & Other Unjustified Killing

The consensus of relevant research is unambiguous about the link between road access and grizzly bear mortality. The more access, the more dead bears there are, with disproportionate concentrations near roads (Brannon et al. 1988; Benn & Herrero 2002; Nielsen et al. 2004; Wakkinen & Kasworm 2004; Boulanger & Stenhouse 2014; McLellan 2015; Proctor et al. 2017, 2018) (attached). Dead bears tend to be concentrated within 100 to 500 m of roads, averaging around 300 m (\pm 195 m) among studies where distance was noted.

Unfortunately, there is a common conflation of the extent to

which radio-marked grizzly bears spatially avoid roads with the geospatial configuration of mortality risk and, even more important, decrements in survival and population growth. These parameters are not synonymous. Even though a bear might underuse habitats within a certain distance of roads, this does not translate into a 1:1 correlation with exposure to risk of human-related mortality during a bear's lifetime. Conflation of avoidance with mortality risk has led to the unstated assumption that the former can be used to set standards for the latter.

Please examine the cumulative effects of this project. The Forest Service could unequivocally benefit grizzly bears in this area by the closure and retirement of roads.

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Boulanger, J., & Stenhouse, G. B. (2014). The impact of roads on the demography of grizzly bears in Alberta. PloS One, 9(12), e115535.

Brannon, R. D., Mace, R. D., & Dood, A. R. (1988). Grizzly bear mortality in the northern Continental Divide ecosystem, Montana. Wildlife Society Bulletin, 16(3), 262-269.

Eberhardt, L. L., Blanchard, B. M., & Knight, R. R. (1994). Population trend of the Yellowstone grizzly bear as estimated from reproductive and survival rates. Canadian Journal of Zoology, 72(2), 360-363.

Garshelis, D. L., Gibeau, M. L., & Herrero, S. (2005). Grizzly bear demographics in and around Banff National Park andKananaskis country, Alberta. The Journal of Wildlife Management, 69(1), 277-297.

Harris, R. B., Schwartz, C. C., Haroldson, M. A., & White, G. C. (2006). Trajectory of the Yellowstone grizzly bear population under alternative survival rates. Wildlife Monographs, (161), 44-55.

Hovey, F. W., & McLellan, B. N. (1996). Estimating population growth of grizzly bears from the Flathead River drainage using computer simulations of reproduction and survival rates.

Canadian Journal of Zoology, 74(8), 1409-1416.

Kasworm , W. F., Radant, T. G., Tesiberg, J. E., Welander, A., Proctor, M., & Cooley, H. (2018). Cabinet- Yaak Recovery Area 2017 research and monitoring progress report. US Fish & Wildlife Service, Missoula, Montana.

Kasworm, W. (2018). Selkirk/Cabinet-Yaak IGBC Subcommittee, meeting notes: 2018 research/monitoring update. http://igbconline.org/wp- content/uploads/

2018/11/181108_SCYE_Mtg_Summary.pdf

Kendall, K. C., Macleod, A. C., Boyd, K. L., Boulanger, J.,

Royle, J. A., Kasworm, W. F., ... & Graves, T. A. (2016).

Density, distribution, and genetic structure of grizzly bears in the Cabinet-Yaak Ecosystem. The Journal of Wildlife Management, 80(2), 314-331.

Ladle, A., Avgar, T., Wheatley, M., Stenhouse, G. B., Nielsen, S. E., & Boyce, M. S. (2018). Grizzly bear response to spatiotemporal variability in human recreational activity. Journal of Applied Ecology.Mace, R. D., Carney, D. W., Chilton-Radandt, T., Courville, S.

A., Haroldson, M. A., Harris, R. B., ... & Schwartz, C. C. (2012). Grizzly bear population vital rates and trend in the Northern Continental Divide Ecosystem, Montana. The Journal of Wildlife Management, 76(1), 119-128. 21

Mattson, D. J. (2019a). Effects of pedestrians on grizzly bears: An evaluation of the effects of hikers, hunters, photographers, campers, and watchers with reference to the proposed Pacific Northwest Trail. Grizzly Bear Recovery Project, Report GBRP-2019-3.

Mattson, D. J. (2019b). Effects of trains and railways on grizzly bears: An evaluation of the effects of increased train traffic on the Burlington Northern Santa Fe and Montana Rail-Link Railways, Montana- Idaho. Grizzly Bear Recovery Project, Report GBRP-2019-1.

Mattson, D. J., & Merrill, T. (2004). A model-based appraisal of habitat conditions for grizzly bears in the Cabinet–Yaak region of Montana and Idaho. Ursus, 15(1), 76-90.

McCall, B. S., Mitchell, M. S., Schwartz, M. K., Hayden, J., Cushman, S. A., Zager, P., & Kasworm, W. F. (2013). Combined use of mark-recapture and genetic analyses reveals response of a black bear population to changes in food productivity. The Journal of Wildlife Management, 77(8), 1572-1582.

McLellan, B. N., & Hovey, F. W. (2001). Habitats selected by grizzly bears in a multiple use landscape. The Journal of Wildlife Management, 65(1), 92-99.McLellan, B. N. (2015). Some mechanisms underlying variation

in vital rates of grizzly bears on a multiple use landscape. The Journal of Wildlife Management, 79(5), 749-765.

Proctor, M. F., Paetkau, D., Mclellan, B. N., Stenhouse, G. B., Kendall, K. C., Mace, R. D., ... & Wakkinen, W. L. (2012). Population fragmentation and inter-ecosystem movements of

grizzly bears in western Canada and the northern United States.

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Proctor, M. F., Nielsen, S. E., Kasworm, W. F., Servheen, C.,

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Proctor, M. F., Lamb, C. T., & MacHutchon, A. G. (2017). Please find Procter et al. attached.

The grizzly dance between berries and bullets: relationships among bottom-up food resources and top-down mortality risk on grizzly bear populations in southeast British Columbia. Transborder Grizzly Bear Project, Kaslo, British Columbia, Canada, http:// transbordergrizzlybearproject.ca/research/ publications.html.

Proctor, M. F., McLellan, B. N., Stenhouse, G. B., Mowat, G., Lamb, C. T., & Boyce, M. S. (2018). Resources roads and grizzly be4ars in British Columbia and Alberta, Canada. Transborder Grizzly Bear Project, Kaslo, British Columbia, Canada, http://transbordergrizzlybearproject.ca/research/ publications.html. Please find attached.

Wakkinen, W. L., & Kasworm, W. (1997). Grizzly bear and road density relationships in the Selkirk and Cabinet-Yaak recovery zones. US Fish and Wildlife Service, Kalispell,
Montana. Wakkinen, W. L., & Kasworm, W. F. (2004).
Demographics and population trends of grizzly bears in the Cabinet–Yaak and Selkirk Ecosystems of British Columbia,
Idaho, Montana, and Washington. Ursus, 15(1), 65-76.
Waller, J. S., & Mace, R. D. (1997). Grizzly bear habitat

selection in the Swan Mountains, Montana. The Journal of Wildlife Management, 61(4), 1032-1039.

It is fair to assume that there are many more violations that regularly occur and are not witnessed and reported. It is also fair to assume that you have made no effort to request this available information from your own law enforcement officers, much less incorporate it into your analysis. Considering the Forest Service's own admissions that road density is the primary factor that degrades elk and grizzly habitat, this is a material and significant omission from your analysis– all of your ORD and HE calculations are wrong without this information.

The veracity of the FS's inventory of system and nonsystem ("undetermined" or "unauthorized") roads is at issue here also. This is partly because the FS basically turns a blind eye to the situation with insufficient commitment to monitoring, and also because violations are not always remedied in a timely manner. The project would violate the Forest Plan/Access standards, a violation of NFMA because of road closure violations.

Please disclose how many years the existing core ares have provided the habitat benefits assumed under the Forest Plan. As pointed out, some has been lost (due to "private infrastructure development") and we're not told of other likely and for see able reductions.

Please take a hard look as road closure violations. It also shows the inadequacy of Forest Plan road density metrics.

Have you closed or obliterated all roads that were promised to be closed or obliterated in the Travel Plan? The DDN does not demonstrate that you have. Or, are you still waiting for funds to close or obliterate those roads? This distinction matters becauseyou cannot honestly claim that you are meeting road density standards promised by the Travel Plan if you have not yet completed the road closures/obliterations promised by the Travel Plan. Furthermore, as noted above, you have a major problem with recurring, chronic violations of the road closures created by the Travel Plan, which means that your assumptions in the Travel Plan that all closures would be effective has proven false.

For this reason, you cannot tier to the analysis in the Travel Plan because it is invalid.

Christensen et al (1993) states: "Any motorized vehicle use on roads will reduce habitat effectiveness. Recognize and deal with all forms of motorized vehicles and all uses, including administrative use." Please disclose this to the public and stop representing that roads closed to the public should not be included in habitat effectiveness calculations. The facts that (a) you are constructing or reconstructing over 13.3 miles of new system roads and 5.3 miles of temporary roads for this project, (b) you have problems with recurring illegal use, which means that your conclusion that this Project will have no effect on open road density or habitat effectiveness is implausible to the point of being disingenuous. You cannot exclude these roads simply because you say they are closed to the public. Every road receiving motorized use must be included in the HE calculation. You must consider all of this road use in order to take a hard look that is fully and fairly informed regarding habitat effectiveness. In the very least you must add in all "non-system" roads, i.e. illegal roads, as well as recurring illegal road use (violations) in your ORD calculations.

Please adequately analyze the cumulative effects on grizzly bears of the East Rim project and other projects in the Pinedale Ranger District and other cumulative effects on grizzly bears. \

Please demonstrate a scientific or legal foundation for the projects's treatment of roads, and the impacts of roads to grizzly bears, lynx, native fish and other resources.

Creating barriers on roads to prevent motorized access will not affect recreational use, including hiking, hunting, bike riding, and berry picking, for example, Where are these impacts to grizzly bear displacement and mortality risk addressed?

Please define total road densities at present, what these will be during the 5 years of project implementation, and what these will be once the project is completed. So the impacts to grizzly bear displacement and mortality risk are not identified to the public.In Case 9:19-cv-0056-DWM the United States District Court for the District of Montana ruled on 6/24/21 that the Flathead Forest Plan was illegal because the Fish and Wildlife Service violated the ESA by not adequately considering the impacts of ineffective road closures in its 2017 BiOp. The court also ruled that the FWS violated the ESA by using a flawed incidental take statement for grizzly bears and the core density standards and secure core habitat surrogate violate the ESA.

Page 5 of the scoping notice states:

This project will address the landscape fuels concerns by removing dead trees and woody debris, while at the same time improving overall forest stand health by significantly thinning live trees in forested stands and reducing diseased trees on the landscape. The benefits of forest thinning and burning include improving landscape resilience to climate change and other disturbances by reducing wildfire risk, decreasing fuel loading, improving forest stand health, and increasing the age class and species diversity of trees. These vegetation changes can improve wildlife habitat by providing a mosaic of healthy vegetation that provides forage and thermal and cover for a variety of wildlife species. Improved shrub diversity and a healthy vegetation understory may improve deer habitat in the migratory corridor. Vegetation clearing may also improve the ability of firefighters to respond to wildfire by creating operational safe space and improved egress and transportation routes. Thinning activities will have the added benefit of "releasing" whitebark pine regeneration by removing the overstory of competing species and removing competing conifers from aspen stands.

The abstract of DellaSalla et al 2022 states:

Fire suppression policies and "active management" in response to wildfires are being carried out by land man-agers 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. Weurge 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.

The East Rim project is not following the best available science and not meeting the purpose and need of the project in violation of NEPA, NFMA, and the APA.

Please see the attached paper by Dr. William Baker titled: "Are High-Severity Fires Burning at Much Higher Rates Recently than Historically in Dry-Forest Landscapes of the Western USA?"

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

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

Based on Dr. Baker's paper, the proposed action will not meet the purpose and need of the project. Baker writes on p. 20: "Management issues

The evidence presented here shows that efforts to generally lower fire severity in dry forests for ecological restoration are not supported." Dr. Baker's paper is the best available science. Please explain why this project is not following the best availables cience. The Draft Decision Notice is in violation of NEPA.

In "Fire Ecology in Rocky Mountain Landscapes" by William Baker, Dr. Baker writes on page 435, "...a prescribed fire regime that is too frequent can reduce species diversity (Laughlin and Grace 2006) and favor invasive species (M.A. Moritz and Odion 2004). Fire that is entirely low severity in ecosystems that historically ex-perience some high-severity fire may not favor germination of fire- dependent species (M.A. Moritiz and Odion 2004) or provide habitat key animals (Smucker, Hutto, and Steele 2005)." Baker continues on page 436: "Fire rotations equal the average mean fire interval across alandscape and are appropriate intervals at which individual points or the whole landscape is burned. Composite fire intervals underestimate mean fire interval and fire rotation (chap 5) and should not be used as prescribed burning intervals as this would lead to too much fire and would likely lead to adversely affect biological diversity (Laughlin and Grace 2006)." Please find (Laughlin and Grace 2006) attached.

Dr. Baker estimates the high severity fire rotation to be 135 - 280 years for lodgepole pine forests. (See page 162.). Baker writes on page 457-458 of Fire Ecology in Rocky Mountain Landscapes:

"Fire rotation has been estimated as about 275 years in the Rockies as a whole since 1980 and about 247 years in the northern Rockies over the last century, and both figures are near the middle between the low (140 years) and high (328 years) estimates for fire rotation for the Rockies under the HRV (chap. 10). These estimates suggest the since EuroAmerican settlement, fire control and other activities may have reduced fire somewhat in particular places, but a general syndrome of fire exclusion is lacking. Fire exclusion also does not accurately characterize the effects of land users on fire or match the pattern of change in area burned at the state level over the last century (fig 10.9). In contrast, fluctuation in drought linked to atmospheric conditionsappear to match many state-level patterns in burned area over the last century. Land uses that also match fluctuations include logging, livestock grazing, roads and development, which have generally increased flammability and ig- nition at a time when the climate is warming and more fire is com- ing." Schoennagel et al (2004) (attached) states: "High- elevation subalpine forests in the Rocky Mountains typify ecosystems that experience infrequent, high-severity crown fires[]... The most extensive subalpine forest types are composed of Engelmann spruce (Picea engelmannii), sub- alpine 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 pat-terns." Please find Schoennagel et al (2004) attached.

Schoennagel et al (2004) states: "it is unlikely that the short period of fire exclusion has significantly altered the long fire intervals in subalpine forests. Furthermore, large, intense fires
burning under dry conditions are very difficult, if not impossible, to suppress, and such fires account for the majority of area burned in subalpine forests. Schoennagel et al (2004) states: "Moreover, there is no consistent relationship between time elapsed since the last fire and fuel abundance in subalpine forests, further undermining the idea that years of fire suppression have caused unnatural fuel buildup in this forest zone."

Schoennagel et al (2004) states: "No evidence suggests that spruce– fir or lodgepole pine forests have experienced substantial shifts in stand structure over recent decades as a result of fire suppression. Overall, variation in cli-mate rather than in fuels appears to exert the largest influence on the size, timing, and se-verity of fires in sub- alpine 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 forests, fire behavior in

Yellowstoneduring 1988, although severe, was neither unusual nor surprising."

Schoennagel et al. (2004) 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 ex- treme 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 highelevation 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 re-store subalpine forests, because they were dense historically and have not changed significantly in response to fire suppression. Thus, fuel- reduction ef- forts in most Rocky Mountain subalpine forests probably would not effectively mitigate the fire hazard, and these efforts may createnew ecological problems by moving the forest structure out-sidethe his- toric range of variability." Please find Schoennagel et al (2004) attached.

The NEPA requires a "hard look" at climate issues, including cumulative effects of the "treatments" in the proposed project when added to the heat, drought, wind and other impacts associated with in- creased climate risk. Regeneration/ Restocking failure following wildfire, prescribed fire and/or mechanical tree-killing has not been analyzed or disclosed. There is a considerable body of science that suggests that regeneration following fire is increasingly problematic. NEPA requires disclosure of impact on "the human environment." Climate risk presents important adverse impacts on cultural, economic, environmental, and social aspects of the human environment. – people, jobs, and the economy – adjacent to and near the project area. Challenges in predicting responses of individual tree species to climate are a result of species competing under a never-before-seen climate regime – one forests may not have experienced before either.

In an uncertain future of rapid change and abrupt, unforeseen transitions, adjustments in management approaches will be necessary and some actions will fail. However, it is increasinglyevident that the greatest risk is posed by continuing to implement strategies inconsistent with and not informed by current understanding of our novel future....

Achievable future conditions as a framework for guiding forest conservation and management, Forest Ecology and Management 360 (2016) 80–96, S.W. Golladay et al.

Stands are at risk of going from forest to non-forest, even without the added risk of "management" as proposed in the project area. The project is currently is violation of NEPA, NFMA, and the APA.

Please take a "hard look" at climate issues, including cumulative effects of the "treatments" in the proposed project when added to the heat, drought, wind and other impacts associated with in- creased climate risk. *U*SFS needs to take a hard look at impacts to lynx under NEPA, apply the lynx conservation measures and standards of the NRLMD, and consult on lynx via section 7 of the ESA b/c the best available science -- including recent tracking surveys conducted by WTU -- confirm lynx's presence and use of the area;

(3) USFS has failed to survey for lynx as required by the Biological Opinion on the Northern Rockies Lynx Management Direction (NRLMD).

In order to meet the requirements of the FS/USFWS Conservation Agreement, the FS agreed to insure that all project activities are consistent with the Lynx Conservation Assessment and Strategy (LCAS).

LCAS requirements include:

Project planning—standards.

1. Within each LAU, map lynx habitat. Identify potential denning habitat and foraging habitat (primarily snowshoe hare habitat, but also habitat for important alternate prey such as red squirrels), and topographic features that may be important for lynx movement (major ridge systems, prominent saddles, and riparian corridors). Also identify non-forest vegetation (meadows), shrub-grassland communities, etc.)adjacent to and intermixed with forested lynx habitat that may

provide habitat for alternate lynx prey species.

2. Within a LAU, maintain denning habitat in patches generally larger than 5 acres, comprising at least 10 percent of lynx habitat. Where less than 10 percent denning habitat is currently present within a LAU, defer any management actions that would delay development of denning habitat structure.

3. Maintain habitat connectivity within and between LAUs. Programmatic planning-standards.

1. Conservation measures will generally apply only to lynx habitat on federal lands within LAUs.

2. Lynx habitat will be mapped using criteria specific to each geographic area to identify appropriate vegetation and environmental conditions. Primary vegetation includes those types necessary to support lynx reproduction and survival. It is recognized that other vegetation types that are intermixed with the primary vegetation will be used by lynx, but are considered to contribute to lynx habitat only where associated with the primary vegetation. Refer to glossary and description for each geographic area.

3. To facilitate project planning, delineate LAUs. To allow for assessment of the potential effects on an individual lynx, LAUs should be at least the size of area used by a resident lynx and contain sufficient year-round habitat.

4. To be effective for the intended purposes of planning and monitoring, LAU boundaries will not be adjusted for individual projects, but must remain constant.

5. Prepare a broad-scale assessment of landscape patterns that compares historical and current ecological processes and vegetation patterns, such as age-class distributions and patch size characteristics. In the absence of guidance developed from such an assessment, limit disturbance within each as follows: if more than 30 percent of lynx habitat within an LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result o vegetation management activities by federal agencies.

Project planning-standards.

1. Management actions (e.g., timber sales, salvage sales) shall not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10- year period. Programmatic planning-standards.

1. Identify key linkage areas that may be important in providing landscape connectivity within and between geographic areas, across all ownerships.

2. Develop and implement a plan to protect key linkage areas on federal lands from activities that would create barriers to movement. Barriers could result from an accumulation of incremental projects, as opposed to any one project.

Please demonstrate that project activities are consistent with above and all other applicable programmatic and project requirements.

The U.S. Court of Appeals for the Ninth Circuit hold that "[o]nce an agency is aware that an endangered species may bepresent in the area of its proposed action, the ESA requires it to prepare a biological assessment" Thomas v. Peterson, 753 F. 2d 754, 763 (9thCir. 1985). If the biological assessment concludes that the proposed action "may affect" but will "not adversely affect" a threatened or endangered species, the action agency must consult informally with the appropriate expert agency. 50 C.F.R. §§ 402.14 (b)(1), 402.12(k)(1). Canada lynx are listed under the ESA.

Canada lynx may be present in the project area and the proposed project may affect lynx by temporarily increasing road density, removing vegetative cover, and engaging in mechanized activities that could displace lynx.

Please complete a biological assessment for lynx and formally consult with USFWS regarding the project's potential impacts on lynx.

Grizzly Bears

The preservation of endangered species takes "priority over the 'primary missions' of federal agencies." Accordingly, courts must "afford[] endangered species the highest of priorities," and act with "institutionalized caution" when reviewing ESA cases. Cottonwood Envtl. Law Ctr. v. USFS, 789 F.3d 1075, 1091 (9th Cir.2015). This Court holds that the "fundamental principle [of institutionalized caution] remains intact and will continue to guide district courts when confronted with requests for injunctive relief in ESA cases." Id. Although the district court did not apply this fundamental principle in this case, this Court may now remedy that error by issuing a temporary injunction pending appeal to preserve the status quo until a final decision is issued on the merits.

Measures implemented beginning in the 1990s for protection of the threatened grizzly bear have decreased the amount of road available for motorized public travel and management activities, while increasing security for grizzly bears as well as other wildlife species.

The well-established scientific consensus is that roads pose the most imminent risk to this grizzly population. Ninety percent of

this population's Recovery Zone habitat is located on public National Forest lands. Thus, the federal government has the power to limit road density for grizzly bear protection on thevast majority of its habitat and thereby prevent the extinction of this grizzly population.

However, the U.S. Forest Service has prepared multiple years of monitoring reports regarding its implementation of road closures in grizzly habitat. These monitoring reports establish that these road closures are routinely violated and therefore ineffective: members of the public regularly ignore signs, drive around gates or earthen berms, remove obstructions such as boulders or logs, or simply create their own new motorized routes.

Please disclose how often closed roads are monitored for closure violations. Please disclose all of the road closure violations in the BTNF over the last 5 years.

The recurring problem of road closure failures undermines the foundation of the BTNF Forest Plan management regime, which relies on these road closures to achieve certain densities of open and total roads both inside and outside the Recovery Zone. The agencies must address this problem and its impacts in an updated ESA consultation for the BTNF Forest Plan. The agencies must also address this problem and its impact in an updated ESA consultation and in the special use projects and is another reason that an EIS should be written for the spexial use Projects.How does the FP complies with the "best available science"

on grizzly recovery, or the 2012 Planning Rule that required Forest to emphasize "Connectivity?" The majority of the Northern Continental Divide Grizzly Bear Ecosystem – is National Forest land, managed by the Forest Service. In terms of all of the human uses that affect grizzly bears, "[r]oads probably pose the most imminent threat to grizzly habitat today. The management of roads is one of the most powerful tools available to balance the needs of people with the needs of bears." Accordingly, the U.S. Fish & Wildlife Service (FWS) states: "It is strongly recommended that road management be given the highest priority within all recovery zones." Roads pose a threat to grizzly bears because roads provide humans with access into grizzly bear habitat, which leads to direct bear mortality from accidental shootings and intentional poachings.

Human access also leads to indirect bear mortality by creating circumstances in which bears become habituated to human food and are later killed by wildlife managers. Human access also results in indirect mortality by displacing grizzly bears from good habitat into areas that provide sub-optimal habitat conditions.

Displacement may have long term effects: "Females who have learned to avoid roads may also teach their cubs to avoid roads. In this way, learned avoidance behavior can persist for several generations of bears before they again utilizehabitatassociated with closed roads." Both open and closed

roadsdisplace grizzly bears: "grizzlies avoided roaded areas even where existing roads were officially closed to public use

[]. Females with cubs remained primarily in high, rocky, marginal habitat far from roads. Avoidance behavior by bears of illegal vehicular traffic, foot traffic, and/or authorized use behind road closures may account for the lack of use of areas near roads by female grizzly bears in this area.

This research demonstrated that a significant portion of the habitat in the study area apparently remained unused by female grizzlies for several years. Since adult females are the most important segment of the population, this lack of use of both open-roaded and closed-roaded areas is significant to the population." In addition to having a significant impact on female grizzly bears, displacement may also negatively impact the survival rates of grizzly cubs: "survivorship of the offspring of females that lived in unroaded, high elevation habitat was lower than that recorded in other study areas in the [Northern Continental Divide Ecosystem].

The majority of this mortality was due to natural factors related to the dangers of living in steep, rocky habitats. This is important in that the effects of road avoidance may result not only in higher mortality along roads and in avoidance of and lack of use of the resources along roads, but in the survival of young when their mothers are forced to live in less favorable areas away from roads."Current peer-reviewed science still finds that roads have the

most significant impact on grizzly bear survival: "[o]f all the covariates we examined, the amount of secure habitat and the density of roads in nonsecure habitat on public lands had thegreatest effect on grizzly bear survival."

Roads, even if nominally "temporary," can still have longlasting generational displacement effects on grizzly bears because females teach their cubs to avoid these areas.

These roads can therefore result in direct mortality, indirect mortality, and reduced cub survival. When applied to an

extremely small, endangered2 population of fewer than 50 individuals that is already experiencing high mortality rates, failing recovery targets, and hovering at less than half the numbers needed for viability, these harms are amplified and create a great cause for concern for Alliance's members. Neither the "imminent harm" posed by roads nor the dire status of this population are acknowledged by the agencies. The project will not maintaining and enhancing grizzly habitat and will increase the potential for grizzly-human conflicts in violation of NFMA, NEPA, the APA and the ESA.

The Forest does not have a good track record of keeping closed roads closed. The Forest Service does not disclose the road mileage behind these ineffective closures; therefore it is unclear how many miles of additional open and total roads must be added to the existing condition calculations as a result of these ineffective closures. There are at least three problems with the FNF's record of

amount of roads. First, because "undetermined" is a subcategory of "unauthorized" roads, it is possible that the particular undetermined roads at issue in this case were created—without authorization from the Forest Service—in the interim between the measurement of the Forest Plans baseline and the Forest Service's survey of existing roads for the Project.

All. for the Wild Rockies v. Savage, 897 F.3d 1025, 1036, n.18 (9th Cir. 2018). In light of these circumstances that (1) road closures/barriers are regularly breached but the Forest Service conducts no systematic monitoring to determine how many miles of illegal road use are occurring behind barriers each year, and (2) the Forest Service simply ignores illegal

"undetermined" roads and does not include them in its calculations for open or total roads in the annual monitoring reports, the open and total road numbers in the monitoring reports are not accurately reflecting the conditions on the ground. It is therefore reasonable to assume that the baselines in the project area regularly exceeded because the reported conditions hover at or near the baseline.

Chronic recurring road closure breaches cannot reasonably be construed as "temporary;" and illegal road use does not fall within the scope of "temporary" roads.

Are road closure violations addressed in the BTNF Forest Plan?

First, it is not reasonable to construe recurring illegal road use as "temporary" road density increases. The monitoring reports indicate that public users may repeatedly breach the same closure year after year. See, e.g., AR42:000059-62 (noting that boulders placed in 2015 have been removed and unauthorized users are again circumventing gate on Road 2236). Moreover, the Forest Service may take years to act on known violations. See, e.g., AR42:000061 ("The Clatter Creek gate (268) was included on the 2015 gate repair contract but after the bids came in the Clatter Creek gate was dropped due to repair costs for all gate repairs exceeding available funding. In BY2016 the gate remained damaged and ineffective."); see also AR43:000081-82 (note 2)(during planning for the Hanna Flats logging project in the Idaho Panhandle N.F., the Forest Service found illegal motorized use on 15.7 miles of road that were not included in the baseline but the agency postponed remedial action until implementation of the logging project; in the 2018 monitoring report, the agency concedes it has still not

yet eliminated this illegal use); see also AR232:000767(finding that four barriers did not effectively prevent motorized use but deferring any action to fix the problems). Thus, while the Forest Service insists that all breaches are temporary, those same breaches may be recurring or may have lasted for many years prior to discovery and remedial action, resulting in a chronic situation. The situation is a good illustration of this problem S although the Forest Service insists that it fixes all breaches as soon as possible, nonetheless at least four out of seven BORZ areas chronically fail to meet both the open and total road baseline conditions from the Access Amendment, as shown above in the table in Section B. Second, even assuming that illegal road use could be construed as "temporary," it still does not have the same effect as lawful temporary road use. A breach of a closure device that results in public motorized use in effect results in an open road. The Access Amendment severely restricts temporary increases in open roads: "immediately following completion of all mechanized harvest and post- harvest slash activities requiring use of the road, to allow motorized public use during the bear summer season prior to the fall bear hunt (i.e., June 16 - August 31) for activities such as personal firewood collection. This public access would only be provided in cases where the mechanized harvest and/or post-harvest slash activities occurred during the same active bear year." Thus, temporary increases in open roads are limited to a June 16-August 31 window, and may only occur in the same year inwhich logging activities have already occurred and used that particular road, presumably because grizzlies would have already been displaced from those areas. In contrast, illegal

motorized use behind road closure breaches is not limited to a June 16-August 31 window, and is not limited to a single year entry on a road along and on which logging activities have already been occurring.

Moreover, illegal road use would also constitute an increase in total roads. However, temporary increases in total roads are only permitted if the roads are "effectively" gated to prevent public use during a project, (2) after project use, the roads are treated so as to "effectively prevent[] motorized access" and require no motorized access for maintenance for at least 10 years, and (3) upon project completion, the area is "returned to or below the baseline levels contained in Table 16" of the Access Amendment ROD. Obviously a road that has illegal road use is not "effectively" gated to prevent public use. Thus, illegal road use does not comply with the restrictions set for lawful increases in temporary roads neither open nor closed in the Access Amendment and therefore cannot possibly have the same effects. It is simply implausible that unlimited illegal road use occurring at any time in any location would have the same effect on grizzly bears as Access Amendment temporary roads that are significantly restricted in both timing and location. Indeed, illegal road use is illegal precisely because the Forest Service has already closed these specific roads to protect grizzly bears. If illegal motorized use occurs on these roads that were closed to protect grizzly bears, it maydisplace grizzly bears from areas that they would otherwise not

be displaced from.

Becasue of the serious impacts to grizzly bears, please demonstrate compliance with Forest Plan standards relevant to grizzly bears, and analyze the direct, indirect, and cumulative impacts to grizzly bears.

The Forest Service must comply with National Forest Management Act ("NFMA") and its implementing regulations. NFMA requires the Forest Service to ensure that site-specific management projects are consistent with the applicable forest plan. 16 U.S.C. § 1604(i). Thus, the Forest Service must ensure that all aspects of the proposed action comply with the BTNF Land Management Plan.

Road density and habitat security standards used by the BTNF are patently deficient, partly because they are based on research that conflates behavioral phenomena such as avoidance and displacement with demographic phenomena, notably survival. The scale is wrong as well, given that exposure to mortality hazards logically accrues over years as a consequence of cumulative annual movements of bears vis-àvis hazardous environs.

Compounding prospective problems with the project, proposedactivities are concentrated in an area that is vital for facilitating movement of grizzly bears between core habitats. Project activities will diminish rather than enhance security needed not only to facilitate transit of bears, but also increase odds that exposed bears will survive.

The extent to which poaching, malicious killing, or other suspect circumstances are associated with human-caused deaths is also instructive regarding the overall effectiveness of conflict mitigation efforts during 1999-2017 to offset the problematic effects of road-access and poaching. By its nature, malicious killing/poaching is a criminal act undertaken by criminals. Such behavior is rooted in attitudes and outlooks that are notoriously unresponsive to education and 'outreach'. The phenomenon is about willful malfeasance. As such, limitations on road access coupled with improved law enforcement and successful prosecutions are logically the most appropriate redress—not, for example, conflict mitigation by a specialist who is not tasked primarily with law enforcement. Before pursuing this any farther, some clarification of obfuscations in the dead bear database is needed. During 1999-2017 a number of deaths were ascribed to 'Undetermined' human causes, 'Poaching' or listed as 'Under investigation'. The first and last categories are not explicit, but nonetheless strongly suggestive. Certainly, 'Under investigation' suggests that the death occurred under suspicious circumstances warranting investigation-with a strong likelihood of either poaching or other unwarranted lethal action by the involved people. Such suspicions are rarelydefinitively resolved. 'Undetermined' is also more suggestive of

malfeasance rather than innocence on the part of the involved people. Given the alternatives, such deaths are more defensibly allocated to causes more resistant than not to

1) malicious or otherwise suspect causes account for a large portion—if not majority—of grizzly bear deaths in the Greater Yellowstone Ecosystem; (2) that aggressive limitations to road access by the USFS are needed, especially in areas with concentrations of productive habitat (Proctor et al. 2015, 2017).

F. Access Management is Critical to Limiting Malicious & Other Unjustified Killing

The consensus of relevant research is unambiguous about the link between road access and grizzly bear mortality. The more access, the more dead bears there are, with disproportionate concentrations near roads (Brannon et al. 1988; Benn & Herrero 2002; Nielsen et al. 2004; Wakkinen & Kasworm 2004; Boulanger & Stenhouse 2014; McLellan 2015; Proctor et al. 2017, 2018). Dead bears tend to be concentrated within 100 to 500 m of roads, averaging around 300 m (\pm 195 m) among studies where distance was noted.

Unfortunately, there is a common conflation of the extent to which radio-marked grizzly bears spatially avoid roads with the geospatial configuration of mortality risk and, even more important, decrements in survival and population growth. These parameters are not synonymous. Even though a bear might underuse habitats within a certain distance of roads, this does not translate into a 1:1 correlation with exposure torisk of human-related mortality during a bear's lifetime. Conflation of avoidance with mortality risk has led to the unstated assumption that the former can be used to set standards for the latter.

Please examine the cumulative effects of this project. The Forest Service could unequivocally benefit grizzly bears in this area by the closure and retirement of roads. Benn, B., & Herrero, S. (2002). Grizzly bear mortality and human access in Banff and Yoho National Parks, 1971-98. Ursus, 13, 213-221.

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Kasworm, W. (2018). Selkirk/Cabinet-Yaak IGBC Subcommittee, meeting notes: 2018 research/monitoring update. http://igbconline.org/wp- content/uploads/ 2018/11/181108_SCYE_Mtg_Summary.pdf Kendall, K. C., Macleod, A. C., Boyd, K. L., Boulanger, J., Royle, J. A., Kasworm, W. F., ... & Graves, T. A. (2016). Density, distribution, and genetic structure of grizzly bears in the Cabinet-Yaak Ecosystem. The Journal of Wildlife Management, 80(2), 314-331.

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Proctor, M. F., McLellan, B. N., Stenhouse, G. B., Mowat, G., Lamb, C. T., & Boyce, M. S. (2018). Resources roads and grizzly be4ars in British Columbia and Alberta, Canada. Trans-border Grizzly Bear Project, Kaslo, British Columbia, Canada, http://transbordergrizzlybearproject.ca/research/ publications.html.Wakkinen, W. L., & Kasworm, W. (1997). Grizzly bear and

road density relationships in the Selkirk and Cabinet-Yaak recovery zones. US Fish and Wildlife Service, Kalispell, Montana.

Wakkinen, W. L., & Kasworm, W. F. (2004). Demographics and population trends of grizzly bears in the Cabinet–Yaak and Selkirk Ecosystems of British Columbia, Idaho, Montana, and Washington. Ursus, 15(1), 65-76.

Waller, J. S., & Mace, R. D. (1997). Grizzly bear habitat selection in the Swan Mountains, Montana. The Journal of Wildlife Management, 61(4), 1032-1039.

Since road closure violations are pervasive throughout the project area and the Forest, the BTNF is in violation of not only the Forest Plan but also the big game security standards.

It is fair to assume that there are many more violations that regularly occur and are not witnessed and reported. It is also fair to assume that you have made no effort to request this available information from your own law enforcement officers, much less incorporate it into your analysis. Considering your own admissions that road density is the primary factor that degrades elk and grizzly habitat, this is a material and significant omission from your analysis– all of your ORD and HE calculations are wrong without this information.

The veracity of the FS's inventory of system and nonsystem ("undetermined" or "unauthorized") roads is at issue here also. This is partly because the FS basically turns a blind eye to the situation with insufficient commitment to monitoring, and also because violations are not always remedied in a timely manner. The East Rim project would violate the Forest Plan/Access standards, a violation of NFMA because of road closure violations.

Please disclose how many years the existing core ares have provided the habitat benefits assumed under the Forest Plan. As pointed out, some has been lost (due to "private infrastructure development") and we're not told of other likely and for see able reductions.

Please take a hard look as road closure violations. It also shows the inadequacy of Forest Plan road density metrics.Have you closed or obliterated all roads that were promised to be closed or obliterated in the Travel Plan? Or, are you still waiting for funds to close or obliterate those roads? This distinction matters because you cannot honestly claim that you are meeting road density standards promised by the Travel Plan if you have not yet completed the road closures/ obliterations promised by the Travel Plan. Furthermore, as noted above, you have a major problem with recurring, chronic violations of the road closures created by the Travel Plan, which means that your assumptions in the Travel Plan that all closures would be effective has proven false. For this reason, you cannot tier to the analysis in the Travel Plan because it is invalid. Christensen et al (1993) states: "Any motorized vehicle use on roads will reduce habitat effectiveness. Recognize and deal with all forms of motorized vehicles and all uses, including administrative use." Please disclose this to the public and stop representing that roads closed to the public should not be included in habitat effectiveness calculations. The facts that (a) you are constructing or reconstructing over 13.3 miles of new system roads and 5.3 miles of temporary roads for this project, (b) you have problems with recurring illegal use, which means that your conclusion that this Project will have no effect on open road density or habitat effectiveness is implausible to the point of being disingenuous. You cannot exclude these roads simply because you say they are closed to the public. Every road receiving motorized use must be included in the HE calculation. You must consider all of this road use in order to take a hard look that is fully and fairly informed regarding habitat effectiveness. In the very least you must add in all "non-system" roads, i.e. illegal roads, as well as recurring illegal road use (violations) in your ORD calculations.

Please adequately analyze the cumulative effects on grizzly bears of the East Rim WUI project and other cumulative effects on grizzly bears.

Please adequately distinguish between and quantify the risks to grizzly bears and other wildlife by decommissioned, abandoned, temporary, open, gated, impassable, and barricaded roads. As a result, it draws arbitrary and capricious conclusions to support the building and rebuilding of more roads and culvert crossings while claiming 2011 grizzly bear habitat conditions will somehow be retained.

Moreover, the East Rim WUI project builds and rebuilds roads in order to support specious logging and other "vegetation management" that will not protect neighboring structures fromfire and will instead make the fire risk situation worse. Nor will the project "improve the diversity and resilience of terrestrial ecosystems and vegetation." It will instead degrade the habitat and habitat security for grizzly bear, lynx and wolverine, among other wildlife species.

On the whole, the East Rim WUI project does not "maintain the on- he-ground [2011] conditions that have contributed to the growth and expansion of the Forest Plan nor does it provide the protections necessary to sustain white bark pine and wolverine.

How much new "temporary" road building will occu=r in the East Rim project? The New roadbuilding in the East Rim project without meaningful reclamation to ensure no net increase in the road system presents a significant threat to grizzly bears, because motor vehicle users and other recreationists can trespass on the supposedly "impassable" roads and thus encroach on grizzly bear habitat. Further, even unused roads cause detrimental impacts to grizzly bear survival and reproduction, because grizzly bears are displaced from roaded habitat, regardless of whether the roads receive public or administrative use.

Please include a detailed economic analysis which fully explain all of the costs of the project.

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

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

Based on Dr. Baker's paper, the proposed action will not meet the purpose and need of the project. Baker writes on p. 20:

"Management issues

The evidence presented here shows that efforts to generally lower fire severity in dry forests for ecological restoration are not supported."

Dr. Baker's paper is the best available science. Please explain why this project is not following the best availablescience. The Draft Decision Notice is in violation of NEPA.

Remedy, choose the No Action Alternative or write an EIS that com- plies with the law.

In "Fire Ecology in Rocky Mountain Landscapes" by William Baker, (which I am sending a copy of via U.S. mail) Dr. Baker

writes on page 435, " ...a prescribed fire regime that is too frequent can reduce species diversity (Laughlin and Grace 2006) and favor invasive species (M.A. Moritz and Odion 2004). Fire that is entirely low severity in ecosystems that historically experience some high-severity fire may not favor germination of fire- dependent species (M.A. Moritiz and Odion 2004) orprovide habitat key animals (Smucker, Hutto, and Steele 2005)."

Baker continues on page 436: "Fire rotations equal the average mean fire interval across a landscape and are appropriate intervals at which individual points or the whole landscape is burned. Composite fire intervals underestimate mean fire interval and fire rotation (chap 5) and should not be used as prescribed burning intervals as this would lead to too much fire and would likely lead to adversely affect biological diversity (Laughlin and Grace 2006)."

Dr. Baker estimates the high severity fire rotation to be 135 - 280 years for lodgepole pine forests. (See page 162.). Baker writes on page 457-458 of Fire Ecology in Rocky Mountain Landscapes:

"Fire rotation has been estimated as about 275 years in the Rockies as a whole since 1980 and about 247 years in the northern Rockies over the last century, and both figures are near the middle between the low (140 years) and high (328 years) estimates for fire rotation for the Rockies under the HRV (chap. 10). These estimates suggest the since EuroAmerican settlement, fire control and other activities may have reduced fire somewhat in particular places, but a general syndrome of fire exclusion is lacking. Fire exclusion also does not accurately characterize theeffects of land users on fire or match the pattern of change in area burned at the state level over the last century (fig 10.9). In contrast, fluctuation in drought linked to atmospheric conditions appear to match many state-level patterns in burned area over the last century. Land uses that also match fluctuations include logging, livestock grazing, roads and development, which have generally increased flammability and ignition at a time when the climate is warming and more fire is com- ing."

Please demonstrate that the Forest Plan requirement of 10% old growth will be met in the East Rim Project Area.

Please demonstrate that the minimum 30% elk security, areas of 250 or more acres, will be maintained in the project area.

Please demonstrate that elk calving and mule deer fawning habitat will be protected from burning activities on 3,000 acres during the spring calving/fawning period from 5/15 to 6/30.

Please demonstrate that goshawk nesting areas in the project area will be protected by a 0.25 mile buffer.

Please demonstrate that the project meets requirement to provide well-distributed habitat to sustain Management Indicator Species

Please show that the requirement for ongoing mapping of Region 4 sensitive species habitat (goshawks, boreal owls, pine marten) has occurred in the project area.

Please demonstrate that the desired condition to have healthy cone-bearing stands of whitebark pine to provide habitat for the

Clark's Nutcracker will be met with the logging of whitebark pine stands.

Please demonstrate that the 1998 baseline condition for grizzly bear security within the Bear Analysis Unit will be maintained.

Please demonstrate that the Forest Plan management approach to improve migration corridors of at least 30% security will be met Please identify the Forest coordination with the state of Wyoming as per the Wyoming Mule Deer Initiative, the Strategic Habitat Plan, and the State Wildlife Action Plan for management of wildlife within the East Rim Project Area.

whitebark Pine

How many white bark pine will be killed by this project? Killing white bark pine is clearly an adverse impact on whitebark pine,.

Please ddress the loss of genetic diversity that will result from the killing of thousands and thousands of whitebark pine seedlings, saplings, and young trees, as well as potentially mature trees that would be damaged from logging activities. The genetic diversity that is provided by these younger trees, that has accrued over hundreds of years, given that whitebark pine can live up to 1,000 years, will surely have severe population consequences for this tree in the East Rim project area. This severe impact was not disclosed by the agency, in violation of the NEPA. This impact would require completion of an Environmental Impact Statement (EIS), along with the severe impacts it will have on the grizzly bear and Clark's Nutcracker.

Please consider new science in that thinning whitebark pine stands to increase their growth will possibly increase their vulnerability to bark beetles in the future (Six et all. 2014; Six et al. 2021 attached). As was noted in the Standing Analysis for whitebark pine (USDI 2023), succession of whitebark pine stands to subalpine fir may take 500 years or more. This analysis also noted that seedling and sapling whitebark pine may tolerate long periods of suppression in the understory, and still release, possibly sporadically, when canopy openings occur. As such, these understory whitebark pine are essential to the long-term viability of whitebark pine stands, even though the East Rim project objectives are to destroy these recruitment trees. The draft EA did not define how the loss of existing whitebark pine recruitment will be compensated with masses of new seedling/ sapling trees, although this in itself would not address the loss of genetic diversity provided by hundreds of years of various-aged recruitment trees. However, suggestions that stand opening will increase whitebark pine regeneration has not yet been documented (Keane and Parsons 2010).

The whitebark pine standing analysis also noted that whitebark pine is highly vulnerable to death from fire. Thus on top of the proposed logging of whitebark pine and trampling/slashing of the understory, surviving smaller whitebark pine trees will be killed with fire.

In conclusion, the East Rim project will clearly create severe adverse population impacts to whitebark pine, impacts that were falsely defined as restoration, in violation of the NEPA. As well, this project is a violation of the ESA as recovery of whitebark pine is not being promoted. It is also unclear why this project would comply with the 4(d) rule released by the USFWS. This rule allows limited mortality of whitebark pine when other management objectives are more important. The claim by the Forest Service that there is an emergency to log whitebark pine to prevent a wildfire crisis was never supported with any analysis, including why the East Rim project area has unique features that make it an emergency fire hazard. Nor did the agency define what the probability is for whitebark pine stands to be destroyed by fire versus logging and loss of decades/ hundreds of years of recruitment (analysis comparison of the no action and proposed action alternatives, which is required by the NEPA.

Wolverine

Please provide a valid assessment of project impacts on the wolverine as required by NFMA and the ESA. First, moose crucial winter range will be destroyed, which will reduce winter forage resources for the wolverine (Scrafford and Boyce 2018). Moose are highly dependent upon climax, dense mature forests in the winter in the Greater Yellowstone Ecosystem (Tyers 2003). Logging moose winter range will remove both the key understory forage provided by subalpine fir, but increase both snow depths and crusting, to the detriment of moose. Increased snow depths will also hinder wolverine travel (Wright and Ernst 2004b). Logging of mature older forest will also reduce the availability of food caching sites for wolveri8ne (Wright and Ernst 2004a).

Please address how the proposed activities and road activities, as well, will impact wolverine. Wolverine are known to be highly sensitive to both roads and human activities, including logging (Scrafford et al. 2018; Fisher et al. 2013; Stewart et al. 2016). Nor did the agency address how logging 6,540 acres of mature forest would impact habitat suitability for the wolverine due to temperature increases. This species is noted to be highly sensitive to heat stress (Parks 2009). Opening 3000 acres of currently dense forests will result in an undefined average temperature increase for wolverine, including in early spring habitat when wolverine seek prey on big game winter ranges and elk/deer calving/fawning habitat.

Please analyze the project and cumulative impacts on 67 species of western forest birds.

Please demonstrate that the project will comply with NEPA, the National Forest Management Act (NFMA), the Endangered Species Act (ESA), the Migratory Bird Treaty Act (MBTA), and the Administrative Procedures Act (APA).

The actual impact of vegetation treatments in forests, woodlands and shrublands needs to be defined to the public, including by individual species and the estimated reduction in carrying capacity per acre of treatment. The level of reduction in carrying capacity that results in significant declines of a specific species needs to be identified, so that the public understands how impacts are measured, as is required by the NEPA.

The BTNF lacks any conservation strategies for birds of conservation concern associated with sagebrush/grassland habitats (4-5 species of conservation concern); lacks a conservation strategy for wildlife associated with grasslands/ meadows; lacks a conservation strategy for birds associated with mixed conifer-mountain fir habitats (15 or more species of conservation concern); lacks a conservation strategy for birds associated with oak/mahogany/mountain shrub habitats (at least 3 species of conservation concern); lacks a conservation strategy for birds associated with pinyon-juniper habitats (at least 4 species of conservation concern); lacks a conservation strategy for birds associated with ponderosa pine forests (at least 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern); lacks a conservation strategy for birds associated with spruce-fir forests (at last 14 species of conservation concern);

Please write an EIS or EA that fully complies with the law or choose the No Action Alternative.

Sincerely yours, Mike Garrity Executive Director Alliance for the Wild Rockies P.O. Box 505 Helena, MT 59624 406-459-5936

And for

Sara Johnson Native Ecosystems Council P.O. Box 125 Willow Creek, MT 59760

And for

Steve Kelly, Director Council on Wildlife and Fish (Formally known as Montana Ecosystems Defense Council) P.O. Box 4641 Bozeman, MT 59772 And for Jason L. Christensen – Director Yellowstone to Uintas Connection P.O. Box 363 Paris, Idaho <u>83261jason@yellowstoneuintas.org</u>

And for

Kristine Akland Center for Biological Diversity (CBD)

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