August 7, 2022, Via Email

Objection against the Draft Decision Notice (DDN), FONSI, and Environmental Assessment for the Greenhorn Vegetation Management Project, Forest Service, Beaverhead-Deerlodge National Forest, Madison Ranger District

Identification of Objectors:

Lead Objector: Michael Garrity, Director, Alliance for the Wild Rockies (Alliance)

PO Box 505

Helena, MT 59624;

Phone 406-459-5936.

And for

Sara Johnson

Native Ecosystems Council

PO Box125
Willow Creek, MT 59760.

And for

Jason L. Christensen
Director Yellowstone to Uintas Connection
P.O. Box 363
Paris, Idaho 83261
jason@yellowstoneuintas.org

Signed for Objectors this 7th day of August 2022

/s/ Michael Garrity

Michael Garrity

Name of the Responsible Official, Beaverhead-Deerlodge-National Forest, Ranger District where Project is Proposed:

The Responsible Official for the project is the Madison District Ranger, Dale Olson. The Greenhorn Vegetation Project area is in the northwest corner of the Gravelly landscape approximately 10 miles south of Virginia City and 5 miles east of the Ruby Reservoir, on the Madison Ranger District of the Beaverhead-Deerlodge National Forest. The project proposes prescribed fire, non-commercial logging, and commercial logging on approximately 17,092 acres within the 41,900 acre project area in the Greenhorn Range. Prescribed fire and non-commercial logging are proposed

on approximately 16,009 acres. Commercial logging is proposed on approximately 1,047 acres and approximately 36 acres are proposed for stand clearcut followed by prescribed fire. This project includes approximately 24 miles of existing road maintenance or reconstruction for use as haul routes to support timber harvest. Approximately 4.7 miles of roads would be constructed.

Description of those aspects of the proposed project addressed by the objection, including specific issues related to the proposed project if applicable, how the objector believes the environmental analysis, Finding of No Significant Impact, and Draft Decision Notice (DDN) specifically violates law, regulation, or policy: The EA and DND are contained in the USFS webpage at: https://www.fs.usda.gov/project/?project=55744

Ranger Olson selected the proposed Alternative 2 (proposed action) as described in the EA on pages 10 -11 with one modification: approximately 4400 acres will receive hand slashing and prescribed burning treatment, and approximately 475 acres will receive hand slashing treatment only.

As a result of the Draft DN, individuals and members of the above mentioned groups would be directly and significantly affected by the logging and associated activities. Appellants are conservation organizations working to ensure protection of biological diversity and ecosystem integrity in the Wild Rockies bioregion (including the BDNF). The individuals and members use the project area for recreation and other forest related activities. The selected alternative would also further degrade the water quality, wildlife and fish habitat. These activities, if implemented, would adversely impact and irreparably harm the natural qualities of the Project Area, the surrounding area, and would further degrade the watersheds and wildlife habitat.

1. Objectors names and addresses:
   Lead Objector Mike Garrity, Executive Director, Alliance for the Wild Rockies
   P.O. Box 505; Helena, MT 59624
   Phone 406 459-5936

And for
Sara Johnson
Native Ecosystems Council

P.O. Box 125
Willow Creek, MT 59760

And for

Jason L. Christensen
Director Yellowstone to Uintas Connection
P.O. Box 363
Paris, Idaho 83261
jason@yellowstoneuintas.org

2. Signature of Lead Objector:

Signed this 7th day of August 2022 by Lead Objector,

/s/ Michael Garrity

3. Lead Objector: Michael Garrity, Alliance for the Wild Rockies

4. Name of the Proposed Project, Responsible Official, National Forest and Ranger District where Project is: Greenhorn Vegetation Project; Beaverhead-Deerlodge National

Forest (BDNF) Ranger Dale Olson is the Responsible Official; The Greenhorn Vegetation Project area is in the northwest corner of the Gravelly landscape approximately 10 miles south of Virginia City and 5 miles east of the Ruby Reservoir, on the Madison Ranger District of the Beaverhead-Deerlodge National Forest in Madison County, MT.

Ranger Olson chose the proposed or selected alternative in the Draft Decision Notice and FONSI.

NOTICE IS HEREBY GIVEN that Alliance objects pursuant to 36 CFR section 218 to the Responsible Official's adoption of the selected Alternative. As discussed below, the Greenhorn Vegetation Project as proposed violates the Clean Water Act, the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Endangered Species Act (ESA), the Beaverhead-Deerlodge Forest Plan and the Administrative Procedure Act (APA).

Location

The Greenhorn Vegetation Project area is in the Greenhorn Vegetation Project area is in the northwest corner of the Gravelly landscape approximately 10 miles south of Vir-

ginia City and 5 miles east of the Ruby Reservoir, on the Madison Ranger District of the Beaverhead-Deerlodge National Forest in Madison County, MT.

5. Specific Issues Related to the Proposed Projects, including how Objectors believes the Environmental Analysis or Draft Record of Decision specifically violates Law, Regulation, or Policy: We included this under number 8 below.

Thank you for the opportunity to object on the Greenhorn Vegetation Project. Please accept this objection from me on behalf of the Alliance for the Wild Rockies, Native Ecosystems Council, and Yellowstone to Uintas Connection, collectively (Alliance).

6. Suggested Remedies that would Resolve the Objection:

We recommend that the "No Action Alternative" be selected. We have also made specific recommendations after each problem.

7. Supporting Reasons for the Reviewing Office to Consider:

This landscape has very high wildlife values, including for the threatened grizzly bear, lynx, wolverine, whitebark pine, big game species, sage grouse, sagebrush and wildlife

dependent upon unlogged forests. The project area will be concentrated within some of the best wildlife habitat in this landscape which is an important travel corridor for wildlife such as lynx, grizzly bears, and wolverine. The agency will also be exacerbating an ongoing problem of displacing elk to adjacent private lands in the hunting season due to a lack of security on public lands. The public interest is not being served by this project.

Suggested Remedies to Resolve the Objection:

We recommend that the “No Action Alternative” be selected. We have also made specific recommendations after each problem.

Thank you for the opportunity to object.

NOTICE IS HEREBY GIVEN that, pursuant to 36 CFR Part 218, Alliance objects to the Draft Decision Notice (DDN) and Finding of No Significant Impact (FONSI) with the legal notice published on June 24, 2022, including the Responsible Official's adoption of proposed or selected Alternative.

AWR is objecting to this project on the grounds that implementation of the Selected Alternative is not in accordance with the laws governing management of the national forests such as the FLPMA, ESA, NEPA, NFMA, Clean Water Act, the Beaverhead-Deerlodge National Forest (BDNF) Forest Plan and the APA, including the implementing regulations of these and other laws, and will result in additional degradation in already degraded watersheds and mountain slopes, further upsetting the wildlife habitat, ecosystem and human communities. Our objections are detailed below.

If the project is approved as proposed, individuals and members of the above-mentioned groups would be directly

and significantly affected by the logging and associated activities. Objectors are conservation organizations working to ensure protection of biological diversity and ecosystem integrity in the Wild Rockies bioregion (including the BDNF). The individuals and members use the project area for recreation and other forest related activities. The selected alternative would also further degrade the water quality, wildlife and fish habitat. These activities, if implemented, would adversely impact and irreparably harm the natural qualities of the Project Area, the surrounding area, and would further degrade the watersheds and wildlife habitat.

Statements that Demonstrates Connection between Prior Specific Written Comments on the Particular Proposed Project and the Content of the Objection.

Roadless Rule

We wrote in our comments:

Please utilize the NEPA process to clarify any roadless boundary issues. It is not adequate to merely accept previous, often arbitrary roadless inventories—unroaded areas

adjacent to inventoried areas were often left out. Additionally, there is a lot of public support for adding unroaded areas as small as 1,000 acres in size to the roadless inventory. Please examine if these unroaded areas adjacent to roadless areas have wilderness qualities.

Page 10 of the EA states: "No commercial timber harvest, road construction or reconstruction is proposed within the boundaries of the Sheep Mountain Inventoried Roadless Area. Vegetation objectives are met through prescribed burning and hand slashing or non-commercial thinning. Prescribed burning treatments are proposed in lowland sagebrush habitats. Hand slashing and non-commercial thinning is proposed in sagebrush grasslands and aspen stands to reduce conifer encroachment."

This is a violation of the roadless rule.

The Roadless Rule states in part:
Prohibition on timber cutting, sale, or removal in inventoried roadless areas.
(a) Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section.
(b) Notwithstanding the prohibition in paragraph (a) of this section, timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The

cutting, sale, or removal of timber in these areas is expected to be infrequent.

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

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

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

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

(3) The cutting, sale, or removal of timber is needed and appropriate for personal or administrative use, as provided for in 36 CFR part 223; or

(4) Roadless characteristics have been substantially altered in a portion of an inventoried roadless area due to the construction of a classified road and subsequent timber harvest. Both the road construction and subsequent timber harvest must have occurred after the area was designated an inventoried roadless area and prior to January 12, 2001. Timber may be cut, sold, or removed only in the

substantially altered portion of the inventoried roadless area.

36 C.F.R. § 294.13 (2005).
219. The Roadless Rule further explains subsection (b)(2) as follows: "Paragraph

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

to classified road for public health and safety reasons; fire line construction for wildland fire suppression or control of prescribed fire; survey and maintenance of property boundaries; other authorized activities such as ski runs and utility corridors; or for road construction and reconstruction where allowed by this rule." 66 Fed. Reg. 3258 (Jan. 12, 2001)

For over 15 years, the Roadless Rule was the subject of litigation. See e.g. Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094, 1126 (9th Cir. 2002); California ex rel. Lockyer v. U.S. Dep't of Agric., 575 F.3d 999, 1007 (9th Cir. 2009); Wyoming v. U.S. Dep't of Agric., 661 F.3d 1209, 1272 (10th Cir. 2011); Organized Vill. of Kake v. U.S. Dep't of Agric., 795 F.3d 956, 962 (9th Cir. 2015) (en banc); Alaska v. United States Dep't of Agric., 273 F. Supp. 3d 102, 108–12 (D.D.C. 2017). Nonetheless, the Roadless Rule is still in effect.

Why is the project violating the roadless rule?

The Forest Service responded:

The project has been designed in compliance with the roadless rule exceptions to tree cutting (hand slashing and non-commercial thinning) in IRAs and is incidental to the main treatment in IRA of prescribed fire. Fuels reduction is not part of the purpose and need of the project; please see the purpose and need and effects analysis in the vegetation section of the EA. Please also see the roadless analysis in the EA and roadless report for disclosure of effects to roadless or wilderness characteristics expected to occur from the project.

It is incorrect to say that fuels reduction is not part of the purpose and need because it is the central part. The scoping notice states:

Purpose and Need

The purpose of the proposed project is to promote resiliency and ecological function by helping to restore and maintain the structure, function, composition and connectivity of Forest terrestrial and aquatic systems. This project is part of an ongoing series of projects across the Beaverhead-Deerlodge National Forest to meet Forest Plan Goals and Objectives for "Biodiversity" and "Unique Habitats", and objectives for "Forested Vegetation" and "Grassland/Shrubland/Riparian" areas.

The Gravelly Landscape Collaborative identified the need for treatment through preliminary analysis with the Beaverhead-Deerlodge National Forest. This analysis has revealed conditions that are not in keeping with the known historic ecological range of variability in these habitat types. Historically, a mosaic of timber stands of different sizes and age classes existed at the landscape level. Insects and fire effects are typically concentrated on certain sizes and ages of vegetation, so only a portion of these stands were vulnerable to insects or fire at any given time (Gibson, 2010; Amman & Logan, 1998; Brown, 1975).

The Gravelly landscape consists of open sagebrush parks, aspen clones, pure Douglas-fir stands, mixed conifer stands, and lodgepole pine-dominated stands. Over approximately the past 100 years, coniferous trees have encroached on sagebrush meadows and aspen clones, and have increased in density in the forested stands beyond historical amounts.

Existing Conditions in the Project Area

Observations of conditions in the project area indicate there is a need to reduce encroaching conifers in grassland-shrubland communities and riparian areas to improve vegetation composition, structure and habitat function. Dense, uniform stands of Douglas-fir have developed over the last century, and have contributed to a decline in the area's park-like sagebrush grasslands and interspersed aspen and willow woodlands.

The Greenhorn conifer forests are experiencing increased mortality due to infestations of bark beetles, as well as blister rust in stands of whitebark pine. Mature, even-aged stands of lodgepole pine are seeing increased mortality due to pine beetle infestations, driven in part by changing climatic conditions. Changes to the variety of habitats impact birds (including sage grouse), bighorn sheep, moose, mule deer, elk, and other wildlife. Riparian and aspen communities have declined, limiting habitat for neotropical songbirds and small mammals.

Vegetation Conditions

The Gravelly landscape consists of open sagebrush parks, aspen clones, pure Douglas-fir stands, mixed conifer stands, and lodgepole pine-dominated stands. Over approximately the past 100 years, coniferous trees have encroached on sagebrush meadows and aspen clones, and have increased in density in the forested stands beyond historical amounts.

Sagebrush Meadows

Mountain meadows are patches of remarkable biological diversity, including forb, grass, and shrub-dominated communities. These communities support diverse populations of birds, and provide habitat for small mammals and other wildlife (Thompson, 2007). Fire suppression in the Gravelly Landscape has allowed encroachment of conifers into sagebrush parks in densities and sizes beyond what was historically present (Figures 3 and 4).

Recent encroachment by conifers has reduced the extent and ecological integrity of meadows, with consequences for their biodiversity, scenic values, and recreational use (Halpern et al., 2010; Thompson, 2007). The causes of encroachment include changes in disturbance regimes such as fire suppression, past grazing practices, and changes in climate.

Aspen

Aspen ecosystems are biologically diverse, and provide important habitats for a variety of wildlife species. Aspen stands provide forage, cover, shade, and nesting habitat for birds, small mammals, big game, and forest carnivores (Debyle and Winokur, 1985). Young aspen is nutritious forage and can contribute a substantial portion to ungulate diets (Cobb and Vavra, 2003). Conserving aspen benefits many plants and animals.

Over time, aspen stands become encroached upon by conifers in the absence of fire. As mature aspen stands linger, they lose vigor, which makes them susceptible to diseases and insects. In the Gravelly Range, aspen have declined approximately 47% from 1947 to 1992 (Wirth et al., 1996) due to lack of disturbance and resulting conifer encroachment.

Forested Stands

Resilient forests are those that not only accommodate gradual changes related to climate, but tend to return toward a prior condition after disturbance either naturally or with management assistance (Millar et. al, 2007).

The USFS Region 1 Forest Health Protection entomologist and plant pathologist recently conducted a forest health analysis of Douglas-fir stands in the area, and found that current stand conditions pose a high risk for epidemic infestation levels of Douglas-fir beetle. Under endemic conditions, Douglas-fir beetles inhabit individual, small groups, or dying Douglas-fir trees (Furniss and Kegley, 2014); however, in uniform, even- aged host-species stands like these (Figure 5), conditions become favorable for epidemic levels of infestation as the trees age. These pure Douglas-fir stands, comprised of a single tree species, are less resilient to insects than a mixed-species stand containing non-host species. Reduction in the basal area of these uniform Douglas-fir stands through thinning would enhance resiliency to Douglas-fir beetle infestations (Furniss and Kegley, 2014). If not treated, these stands of pure Douglas-fir will be increasingly at risk as the trees age and become less vigorous.

As previously mentioned, mixed-conifer stands in the proposed project area contain higher basal areas and densities than were historically present, due to absence of disturbances including fire (Figure 6).

Lodgepole pine stands in the project area are made up of ageing lodgepole pine of mostly uniform ages (Figure 7).

These are proposed actions. The Forest may adjust these activities in response to findings in ongoing fieldwork, continued effects analysis, and comments received in response to this scoping.

Page 1 and 2 of the EA states:

The purpose of the Greenhorn Vegetation project is to promote resiliency and ecological function by helping to restore and maintain the structure, function, composition, and connectivity of Forest terrestrial systems. This project is designed to help meet the Forest Plan goals and objectives described in the Land Management section below. Analysis of existing conditions in the project area reveal conditions that are not within the known historic ecological range of variability (see the Environmental Consequences section of this document). There is a need to reduce encroaching conifers in sagebrush grasslands, grassland-shrubland communities, aspen and willow woodlands, and riparian areas to improve vegetation composition, structure, and habitat function.

The Forest Service wrote in the EA on page 37 which is directly contradictory:

Vegetation condition class (VCC; formally known as fire regime condition class) is accepted by Federal, state, and local agencies as the best available science regarding current vegetation condition relative to a historic range of variability, especially on a landscape scale. It is one of many products produced in LandFire, which is a program that was created jointly between the Department of Agriculture and Department of Interior after the 2000 fire season and is sponsored by the Wildland Fire Leadership

Council. Other types of information can be found in LandFire such as reference databases, land change disturbance and transitions, vegetation cover type and succession class, biophysical settings, site potential, and fire regimes.

The first sentence of the above paragraph states that the Forest Service calculates a departure rating. The second sentence then says that the departure calculation isn't conducive to displaying the departure. The Forest Service is using vegetation departure to show the change from reference condition but it doesn't show this. VCC, formerly, FRCC, determines if an area is departed from historical conditions.

Dr. John Craighead believed the Pfister vegetation classification was the basis for the study of ecosystems. It takes people on the ground with good plots that aren't manipulated or added to. The Craighead team had hundreds of plots throughout central Idaho they used to ground truth the satellite images. If you want good data there are no shortcuts. The Forest Service should no evidence that they used plots on the ground to ground truth the data.

Please do not dismiss the importance of the following information relating to Pfister, et al. (1977) cited in the EA. See: EA, at page 15.

Quote from Pfister et al. (1977):
RESEARCH SUMMARY

A land-classification system based upon potential natural vegetation is presented for the forests of Montana. It is based on an intensive 4-year study and reconnaissance sampling of about 1,500 stands. A hierarchical classification of forest sites was developed using the habitat type concept. A total of 9 climax series, 64 habitat types, and 37 additional phases of habitat types are defined. A diagnostic key is provided for field identification of the types based on indicator species used in development of the classification. In addition to site classification, descriptions of mature forest communities are provided with tables to portray the ecological distribution of all species. Potential productivity for timber, climatic characteristics, and surface soil characteristics are also described for each type. Preliminary implications for natural resource management are provided, based on field observations and current information.

FOREST HABITAT TYPES OF MONTANA, Robert D. Pfister, Bernard L. Kovalchik,
Stephen F. Amo, and Richard C. Presby
INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION
Forest Service-U. S. Department of Agriculture
Ogden, Utah 84401 (hereafter, Pfister, et al. (1977), or Pfister)

Pfister et al. (1977) established a new, and vastly improved, forest classification system which further developed the application of habitat type classification to forest ecosystem classification. A better classification system for forest communities and the characteristics of the specific site locations upon which forest vegetation develop and depend.

The habitat type approach to classification of forest sites was developed more than 20 years ago by Daubenmire (1952) for forests of northern Idaho and eastern Washington. His original classification, and a subsequent revision and J. Daubenmire 1961, have proven useful in forest management and research

(Laysex 1974; Pfister 1976). Id. p.1
In 2022, Pfister et al. is considered the "best available science" in this field (old growth and old-growth habitat) of study. It is often, to this day, spoken fondly of as "The Bible" for habitat-type classification, a detailed expression of the overall environment, ie. an ecological classification. There is, quite simply, no better system in existence being used for interpreting the ecological potential of the forested landscapes of Montana and the Northern Rockies. Federal land managers attempting to make intelligent prescriptions for managing/manipulating forest vegetation should, and must use Pfister's habitat type classifications as the foundation of forest ecosystem analysis.

Pfister is foundational; it is the ground upon which forest ecology and ecosystem science rests. There is no substitute, and any and all attempts to truncate, or compartmentalize elements within Phister's holistic, habitat-type classification system, represents a most objectionable form of "scientism" that reeks of a hidden agenda that
has little to do with interpreting the forest's ecological potential.

ESA - As a foundational ecosystem analysis and interpretation tool, Pfister et al. is linked directly to specific language, unambiguously articulated by Congress, to describe the Purposes of ESA (Endangered Species Act).

(b) PURPOSES
The purposes of this chapter are to provide a means whereby the ecosystems upon which endangered species and the threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section. Page one, 16 USC, Chapter 35, §1531(b)

We urge the Forest Service to simply comply with the clear intent of Congress, and its own (government funded) research to properly identify the habitat type in the project area using Pfister, et al. and arrive at an intelligent decision based on the best available science, and the intent and purposes of the federal laws which govern these types of

project-level management actions. Emphasis added.
….end of project/EA analysis which references Pfister, and then proceeds to depart into
a lengthy narrative, not about habitat type, but some typing using inadequate date, insufficient field examination and data and computer modelling that fails to follow
Pfister's habitat typing methodology.

Roadless rule says: "... maintain or restore the characteristics of ecosystem composition and structure..."

May I suggest that HABITAT TYPE, NOT "***...Vegetation condition class (VCC; formally known as fire regime condition class)...***" is the foundation and best available science to determine characteristics of ecosystem composition and structure. (Pfister, et al. (1977). All this "vegetative" mumbo-jumbo is used to avoid Pfister and proper, foundational identification of the habitat type. The Forest Service is looking at the Greenhorn project as "tree farmers" not scientists studying natural forest succession/evolution.

The Forest Service continues in the EA:

Reference vegetation conditions were determined through an expert-based development process and the different vegetation types were split into biophysical settings. These biophysical setting models are used to estimate reference and historical conditions, and act as a baseline for comparison with current conditions. From this comparison, the model determines vegetation departure and vegetation

condition class ratings. The Continental United States are broken into 66 different zones. Map zone 21 covers the Greater Yellowstone Ecosystem and the Greenhorn Vegetation project. The majority of areas proposed for prescribed fire are covered by three biophysical settings: 1) Inter-mountain Basins Montane Sagebrush Steppe, 2) Middle Rocky Mountain Montane Douglas-fir Forest and Woodland, and 3) Rocky Mountain Aspen and Forest Woodland.

The vegetation departure rating (Table 19) is a measure of current vegetation departure from the reference vegetation condition. The rating is measured with a metric from 0-100; with zero indicating vegetation that is completely unaltered from reference condition, and 100 referring to a completely altered state. Vegetation departure is not conducive to displays demonstrating the level of departure from reference or historical vegetation conditions, especially on a landscape scale. As a result, vegetation condition class is used when analyzing and displaying vegetation departure from reference conditions over time across the landscape.

This vegetation type falls into Fire Regime IV, and has stand-replacing, high-severity fires every 35-200 years. Most shrub-type communities fall into this regime. As (Sanders and Durham 1985) describe, "it is relatively unimportant how fast the fire moves, how hot the fire is, or what the intensity is...if a fire front passes through an area, the sagebrush would be killed." The mosaic or patchiness found historically in sagebrush was a result of

the self-perpetuating effects of free ranging fires. Burned areas would have different fuel loads and vegetation present than unburned areas. When these varying conditions are coupled with changes in weather and site conditions for future fires, the mosaic or patchy effect is created. (Baker et al. 2007) described how low sagebrush cover, insufficient fine fuels, high fuel moisture and variable winds contribute to this patchiness effect.

The following paragraph that they are relying on random pictures taken in the 1920s and the 1960s to show that sagebrush and conifers have increased and aspen have declined. Using random pictures from random times is not based on science and is arbitrary and capricious. Therefore the project is in violation of the roadless rule, NEPA, NFMA and the roadless.

Page 44 of the EA states

Historical Photos

The range program on the Madison Ranger District has a collection of historical photos of the area, including some photo points from within the project area. Some of these photos were taken in the 1920s, and some in the 1960s. All of these show three similar vegetation changes and trends: an increase in sagebrush, an increase in conifer encroachment (primarily Douglas-fir, and juniper as well), and the loss of aspen stands. (Gruell 1983) references one point within the project area (Romy Lake in Timber Creek) and three points in close proximity. These show a similar trend of increased sagebrush, increased

abundance and expansion of conifers, and the loss or decline of aspen stands. These three factors are why the majority of those vegetation types are classified as moderately or highly departed (condition class II.A). See Figure 15, Figure 16 and Figure 17 for examples from the District's Range Program photo collection. See the Range and Noxious Weeds report for more information.

Historical photos are also a weak method. Consider the state of cameras and film a hundred years ago. They were not good in reduced light conditions. So most historic FS photos are from park-like forests and meadows. And even then, if you look into the background you will see the pesky douglas fir, compared in Carl Fiedler and Stephen Arno's book "Ponderosa" to a "terrorist insurgency." Pretending trees like sagebrush and douglas fir are alien invaders is science fiction.

Aspen have been declining because of cattle grazing according Beschta et al. 2014, please find attached. Sagebrush and conifers expand and contract their range in response to stand replacing fires. I don't see any evidence that the fire regime is outside the normal range of variability.

Pinon, juniper, and sagebrush have long fire rotations - fire is infrequent but can burn at high intensity when it does occur. Based on what you the Forest Service presented, the landscape being examined has not been shown to be outside the range of natural variability. Therefore the roadless areas should not be logged and burned.

1. Baker and Shinneman. 2004. (Please find attached). Fire rotation for high- severity fire in juniper is estimated at 400-480 years. They conclude: ***Natural re-establishment of trees after fire can be quite slow in these woodlands, requiring decades, so that post-fire stands may superficially appear to represent tree invasion. However, post-fire stands can often be identified by the presence of some standing or down charred wood from the fire. Burned woodlands with slowly re-establishing trees do not warrant treat ment if the goal is restoration. Invading post-settle ment stands and post-settlement trees inside old stands require further research to determine whether restora tion is needed, and, if so, what needs to be done. Invasion may be natural (e.g., climatic fluctuations) or human-caused (fire suppression, livestock grazing, increased carbon dioxide). Unless the specific natural or human causes can be distinguished for a site, restoration is likely to be ineffective or possibly mis-directed. The first step in effective restoration is to identify and then modify the cause of degradation (Hobbs and Norton, 1996). If our land uses are found to be responsible for tree invasions or density increases,***

and if restoration is to have lasting value, it is essential to change the land uses that led to the need for restoration.

2. Floyd and others. 2004. Stand replacing fires in juniper 400 years or longer.

3. Bauer and Weisberg. 2009. The fire cycle in pinyon- juniper was estimated at 427 years.

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

Both sagebrush, juniper and Douglas fir all tend to have long fire rotations. Mountain big sage which dominates the area has a natural fire regime of burning 100-250 years. Juniper is much longer like 400-600 years. So the "evidence that sagebrush and juniper are "denser" now is meaningless. With hundreds of years between "stand replacement" blazes, it is only natural to have gradual increase in density.

Aspen tends to regenerate with stand replacement blazes. Again if sagebrush, jumper, etc. are increasing, it means there haven't been any significant blazes. When, and if there is, you would have much aspen regeneration.

The main fire study that the EA uses use: History of fire and Douglas-fir establishment in a savanna and sagebrush–grassland mosaic, southwestern Montana, USA Emily K. Heyerdahl a, *, Richard F. Miller b,1 , Russell A. Parsons a has serious methodological issues. Heyerdahl set up plots and looked for fire scars. When she didn't find enough in her plots, she used a bunch of fire-scarred trees outside of her plots which makes the survey not random. This, of course, increases the number of scarred trees, and thus reduces the fire interval. So she concluded that fire burned through the area much more frequently than other studies conclude about sagebrush ecosystems.

Then the FS using the more frequent fire burn regime, they argue that fire suppression has permitted tree densities to increase unnaturally.

George Wuerthner wrote the attached article titled, “Fire Scar Historical Reconstructions: Accurate or Flawed” which goes into this criticism in more detail.

We wrote in our comments:
Overall, the EA is devoid of any useful information to the public as to why this project enhances wildlife habitat, or is needed to maintain natural ecosystem processes within an IRA. Iff juniper is so flammable, it is not clear why it has to be slashed before it can be burned. It is clear that this project requires much more information to be provided to the public, and much more documentation to justify vegetation management within the IRA. And as previously

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

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-suc- cessional burned patches and decreasing landscape heterogeneity that confers resilience to climatic change."

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

The purpose of this project is to improve big game and grouse habitat and to make the forest more resilient and plan for a more historic fire regime. Based on Dr. Baker's paper, the proposed action will not meet the purpose and need of the project.

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

Please explain include a discussion of the following:

1. Baker and Shinneman. 2004. Fire rotation for high-severity fire in juniper is estimated at 400-480 years.

2. Floyd and others. 2004. Stand replacing fires in juniper 400 years or longer.

3. Bauer and Weisberg. 2009. The fire cycle in pinyon-juniper was estimated at 427 years.

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

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

Please find Schoennagel et al (2004) attached. Schoe-

nagel states: "we are concerned that the model of his-

torical fire effects and 20th-century fire suppression in dry ponderosa pine forests is being applied uncritically across all Rocky Mountain forests, including where it is inappropriate.

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

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

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

Schoennagel et al (2004) states: “No evidence suggests that spruce–fir or lodgepole pine forests have experienced sub- stantial shifts in stand structure over recent decades as a re- sult of fire suppression. Overall, variation in climate rather than in fuels appears to exert the

largest influence on the size, timing, and severity of fires in subalpine forests []. We conclude that large, infrequent stand replacing fires are ‘business as usual’ in this forest type, not an artifact of fire suppression.”.

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

Schoennagel et al (2004) states: "The Yellowstone fires in 1988 revealed that variation in fuel conditions, as measured by stand age and density, had only minimal influence on fire behavior. Therefore, we expect fuel-reduction treatments in high-elevation forests to be generally unsuccessful in reducing fire frequency, severity, and size, given the overriding importance of extreme climate in controlling fire regimes in this zone. Thinning also will not restore subalpine forests, because they were dense historically and have not

changed significantly in re- sponse to fire suppression. Thus, fuel- reduction efforts in most Rocky Mountain sub- alpine forests probably would not effectively mitigate the fire hazard, and these efforts may create new ecological problems by moving the forest structure outside the historic range of variability."

Likewise, Brown et al (2004) states: "At higher elevations, forests of subalpine fir, Engelmann spruce, mountain hem- lock, and lodgepole or whitebark pine predominate. These forests also have long fire return intervals and contain a high proportion of fire sensitive trees. At periods averaging a few hundred years, extreme drought conditions would prime the- se forests for large, severe fires that would tend to set the forest back to an early successional stage, with a large carryover of dead trees as a legacy of snags and logs in the regenerating forest . . . . natural ecological dynamics

are largely preserved be- cause fire suppression has been effective for less than one natural fire cycle. Thinning for restoration does not appear to be appropriate in these forests. Efforts to manipulate stand structures to reduce fire hazard will not only be of limited effectiveness but may also move systems away from pre-1850 conditions to the detriment of wildlife and water- sheds." "Fuel levels may suggest a high fire 'hazard' under conventional assessments, but wildfire risk is typically low in these settings."

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

high- intensity, stand-replacing fires. Dry forests historically had short intervals between fi- res, but most important, the fires had low to moderate severity."

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

to allow higher wind speeds that tend to dry fuels compared to dense stands. These factors may in- crease probability of ignition in some open canopy stands compared to dense canopy stands."

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

The abstract of the paper states:

Fire suppression policies and "active management" in response to wildfires are being carried out by land managers globally, including millions of hectares of mixed conifer and dry ponderosa pine (Pinus ponderosa) forests of the western USA that periodically burn in mixed severity fires. Federal managers pour billions of dollars into command-and-control fire suppression and the MegaFire (landscape scale) Active Management Approach (MFAMA) in an attempt to contain wildfires increasingly influenced by top down climate forcings. Wildfire suppression activities aimed at stopping or slowing fires include expansive dozerlines, chemical retardants and ig-

niters, backburns, and cutting trees (live and dead), including within roadless and wilderness areas. MFAMA involves logging of large, fire-resistant live trees and snags; mastication of beneficial shrubs; degradation of wildlife habitat, including endangered species habitat; aquatic impacts from an expansive road system; and logging-related carbon emissions. Such impacts are routinely dismissed with minimal environmental review and defiance of the precautionary principle in environmental planning. Placing restrictive bounds on these activities, deemed increasingly ineffective in a change climate, is urgently needed to overcome their contributions to the global biodiversity and climate crises. We urge land managers and decision makers to address the root cause of recent fire increases by reducing greenhouse gas emissions across all sectors, reforming industrial forestry and fire suppression practices, protecting carbon stores in large trees and recently burned forests, working with wildfire for ecosystem benefits using minimum suppression tactics when fire is not threatening towns, and surgical application of thinning and prescribed fire nearest homes.

The Bitterroot Front website states: ***This project aims to increase forest resiliency by addressing insect and disease risks, reducing risk of high severity wildfire, maintaining/improving wildlife habitat and watershed conditions, as well as maintaining/improving recreation and roads.***

This conclusion of this paper is that the purpose and need of the project will not be met by your proposed management activities. This paper is now the best available sci-

ence. Why does the Greenhorn proposal not follow the best available science?

It is well established that logging in an uninventoried and inventoried roadless areas is an irreversible and irretrievable" commitment of resources that "could have serious environmental consequences" Smith v. U.S. Forest Service, 33 F.3d 1072, 1078 (9th Cir. 1994). Please address the effects of logging and roading the uninventoried roadless areas on their characteristics vis-à-vis potential for future wilderness or inventoried roadless area designation. The discussion of the impacts on unroaded areas was superficial. There was no analysis of the project's impact on the unique values of unroaded areas together with their adjacent inventoried roadless areas. The EIS should satisfy the "hard look" requirement with respect to the environmental impact of logging and roading uninventoried roadless areas."

The Greenhorn Project is in violation NEPA, NFMA, the APA, and the Roadless Rule.

Remedy

Choose the No Action Alternative or Withdraw the draft decision and write an EIS that fully complies with the law.

We wrote in our comments:

Whitebark Pine

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

The scoping notice says on page 5: "Opportunities exist to promote and expand the presence of whitebark pine by removing competition and creating openings for natural regeneration through thinning and regeneration treatments, both commercial and non-commercial. The use of

fire is the most effective method for stimulating natural regeneration and is proposed as a potential treatment. Planting of rust-resistant seedlings is also an option in certain areas where site conditions are appropriate."

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

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

Montana is currently experiencing a mountain pine beetle epidemic. Mountain pine beetle prefer large, older whitebark pine, which are the major cone producers. In some areas the few remaining whitebark that show the potential

for blister rust resistance are being attacked and killed by mountain pine beetles, thus accelerating the loss of key mature cone-bearing trees.

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

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

complished? What is the severity of white pine blister rust in proposed action areas?

Pp. 56-57 of the EA states: "Restoration activities that support the regeneration of whitebark pine and reduce competing species are being supported by lead researchers (Keane and Parsons 2010), and include: wildland fire use, prescribed fire, planting of rust-resistant seedlings, silvicultural and mechanical treatments, or a combination of several treatments."

P. 58 of the EA states: "Commercial and clearcut treatments: Within commercial treatment units, trampling and removal of whitebark pine seedlings and saplings could occur as equipment and machinery remove desired trees. Whitebark pine individuals three inch DBH and greater would be avoided to the extent possible (see Appendix C, Design Features)."

Please disclose the failure rate of these practices as a technique for natural regeneration of whitebark pine under these conditions.

Please disclose or address the results of the Forest Service's only long-term study on the effects of tree cutting and burning on whitebark pine. This study, named "Restoring Whitebark Pine Ecosystems," included prescribed fire, "thinning", "selection cuttings," and "fuel enhancement cuttings" on multiple different sites. The re-

sults were that "[a]s with all the other study results, there was very little whitebark pine regeneration observed on these plots." See U.S. Forest Service, General Technical Report RMRS-GTR-232 (January 2010). These results directly undermine the representations the Forest Service makes in the EA and is therefore a violation of NEPA, NFMA, and the APA.

More specifically, the Forest Service's own research at RMRS-GTR-232 finds: "the whitebark pine regeneration that was expected to result from this [seed] caching [in new openings] has not yet materialized. Nearly all sites contain very few or no whitebark pine seedlings." Thus, even ten years after cutting and burning, regeneration was "marginal."

Moreover, as the Forest Service notes on its website: "All burn treatments resulted in high mortality in both whitebark pine and subalpine fir (over

Accordingly, the only proven method of restoration of whitebark pine is planting: "Manual planting of whitebark pine seedlings is required to adequately restore these sites."

Why is the EA misleading the public that this project will benefit whitebark pine when the Forest Service's own

studies show that manual planting of whitebark pine is the only proven way to restore whitebark pine?

Please formally consult with the US FWS on the impact of the project on whitebark pine.

The Forest Service responded:

During project development, the interdisciplinary team examined several alternatives considered and eliminated from detailed analysis to meet the purpose and need of the project (EA pages 8-9). Design measures to avoid white-bark pine will be taken during implementation of project activities. If whitebark pine is found in any harvest unit during implementation, it will be protected to the extent possible (see Sensitive Plants, Environmental Effects). Changing grazing management is not within the scope of this project.

This is a violation of NEPA, NFMA, the APA and the ESA. The project will harm habitat for fish and wildlife and is therefore not meeting the purpose and need of the Beaver-head-Deerlodge Forest Plan.

Remedy: Choose the No Action alternative or pull the draft decision and write an EIS that follow all laws and require-ments in the Forest Plan. Since Whitebark pine are now

proposed to be listed under the ESA, you must formally re-consult with the FWS on the impact of the project on whitebark pine. To do this the Forest Service will need to have a complete and recent survey of the entire project area for whitebark pine and consider planting whitebark pine as the best available science by Keene et al. states is the only way to get new whitebark pine to grow. The Forest Service response is incorrect that the project area does not contain high elevation stands. Appendix A, Maps - Whitebark pine clearly show that there are whitebark pine stands in the project area.

On December 2, 2020, the U.S. Fish and Wildlife Service issued a rule proposing to list whitebark pine (Pinus albicaulis) under the Endangered Species Act.

The Project area includes whitebark pine.

The whitebark pine present in the Pintler Face Project area represents a major source within the larger geographic area.

Hundreds of acres of clearcutting and burning around individual whitebark pine trees are proposed for the Project, including clearings around individual whitebark pines.
The Forest Service fails to disclose the incredibly high failure rate of these practices as a technique for natural regeneration of whitebark pine under these conditions. The Forest Service states they are not protecting whitebark pine trees under 3” dbh.

The Forest Service does not disclose or address the results of its only long- term study on the effects of tree cutting and burning on whitebark pine. This study, named "Restoring Whitebark Pine Ecosystems," included prescribed fire, “thinning”, “selection cuttings,” and “fuel enhancement cuttings” on multiple different sites. The results were that “[a]s with all the other study results, there was very little whitebark pine regeneration observed on these plots.” See U.S. Forest Service, General Technical Report RMRS-GTR-232 (January 2010). These results directly undermine the representations the Forest Service makes in the Project EIS. More specifically, the Forest Service’s own research at

RMRS-GTR-232 finds: “the whitebark pine regeneration that was expected to result from this [seed] caching [in new openings] has not yet materialized. Nearly all sites contain very few or no whitebark pine seedlings.” Thus, even ten years after cutting and burning, regeneration was “marginal.”

Moreover, as the Forest Service notes on its website: “All burn treatments resulted in high mortality in both whitebark pine and subalpine fir (over 40%).” Accordingly, the only proven method of restoration of whitebark pine is planting: “Manual planting of whitebark pine seedlings is required to adequately restore these sites.”

The Greenhorn DDN, FONSI and EA are in violation of NEPA, NFMA, the APA and the ESA. The project will harm habitat for fish and wildlife and is therefore not meeting the purpose and need of the Beaverhead-Deerlodge National Forest Forest Plan. Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning, would experience mortality from project activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the pres-

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

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

Montana is currently experiencing a mountain pine beetle epidemic. Mountain pine beetle prefer large, older whitebark pine, which are the major cone producers. In some areas the few remaining whitebark that show the potential for blister rust re- sistance are being attacked and killed by mountain pine beetles, thus accelerating the loss of key mature cone-bearing trees.

Are whitebark pine seedlings and saplings present in the subalpine forests pro- posed for burning and logging? In the absence of fire, this naturally occurring whitebark pine regeneration would continue to function as an important part of the subalpine ecosystem. Since 2005, rust resistant seed sources have been identified in the Northern Rockies (Mahalovich et al 2006). Due to the severity of blister rust

infection within the region, natural whitebark pine regeneration in the project area is prospective rust resistant stock.

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

Remedy: Choose the No Action alternative or pull the draft decision and write an EIS that follow all laws and requirements in the Forest Plan. Since Whitebark pine are now proposed to be listed under the ESA, you must formally re-consult with the FWS on the impact of the project on whitebark pine. To do this the Forest Service will need to have a complete and recent survey of the entire project area for whitebark pine and consider planting whitebark pine as the best available science by Keene et al. states is the only way to get new whitebark pine to grow. The Forest Service response is incorrect that the project area does not contain high elevation stands. Appendix A, Maps - Whitebark pine

clearly show that there are whitebark pine stands in the project area.

The whitebark pine present in the Greenhorn Project area represents a major source within the larger geographic area. Hundreds of acres of clearcutting and burning around individual whitebark pine trees are proposed for the Project, including clearings around individual whitebark pines.
The Forest Service fails to disclose the incredibly high failure rate of these practices as a technique for natural regeneration of whitebark pine under these conditions. The Forest Service states they are not protecting whitebark pine trees under 3” dbh.

The Forest Service fails to provide any discussion of the high failure rate of planting seedlings in clearcuts.
The Forest Service does not disclose or address the results of its only long- term study on the effects of tree cutting and burning on whitebark pine. This study, named "Restoring Whitebark Pine Ecosystems," included prescribed fire, “thinning”, “selection cuttings,” and “fuel enhancement

cuttings" on multiple different sites. The results were that "[a]s with all the other study results, there was very little whitebark pine regeneration observed on these plots." See U.S. Forest Service, General Technical Report RMRS-GTR-232 (January 2010). These results directly undermine the representations the Forest Service makes in the Project EIS. More specifically, the Forest Service's own research at RMRS-GTR-232 finds: "the whitebark pine regeneration that was expected to result from this [seed] caching [in new openings] has not yet materialized. Nearly all sites contain very few or no whitebark pine seedlings." Thus, even ten years after cutting and burning, regeneration was "marginal."

Moreover, as the Forest Service notes on its website: "All burn treatments resulted in high mortality in both whitebark pine and subalpine fir (over 40%)." Accordingly, the only proven method of restoration of whitebark pine is planting: "Manual planting of whitebark pine seedlings is required to adequately restore these sites."

We wrote in our comments:

WUI

The current fuel/fire hazard situation on land of all ownerships within the WUI (at least the WUI that's relevant to this area) must be displayed on a map. More importantly, the fuel/fire hazard situation post-project on land of all ownerships within the WUI must also be displayed on a map. Based on this mapping of current and projected conditions, please accurately disclose the threats to private structures and people under those scenarios, for all alternatives. It must be discernible why some areas are included for treatment and others are not.

Page 1 of the EA states: "Approximately 70 percent of the project area lies within the wildland urban interface (WUI), as identified by the Madison County community wildfire protection plan (CWPP). The Forest Service manages public lands on the Beaverhead-Deerlodge National Forest for multiple purposes and resources, in addition to those listed above."

Did the Forest Service take public comment on boundaries of the wildland urban interface as required by NEPA?

Does the wildland urban interface (WUI), as identified by the Madison County community wildfire protection plan (CWPP) meet the definition of the wildland urban interface under the Healthy Forest Restoration Act (HFRA)?

The HFRA defines wildland urban interface as follows: "The term 'wildland-urban interface' means– (A) an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a community wildfire protection plan . . . ." 16 U.S.C. § 6511 (16)(emphasis added). The HFRA defines "at-risk community" as follows:

The term "at-risk community" means an area-- (A) that is comprised of--

(i) an interface community as defined in the notice. . . (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.

16 U.S.C. § 6511 (1) (emphases added). In turn, the cited Federal Register notice mandates: "The development density for an interface community is usually 3 or more structures per acre, with shared municipal services. . . . An alternative definition of the interface community emphasizes a population density of 250 or more people per square mile." 66 Fed. Reg at 753, 2001 WL 7426.

Please explain how the Madison 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 analysis of 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 Madison 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 Madison 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 funding scenarios 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 home losses 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-per-hour 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 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 scientif-

ic 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 cavity-nesting 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 Pre-

serve. 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.

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--and-shouldnt--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 curbing wildfires, 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.

"The purpose of the Greenhorn Vegetation Project is to promote resiliency and ecological function by helping to restore and maintain the structure, function, composition and connectivity of Forest terrestrial systems." EA p. 1.

Since Ecological restoration 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 http://store.elsevier.com/The-Ecological-Importance-of-Mixed-Severity-Fires/Dominick-DellaSala/isbn-9780128027493/.

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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 old-growth 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 co-exist with fires burning safely in the backcountry.1,2

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.3

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 science- based forest and climate change planning.

Sincerely (affiliations are listed for identification purposes only),

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2http://www.fs.usda.gov/detail/r5/news-events/audiovisual/?cid=stelprdb5431394;

https://vimeo.com/75533376; http://vimeo.com/groups/future/videos/8627070; http://www.youtube.com/watch?v=iTl-naywNyY&list=PL7F70F134E853F520&index=15; http://www.youtube.com/watch?v=1BmTq8vGAVo&feature=youtu.be; http://vimeo.com/3428311

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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 restoration projects. Fire regime researchers need to acknowledge the limitations of fire history methodology and avoid over-reliance 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.

Since disruption of fire cycles is identified, the BDNF needs to take a hard look at its fire policies. The development of approved fire management plans in compliance with the Federal Wildland Fire Policy was the number one policy objective intended for immediate implementation in the Implementation Action Plan Report for the Federal Wildland Fire Management Policy and Program Review. In general, the FS lags far behind other federal land management agencies that have already invested considerable amounts of time, money, and resources to implement the Fire Policy. Continued mismanagement of national forest lands and FS refusal to fully implement the Fire Policy puts wildland firefighters at risk if and when they are dispatched to wildfires. This is a programmatic issue, one that the current Forest Plan does not adequately consider. Please see Ament (1997) as comments on this proposal, in terms of fire policy and Forest Planning.

Many adverse consequences to soil, ecological processes, wildlife, and other elements of the natural environment are associated with thinning. (Ercelawn, 1999; Ercelawn, 2000.) For example: "Salvage or thinning operations that remove dead or decayed trees or coarse woody debris on

the ground will reduce the availability of forest structures used by fishers and lynx." (Bull et al., 2001.)

The Forest Service responded:

The majority of these comments are based upon the belief that this is a hazardous fuels reduction project. The purpose of the Greenhorn project is to promote resiliency and ecological function by helping to restore and maintain the structure, function, composition and connectivity of Forest terrestrial systems.

The Forest Service did not respond to all of our comments.

The Greenhorn DDN, FONSI and EA did not clearly demonstrate that the project uses a legal definition of the Wildland Urban Interface (WUI) in violation of NEPA, NFMA, the Healthy Forest Act and the APA. The Greenhorn project purpose and need is based on false assumptions in violation of NEPA, NFMA and the APA.

Remedy

Choose the No Action Alternative or withdraw the draft decision and write an EIS that fully complies with the law.

We wrote in our comments:

Why is the Forest Service ignoring the Kosterman threshold for clearcutting (no more than 15% per LAU) and the

mature forest conservation requirement (conserve it all in- cluding at least 50% per LAU)?

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

Kosterman's Thesis says that clearcutting more than 10-15% of a lynx home range results in declines in reproduction. Many National Forests allows more clearcutting than this. The Lynx Amendment allows up to 30% clearcutting in a home range, which means that habitat has declined and is declining from the levels nec- essary for reproduction and therefore survival and recovery.

Kosterman's Thesis recommends conserving mature/old growth forest and main- taining 50% mature/old growth in each lynx home range. No National Forest is complying with that due to past and current logging, which means that habitat has declined and is declining from the

levels necessary for reproduction and therefore survival and recovery.

Squires says that lynx avoid clearcuts.

FWS has no idea what the population of lynx is because they don't do lynx popula- tion monitoring. In light of the government's failure to monitor lynx population trends, it would be disingenuous for FWS to argue that "there is no evidence of population decline" because the reason that "there is no evidence" is because the government refuses to conduct monitoring. In light of the government's failure to monitor and document populations and population trends, the Forest Service and the FWS must apply the precautionary principle and assume that the effects of allowing logging that does not comply with Kosterman and Squires findings is re- sulting in population declines.

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

Page 93 of the 2016 Fleecer EA states: "In July, 2013 the U.S. Fish and Wildlife Service updated the "Threatened, Endangered and Candidate Species for the Beaverhead-Deerlodge National Forest" and the Canada lynx was added to the BDNF list as "Transient; secondary/periph-

eral lynx habitat"; where it remains (USDI Fish and Wildlife Service 2016)."

The Forest straddles the mountains of the Continental Divide and contains nationally renowned trout streams, elk populations, and some of last wild refuges for many threatened, endangered, and sensitive fish and wildlife species.

In particular, the Forest and Project area provide habitat for grizzly bears, wolverines, Canada lynx, gray wolves, and westslope cutthroat trout.

Ruggiero et al (1999), the Forest Service's General Technical Report "Ecology and Conservation of Lynx in the United States," states that lynx are present in the For- est.

Ruediger et al (2000), the agencies' "Canada lynx conservation assessment and strategy," considers the Forest within the geographic extent of the strategy.

The Montana Department of Fish, Wildlife, and Parks has compiled a database of lynx occurrences and distribution throughout Montana from 1977 -1998. This information was mapped on pages 244 and 247 of Ruggiero et al (1999) and shows numerous occurrences in the Forest.

In Squires (2003), the Forest Service documents: "Discussions with local trappers and biologists indicate that lynx were present in the Pioneer Mountains prior to the late 1990's, and had been detected during winter track surveys as recently as 2000 (Forkan 2000). This fact is

substantiated by the number of trapped lynx from this area in the 1970s." Elsewhere, the report notes "[f]rom 1977 to 1994, 39 lynx oc- currences were recorded in the Pioneer Mountains, including 13 harvested individ- uals (McKelvey et al. 2000). Snow-track surveys performed as recently as 2000 indicated that lynx were present along the Scenic Byway (Forkan 2000)."

In Squires (2003), the Forest Service documented the re- sults of winter tracking surveys. The record indicates two (2) sets of lynx tracks were found in the Forest near the Project area, within the Big Hole landscape area

(which is the analysis area for wildlife security for the Project). The report con- cludes that "lynx were either ab- sent or at very low densities during our study." (emphasis added).

The U.S. Fish and Wildlife Service's final map (2003) for lynx shows that the For- est is within the range of both resident and dispersing lynx.

Berger (2009) found one set of potential lynx tracks in the Forest during winter tracking surveys, as well as one set outside the Forest boundary that was heading towards the Forest boundary.

In Devineau (2010), the State of Colorado Division of Wildlife documented loca- tions of radio-collared lynx re- leased in Colorado. The record shows

multiple lynx traveling in the Forest (approximately four (4) individuals), including at least two individual lynx traveling in the Project area. One of the individuals inhabited the Madison Range for approximately two weeks.

In litigation over lynx critical habitat in 2010, the U.S. Fish and Wildlife Service admitted that the Forest is occupied for the purpose of designating lynx critical habitat. Alliance for Wild Rockies v. Lyder, 728 F.Supp.2d 1126, 1133 (D. Mont. 2010)("Plaintiffs take exception to the Service's failure to designate the Beaver- head-Deerlodge [and certain other National Forests] as lynx critical habitat. [FN4] . . . In response, the government acknowledges the record shows such forests to be occupied . . . .")

The Forest Service's Fleecer Mountains Watershed Assessment (2009) indicates that lynx are "potentially" "likely to be present" in the Project area. It also states "f]rom 1988 to 1999 there are 72 reports of lynx being trapped or observed in the Pioneers, Big Hole Mountains and Fleecer Range."

The Project area contains agency-designated "linkage areas" for the Canada lynx: one on the north end of the Project area heading northwest to the Anaconda Mountains and Anaconda-Pintler Wilderness, and one to the southwest heading to the Pi- oneer Mountains.

The Project analysis and impacts on ESA-listed Canada lynx violate the ESA, NEPA, and NFMA.

The Federal District Court of Montana recently ordered the USFWS to reconsult on lynx critical habitat because they did not base lynx critical habitat on where lynx were at the time of listing in 2000. Lynx were in the project area at the time of listing so the Forest Service needs to consult with the FWS to see if this project could effect lynx critical habitat.

The Forest Plan analysis and impacts on ESA-listed lynx violate ESA, NFMA, and NEPA.

The Forest Service's failure to take a hard look at lynx presence and the Forest Plan's potential impacts on lynx, using the best available science, including the agency's failure to assess the Forest Plan's impacts on lynx travel/ linkage corri- dors, violates NEPA. See Pacific Rivers Council v. U.S.

Forest Service, --- F.3d ----, 2012 WL 336133 (9th Cir. 2012).

The Forest Service's failure to include binding legal standards aimed at conserving and recovering ESA-listed lynx on the Forest in the Forest Plan violates NFMA.

The FS approval and implementation of the Lynx Management Direction is arbi- trary and capricious, violates NEPA's hard look requirement and scientific integrity mandate and fails to apply the best available science necessary to conserve lynx. The Lynx Direction contains no protection or standard for conservation of winter lynx

habitat (old growth forests). This project allows the logging of thousands of

acres of old growth without any analysis of whether that forest is necessary for conservation as winter lynx habitat. Please take a hard look at this factor. By failing to include a provision to protect winter lynx habitat, the Lynx Direction fails to apply the best available science and implement the measures necessary for lynx conservation, as required by the ESA. The Lynx

Direction also arbitrarily exempts WUI lands from lynx habitat protection. If this exemption did not exists, the project could not proceed because the logging authorized by the projects violates at least one of the protection for lynx habitat.

The Lynx Amendment and its Biological Opinion/Incidental Take Statement allow unrestricted logging in the wildland urban interface, which the agencies estimate to compose approximately 6% of the lynx habitat on National Forests. The EA nor the DN explain where the WUI is in relation to the projects and the LAUs but merely state that the entire project lies within the WUI bounder. EA p. 164, foot note 11. Also, it is not clear why the project does not utilize the Lynx Amendment wildland urban interface map to define WUI, the correct definition for WUI, but instead uses the definition in the Healthy Forest Restoration Act. If the projects were to use the correct definition of WUI, the project could not proceed. The failure to

comply with logging restrictions outside the WUI violates NFMA. The failure to adequate- ly address this issue in the EA and demonstrate compliance with the Lynx Amend- ment violates NEPA.

The analysis of the impacts to lynx in the EA and the DN is extremely limited and it inappropriately uses an LAU that excessively large, allowing the impacts to be mini- mized. The current best science suggests that female lynx home range as about 10,000 acres. The project area is almost 10 times the size. The analysis in the EA is invalid.

The current science demonstrates that lynx must travel between areas of high hare densities and resist traveling through low cover areas in winter. The EA fails to identify the amount of non or low cover areas that will be created from the project. The project fails to use the best available science in regard to lynx habitat. As stat- ed in AWR's comments, the best available science is now Kosterman's masters Thesis, "Correlates of Canada Lynx Reproductive Success in Northwestern Mon- tana" This study finds that 50% of lynx habitat must be mature undisturbed forest for it to be optimal lynx habitat where lynx can have repro- ductive success and no more than 15% of lynx habitat should be young clearcuts, i.e. trees under 4 inched dbh. This contradicts the agency's assumption in the Lynx Amendment that 30% of lynx habitat can be clearcut, and that no specific amount of mature forest needs to be con- served. It is now the best available science out there that describes lynx habitat in the Northern Rockies related to

lynx viability and recovery. Kosterman's study demonstrates that the Lynx Amendment standards are not adequate for lynx viability and recovery, as assumed by the Forest Service

The current best science indicates that lynx winter foraging habitat is critical to lynx persistence (Squires et al. 2010), and that this habitat should be "abundant and well-distributed across lynx habitat." (Squires et al. 2010; Squires 2009.) Existing openings such as clearcuts not yet recovered are likely to be avoided by lynx in the winter. (Squires et al. 2010; Squires et al. 2006.)

Lynx winter habitat, provided only in older, multi-storied forests, is critical for lynx preservation. (Squires et al. 2010.) Winter is the most constraining season for lynx in terms of resource use; starvation mortality has been found to be the most com- mon during winter and early spring. (Squires et al. 2010.) Prey availability for lynx is highest in the summer. (Squires et al. 2013.)

Squires et al. (2013) noted in their research report that some lynx avoided crossing highways; in their own report, they noted that only 12 of 44 radio- tagged lynx with home ranges including 2- lane highways crossed them. Openings, whether

small in uneven-aged management, or large with clearcutting, remove lynx winter travel habitat on those

affected acres, since lynx avoid openings in the winter. (Squires et al. 2010.)

Squires et al., 2010 reported that lynx winter habitat should be "abundant and spa- tially well- distributed across the landscape. Those authors also noted that in heavi- ly managed landscapes, retention and recruitment of lynx habitat should be a prior- ity.

The Northern Rockies Lynx Management Direction is in- adequate to ensure con- servation and recovery of lynx. The amendments fail to use the best available sci- ence on necessary lynx habitat elements, including but not limited to, failing to in- clude standards that protect key winter habitat. The

Endangered Species Act requires the FS to insure that the project is not likely to result in the destruction or adverse modification of critical habitat. 16 U.S.C. §1536(a)(2). Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably re- duces the con- servation value of critical habitat for lynx. 74 Fed. Reg. 8644.

The Northern Rockies Lynx Management Direction (NRLMD) as applied in the project violates the ESA by failing to use the best available science to insure no ad- verse modification of critical habitat. The NRLMD carves out exemptions from Veg Standards S1, S2, S5, and S6. In particular, fuel treatment projects may occur in the WUI

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

Standard S2 prohibits projects that do regenerate more than 15% of lynx habitat on NFS lands within an LAU in a 10-year period. The EA and DN do not provide the number of acres with in the LAU that have been harvest- ed within the last 10-years and fails to take previous project in account in regards to Veg Standard S2.

The FS violated NEPA by applying the above-mentioned exception without analyz- ing the impacts to lynx in the individual LAUs. The Project violates the NFMA by fail- ing to insure the viability of lynx. According to the 1982 NFMA regulations, fish and wildlife must be managed to maintain viable populations of Canada lynx in the plan- ning area. 36 C.F.R. 219.19. The FS has not shown that

lynx will be well-distributed in the planning area. The FS has not addressed how the project's adverse modification of denning and foraging habitat will impact distribution. This is important because the agency readily admits that the LAUs already contain a "relatively large percentage of un- suitable habitat." The NRLMD ROD at 40 states that: The national forests subject to this new direction will provide habitat to maintain a viable population of lynx in the northern Rockies by maintaining the current distribution of occupied lynx habitat, and maintaining or enhancing the quality of that habitat."

A big problem with the Forest Plan (including the NRLMD) is that it allows with few exceptions the same level of industrial forest management activities that occurred prior to Canada lynx ESA listing.

The Northern Rockies Lynx Management Direction appeal decision requires the FS to consult with the US Fish and Wildlife Service regarding lynx and lynx criti- cal habitat. The Wildlife Report, Frost 2017, states that the effects determination for lynx is "may affect, likely to adversely affect. This means that listed resources are likely to be exposed to the action or its environmental consequences and will respond in a negative manner to the exposure.

The project does not have a take permit from the USFWS and is in violation of the ESA, NFMA, the APA and NEPA. The ESA (Section 3) defines take as "to harass,

harm, pursue, hunt, shoot, wound, trap, capture, collect or attempt to engage in any such conduct". The USFWS further defines "harm" as "significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering", and "harass" as "actions that create the likelihood of injury to listed species to such an ex- tent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering". The project will harm lynx.

Squires found that lynx avoid clearcuts for up to 50 years. A big problem with the Forest Plan and the NRLMD is that it allows with few exceptions the same level of industrial forest management activities that occurred prior to Canada lynx ESA listing. The FS approval and implementation of the NRLMD and the revised Beaverhead-DeerlodgeNational Forest Forest Plan is arbitrary and capricious, violates NEPA's hard look requirement and scientific integrity mandate and fails to apply the best available science necessary to conserve lynx. The NRLMD or the revised BDNF Forest Plan contain no protection or standard for conservation of winter lynx habitat (old growth forests).
Please disclose if the FS conducted lynx occurrence surveys of habitat in the LAUs.

Please disclose if surveys target snowshoe hare occurrence data in these stands newly considered unsuitable for lynx. Also, the EA doesn't indicate if the FS surveyed any areas (proposed for logging and/or burning or not) thought to not be lynx habitat based on mapping or stand data were surveyed to confirm unsuitable habitat conditions.

The current science demonstrates that lynx must travel between areas of high hare densities and resist traveling through low cover areas in winter. The EA fails to identify the amount of non-cover or low-cover areas that will be created from the project.

It appears the FS doesn't have a coherent strategy for recovering lynx from their Threatened status, including linking currently populated areas with each other through important linkages such as project area LAUs.

Please analyze and disclose cumulative impacts of recreational activities on lynx, such as snowmobiles. As the KNF's Galton FEIS states, "The temporal occurrence of forest uses such ... winter (skiing and snowmobiling) ... may result in a temporary displacement of lynx use of that area..."

Please quantify and disclose the cumulative effects on Canada lynx due to trapping or from use of the road and trail networks in the project area.

Please analyze and disclose how lynx habitat capacity for denning will be impaired by project activities.

The USFWS listed the Canada lynx as a threatened species under the Endangered Species Act in 2000 due to "lack of guidance for conservation of lynx and snowshoe hare habitat..." and subsequent authorization of actions that may cumulatively adversely affect the lynx. Relatively little is known about lynx in the contiguous United States. Historically, lynx inhabited states spanning from Maine to Washington, but it is unknown how many lynx remain.

Lynx are highly mobile and generally move long distances [greater than 60 mi. (100 km.)]; they disperse primarily when snowshoe hare populations decline; subadult lynx disperse even when prey is abundant, presumably to establish new home ranges; and lynx also make exploratory movements outside their home ranges. 74 Peg. Reg. at 8617. The contiguous United States is at the southern edge of the boreal forest range, resulting in limited and patchy forests that can support snowshoe hare and lynx populations.

Lynx subsist primarily on a prey base of snowshoe hare, and survival is highly dependent upon snowshoe hare habitat, forest habitat where young trees and shrubs grow densely. In North America, the distribution and range of lynx is nearly "coincident" with that of snowshoe hares, and protection of snowshoe hares and their habitat is critical in lynx conservation strategies.

Since more often than not when the FS conducts logging projects in LAUs surveys of stands for lynx habitat result in less suitable habitat than previously assumed, the FS needs to take a few steps backward and consider that its range-wide Canada lynx suitable habitat estimations were too high.

Squires et al. (2013) noted that long-term population recovery of lynx, as well as other species as the grizzly bear, require maintenance of short and long-distance connectivity. The importance of maintaining lynx linkage zones is also recognized by the FS's Lynx Conservation Assessment and Strategy (LCAS), as revised in 2013, which stresses that landscape connectivity should be maintained to allow for movement and dispersal of lynx.

Squires et al. (2013) noted in their research report that some lynx avoided crossing highways; in their own report, they noted that only 12 of 44 radio-tagged lynx with home ranges including 2- lane highways crossed them.

The current best science indicates that lynx winter foraging habitat is critical to lynx persistence (Squires et al. 2010), and that this habitat should be "abundant and well-distributed across lynx habitat." (Squires et al. 2010; Squires 2009.) Existing openings such as clearcuts not yet recovered are likely to be avoided by lynx in the winter. (Squires et al. 2010; Squires et al. 2006a.)

Lynx winter habitat, provided only in older, multi-storied forests, is critical for lynx preservation. (Squires et al. 2010.) Winter is the most constraining season for lynx in

terms of resource use; starvation mortality has been found to be the most common during winter and early spring. (Squires et al. 2010.) Prey availability for lynx is highest in the summer. (Squires et al. 2013.)

Openings, whether small in uneven-aged management, or large with clearcutting, remove lynx winter travel habitat on those affected acres, since lynx avoid openings in the winter. (Squires et al. 2010.)

Squires et al., 2010 reported that lynx winter habitat should be "abundant and spatially well- distributed across the landscape." Those authors also noted that in heavily managed landscapes, retention and recruitment of lynx habitat should be a priority.

The LCAS (Ruediger et al. 2000) recommends, until conclusive information is developed concerning lynx management, the agencies retain future options; that is, choose to err on the side of maintaining and restoring habitat for lynx and their prey. To err on the side of caution, the KNF would retain all remaining stem exclusion forests for recruitment into lynx winter habitat, so that this key habitat would more closely resemble historic conditions.

As early as 2000, the LCAS noted that lynx seem to prefer to move through continuous forest (1- 4); lynx have been observed to avoid large openings, either natural or created (1-4); opening and open forest areas wider than 650 feet may restrict lynx movement (2-3); large patches with low stem densities may be functionally similar to open-

ings, and therefore lynx movement may be disrupted (2-4). Squires et al. 2006a reported that lynx tend to avoid sparse, open forests and forest stands dominated by small-diameter trees during the winter. Squires et al. 2010 again reported that lynx avoid crossing clearcuts in the winter; they generally avoid forests composed of small diameter saplings in the winter; and forests that were thinned as a silvicultural treatment were generally avoided in the winter.

Squires et al. 2010 show that the average width of openings crossed by lynx in the winter was 383 feet, while the maximum width of crossed openings was 1240 feet.

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 and mature 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 pre-

ferred 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 reoccupancy.

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.

The Forest Plan/FEIS fail to describe the quantity and quality of habitat that is necessary to sustain the viability of the Canada lynx.

Significantly, in the 2018 order, this Court explained that consultation on the Northern Rockies Lynx Management Direction, commonly referred to as the "Lynx Amendment," was not sufficient in part because the Lynx Amendment only applies to mapped "lynx habitat" on the Forest. Id. at 1070. Thus, areas on the Forest where lynx "may be present" that are not mapped as "lynx habitat" are not covered by the Lynx Amendment consultation. Id. Accordingly, the primary purpose of the 2018 remand was for the agencies to consult on the entire Forest, including areas of the Forest that are not mapped as "lynx habitat" but where lynx nonetheless "may be present." See id.

On August 24, 2021, the agencies filed a second motion to dissolve the injunction. The agencies provide the Court with a new 2021 Biological Assessment and Biological Opinion for the Forest Plan. Doc. 93-9 (Biological Assessment); Doc. 93-1 (Biological Opinion). However, this new consultation suffers from the same flaw that the Court found with the Lynx Amendment consultation in its 2018 order – the analysis is incomplete because it addresses mapped "lynx habitat" where the Lynx Amendment applies, instead of all areas where lynx "may be present" on the Forest. For this reason, the motion to dissolve the injunction should be denied. Alternatively, or in

addition, dissolution is not equitable at this time because the agencies have unlawfully stripped legal protections for lynx from 1.1 million acres during the remand in this case. Accordingly, this Project should not move forward until the agencies comply with their legal obligations under the ESA, NEPA, and NFMA regarding this de facto Forest Plan amendment that removed lynx protections on almost one-third of the Forest.

As set forth below in more detail, this case is similar to Native Ecosystems in that the agencies engaged in a new ESA consultation on remand, but the consultation does not contain the analysis ordered by the Court in its 2018 remand order. Thus, in this case, as in Native Ecosystems, the motion to dissolve the injunction should be denied. Furthermore, during the remand for this case, the Forest Service has effectively issued a programmatic Forest Plan amendment with its decision to strip away protections for lynx from 1.1 million acres of the Forest. This removal of protections for lynx applies to the Fleecer Project. However, the agencies did not conduct any NEPA or NFMA analysis or ESA consultation for this de facto Forest Plan amendment. Thus, for this additional reason, dissolution of the injunction may be denied because the dissolution is not equitable under these circumstances.

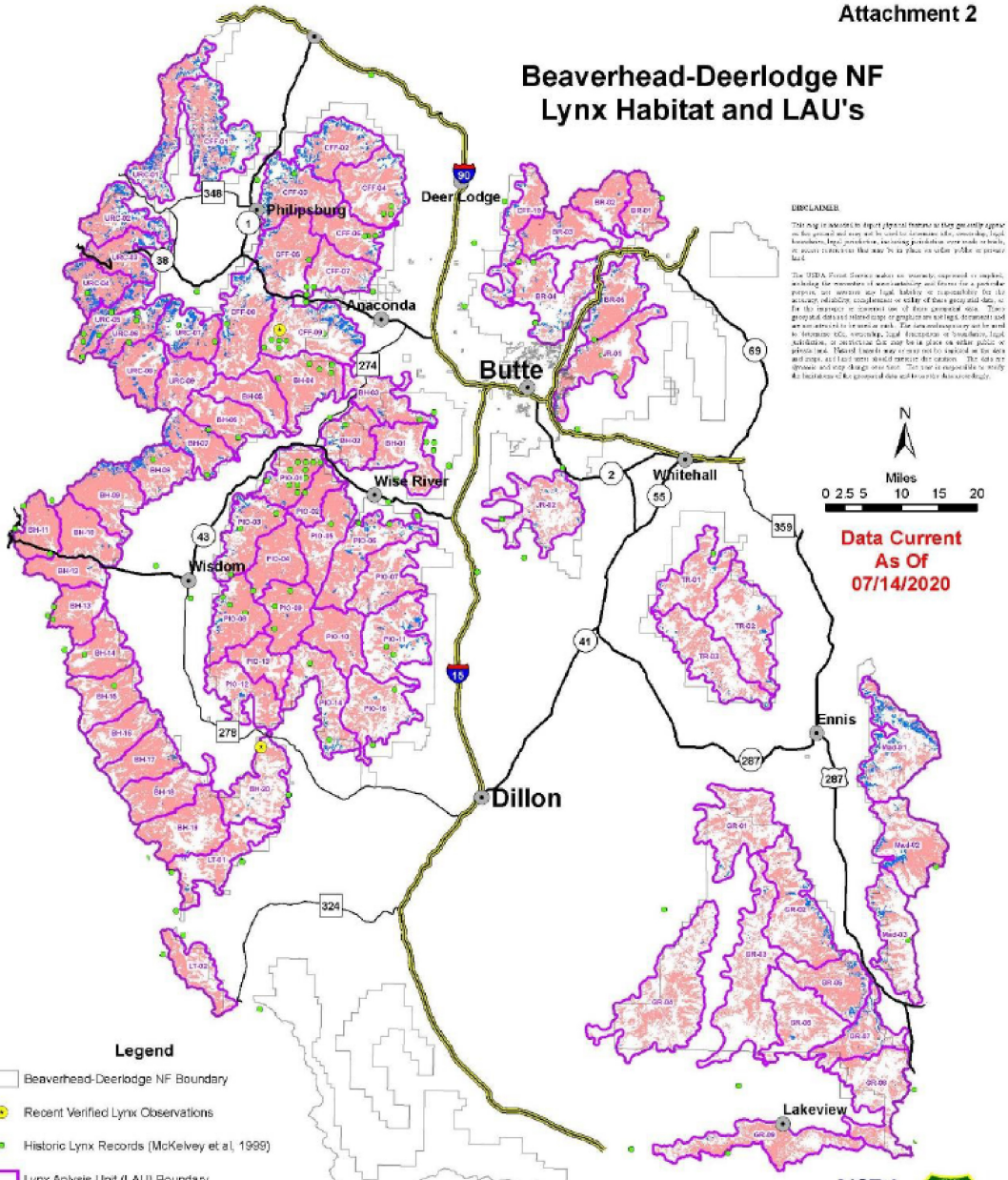
The new Forest Plan consultation addresses effects to lynx within mapped "lynx habitat," but does not address the effects to lynx in areas that are not mapped "lynx

habitat" but where lynx "may be present," which was the purpose of the remand.

The Beaverhead-Deerlodge National Forest covers approximately 3.4 million acres. Doc. 93-9 at 10.[1] In 2020, the agencies mapped approximately 1.5 million acres of the Forest as "lynx habitat." Doc. 93-9 at 17 (Table 5). The agencies consider these areas of mapped "lynx habitat" to be "occupied" by lynx. Doc. 93-9 at 6. However, these areas of mapped "lynx habitat" do not directly correspond to areas of known lynx detections, both historic and recent. Doc. 93-9 at 100. The map below shows area of mapped "lynx habitat" in color, with green and yellow circles to indicate known historic and recent detections:

Attachment 2

Beaverhead-Deerlodge NF
Lynx Habitat and LAU's



DISCLAIMER

This map is intended to depict general features as they generally appear on the ground and may not be used to determine title, ownership, legal boundaries, legal jurisdiction, or zoning jurisdiction over roads or lands, or access restrictions that may be in place on either public or private land.

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Legend

- Beaverhead-Deerlodge NF Boundary
- Recent Verified Lynx Observations
- Historic Lynx Records (McKelvey et al. 1999)
- Lynx Anlysis Unit (LAU) Boundary

Lynx Habitat

Primary Vegetation	1,509,146 acres
Secondary Vegetation	116,660 acres
Total	1,625,806 acres

MXD Location:
T:\S_FS_R1\Beaverhead_Deerlodge\Program\2600\Wildlife\GIS\LynxHabMapping_2019\MXD\DG_Overview.mxd

PDF's Location:
T:\S_FS_R1\Beaverhead_Deerlodge\Program\2600\Wildlife\GIS\LynxHabMapping_2019\Product\DocMaps\DocMapGH_HabLau_20200714_8X11.pdf

Lynx Habitat Definitions

Primay Vegetation Habitat:
- abla1, abla2, abla3, abla4, abla5, picea habitat types
- Snow depth greater than 50 cm

Secondary Vegetation Habitat:
- psme2, ubgr2, ubgr3 Habitat Types
- Snow depth greater than 50 cm
- Distance to primary habitat 300 meters or less

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Beaverhead-Deerlodge NF
7/14/2020

Map Created By: J. ONeil

This map replaces all versions of same title printed with prior dates.

As noted above, the agencies have determined that lynx "may be present" across the entire Forest. Krueger, 348 F.Supp.3d at 1068. Thus, while approximately 1.5 million acres of the Forest is mapped "lynx habitat," Doc. 93-9 at 17, another 1.9 million acres (more than half the Forest) is not mapped "lynx habitat," but still constitutes an area where lynx "may be present, " see Doc. 93-9 at 10; Krueger, 348 F.Supp.3d at 1068.

In its 2018 remand order in this case, this Court held:

*Because there are provisions of the Forest Plan other than the Lynx Amendment that "may affect" lynx outside of the areas protected by the Lynx Amendment, and because the FWS determined that lynx "may be present" throughout the forest, a plaintiff may still bring a section 7 consultation claim to the broader Forest Plan itself. See Native Ecosystems Council v. Marten, 334 F.Supp.3d 1124, 1131, 2018 WL 3831339, at *4 (D. Mont. Aug. 13, 2018) (stating that "the Lynx Amendment only applies to mapped lynx habitat on National Forest System land presently occupied by Canada lynx" and holding that a forest-wide determination that lynx "may be present" arguably requires consultation of an agency action that "may affect" lynx but where "compliance with the Lynx Amendment is not required.") Such is the case here.*

The Forest Service must complete an ESA consultation for the Forest Plan that includes an analysis of how lynx may be affected on areas of this Forest that are not mapped "lynx habitat" but nonetheless are areas where lynx "may be present." Id. As noted above, that area is 1.9

million acres. The agencies have not complied with the remand order in this case because they have not yet provided this analysis.

In the January 4, 2021, Forest Plan Biological Assessment, the Forest Service uses "the 2020 updated lynx habitat model to disclose potential effects and set the current existing conditions."

As the agency summarizes: "Impacts to lynx and their habitat have been considered in the context of the modeled lynx habitat on the Forest, vegetation conditions, anticipated amount and distribution of forest activities (e.g., timber projects, recreation expansion), and guidance within the Forest Plan and the Northern Rockies Lynx Management Direction. Since all areas of modeled lynx habitat are considered occupied, lynx are presumed to be present, including both resident or dispersing." Furthermore, regarding cumulative impacts, the Forest Service discloses: "[f]or this analysis, the cumulative effects boundary consists of all 2020 modeled lynx habitat both within and outside of the [Beaverhead-Deerlodge National Forest]."

Similarly, the FWS's responsive 2021 Forest Plan Biological Opinion states: "In order to fully address effects of implementing the 2009 Revised Forest Plan, the Forest provided lynx habitat information. The information provided consists of a broad scale estimate of lynx habitat across the Forest intended to provide an overall picture of the current status of lynx habitat." Doc. 93-1 at 9 (emphases added). FWS then summarizes the analysis of ef-

fects to mapped lynx habitat set forth in the Forest Service Biological Assessment. FWS also provides an analysis of only those portions of existing projects that "occur within mapped lynx habitat . . . ." Doc. 93-1 at 29.

Both the Forest Plan Biological Assessment and Forest Plan Biological Opinion limit their analyses to effects to mapped lynx habitat, which is now considered to be "occupied." However, in the Fleecer case, the federal district court remanded to the agencies to address all potential effects to lynx across the entire Forest, specifically including those areas that are not mapped as "lynx habitat." As noted above, the areas that are not mapped as "lynx habitat" where lynx nonetheless "may be present" constitute approximately 1.9 million acres across the Forest.

The federal district court denied a motion to dissolve under similar circumstances in the Fleecer project. In that case, this Court "enjoined Defendants from proceeding with their project until Defendants conducted a site-specific biological opinion for both Canada lynx and grizzly bear." Subsequently, the Forest Service "submitted a new biological opinion for both grizzly bear and Canada lynx. . . [and sought] dissolution of the injunction." Id. This Court then held:

"The Court's order required the new biological opinion to analyze "all logging associated activities." . . . The new biological opinion fails to contemplate any effects on grizzly bear from the logging activity itself . . . . Defendants have failed to comply, therefore, with this Court's order to conduct a new biological opinion that analyzes the im-

pacts to grizzly bears of "all logging associated activities."'

The Court further enjoined the Fleecer project until the Forest Service conducted a new biological opinion that analyzed project impacts on Canada lynx. The previous first-tier biological opinion required a site-specific biological opinion to consider whether assumptions made in the original biological opinion were valid. . . . The Forest Service failed to consider, however, whether these vegetation treatment projects are affecting lynx in the way anticipated by the 2007 Biological Opinion. Without that analysis, the second-tier Biological Opinion fails to perform the role anticipated in the first-tier biological opinion.

The same is true here. The Forest Service failed to conduct the biological opinion ordered by the Court in the Fleecer project. Thus, the motion to dissolve was denied. The agencies must prepare a consultation that analyzes potential effects on lynx on the entire 3.4 million acre Forest – not just mapped lynx habitat on less than half the Forest.

The Forest Service and the FWS have not yet analyzed effects on lynx across the entire Forest as required by the 2018 remand order; instead, their consultation addresses mapped lynx habitat. However, mapped lynx habitat is less than half of the Forest, and there are still another 1.9

million acres of Forest that are not mapped lynx habitat but nonetheless satisfy the "may be present" threshold. Thus, the agencies have not yet provided Plaintiffs with all of the relief they seek.

The agencies' decision to remap "lynx habitat" in order to remove Lynx Amendment protections from 1.1 million acres on the Forest is a Forest Plan amendment under NFMA, a major federal action under NEPA, and an agency action under the ESA. Thus, NEPA analysis and ESA consultation must occur for this change in management – and the Forest Service must issue a Forest Plan amendment that complies with the 2012 NFMA planning regulations – before the Greenhorn Project may move forward.

The Forest Service unlawfully stripped legal protections from lynx across 1.1 million acres of the Forest without conducting the legally required analyses. Both the District of Idaho and District of Oregon hold that the remapping of lynx habitat requires analysis under NFMA, NEPA, and/or the ESA. Oregon Nat. Res. Council Fund v. Forsgren, 252 F.Supp.2d 1088, 1104 (D. Or. 2003)(addressing NFMA and NEPA); Native Ecosystems Council & All. for the Wild Rockies v. U.S. Forest Serv. ex rel. Davey, 866 F.Supp.2d 1209, 1231 (D. Id. 2012)(addressing ESA and NEPA).

Accordingly, this Project should not move forward until the agencies comply with their legal obligations under the ESA, NEPA, and NFMA regarding this de facto Forest Plan amendment that removed lynx protections on almost

one- third of the Forest during the remand in this case. This Court may address this issue in its equitable discretion. However, if it declines to do so, Plaintiffs will file a new action and request injunctive relief in that action.

NEPA requires an agency to prepare an EIS for all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. §4332(2)(C). Major federal actions include "new or revised agency . . . plans, policies, or procedures" including "official documents prepared or approved by Federal agencies which prescribe alternative uses of Federal resources, upon which future agency actions will be based." 40 C.F.R. §1508.1 (q)(2), (3)(ii).

The remapping of "lynx habitat" is a major federal action under NEPA that requires either an EIS or an EA. Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1104-07; Native Ecosystems Council, 866 F.Supp.2d at 1231.

Furthermore, ESA consultation is required for "any agency action" that "may affect" a listed species in an area where a listed species "may be present." 16 U.S.C. §1536(c). The ESA defines agency action as "any action authorized, funded, or carried out by [a federal] agency." 16 U.S.C. §1536(a)(2). In Karuk Tribe of California v USFS, the en banc Ninth Circuit held that "[t]here is 'little doubt' that Congress intended agency action to have a broad definition in the ESA . . . ." 681 F.3d 1006,1020-21 (9th Cir.2012)(citations omitted). Thus, the "'agency action' inquiry is two-fold. First, we ask whether

a federal agency affirmatively authorized, funded, or carried out the underlying activity. Second, we determine whether the agency had some discretion to influence or change the activity for the benefit of a protected species." Id. The remapping of "lynx habitat" is an agency action that requires ESA consultation. Native Ecosystems Council, 866 F.Supp.2d at 1232-33.

Finally, NFMA requires a forest plan amendment for any actions that "add, modify, or remove one or more [forest] plan components, or [] change how or where one or more plan components apply to all or part of the [forest] plan area (including management areas or geographic areas)." 36 C.F.R. §219.13(a). Remapping "lynx habitat" requires a forest plan amendment. Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1101-04.

Regardless of whether a forest plan amendment is deemed "significant" in the NFMA context, see 16 U.S.C. §1604 (f)(4), the Forest Service must provide for public participation, public notification, and NEPA compliance in conjunction with the amendment, 36 C.F.R. §219.13(b)(2)-(3). "The appropriate NEPA documentation for an amendment may be an [EIS], an environmental assessment, or a categorical exclusion, depending upon the scope and scale of the amendment and its likely effects." 36 C.F.R. §219.13(b)(3).

Furthermore, regardless of whether a forest plan amendment is "significant" under NFMA, any substantive protections in the 2012 NFMA planning regulations that are "directly relevant" to the forest plan amendment

must be applied. 36 C.F.R. §219.13(b)(5); see Sierra Club, Inc. v. USFS, 897 F.3d 582, 601 (4th Cir. 2018)(remanding for application of substantive protections of the 2012 planning regulations to a non-significant forest plan amendment).

Finally, a de facto forest plan amendment cannot be lawfully categorized and dismissed as a mere "administrative change" unless it involves only "corrections of clerical errors to any part of the plan, conformance of the plan to new statutory or regulatory requirements, or changes to other content in the plan (§ 219.7(f))." 36 C.F.R. §219.13(c). "Changes to other content in the plan" is a term of art that includes only watershed identification, the plan's roles and contributions in the broader landscape, the monitoring program, proposed and possible actions, and potential management approaches or strategies and partnership opportunities or coordination activities." 36 C.F.R. §219.7(f).

During the remand in the Fleecer case, the agencies determined that the Beaverhead-Deerlodge National Forest is now "occupied" by lynx. This change in status means that compliance with the Lynx Amendment is now mandatory for all site-specific projects on the Forest, but only within the lands that are mapped as "lynx habitat."

Accordingly, in 2020, the agencies remapped "lynx habitat" on the Forest.

The result of the remapping was that the agencies removed approximately 1.1 million acres from the "lynx habitat" designation, and thereby removed the protections of the Lynx Amendment standards from those 1.1 million acres of Forest:

Table 4. Comparison of lynx habitat acres, number of lynx analysis units, and the range of habitat within lynx analysis units between mapping efforts.

Metric	2001 mapping effort	2020 mapping effort	Difference
Lynx habitat (acres)	2,711,422	1,625,806	-1,085,616
Lynx analysis units (number)	509	78	-431
Range of lynx habitat within LAUs (acres)	0-24,101	12,603 - 29,880	Minimum +12,603 Maximum +5,779

Additionally, the agencies reduced the number of "Lynx Analysis Units" from 509 to 78, and increased the size of individual Lynx Analysis Units so that more acres can be logged before the percentage limits for logging in each unit are reached..

The remapping of "lynx habitat" requires an EA or EIS under NEPA.

As both the District of Idaho and District of Oregon have already held, the remapping of "lynx habitat" constitutes a major federal action under NEPA, which requires either an EA or EIS. Oregon Nat. Res. Council Fund, 252 F.-Supp.2d at 1104-07; Native Ecosystems, 866 F.Supp.2d at 1231. In the Greenhorn Project as well, the new mapping recategorizes thousands of acres of "lynx habitat" out of existence and thereby paves the way for future projects to authorize logging and other activities in those areas, even if those activities would have been previously prohibited in those same areas under the Lynx Amendment. This is

***not a minor change: instead, this changes strips away Lynx Amendment protections from approximately 1.1 million acres across the Forest. ***

This significant change in management of the Forest requires a complete analysis under NEPA. Native Ecosystems, 866 F.Supp.2d at 1231. As the District of Idaho held:

"The 2005 map was a document officially approved by the Forest Service. . . .There also seems to be little room for debate over whether the 2005 map ultimately governs "uses of Federal resources, upon which future agency actions will be based." []. Without the adoption of the 2005 map—and the attendant elimination of nearly 400,000 acres of land within [Lynx Analysis Units] —the Project area would have been subject to the restrictions contained in the Lynx [Amendment] . . . . With the adoption of the 2005 map, the 390,900 acres of previously restricted land was opened for uses that were not available without the adoption of the map."

The 2005 map . . . eliminated almost 400,000 acres of land that was previously subject to greater environmental restrictions under the Lynx [Amendment]. . . . the map was never subjected to independent NEPA review, which would have required an analysis of the potential [e]ffects . . . on the lynx, its habitat, and the habitat of the snowshoe hare. Such analysis is absent in this case. The absence of

such analysis violates NEPA's procedural requirements . . . .

Similarly in the BDNF,"[w]ith the adoption of the [2020] map, the [1.1 million] acres of previously restricted land was opened for uses that were not available without the adoption of the map.". " [T]he map was never subjected to independent NEPA review, which would have required an analysis of the potential [e]ffects . . . on the lynx, its habitat, and the habitat of the snowshoe hare. Such analysis is absent in this case. The absence of such analysis violates NEPA's procedural requirements . . . ."

And, as the District of Oregon similarly held:

"Defendants have substantially minimized the effects of the new mapping direction. The new mapping direction was far more than the result of day-to-day inventory-taking. It significantly changed the nature and the extent of lynx habitat, and the consequences to the lynx may be far-reaching. It has been used by the [Forest Service] to reduce the recognized primary lynx habitat within the Forest by thousands of acres . . . . The Court finds Defendants, at the least, were required under NEPA to prepare an Environmental Assessment with public involvement to determine whether the new mapping direction might significantly affect the lynx in the Forest and whether Defendants should prepare an EIS.

Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1105. The same result is required in this case."

The remapping of "lynx habitat" requires ESA consultation.

In addition to requiring NEPA analysis, the remapping of lynx habitat also requires ESA consultation. The remapping of lynx habitat on the Forest is an agency action under the ESA because it was "authorized, funded, or carried out by [a federal] agency." 16 U.S.C. §1536(a)(2). Additionally, "the agency had some discretion to influence or change the activity for the benefit of a protected species." Karuk Tribe, 681 F.3d at 1021.
In Native Ecosystems, the District of Idaho found that ESA consultation was required to address the impacts on lynx from the remapping decision. 866 F.Supp.2d at 1231-33. The court held: "Defendants argue that, because a jeopardy determination was made for the standards contained in the Lynx [Amendment], and those standards were used in revising the [Lynx Analysis Unit] map in 2005, the agencies satisfied their obligations under the ESA. The Court does not agree." Id. at 1232. The court found that the Lynx Amendment "biological opinion from 2007 does not assess the validity of the 2005 map" and that the agencies should have evaluated whether "the elimination of 390,900 acres of land within the boundaries of [Lynx Analysis Unit]s in the 2005 map would adversely affect the lynx or its habitat." Id.

Similarly, in this case, the agencies must prepare an ESA consultation that the evaluates whether "the elimination of [1.1 million] acres of land within the boundaries of

[Lynx Analysis Unit]s in the [2020] map would adversely affect the lynx or its habitat." See id.

The remapping of "lynx habitat" requires a Forest Plan amendment.

Finally, the remapping of "lynx habitat" is a Forest Plan amendment that requires analysis under NFMA. Removing Forest Plan Lynx Amendment protections from approximately 1.1 million acres, reducing the number of Lynx Analysis Units on the Forest from 509 to 78, and increasing the size of individual Lynx Analysis Units so that more acres can be logged before the Lynx Amendment percentage limits for logging in each unit are reached, are changes that "add, modify, or remove one or more [forest] plan components, or [] change how or where one or more plan components apply to all or part of the [forest] plan area (including management areas or geographic areas)." 36 C.F.R. §219.13(a).

More specifically, the remapping of lynx habitat "change[s] how or where" the Lynx Amendment protections apply to this Forest because these protections no longer apply to 1.1 million acres of the Forest. Furthermore, stripping Forest Plan protections from 1.1 million acres – approximately one-third of the Forest – could not be reasonably construed as a mere "administrative change" because such an action does not fall with the narrow regulatory definition of "administrative change." 36 C.F.R. §§219.13(c), 219.7(f).

The District of Oregon held that remapping lynx habitat requires a forest plan amendment:

"the revision of the [Lynx Conservation Assessment Strategy] and the new mapping direction were not merely part of the day-to-day operations of the FS like the less substantial actions taken by the FS and BLM in the cases on which Defendants primarily rely. The court's concerns in Prairie Woods Products regarding the absence of discernible limits to the discretion of the FS to forego or to forestall formal amendment procedures with their concomitant public involvement also are concerns in this case. . . . Whether based on a theory of a de facto amendment or a failure to act to amend, therefore, the Court concludes an order compelling the public involvement required by NFMA is warranted as to these timber sales. Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1101. The court further found that the Forest Service's action violated the substantive provisions of the NFMA planning regulations."

Similarly, in House v. USFS, the Eastern District of Kentucky found that changes to management direction for the Indiana bat constituted a forest plan amendment under NFMA. 974 F.Supp. 1022, 1034 (E.D. Ky. 1997). The court found: "these policies may not be implemented until the Forest Plan has been properly amended to include the same."

Likewise, in Klamath Siskiyou Wildlands Ctr. v. Boody, the Ninth Circuit found that changes to management direction for the red tree vole constituted an amendment of

a Bureau of Land Management Resource Management Plan under the Federal Land Policy and Management Act. 468 F.3d 549, 558 (9th Cir. 2006). The court held: "if BLM can modify the protection afforded a species under a resource management plan as dramatically as it has here — without complying with [the amendment regulation] — BLM could ultimately remove all the Survey and Manage designations without ever conducting another EA or EIS, and without providing public disclosure. Such steps would undoubtedly run contrary to both the goals and language of [Federal Land Policy and Management Act.]" Id.

Here too, if the Forest Service "can modify the protection afforded [lynx] under a [forest] plan as dramatically as it has here—without complying with [the amendment regulation] — [the Forest Service] could ultimately remove all the [lynx habitat] designations without ever conducting another EA or EIS, and without providing public disclosure. Such steps would undoubtedly run contrary to both the goals and language of [NFMA]." The preparation of a Forest Plan amendment is not an empty procedural exercise because all relevant substantive protections from the 2012 NFMA planning regulations must be applied to a forest plan amendment. More specifically, for each amendment, the Forest Service must "[d]etermine which specific substantive requirement(s) within §§219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment." 36 C.F.R. §219.13(b)(5); see Sierra

Club, 897 F.3d at 601(remanding for application of substantive protections of the 2012 planning regulations to a non-significant forest plan amendment). The application of these substantive regulatory protections may ultimately result in a decision that alters – and is more protective of lynx – than the current 2020 remapping of "lynx habitat."

For all of these reasons, the agencies must complete NEPA, ESA, and NFMA analysis for the 2020 remapping of "lynx habitat" on the Forest. Until those analyses are completed in a lawful manner, the Greenhorn Project can not go forward because the Project analysis is unlawfully premised upon the acceptance and implementation of the new map of lynx habitat "like a house of cards built on an unsound foundation." Native Ecosystems, 866 F.

The Forest Service responded:

The standards of the Northern Rockies Lynx Management Direction are discussed in detail in the Wildlife report in the project record.

Remedy: Choose the No Action Alternative or write an EIS that fully complies with the law. Squires found that lynx avoid clearcuts for up to 50 years. A big problem with the Forest Plan and the NRLMD is that it allows with few exceptions the same level of industrial forest management activities that occurred prior to Canada lynx ESA listing. The FS approval and implementation of the NRLMD and the

revised Beaverhead-Deerlodge National Forest Forest Plan is arbitrary and capricious, violates NEPA's hard look requirement and scientific integrity mandate and fails to apply the best available science necessary to conserve lynx.

The NRLMD or the revised BDNF Forest Plan contain no protection or standard for conservation of winter lynx habitat (old growth forests).

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 and mature 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.

The Forest Plan/FEIS fail to describe the quantity and quality of habitat that is necessary to sustain the viability of the Canada lynx.

Significantly, in the 2018 order, this Court explained that consultation on the Northern Rockies Lynx Management Direction, commonly referred to as the "Lynx Amendment," was not sufficient in part because the Lynx Amendment only applies to mapped "lynx habitat" on the Forest. Id. at 1070. Thus, areas on the Forest where lynx "may be present" that are not mapped as "lynx habitat" are not covered by the Lynx Amendment consultation. Id. Accordingly, the primary purpose of the 2018 remand was for the agencies to consult on the entire Forest, including areas of the Forest that are not mapped as "lynx habitat" but where lynx nonetheless "may be present." See id.

On August 24, 2021, the agencies filed a second motion to dissolve the injunction. The agencies provide the Court with a new 2021 Biological Assessment and Biological Opinion for the Forest Plan. Doc. 93-9 (Biological Assessment); Doc. 93-1 (Biological Opinion). However, this new consultation suffers from the same flaw that the Court found with the Lynx Amendment consultation in its 2018 order – the analysis is incomplete because it addresses mapped "lynx habitat" where the Lynx Amendment applies, instead of all areas where lynx "may be present" on the Forest. For this reason, the motion to dissolve the injunction should be denied. Alternatively, or in addition, dissolution is not equitable at this time because the agencies have unlawfully stripped legal protections for lynx from 1.1 million acres during the remand in this case. Accordingly, this Project should not move forward until the agencies comply with their legal obligations under the ESA, NEPA, and

NFMA regarding this de facto Forest Plan amendment that removed lynx protections on almost one-third of the Forest.

As set forth below in more detail, this case is similar to Native Ecosystems in that the agencies engaged in a new ESA consultation on remand, but the consultation does not contain the analysis ordered by the Court in its 2018 remand order. Thus, in this case, as in Native Ecosystems, the motion to dissolve the injunction should be denied. Furthermore, during the remand for this case, the Forest Service has effectively issued a programmatic Forest Plan amendment with its decision to strip away protections for lynx from 1.1 million acres of the Forest. This removal of protections for lynx applies to the Fleecer Project. However, the agencies did not conduct any NEPA or NFMA analysis or ESA consultation for this de facto Forest Plan amendment. Thus, for this additional reason, dissolution of the injunction may be denied because the dissolution is not equitable under these circumstances.

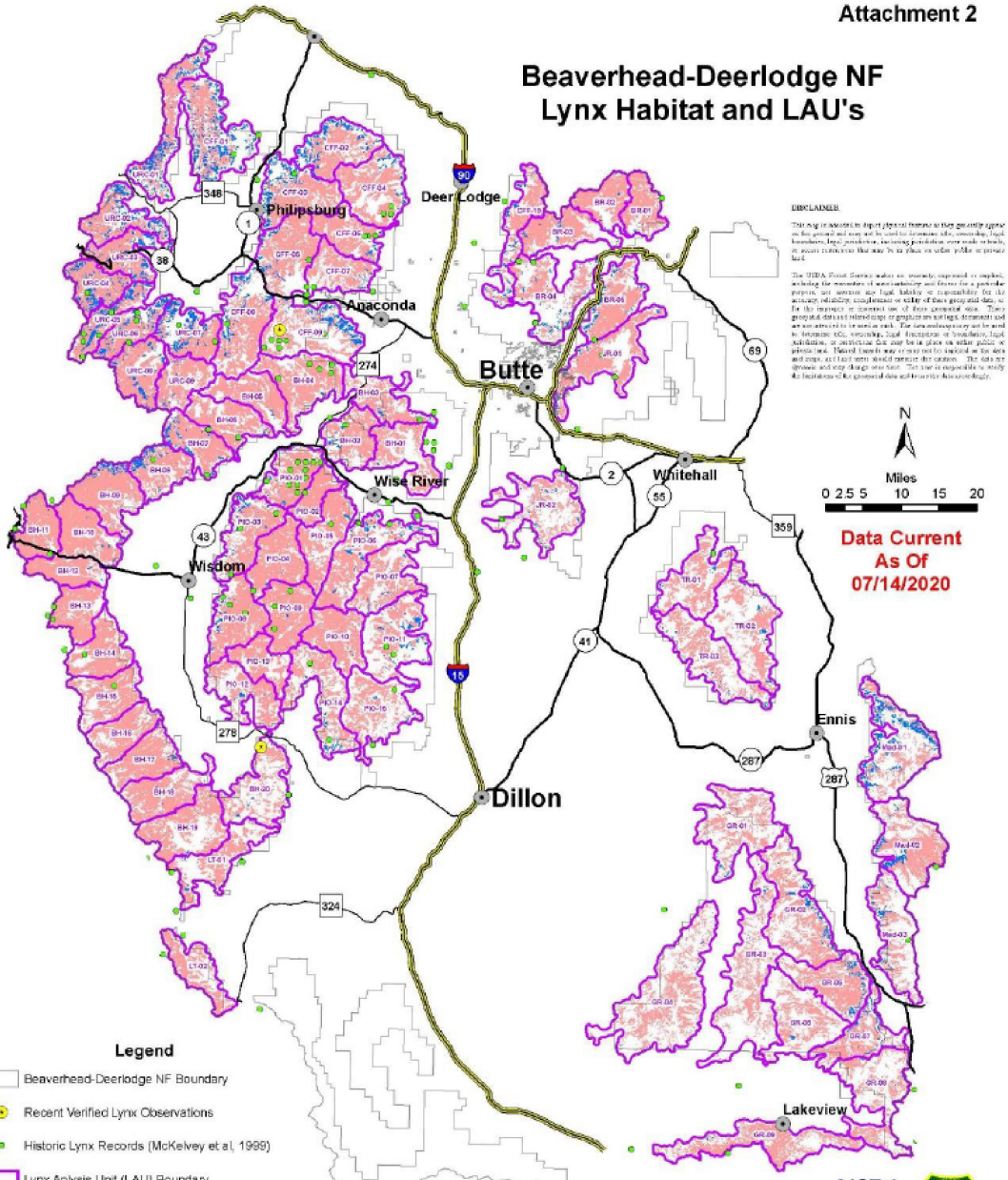
The new Forest Plan consultation addresses effects to lynx within mapped "lynx habitat," but does not address the effects to lynx in areas that are not mapped "lynx habitat" but where lynx "may be present," which was the purpose of the remand.

The Beaverhead-Deerlodge National Forest covers approximately 3.4 million acres. Doc. 93-9 at 10.[1] In 2020, the agencies mapped approximately 1.5 million acres of the Forest as "lynx habitat." Doc. 93-9 at 17 (Table 5). The

agencies consider these areas of mapped “lynx habitat” to be “occupied” by lynx. Doc. 93-9 at 6. However, these areas of mapped “lynx habitat” do not directly correspond to areas of known lynx detections, both historic and recent. Doc. 93-9 at 100. The map below shows area of mapped “lynx habitat” in color, with green and yellow circles to indicate known historic and recent detections:

Attachment 2

Beaverhead-Deerlodge NF
Lynx Habitat and LAU's



DISCLAIMER

This map is intended to depict general features as they generally appear on the ground and may not be used to determine title, ownership, legal boundaries, legal jurisdiction, or zoning jurisdiction over roads or lands, or access restrictions that may be in place on either public or private land.

The USDA Forest Service makes no warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose, nor assumes any legal liability or responsibility for the accuracy, reliability, completeness or utility of these geospatial data, or for the improper or incorrect use of these geospatial data. These geospatial data and related maps or graphics are not legal documents and are not intended to be used as such. The data and maps may not be used to determine title, ownership, legal boundaries, or jurisdiction. Use may be in place on either public or private land. Natural hazards may or may not be depicted on the data and maps, and land users should exercise due caution. The data are dynamic and may change over time. The user is responsible to verify the limitations of the geospatial data and to use them accordingly.

Legend

- Beaverhead-Deerlodge NF Boundary
- Recent Verified Lynx Observations
- Historic Lynx Records (McKelvey et al. 1999)
- Lynx Anlysis Unit (LAU) Boundary

Lynx Habitat

Primary Vegetation	1,509,146 acres
Secondary Vegetation	116,660 acres
Total	1,625,806 acres

MXD Location:
T:\S_FS_R1\Beaverhead_Deerlodge\Program\2600\Wildlife\GIS\LynxHabMapping_2019\MXD\DG_Overview.mxd

PDF's Location:
T:\S_FS_R1\Beaverhead_Deerlodge\Program\2600\Wildlife\GIS\LynxHabMapping_2019\Product\DocMaps\DocMapGH_HabLau_20200714_8X11.pdf

Lynx Habitat Definitions

Primay Vegetation Habitat:
- abla1, abla2, abla3, abla4, abla5, picea habitat types
- Snow depth greater than 50 cm

Secondary Vegetation Habitat:
- psme2, ubgr2, ubgr3 Habitat Types
- Snow depth greater than 50 cm
- Distance to primary habitat 300 meters or less

USDA

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Beaverhead-Deerlodge NF
7/14/2020

Map Created By: J. ONeil

This map replaces all versions of same title printed with prior dates.

As noted above, the agencies have determined that lynx "may be present" across the entire Forest. Krueger, 348 F.-Supp.3d at 1068. Thus, while approximately 1.5 million acres of the Forest is mapped "lynx habitat," Doc. 93-9 at 17, another 1.9 million acres (more than half the Forest) is not mapped "lynx habitat," but still constitutes an area where lynx "may be present, " see Doc. 93-9 at 10; Krueger, 348 F.Supp.3d at 1068.

In its 2018 remand order in this case, this Court held:

Because there are provisions of the Forest Plan other than the Lynx Amendment that "may affect" lynx outside of the areas protected by the Lynx Amendment, and because the FWS determined that lynx "may be present" throughout the forest, a plaintiff may still bring a section 7 consultation claim to the broader Forest Plan itself. See Native Ecosystems Council v. Marten, 334 F.Supp.3d 1124, 1131, 2018 WL 3831339, at *4 (D. Mont. Aug. 13, 2018) (stating that "the Lynx Amendment only applies to mapped lynx habitat on National Forest System land presently occupied by Canada lynx" and holding that a forest-wide determination that lynx "may be present" arguably requires consultation of an agency action that "may affect" lynx but where "compliance with the Lynx Amendment is not required.") Such is the case here.

The Forest Service must complete an ESA consultation for the Forest Plan that includes an analysis of how lynx may be affected on areas of this Forest that are not mapped "lynx habitat" but nonetheless are areas where lynx "may be present." Id. As noted above, that area is 1.9 million

acres. The agencies have not complied with the remand order in this case because they have not yet provided this analysis.

In the January 4, 2021, Forest Plan Biological Assessment, the Forest Service uses "the 2020 updated lynx habitat model to disclose potential effects and set the current existing conditions."

As the agency summarizes: "Impacts to lynx and their habitat have been considered in the context of the modeled lynx habitat on the Forest, vegetation conditions, anticipated amount and distribution of forest activities (e.g., timber projects, recreation expansion), and guidance within the Forest Plan and the Northern Rockies Lynx Management Direction. Since all areas of modeled lynx habitat are considered occupied, lynx are presumed to be present, including both resident or dispersing." Furthermore, regarding cumulative impacts, the Forest Service discloses: "[f]or this analysis, the cumulative effects boundary consists of all 2020 modeled lynx habitat both within and outside of the [Beaverhead-Deerlodge National Forest]."

Similarly, the FWS's responsive 2021 Forest Plan Biological Opinion states: "In order to fully address effects of implementing the 2009 Revised Forest Plan, the Forest provided lynx habitat information. The information provided consists of a broad scale estimate of lynx habitat across the Forest intended to provide an overall picture of the current status of lynx habitat." Doc. 93-1 at 9 (emphases added). FWS then summarizes the analysis of effects to mapped lynx habitat set forth in the Forest Service Biological As-

sessment. FWS also provides an analysis of only those portions of existing projects that "occur within mapped lynx habitat . . . ." Doc. 93-1 at 29.

Both the Forest Plan Biological Assessment and Forest Plan Biological Opinion limit their analyses to effects to mapped lynx habitat, which is now considered to be "occupied." However, in the Fleecer case, the federal district court remanded to the agencies to address all potential effects to lynx across the entire Forest, specifically including those areas that are not mapped as "lynx habitat." As noted above, the areas that are not mapped as "lynx habitat" where lynx nonetheless "may be present" constitute approximately 1.9 million acres across the Forest.

The federal district court denied a motion to dissolve under similar circumstances in the Fleecer project. In that case, this Court "enjoined Defendants from proceeding with their project until Defendants conducted a site-specific biological opinion for both Canada lynx and grizzly bear." Subsequently, the Forest Service "submitted a new biological opinion for both grizzly bear and Canada lynx. . . [and sought] dissolution of the injunction." Id. This Court then held:

"The Court's order required the new biological opinion to analyze "all logging associated activities." . . . The new biological opinion fails to contemplate any effects on grizzly bear from the logging activity itself . . . . Defendants have failed to comply, therefore, with this Court's order to conduct a new biological opinion that analyzes the impacts to grizzly bears of "all logging associated activities."'

The Court further enjoined the Fleecer project until the Forest Service conducted a new biological opinion that analyzed project impacts on Canada lynx. The previous first-tier biological opinion required a site-specific biological opinion to consider whether assumptions made in the original biological opinion were valid. . . . The Forest Service failed to consider, however, whether these vegetation treatment projects are affecting lynx in the way anticipated by the 2007 Biological Opinion. Without that analysis, the second-tier Biological Opinion fails to perform the role anticipated in the first-tier biological opinion.

The same is true here. The Forest Service failed to conduct the biological opinion ordered by the Court in the Fleecer project. Thus, the motion to dissolve was denied. The agencies must prepare a consultation that analyzes potential effects on lynx on the entire 3.4 million acre Forest – not just mapped lynx habitat on less than half the Forest.

The Forest Service and the FWS have not yet analyzed effects on lynx across the entire Forest as required by the 2018 remand order; instead, their consultation addresses mapped lynx habitat. However, mapped lynx habitat is less than half of the Forest, and there are still another 1.9 million acres of Forest that are not mapped lynx habitat but nonetheless satisfy the "may be present" threshold. Thus, the agencies have not yet provided Plaintiffs with all of the relief they seek.

The agencies' decision to remap "lynx habitat" in order to remove Lynx Amendment protections from 1.1 million acres on the Forest is a Forest Plan amendment under NFMA, a major federal action under NEPA, and an agency action under the ESA. Thus, NEPA analysis and ESA consultation must occur for this change in management – and the Forest Service must issue a Forest Plan amendment that complies with the 2012 NFMA planning regulations – before the Trail Creek Project may move forward.

The Forest Service unlawfully stripped legal protections from lynx across 1.1 million acres of the Forest without conducting the legally required analyses. Both the District of Idaho and District of Oregon hold that the remapping of lynx habitat requires analysis under NFMA, NEPA, and/or the ESA. Oregon Nat. Res. Council Fund v. Forsgren, 252 F.Supp.2d 1088, 1104 (D. Or. 2003)(addressing NFMA and NEPA); Native Ecosystems Council & All. for the Wild Rockies v. U.S. Forest Serv. ex rel. Davey, 866 F.Supp.2d 1209, 1231 (D. Id. 2012)(addressing ESA and NEPA).

Accordingly, this Project should not move forward until the agencies comply with their legal obligations under the ESA, NEPA, and NFMA regarding this de facto Forest Plan amendment that removed lynx protections on almost one-third of the Forest during the remand in this case. This Court may address this issue in its equitable discretion. However, if it declines to do so, Plaintiffs will file a new action and request injunctive relief in that action.

NEPA requires an agency to prepare an EIS for all "major Federal actions significantly affecting the quality of the

human environment." 42 U.S.C. §4332(2)(C). Major federal actions include "new or revised agency . . . plans, policies, or procedures" including "official documents prepared or approved by Federal agencies which prescribe alternative uses of Federal resources, upon which future agency actions will be based." 40 C.F.R. §1508.1 (q)(2), (3)(ii).

The remapping of "lynx habitat" is a major federal action under NEPA that requires either an EIS or an EA. Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1104-07; Native Ecosystems Council, 866 F.Supp.2d at 1231.

Furthermore, ESA consultation is required for "any agency action" that "may affect" a listed species in an area where a listed species "may be present."
16 U.S.C. §1536(c). The ESA defines agency action as "any action authorized, funded, or carried out by [a federal] agency." 16 U.S.C. §1536(a)(2). In Karuk Tribe of California v USFS, the en banc Ninth Circuit held that "[t]here is 'little doubt' that Congress intended agency action to have a broad definition in the ESA . . . ." 681 F.3d 1006,1020-21 (9th Cir.2012)(citations omitted). Thus, the "'agency action' inquiry is two-fold. First, we ask whether a federal agency affirmatively authorized, funded, or carried out the underlying activity. Second, we determine whether the agency had some discretion to influence or change the activity for the benefit of a protected species." Id. The remapping of "lynx habitat" is an agency action that requires ESA consultation. Native Ecosystems Council, 866 F.Supp.2d at 1232-33.

Finally, NFMA requires a forest plan amendment for any actions that "add, modify, or remove one or more [forest] plan components, or [] change how or where one or more plan components apply to all or part of the [forest] plan area (including management areas or geographic areas)." 36 C.F.R. §219.13(a). Remapping "lynx habitat" requires a forest plan amendment. Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1101-04.

Regardless of whether a forest plan amendment is deemed "significant" in the NFMA context, see 16 U.S.C. §1604 (f)(4), the Forest Service must provide for public participation, public notification, and NEPA compliance in conjunction with the amendment, 36 C.F.R. §219.13(b)(2)-(3). "The appropriate NEPA documentation for an amendment may be an [EIS], an environmental assessment, or a categorical exclusion, depending upon the scope and scale of the amendment and its likely effects." 36 C.F.R. §219.13(b)(3).

Furthermore, regardless of whether a forest plan amendment is "significant" under NFMA, any substantive protections in the 2012 NFMA planning regulations that are "directly relevant" to the forest plan amendment must be applied. 36 C.F.R. §219.13(b)(5); see Sierra Club, Inc. v. USFS, 897 F.3d 582, 601 (4th Cir. 2018)(remanding for application of substantive protections of the 2012 planning regulations to a non-significant forest plan amendment).

Finally, a de facto forest plan amendment cannot be lawfully categorized and dismissed as a mere "administrative change" unless it involves only "corrections of clerical er-

rors to any part of the plan, conformance of the plan to new statutory or regulatory requirements, or changes to other content in the plan (§ 219.7(f)).” 36 C.F.R. §219.13(c). “Changes to other content in the plan” is a term of art that includes only watershed identification, the plan’s roles and contributions in the broader landscape, the monitoring program, proposed and possible actions, and potential management approaches or strategies and partnership opportunities or coordination activities.” 36 C.F.R. §219.7(f).

During the remand in the Fleecer case, the agencies determined that the Beaverhead-Deerlodge National Forest is now “occupied” by lynx. This change in status means that compliance with the Lynx Amendment is now mandatory for all site-specific projects on the Forest, but only within the lands that are mapped as “lynx habitat.”

Accordingly, in 2020, the agencies remapped “lynx habitat” on the Forest.

The result of the remapping was that the agencies removed approximately 1.1 million acres from the “lynx habitat” designation, and thereby removed the protections of the Lynx Amendment standards from those 1.1 million acres of Forest:

Table 4. Comparison of lynx habitat acres, number of lynx analysis units, and the range of habitat within lynx analysis units between mapping efforts.

Metric	2001 mapping effort	2020 mapping effort	Difference
Lynx habitat (acres)	2,711,422	1,625,806	-1,085,616
Lynx analysis units (number)	509	78	-431
Range of lynx habitat within LAUs (acres)	0-24,101	12,603 - 29,880	Minimum +12,603 Maximum +5,779

Additionally, the agencies reduced the number of "Lynx Analysis Units" from 509 to 78, and increased the size of individual Lynx Analysis Units so that more acres can be logged before the percentage limits for logging in each unit are reached..

The remapping of "lynx habitat" requires an EA or EIS under NEPA.

As both the District of Idaho and District of Oregon have already held, the remapping of "lynx habitat" constitutes a major federal action under NEPA, which requires either an EA or EIS. Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1104-07; Native Ecosystems, 866 F.Supp.2d at 1231. In the Trail Creek Project as well, the new mapping recategorizes thousands of acres of "lynx habitat" out of existence and thereby paves the way for future projects to authorize logging and other activities in those areas, even if those activities would have been previously prohibited in those same areas under the Lynx Amendment. This is not a minor change: instead, this changes strips away Lynx Amendment protections from approximately 1.1 million acres across the Forest. \

This significant change in management of the Forest requires a complete analysis under NEPA. Native Ecosystems, 866 F.Supp.2d at 1231. As the District of Idaho held:

"The 2005 map was a document officially approved by the Forest Service. . . .There also seems to be little room for debate over whether the 2005 map ultimately governs "uses of Federal resources, upon which future agency actions will be based." []. Without the adoption of the 2005 map—and the attendant elimination of nearly 400,000 acres of land within [Lynx Analysis Units] —the Project area would have been subject to the restrictions contained in the Lynx [Amendment] . . . . With the adoption of the 2005 map, the 390,900 acres of previously restricted land was opened for uses that were not available without the adoption of the map."

The 2005 map . . . eliminated almost 400,000 acres of land that was previously subject to greater environmental restrictions under the Lynx [Amendment]. . . . the map was never subjected to independent NEPA review, which would have required an analysis of the potential [e]ffects . . . on the lynx, its habitat, and the habitat of the snowshoe hare. Such analysis is absent in this case. The absence of such analysis violates NEPA's procedural requirements . . . .

Similarly in the BDNF,"[w]ith the adoption of the [2020] map, the [1.1 million] acres of previously restricted land was opened for uses that were not available without the

adoption of the map.". " [T]he map was never subjected to independent NEPA review, which would have required an analysis of the potential [e]ffects . . . on the lynx, its habitat, and the habitat of the snowshoe hare. Such analysis is absent in this case. The absence of such analysis violates NEPA's procedural requirements . . . ."

And, as the District of Oregon similarly held:

"Defendants have substantially minimized the effects of the new mapping direction. The new mapping direction was far more than the result of day-to-day inventory-taking. It significantly changed the nature and the extent of lynx habitat, and the consequences to the lynx may be far-reaching. It has been used by the [Forest Service] to reduce the recognized primary lynx habitat within the Forest by thousands of acres . . . . The Court finds Defendants, at the least, were required under NEPA to prepare an Environmental Assessment with public involvement to determine whether the new mapping direction might significantly affect the lynx in the Forest and whether Defendants should prepare an EIS.

Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1105. The same result is required in this case."

The remapping of "lynx habitat" requires ESA consultation.

In addition to requiring NEPA analysis, the remapping of lynx habitat also requires ESA consultation. The remapping of lynx habitat on the Forest is an agency action under the ESA because it was "authorized, funded, or carried out by [a federal] agency." 16 U.S.C. §1536(a)(2). Additionally,

"the agency had some discretion to influence or change the activity for the benefit of a protected species." Karuk Tribe, 681 F.3d at 1021.

In Native Ecosystems, the District of Idaho found that ESA consultation was required to address the impacts on lynx from the remapping decision. 866 F.Supp.2d at 1231-33. The court held: "Defendants argue that, because a jeopardy determination was made for the standards contained in the Lynx [Amendment], and those standards were used in revising the [Lynx Analysis Unit] map in 2005, the agencies satisfied their obligations under the ESA. The Court does not agree." Id. at 1232. The court found that the Lynx Amendment "biological opinion from 2007 does not assess the validity of the 2005 map" and that the agencies should have evaluated whether "the elimination of 390,900 acres of land within the boundaries of [Lynx Analysis Unit]s in the 2005 map would adversely affect the lynx or its habitat." Id.

Similarly, in this case, the agencies must prepare an ESA consultation that the evaluates whether "the elimination of [1.1 million] acres of land within the boundaries of [Lynx Analysis Unit]s in the [2020] map would adversely affect the lynx or its habitat." See id.

The remapping of "lynx habitat" requires a Forest Plan amendment.

Finally, the remapping of "lynx habitat" is a Forest Plan amendment that requires analysis under NFMA. Removing Forest Plan Lynx Amendment protections from approximately 1.1 million acres, reducing the number of Lynx

Analysis Units on the Forest from 509 to 78, and increasing the size of individual Lynx Analysis Units so that more acres can be logged before the Lynx Amendment percentage limits for logging in each unit are reached, are changes that "add, modify, or remove one or more [forest] plan components, or [] change how or where one or more plan components apply to all or part of the [forest] plan area (including management areas or geographic areas)." 36 C.F.R. §219.13(a).

More specifically, the remapping of lynx habitat "change[s] how or where" the Lynx Amendment protections apply to this Forest because these protections no longer apply to 1.1 million acres of the Forest. Furthermore, stripping Forest Plan protections from 1.1 million acres – approximately one-third of the Forest – could not be reasonably construed as a mere "administrative change" because such an action does not fall with the narrow regulatory definition of "administrative change." 36 C.F.R. §§219.13(c), 219.7(f).

The District of Oregon held that remapping lynx habitat requires a forest plan amendment:

"the revision of the [Lynx Conservation Assessment Strategy] and the new mapping direction were not merely part of the day-to-day operations of the FS like the less substantial actions taken by the FS and BLM in the cases on which Defendants primarily rely. The court's concerns in Prairie Woods Products regarding the absence of discernible limits to the discretion of the FS to forego or to forestall formal amendment procedures with their concomitant public involvement also are concerns in this case. . . . Whether

based on a theory of a de facto amendment or a failure to act to amend, therefore, the Court concludes an order compelling the public involvement required by NFMA is warranted as to these timber sales.
Oregon Nat. Res. Council Fund, 252 F.Supp.2d at 1101. The court further found that the Forest Service's action violated the substantive provisions of the NFMA planning regulations."

Similarly, in House v. USFS, the Eastern District of Kentucky found that changes to management direction for the Indiana bat constituted a forest plan amendment under NFMA. 974 F.Supp. 1022, 1034 (E.D. Ky. 1997). The court found: "these policies may not be implemented until the Forest Plan has been properly amended to include the same."

Likewise, in Klamath Siskiyou Wildlands Ctr. v. Boody, the Ninth Circuit found that changes to management direction for the red tree vole constituted an amendment of a Bureau of Land Management Resource Management Plan under the Federal Land Policy and Management Act. 468 F.3d 549, 558 (9th Cir. 2006). The court held: "if BLM can modify the protection afforded a species under a resource management plan as dramatically as it has here — without complying with [the amendment regulation] — BLM could ultimately remove all the Survey and Manage designations without ever conducting another EA or EIS, and without providing public disclosure. Such steps would undoubtedly run contrary to both the goals and language of [Federal Land Policy and Management Act.]" Id.

Here too, if the Forest Service "can modify the protection afforded [lynx] under a [forest] plan as dramatically as it has here—without complying with [the amendment regulation] — [the Forest Service] could ultimately remove all the [lynx habitat] designations without ever conducting another EA or EIS, and without providing public disclosure. Such steps would undoubtedly run contrary to both the goals and language of [NFMA]." The preparation of a Forest Plan amendment is not an empty procedural exercise because all relevant substantive protections from the 2012 NFMA planning regulations must be applied to a forest plan amendment. More specifically, for each amendment, the Forest Service must "[d]etermine which specific substantive requirement(s) within §§219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and apply such requirement(s) within the scope and scale of the amendment." 36 C.F.R. §219.13(b)(5); see Sierra Club, 897 F.3d at 601(remanding for application of substantive protections of the 2012 planning regulations to a non-significant forest plan amendment). The application of these substantive regulatory protections may ultimately result in a decision that alters – and is more protective of lynx – than the current 2020 remapping of "lynx habitat."

For all of these reasons, the agencies must complete NEPA, ESA, and NFMA analysis for the 2020 remapping of "lynx habitat" on the Forest. Until those analyses are completed in a lawful manner, the Trail Creek Project can not go forward because the Project analysis is unlawfully premised upon the acceptance and implementation of the new map of

lynx habitat “like a house of cards built on an unsound foundation.” Native Ecosystems, 866 F.

We wrote in our comments:

ELK

The Project and Forest Plan analysis and impacts on elk violate NFMA and NEPA.

In a NEPA analysis, the Forest Service must assess direct, indirect, and cumulative effects of a proposed action.

In a project analysis, the Forest Service must apply the best available science.

The Revised Forest Plan and best available science define “elk security area” as “comprised of contiguous 250 acre blocks of forested habitat .5 miles or more from open roads with these blocks encompassing 30% or more of the area.”

The 2016 EA does not comply with this definition in the analysis of elk.

As the Montana District Court wrote in the order on the Fleecer case:

Christensen et al. (1993) does not support the exclusion of temporary roads. See Native Ecosystems Council, 848 F.

Supp. 2d at 1219. While the study does not speak specifically to "temporary" roads except to advise that the Forest Service "[i]dentify temporary roads where they are an option," temporary roads are not ex- cepted from Christensen's conclusion that "[a]ny motorized vehicle use on roads

will reduce habitat effectiveness." BDNF:L- 055:4 (emphasis added). The defini- tion section ofthe FEIS does not support the exclusion of temporary roads either. "Road density" is defined as the "[n]umber ofmiles of open road per square mile." BDNF:A1-40:1463. While "open road" may suggest that restricted-use roads are not included in the definition, Defendants have admitted that administrative and permitted roads are, in fact, included in the definition. A "temporary road" is listed as one type of"road." ld. It is defined as a "road[] authorized by contract, permit, lease, other written authorization, or emergency operation not intended to be part of the forest transportation system and not necessary for long- term resource man- agement," id., and as "[a] road or trail necessary for emergency operations, or au- thorized by contract, permit, lease, or other written authorization that is not a forest road or trail that is not included in the Forest Transportation Atlas (36 CFR 212.1 (2005) Transportation System),"

id. at 1464. In other words, a temporary road may be an administrative or permitted road, which Defendants say are included in the tables.

Neither the Forest Plan nor the FEIS discuss what effect temporary roads will have on elk viability. In their briefing for the Fleecer case the Forest Service argued that including temporary roads would be nonsensical in areas where the road density objectives are lower than the actual road density at the time the Plan was adopted. In these areas, they assert, no management activities requiring temporary roads would ever be allowed. While this may be true, the Forest Service failed to develop its analysis in the record for the Forest Plan itself, and provided no explanation for its departure from the best available science or from the definitions contained in the FEIS. It "entirely failed to consider an important aspect ofthe problem," Lands Council I, 537 F.3d at 993, and must address this issue on remand in a supplemen- tal EIS.

The EA did not adequately explain the effect of temporary roads on elk viability as the court ordered for the Fleecer EA.

The Forest Service assumptions in the Travel Plans that all closures would be effective has proven false. How many road closure violations have occurred in the Wisdom Ranger District in the last 5 years? It there have been violations of road closures, for this reason, you cannot tier to the analysis in the Travel Plan because it is invalid.

Please update your open road density calculations to include all roads receiving illegal use.

The Forest Service responded:

The EA was released in 2021 and not 2016.

Elk Security section for existing and post implementation secure area which accounts for effects of all roads at different temporal scales; this displays effects of all road use during project implementation and allows comparison to the baseline as it exists today, as well as displays post- implementation security that will result when all temporary roads are obliterated, and routes identified for closure or decommissioning are implemented.

Majority of the analysis area is mapped as secure for wildlife as it is away from open, motorized routes. Elk security is not considered a limiting factor to elk in this area and elk have been at or substantially over objective for many years in this elk management unit.

Impacts to elk from temporary roads were analyzed in the elk analysis in Appendix A. A majority of all temporary roads constructed are adjacent to open motorized routes so there is a small decrease <2% of elk security. The temporary roads will also not be open in the spring and logging will not be conducted during this time – which is a crucial time for calving elk. This is detailed in Appendix A, the wildlife report in the Elk security section.

Proffitt et al. (2013) evaluated effects of hunter access, security habitat as defined by the Hillis paradigm, and other landscape attributes on adult female elk resource selection during the pre- hunting, archery, rifle, and post-hunting periods in 2 different Greater Yellowstone Ecosystem (GYE) elk herds (East Madison Valley and West Paradise Valley). They found that female elk selection for areas restricting public hunting access was stronger than selection for security habitat in both study areas, and that the densities of roads open to motorized use was the strongest predictor of elk distribution. Security is the protection inherent in any situation that allows elk to remain in a defined area despite an increase in stress or disturbance associated with the hunting season or other human activities.

Security is a state of being, a condition or functional concept most important when viewed in relation to the hunting season. Based on thorough review of Unsworth et al. (1993), Hayes et al. (2002), Cook et al. (2005), Rumble and Gamo (2011), which constitute a body of best available science postdating Hillis (1991), forested cover for both hiding and thermal benefits do not appear to be persuasive metrics for elk analysis, particularly for hunted populations.

Additionally, the most recent count of elk in the Gravelly EMU is 10,771 elk which is above the 20 year average of 9,520. This population is currently 12.2% above the management objective of 6,400-9,600 elk. And according to

FWP, "population reduction was needed to move the population towards management objective".

FWP April 4, 2022 data reported the observed total bull: 100 cows ratio was 27.1 (95% CI=25.7─28.5). This compares to 29.5 last year and a LTA of 23.5 (N=39, SD=11.8, 95% CI=21.9─25.1).

The analysis includes the IRA, as it is a substantial portion of the project area and is highly used by elk. Not including this habitat would invalidate conclusions on effects to elk.

Moose winter range in this area was mapped and included in Appendix A of the EA. Based on update mapping from MT FWP and extensive moose survey work – the 2008 Moose Winter Range map was update to more accurately depict moose winter range based on moose observations.

There is no logging proposed in moose winter range as currently mapped.

The project is in violation of NEPA, NFMA, the Forest Plan, The Travel Plan, the APA and the ESA because of the repeated road closure violations. The Forest Service assumptions in the Travel Plans that all closures would be effective has proven false. How many road closure violations have occurred in the Wisdom and Wise River Ranger Districts in the last 5 years? It there have been violations of

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

The statement, “Elk security is not considered a limiting factor to elk in this area and elk have been at or substantially over objective for many years in this elk management unit”, is incorrect. Elk security is a limiting factor for elk throughout MT on public lands. The project area does not have superman elk who are unafraid of hunters. The elk security issue is something MT FWP argues for because they do not want the elk to flee to private lands during hunting season where public lands hunters do not not have access.

Page 26 of the Greenhorn wildlife report states:

- ***This project may result in changes in prey distribution and availability in the short term as potential prey avoid treatment areas and respond to changes in vegetation in treated stands. Some effects may last up to 15 to 20 years as regenerated stands grow and develop a new understory layer comprised of shrubs and trees.***

Page 49 of the Greenhorn wildlife report states:

Temporary roads would reduce secure habitat during implementation however no change in open motorized road and trail densities.

Therefore the EA is incorrect and the Greenhorn project will cause of loss of elk habitat because of loss of security.

The project is in violation of the BDNF Forest Plan because it is not following the best available science for elk which is the Eastside Assessment.

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.”

Christensen et al. (1993) states: “For areas intended to benefit elk summer range and retain high use, habitat effectiveness should be 70 percent or greater.”

Christensen et al. (1993) states: “For areas where elk are one of the primary resource considerations habitat effectiveness should be 50 percent or greater.”

Christensen et al. (1993) states: “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.”

Christensen et al. (1993) states: “Reducing habitat effectiveness should never be considered as a means of controlling elk populations. A population over target is not a Forest Service habitat problem.”

Accordingly, the Eastside Assessment states at page 17 states: “For areas intended to benefit elk summer range and retain high elk use, habitat effectiveness related to motorized routes should be 70% or greater.”

The Eastside Assessment at page 17 states: “At the project level an elk habitat effectiveness analysis should be conducted.”

The best available science define “elk security area” as “comprised of contiguous 250 acre blocks of forested habitat .5 miles or more from open roads with these blocks encompassing 30% or more of the area.”

Page 56 - 57 of the Greenhorn wildlife report states:

Analysis Methods and Assumptions

Elk are identified in the BDNF Forest Plan as a Management Indicator Species for security habitat. Accordingly, elk are analyzed herein with regard to security habitat. Security is defined by MTFWP (2004) as the protection inherent in any situation that allows elk to remain in a defined area despite an increase in stress or disturbance associated with the hunting season or other human activities. Forested cover for hiding and thermal benefits do not appear to be the best metrics for elk analysis, especially for hunted populations (Unsworth et al. 1993; Hayes et al. 2002; Cook et al. 2005; and Rumble and Gamo 2011). Additionally, a study by Proffitt et al. (2013) looked at elk security, hunter access, and other variables

relative to the effects on adult female elk in the Greater Yellowstone Ecosystem (GYE). This study found that elk selection for areas restricting hunting access was greater than selection for security habitat. Further, they found that the density of roads open to motorized use was the strongest predictor of elk distribution.

As such, the density of open motorized roads and trails (OMRTD) is used as the metric for elk security. The Forest Plan has established OMRTD goals for the Gravelly Landscape, broadly, and for Hunting District 330 (the Hunting District encompassing the project area) to address elk security and wildlife security more broadly. The OMRTD goal for the Gravelly Landscape applies year-round, except for the fall hunting season. The goal is 0.7 miles of road per square mile. The OMRTD goal for Hunting District 330 applies to the fall rifle big game season and is 0.7 miles per square mile or less.

Additionally, the Forest Plan defined secure areas based on a buffer around open motorized roads and trails. Specifically, secure areas are those areas greater than 10 acres in size that are 1/3 of a mile or more from a route open to motorized vehicles. The current acreage of secure areas within the project area is displayed in Table 28; refer also to the Secure Area General Season and Fall Season maps). Secure areas account for over 60 percent of both the project area and larger analysis area in both the general season and the fall hunting season.

The Greenhorn project and the forest plan are not flowing the best available science for elk security. There is no mention of what the habitat effectiveness is now or will be for the project area after and during the implementation of the project in violation of NEPA, NFMA and the APA

We wrote in our comments:

Disclose the number of road closure violations in the Madison Ranger District in the last 5 years;

The Forest Service responded:

As stated in the EA, we prepared the EA in order to determine whether the effects of the proposed activities may be significant and require preparation of an EIS. Comments are the commenter's opinion and does not provide new information that demonstrates an EIS is warranted.

The EA and resource reports cite relevant literature, inventory, and monitoring data to discuss the existing condition of resources and potential effects of the Proposed Action. They also contain information on past, present, and reasonably foreseeable actions that could contribute to cumulative effects. The general nature of the comments does not help us identify specific information that the commenter believes is necessary for the analysis or describe how that information might change the results of the analysis.

The Greenhorn project is in violation of NEPA, NFMA and the APA for not responding to our question even though the EA admits that illegal roads are a problem in the project area and effects the analysis of elk security.

Remedy: Choose the No Action Alternative or 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 and use the best available science definition for elk security.

Grizzly Bears

We wrote in our comments:

Please examine how this project could affect grizzly bears, lynx and other species listed under the Endangered Species Act. Are you complying with lynx critical habitat requirements? Please examine how this project will affect all MIS and sensitive species.

The current best science indicates that connectivity between the Yellowstone and Glacier ecosystems are necessary for the long term genetic health of both populations, especially bears in the Yellowstone ecosystem. The project area lies within an identified linkage zone for griz-

zly bears as well as lynx. However, there are no management standards for either species to ensure connectivity is maintained, based on the current best science as required by the ESA. This requires limits on open road densities, limits on travel barriers, and retention of at least 50% dense, older forest habitats for lynx. The NRLMD (2007) does not require any specific features for connectivity for lynx, and the RFP does not require any minimum impacts from open roads to grizzly bears. Grizzly bears are known to be expanding into this landscape, and it is also historic habitat for lynx. Since lynx occupied this area at the time of listing as a threatened species, this landscape may qualify as critical habitat. It's suitability for lynx must therefore be retained until a final deci- sion is made on critical habitat. And suitability for grizzly bear use must also be retained/restored.

The Forest Plan analysis and impacts on ESA-listed grizzly bear violate ESA, NFMA, and NEPA.

The Forest Service did not prepare a biological assessment and consult with

U.S. Fish and Wildlife Service regarding the impact of the Revised Forest Plan on the threatened grizzly bear in all areas across the Forest where grizzly bears may be present.

The biological opinion for the Revised Forest Plan apparently is based on grizzly bear distribution in 2004, which is eight year old data that no longer represents the best

available science on where grizzly bears may be present on the Forest.

There is no scientifically sound incidental take statement for the Revised Forest Plan for the threatened grizzly bear that includes reasonable and prudent measures for all areas where grizzly bears may be present across the Forest.

The agencies' failure to promulgate an adequate biological assessment, Biological Opinion, and Incidental Take Statement for the Revised Forest Plan that addresses all grizzly bears across the Forest violates the ESA.

The Forest Service's failure to take a hard look and include appropriate standards for ESA-listed grizzly bears within the Forest Plan, in a supplemental NEPA process, violates NEPA. See Pacific Rivers Council v.

supplemental NEPA analysis for the Forest Plan.

The Forest Service's failure to amend the Forest Plan to include binding legal stan- dards aimed at recovering and conserving the ESA-listed grizzly bear on the Forest violates NFMA.

The Forest Service must complete a biological assessment for grizzly bears

for the Project because the U.S. Fish and Wildlife Service states that both resident and transient grizzly bears may be present on the Forest.

Grizzly bears are present on the Forest, both within designated grizzly bear recov- ery zones and outside of those zones.

Grizzly bears were documented recently in the Big Hole Valley to the south west of the project area.

As recently as 2010, grizzly bears have been documented to the north and north- west of the Project area: in the Anaconda-Pintler Wilderness area, in the Flint Creek mountain range, in the John Long Mountains, and on the east end of the Anaconda range. The Anaconda range and Anaconda-Pintler Wilderness area are within the wildlife security analysis area for the Project.

In 2005, a dead grizzly bear was found within the Mount Haggin Wildlife Man- agement Area, which is adjacent to the Project area and within the wildlife security analysis area for the Project.

The Project analysis and impacts on ESA-listed grizzly bears violate ESA, NEPA and NFMA.

The U.S. Court of Appeals for the Ninth Circuit holds 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 (9

Cir. 1985).

Because there are endangered species present and will be effect, the Forest Service must complete and EIS. The Project EIS and BA/BiOp must disclose and apply the best available science on recommended open

motorized route density, total motorized route density, and core habitat thresholds for NCDE grizzly bears.

The best available science on NCDE grizzly bears requires no more than 19% open motorized route density over 1.0 mi./sq.mi. and 19% total motorized route density

over 2.0 mi./sq.mi., and no less than 68% core habitat for NCDE grizzly bears (19/19/68).

The following article in the November 3, 2017 NY Times mentions the importance of corridors between the Northern Continental Divide population and the Yellow- stone grizzly population. It also mentions that grizzly bears from the Northern Continental Divide population have almost connected with the Yellowstone popu- lation since there is a grizzly bear in the mountains near Butte, 70 miles from the Yellowstone population.

Yellowstone Grizzlies May Soon Commingle With Northern Cousins

https://www.nytimes.com/2017/11/03/science/grizzly-bears-yellowstone- genes.html?_r=0

HELENA, Mont. — To make the plains and mountains safe for the great herds of cattle that were brought to the

West at the end of the 19th century, grizzly bears were routinely shot as predators by bounty hunters and ranchers.

Ever since, the bears in Yellowstone National Park, protected from hunting, have been cut off from the rest of their kind. Their closest kin prowl the mountains some 70 miles north, in and around Glacier National Park.

In a new paper, biologists say that as grizzly populations increase in both Glacier and Yellowstone, more adventurous males from both parks are journeying farther to stake out territory, winding up in places where they have not been seen in a cen- tury or more.

If they keep roaming and expanding, the two populations will likely reconnect, perhaps as soon as five or 10 years from now.

"It's very encouraging for the long-term future of the bear," said Frank van Manen, leader of the Interagency Grizzly Bear Study Team in Bozeman, Mont., which oversees research into Yellowstone's bears.

A mingling of the separate populations would go a long way toward bolstering the genetics of the isolated Yellowstone grizzlies.

The bears in the Greater Yellowstone ecosystem, in and around the park, are healthy now, and they have increased to at least 700 today from fewer than 150 in 1975, when they were listed as endangered.

But a genetic lifeline from Glacier bears, which are also related to the grizzlies of Canada, will mean a good deal more diversity to help assure the bears' future. It's so important that researchers have talked about trucking grizzly bears from the north to add to the Yellowstone gene pool.

"Because Yellowstone is a bit lower in genetic diversity, hundreds of years from now they might be less able to adapt to changing conditions — changing climate, changing food sources and disease resistance," Dr. van Manen said.

While no one knows what advantageous traits the Glacier grizzlies might have in their genes, increasing diversity is the best way to assure resilience against those types of hazards.

Currently, the nearest interloper from the Northern Continental Divide Ecosystem has bridged the 70-mile gap by working his way south. That grizzly is in the moun- tains near Butte, Mont., some 50 miles from the perimeter of the Yellowstone ecosystem.

Biologists and conservationists are rooting for a natural reunion between the two

largest populations of grizzlies in the country, Dr. van Manen said.

In a study published in Ecosphere, researchers tracked grizzly bears from the northern and southern populations as they moved through western Montana, in- cluding the rugged Big Belt mountains near this city, which sits be- tween the two national parks.

Photo !!

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A grizzly on a road near Mammoth, Wyo. Scientists say if bears keep roaming

from Yellowstone and Glacier National Park, the two populations will likely re- connect. Credit David Grubs/ The Billings Gazette, via Associated Press

The effort to follow these nomadic bears was aided by satellite data collars and new, more powerful data analysis techniques. Some 124 males were monitored from 2000 to 2015, some for more than one year.

GPS collars can track a bear almost in real time, providing richly detailed informa- tion on the corridors and habitats they use that need to be protected.

While much of the land between the two parks is publicly owned and wild, it be- comes a gauntlet in some places as bears migrate into towns, cities, ranches and farms.

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The bears are likely to seek out dog food, beehives, garbage, chickens and even apple trees, getting into trouble that may require trapping and relocating them. Highway crossings, especially on I-90 and I-15, pose a serious risk.

Conservation groups and biologists say it's a race against time to protect some of the open land between the two parks and to assure permanent transit routes for wildlife through land purchases or conservation easement.

Residential housing development north of Yellowstone around Bozeman, for ex- ample, is soaring.

"Even one house per square mile can be a problem for bears," said Jodi Hilty, a wildlife biologist in Canmore, Canada. "At the same time, this is one of the most intact mountain ecosystems in the world."

Dr. Hilty heads the group Yellowstone to Yukon, which seeks to link bears and oth- er Yellowstone wildlife with populations in Glacier National Park and in vast tracts of wilderness in Canada. Protecting migration corridors between Yellowstone, Glacier and Canada would benefit not just bears, she said, but cougars, wolverines and other animals.

The Fish and Wildlife Service has removed the protections afforded under the En- dangered Species Act from the Yellowstone grizzly because the population has grown so large. Dr. van Manen said that the number of grizzlies may exceed 1,000.

Environmentalists have sued the agency over its decision. They argue that climate change is a wild card that might someday cause the Yellowstone bear population to collapse.

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With the bears delisted, some are concerned about plans by Montana officials to

allow the hunting of Yellowstone grizzlies. Dr. David Mattson, a retired wildlife biologist, said that there is a good chance that "Montana will institute a more lethal regime, whether by sport hunting or by other means, that will compromise these prospects."

The state has said it would not allow hunting in areas where the two populations might reconnect.

As bears explore far beyond their core habitats, people not accustomed to grizzlies need to be educated about bear-proofing garbage cans and sealing off beehives and chicken coops with electric fencing, Dr. van Manen said.

Carrying pepper spray has already become indispensable for hikers, hunters and others in many parts of Montana, Idaho and Wyoming.

In 2016, four grizzlies were killed after confronting hunters in "defense of life" scenarios. Recently, a game warden near Cody, Wyo., shot and killed a female grizzly when it charged at him, leaving her cubs orphans.

Generally, though, the news for the big bear is good, said Dr. van Manen.

"There is strong scientific evidence that the recovery process that was put into place starting in the mid 1970s has paid off," he said. "It's an extraordinary effort

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for recovery of a species that has ability to kill people. For the American people to support it is a remarkable achievement."

The project FEIS does not address what the level of security, OMARD, and TMARD are recommended for grizzly bears in the NCDE, and how these compare to those available in the project area. This comparison would demonstrate compat- ibility of existing and planned management of grizzly bears to the general public.

There is no analysis of TMARD before or after project completion. Decommissioning of roads will reduce OMARD, but will not reduce TMARD. The road would have to be completely obliterated, and no future use can be planned (IGBC 1998). The claim that all new temporary roads will be obliterated, and thus no add to TMARD after the projects are completed, is never actually verified in the project FEIS. There is no actual identification of the individual new temporary roads to be constructed, how long they will be left in place, the timeline for obliteration, as well as thes for obliteration. The project FEIS does not define why future management activities will not be required on these new roads in harvest units, such as future harvests in partial logging units, and precommer-

cial thinning of the vast clearcut acreage that will be created by the project.

There is no analysis on how the project as to how the clearcutting existing cover, including openings up to large clearcuts, will affect grizzly bear movement through this landscape.

In a project analysis, the Forest Service must apply the best available science.

The BiOp for the BDNF revised Forest Plan, and the scoping notice for the Greenhorn project, also do not use the current best science by identifying limits to TMARD or security. Security is the key factor that is proposed for management outside the Recovery Zones for grizzly bears (RFP Appendix G at 48).

The suggestion by the USFWS that the RFP OMRTD direction will prevent undue impacts on grizzly bears is meaningless as well. The RFP direction does not have to be met within any specific project area, including the project, but rather within huge landscape areas. The key linkage zone in the Greenhorn project could increase roads by over 60 miles and still meet the RFP "goal" for OMARD "after" the project is completed. This goal does not apply to activities during project im- plementation (RFP glossary at corrected 295).

The incidental take allowed on the BDNF and in the project for current as well as planned levels of disturbance are illegal because there is no actual means of mea- suring take by the allowed construction of up to 70 miles of new roads across the entire BDNF, which consists of 3, 380,000 acres (RFP 2).

The Greenhorn project violates existing conservation direction for grizzly bears because habitat connectivity is not being managed to contribute to wildlife linkage zones (RFP at 45); secure habitat needed to facilitate grizzly bear habitat will be decreased for over 10 years, during which bear movements will be reduced.

The Forest Service and the USFWS will violate the ESA, the NEPA, and the NFMA if the project is implemented, due to the following:

-the BDNF has no conservation strategy for grizzly bears on the Pintler portion of the Forest, including within the project area.

-the BDNF is not maintain habitat connectivity for grizzly bears in the Greenhorn project area.

-the analysis of direct impacts for the project area do not use the current best sci- ence for grizzly bear security areas in the NDDE.

-the ability of grizzly bears to traverse through the project area is never evaluated.

-the current best science, including levels of grizzly bear security, open and total road densities, was not used in evaluating project impacts on grizzly bear during as well as after implementation.

-mitigation measures cited by both the Forest Service and the USFWS for grizzly bears as per landscape levels of OMRTD are invalid as direct effects are washed out.

-mitigation measures as per OMRTD at the landscape level do not apply to project implementation, and do therefore no mitigate disturbance impacts to grizzly bears from motorized routes during project activities.

-the cumulative effects of proposed activities on the Helena National Forest are not evaluated.

-the conclusions as to project effects as per the ESA of the proposed project on grizzly bears is never identified in the draft ROD or FEIS.

-the report provided by the USFWS in regards to project impacts on grizzly bears, and terms and conditions of the project, were never provided to the public in the draft ROD or FEIS.

-the conclusions regarding project impacts on grizzly bears in the project FEIS were invalid due to a lack of supporting documentation.

-there is no analysis of the loss of extensive, large blocks of hiding cover on grizzly bear movement through the project area.

-there was no action alternative that would restore grizzly bear habitat in the project area to improve habitat connectivity.

-the FS and the USFWS provided invalid, unsupported definitions of "temporary impacts".

The Forest Service responded:

These comments are directed at the Forest Plan and not specific to the proposed action or project analysis. There is no project- or site-specific comment to respond to.

The project is in violation of NEPA, NFMA, the ESA and the APA for not responding to our comments, for not following the best available science, and for not analyzing the project's effects on grizzly bears even though the project is likely to adversely affect grizzly bears.

Open road density and the amount of secure habitat in female home ranges are important predictors of female survival and both contribute different yet important com- ponents influencing survival (Mace et al. 1996, Wakkinen and Kasworm 1997, Schwartz et al. 2010).

Please find attached, ***Effects of roads and motorized human access on grizzly bear populations in British Columbia and Alberta, Canada*** by Proctor et al. 2020.

They find that the secure habitat needs to be greater than 10 km squared or greater than 2471 acres. But page 16 of Appendix A, Greenhorn ES wildlife report states:

Secure Habitat - Motorized Roads and Trails. Grizzly bear secure habitat is defined as areas more than 500 meters from an open motorized access route and greater than 10 acres in size (IGBC 1998). Based on this definition, there are approximately 38,613 acres (54 percent) of secure areas within the analysis area. Refer to the Grizzly Bear Secure Area map.

Proctor et al. 2020 is the best available science and defines secure habitat as approximately 2500 acres in size and 500 meters from a road. The Greenhorn project defines secure habitat as 10 acres in size and 500 meters from a road. The project is not following the best available science, NEPA, NFMA, the ESA and the APA.

Page 18 of Appendix A, Greenhorn ES wildlife report states:

Appendix A, Greenhorn ES wildlife report states:

Helicopter Displacement

Helicopters may be used for implementation of prescribed burns during the time grizzly bears are in their dens and during den emergence (March-May), and also during the

fall when this area is heavily used by hunters. It is known that low-flying aircraft have the potential to affect grizzly bears, ranging from basic observation of the aircraft to temporary movement out of an area. After den emergence, females with cubs of the year often hang around their den site until the cubs are large enough to move through the neighboring snowpack.

Helicopter activity would be targeted to a potential burn window and the preferred timing is spring (when there is enough snowpack in the forested stands to act as a fuel break into these forested habitats). The length of time could be up to 5 days of daylong helicopter activity; displacement is likely. To implement a given burn unit, there would generally be 3 or 4 days of burn activity with continuous helicopter activity.

There would be minimal ground support for aerial operations. The prescribed fire area would be useable to grizzly bears immediately after 1-5 days of implementation per unit. It is likely 1-2 prescribed fire units would get burned during each season. There are 13 burn units proposed with this project.

Because of the potential of direct impacts to grizzly bears during the spring, prior to ignition operations, the unit proposed for treatment will be flown over a minimum of 3 complete times to survey for grizzly bear dens or any grizzly bears in the unit with a qualified wildlife biologist (or designated qualified observer). If grizzly bears are observed within the unit, ignition would not occur at elevations below the individuals, and would occur in a pattern

that would allow the bear or bears to be able to leave the prescribed fire unit. Bears without cubs are expected to be able to move out of the prescribed fire unit more easily into other neighboring areas that are not burned. Because all of the burn units will not be implemented simultaneously, there are adjacent areas within the analysis area that yearlings to adult bears can be displaced to and are free from disturbance (insignificant effects).

After den emergence, females with cubs of the year often hang around their den site until the cubs are large enough to move through the neighboring snowpack. Because females with cubs are restricted during this time, there is a potential that cubs would not be able to move out of the flight path or be able to follow their mother closely during disturbance and displacement from the helicopter.

Scientific research documents that grizzly bears flee in terror from low-level helicopter flights and may abandon their habitat, but the draft decision authorizes low-level helicopter flights to drop firestarters in areas occupied by grizzly sow/cub groups – a blatant violation of the Endangered Species Act.

So the wildlife report states low-level aircraft displace grizzly bears but they are going to look for grizzly bears with at least 3 low level flights.

Please find attached: ***Guide to Effects Analysis of Helicopter Use in Grizzly Bear Habitat*** found that repeated low

level flights as authorized by the draft decision is a take of grizzly bears.

There is no analysis of the impact of domestic sheep in the project area on grizzly bears.

REMEDY: Choose the No Action Alternative or withdraw the draft decision and FONSI and write an EIS that fully complies with the law.

Old Growth

We wrote in our comments:

For the proposal to be consistent with the Forest Plan, enough habitat for viable populations of old-growth dependent wildlife species is needed over the landscape. Considering potential difficulties of using population viability analysis at the project analysis area level (Ruggiero, et. al., 1994), the cumulative effects of carrying out multiple projects simultaneously across the BDNF makes it imperative that population viability be assessed at least at the forestwide scale (Marcot and Murphy, 1992). Also, <u>temporal</u> considerations of the impacts on wildlife population viability from implementing something with such long duration as a Forest Plan must be considered (id.) but this has never been done by the BDNF. It is also of paramount importance to monitor population during the implementation of the Forest Plan in order to validate assumptions used about long-term species persistence i.e., population viability (Marcot and Murphy, 1992; Lacy and Clark, 1993).

The U.S. District Court in Montana ruled in Native Ecosystems Council vs. Kimbell on the Keystone Quartz project that the Forest Service presented no hard data to support or demonstrate the biological impact on old-growth species viability across the forest of further reducing Douglas-fir old-growth habitat below minimum forest plan standards, which themselves may be inadequate in light of more recent scientific information. Species in the Northern Region, including the BDNF, thought to prefer old-growth habitat for breeding or feeding include northern goshawk, flammulated owl, pileated woodpecker, black-backed woodpecker (after wildfire or beetle epidemic), fisher, marten, Canada lynx, and wolverine.

For the BDNF, sensitive old-growth dependent species include the northern goshawk and flammulated owl. According to official FS policy, the BDNF "must develop conservation strategies for those sensitive species whose continued existence may be negatively affected by the forest plan or a proposed project." FSM 2670.45. These strategies would address the forest-wide and range-wide conditions for the affected species, allowing site-specific viability analysis to be tiered to the forest-wide viability analysis, and would establish quantifiable objectives for the affected species. These strategies must be adopted

prior to implementation of projects that would adversely impact sensitive species habitat. FSM 2622.01, 2670.45.

Please demonstrate that this project will leave enough snags to follow the Forest Plan requirements and the requirements of sensitive old growth species such as flammulated owls and goshawks. Loggers are required to follow OSHA safety standards. Will these standards require snags to be cut down? After snags are cut down for safety for OSHA requirements will there still be enough snags left for old growth sensitive species?

Specifically how will the Greenhorn Project affect Flammulated owls, cavity-nesters usually associated with mature stands of ponderosa pine and Douglas-fir? Among other habitat characteristics, flammulated owls benefit from an abundance of large snags and a relatively dense under-story. The flammulated owl is a sensitive species in Region One, and is largely dependent on old ponderosa pine forests. According to a 2002 Region-wide assessment, not referenced in the 2003 FEIS for the Project, such forests only occur at 12-16% of their former, pre-fire suppression/pre-logging (that is, "historic") levels, and thus species viability has been determined to be at risk. The Northern Region also recognizes that its strategy for

restoring habitat for the flammulated owl and found in the Island South project that "in no way guarantees that flammulated owls will be restored to viable levels."

Snag densities recommended by experts to support cavity-nesting birds range from 2.1 to 11 snags per acre of greater than 9" dbh. Please note that the fact that more recent science has called into question the lower snag densities cited in the earlier research, and the more recent science implies that about 4 snags per acre may be the minimum required to insure viability.

What surveys has the BDNF specifically designed to detect flammulated owls? The FS has not developed a conservation strategy for the flammulated owl in the BDNF, or in the Northern Rockies. Absent an appropriate landscape management strategy for insuring their viability, based upon the best available science, it is arbitrary and capricious to dismiss potential impacts on the ground where the FS has failed to conduct the kind of comprehensive surveys that would reveal their presence. This convenient excuse for not protecting for a species that is becoming exceedingly rare, a strategy of managing for extinction (since protection premised on detection affords greatest protection to the species that least need it) has

been condemned by the FS's own leading expert in the northern region, Mike Hillis:

> *With the exception of the Spotted Owl…, the U.S. Forest Service has not given much emphasis to owl management. This is contrary to the National Forest Management Act of 1976 (NFMA) which mandates that all wildlife species be managed for viable populations. However, with over 500 vertebrate species this would be difficult for any organization. Recognizing the absence of detailed information on owl habitat, the apparent association of owls with snags, mature, and old-growth timber (both rapidly declining), it seems inconsistent that the U.S. Forest Service has placed little emphasis on owl management. One might conclude that the agency's painful experiences with the Spotted Owl in Oregon and Washington have evolved into a 'hear no evil, see no evil' approach for other forest owls as well.*

The NPCNF's Lolo Insect & Disease DEIS states: "The nest tree is the most important variable to estimate breeding habitat use by the pileated woodpecker (Kirk and Naylor 1996, Giese and Cuthbert 2003) …The mean DBH of nest trees was 33 inches. …Nest trees averaged 28 inches DBH." (Emphases added.)

Bull et al., 2007 compare the effects of natural disturbance with large-scale logging on pileated woodpeckers. Also see Bull et al., 1992, Bull and Holthausen, 1993, and Bull et al., 1997 for biology of

pileated woodpeckers and the habitats they share with cavity nesting wildlife.

Lorenz et al., 2015 state:

> ***Our findings suggest that higher densities of snags and other nest substrates should be provided for PCEs (primary cavity excavators) than generally recommended, because past research studies likely overestimated the abundance of suitable nest sites and underestimated the number of snags required to sustain PCE populations. Accordingly, the felling or removal of snags for any purpose, including commercial salvage logging and home firewood gathering, should not be permitted where conservation and management of PCEs or SCUs (secondary cavity users) is a concern (Scott 1978, Hutto 2006).***

The implication is clear: managers know little about how many snags per acre are needed to sustain populations of cavity nesting species. Only the birds themselves have the capability to decide if a tree is suitable for excavating. The EA and Forest Plan fails to recognize this scientific finding.

On the same subject, Hutto 2006, notes from the scientific literature: "The most valuable wildlife snags in green-tree forests are relatively large, as evidenced by the disproportionate number of cavities in larger snags (Lehmkuhl et al. 2003), and are relatively deteriorated (Drapeau et al. 2002)."

Spiering and Knight (2005) examined the relationship between cavity-nesting birds and snag density in managed ponderosa pine stands and examined if cavity-nesting bird use of snags as nest sites was related to the following snag characteristics (DBH, snag height, state of decay, percent bark cover, and the presence of broken top), and if evidence of foraging on snags was related to the following snag characteristics: tree species, DBH, and state of decay. Spiering and Knight (2005) state:

> *"Many species of birds are dependent on snags for nest sites, including 85 species of cavity-nesting birds in North America (Scott et al. 1977). Therefore, information of how many and what types of snags are required by cavity-nesting bird species is critical for wildlife biologists, silviculturists, and forest managers."*
>
> *"Researchers across many forest types have found that cavity-nesting birds utilize snags with large DBH and tall height for nest trees (Scott, 1978; Cunningham et al., 1980; Mannan et al., 1980; Raphael and White, 1984; Reynolds et al., 1985; Zarnowitz and Manuwal, 1985; Schreiber and deCalesta, 1992)."*

Spiering and Knight (2005) found the following.

> *Larger DBH and greater snag height were positively associated with the presence of a cavity, and advanced stages of decay and the presence of a broken top were*

negatively associated with the presence of a cavity. Snags in larger DBH size classes had more evidence of foraging than expected based on abundance.

Percent bark cover had little influence on the presence of a cavity. Therefore, larger and taller snags that are not heavily decayed are the most likely locations for cavity-nesting birds to excavate cavities.

The association of larger DBH and greater height of snags with cavities is consistent with other studies (Scott, 1978; Cunningham et al., 1980; Mannan et al., 1980; Raphael and White, 1984; Reynolds et al., 1985; Zarnowitz and Manuwal, 1985; Schreiber and deCalesta, 1992).

Spiering and Knight (2005) state that the "lack of large snags for use as nest sites may be the main reason for the low densities of cavity-nesting birds found in managed stands on the Black Hills National Forest. ...The increased proportion of snags with evidence of foraging as DBH size class increased and the significant goodness-of-fit test indicate that large snags are the most important for foraging."

Tingley et al., 2016 note the diversity of habitats following a fire is related to <u>the diversity of burn severities:</u> "(W)ithin the decade following fire, different burn severities represent unique habitats whose bird communities show differentiation over time… Snags are

also critical resources for many bird species after fire. Increasing densities of many bird species after fire—primarily wood excavators, aerial insectivores, and secondary cavity nesters—can be directly tied to snag densities…"

One issue that arises is the abundance of the large snags and down wood remaining from past logging, firewood gathering, and other management, following the proposed logging, and—<u>the nuance ignored in this EA</u>—through time as recruitment becomes practically nil after a few years in logged areas due to most or all of the large trees being removed and/or downed. Since the EA suggests that beyond the analysis area (the entire Forest and to the Region) adequate habitat values would remain, the agency is obligated to provide the numbers and conduct a scientifically sound cumulative effects analysis—including the impacts of past logging, firewood gathering, etc. The FS has not done this. The project area was logged in the past, which obviously has affected recruitment of large snags. As we discuss above, the nesting tree needs of the pileated woodpecker is of a larger size than the FS acknowledges or analyzes. And the EA makes no commitment towards assuring retention of the largest tree habitat at the unit, project area, or any landscape scale.

Mealey, 1983 stated: "Well distributed habitat is the amount and location of required habitat which assure that individuals from demes, distributed throughout the

population's existing range, can interact. Habitat should be located so that genetic exchange among all demes is possible." That document also provides guidance for pileated woodpecker habitat distribution.

<u>Northern goshawk</u>
The EA fails to include a cumulative effects analysis considering past and ongoing impacts in a logical cumulative effects analysis area for goshawks.

Crocker-Bedford (1990) investigated changes in northern goshawk habitat utilization following logging. He noted:

> ***After partial harvesting over extensive locales around nest buffers, reoccupancy decreased by an estimated 90% and nestling production decreased by an estimated 97%. Decreases were probably due to increased competition from open-forest raptors, as well as changes in hunting habitat and prey abundance.***

Clough (2000) noted that in the absence of long-term monitoring data, a very conservative approach to allowing logging activities near active goshawk nest stands should be taken to ensure that goshawk distribution is not greatly altered. This indicates that the full 180-acre nest area management scheme recommended by Reynolds et al. (1992) should be used around any active goshawk nest on the Forest. Removal of any large trees in the 180-acre nesting area would contradict the Reynolds et al. (1992) guidelines.

The EA doesn't explain how the FS would be managing in considerations of Reynolds et al. (1992) scientific recommendations. Reynolds, et al. 1992, calls for protecting northern goshawk nest areas around 3 nests and 3 alternative nests against adverse impacts in each home range. However, the EA does not invoke best available science to maintain any nest areas, or accurately disclosed how the approved activities might impact such areas.

Reynolds et al. 1992 calls for ratios of (20%/20%/20%) each in the mid-aged forest, mature forest, and old forest Vegetative Structural Stage (VSS) classes for, in this case hypothetical post-fledging family areas (PFAs) and foraging areas.

In addition, Reynolds et al. 1992 calls for agency-created openings of no more than 2 acres in size or less in the PFAs, depending on forest type, and agency-created opening of no more than 1-4 acres or less in size in the foraging areas, depending on forest type.

Along with Reynolds et al., 1992, another conservation strategy for the goshawk is Graham, et al., 1999. Research suggests that it is essential to viability of goshawks that 20-50% of old growth within their nesting areas be maintained (Suring et al. 1993, Reynolds et al. 1992). USDA Forest Service (2000b) recommends that forest opening greater than 50-60 acres be avoided in the

vicinity of goshawks. At least five years of monitoring is necessary to allow for effective estimates of habitat quality (USDA Forest Service, 2000b). Research suggests that a localized distribution of 50% old growth should be maintained to allow for viability of goshawks (Suring et al. 1993).

Moser and Garton (2009) reported that all goshawk nests examined in their study area were found in stands whose average diameter of overstory trees was over 12.2 inches and all nest stands had ≥ 70% overstory tree canopy. They described their findings as being similar to those described by Hayward and Escano (1989), who reported that nesting habitat "may be described as mature to overmature conifer forest with a closed canopy (75-85% cover)…."

The EA fails to recognize goshawk long-term fidelity to nest stands.

Also please consider Beier and Drennan (1997), Crocker-Bedford (1990), Greenwald et al. (2005), Hayward and Escano (1989), La Sorte, et al. (2004), USDA Forest Service (2000b) and Patla (1997) as best available science for northern goshawk biology.

Please disclose the frequency and geographic extent of goshawk nest searches during the past 10 years in the project area.

The FS did not utilize goshawk survey methodology consistent with the best available science. For example the recent and comprehensive protocol, "Northern Goshawk Inventory and Monitoring Technical Guide" by Woodbridge and Hargis, 2006. Also, USDA Forest Service 2000b state:

> ***A common thread in the interviews was the lack of a landscape approach in providing goshawk habitat well distributed across the Forest (Squires, Reynolds, Boyce). Reynolds was deeply concerned that both alternatives focus only on 600 acres around known goshawk nests. He was concerned that this direction could be keeping the goshawk population artificially low. Because goshawks move around within their territories, they are very difficult to find (Reynolds). There might be more goshawks on the Forest than currently known (Squires). One or two years of goshawk surveys is not enough (Reynolds). Some pairs may not lay eggs for five years (Reynolds). To get confidence in identifying nesting goshawk pairs, four to six years of surveys are needed (Reynolds). (Emphasis added.)***

The FS's Samson (2006a) reports says that 110 breeding individuals (i.e. 55 pairs) are necessary for a viable goshawk population in R1. Attachment 1 is a map showing the results from the 2005 R1 region-wide goshawk survey using their Woodbridge and Hargis goshawk monitoring protocol, which is published as a

USFS technical report. The 2005 detection map says there were 40 detections in 2005 in Region 1. So the results of this survey essentially show that the population in Region 1 is not viable according to the agency's own science (only 40 instead of 55). And some of the detections may have been individuals using the same nest, so the number of nests (and therefore number of breeding pairs) could be even lower than 40.

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

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

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

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

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

CC.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;

The Forest Service responded:

As stated in the EA, we prepared the EA in order to determine whether the effects of the proposed activities may be significant and require preparation of an EIS. Comments are the commenter's opinion and does not provide new information that demonstrates an EIS is warranted.

The EA and resource reports cite relevant literature, inventory, and monitoring data to discuss the existing condition of resources and potential effects of the Proposed Action. They also contain information on past, present, and reasonably foreseeable actions that could contribute to cumulative effects. The general nature of the comments does not help us identify specific information that the commenter believes is necessary for the analysis or describe how that information might change the results of the analysis.

The Greenhorn project does not demonstrate that the project complies with the Forest Plan requirements for old growth in violation of NEPA, NFMA, and the APA.

Remedy:

Choose the No Action Alternative or withdraw the Draft Decision and FONSI and write an EIS that fully complies with the law.

We wrote in our comments:

A. Disclose all Beaverhead-Deerlodge National Forest Plan requirements for logging projects and explain how the Project complies with them;

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

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

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

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

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

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

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

I. Disclose the number of road closure violations in the Madison Ranger District in the last 5 years;

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

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

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

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

N. Disclose the number of acres and location of Lynx Analysis Units (LAU)s that were removed from the BDNF without going through NEPA;

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

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

Q. Disclose the amount of detrimental soil disturbance that currently exists in each proposed unit from previous logging and grazing activities;

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

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

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

U. Disclose how grazing affects aspen regeneration;
V. Disclose the timeline for implementation;
W. Disclose the funding source for non-commercial activities proposed;
X. Disclose the current level of old growth forest in each third order drainage in the Project area;
Y. Disclose the method used to quantify old growth forest acreages and its rate of error based upon field review of its predictions;
Z. Disclose the historic levels of mature and old growth forest in the Project area;
AA. Disclose the level of mature and old growth forest necessary to sustain viable populations of dependent wildlife species in the area;
BB. Disclose the amount of mature and old growth forest that will remain after implementation;
CC. Disclose the amount of current habitat for old growth and mature forest dependent species in the Project area;
DD. Disclose the amount of habitat for old growth and mature forest dependent species that will remain after Project implementation;
EE. 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;
FF. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security currently available in the area;
GG. Have forest fires contributed to a diverse landscape?

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

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

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

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

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

MM. 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;

NN. 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;

OO. 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;

PP. Disclose when and how the Beaverhead-Deerlodge National Forest made the decision to suppress

natural wildfire in the Project area and replace natural fire with logging and prescribed burning;

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

RR. Disclose how Project complies with the Roadless Rule;

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

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

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

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

WW. Disclose how will the project effect sage grouse;

XX. What is the fire cycle of sagebrush;

1. Past, current, and reasonably foreseeable logging units in the Project area;
2. Past, current, and reasonably foreseeable grazing allotments in the Project area;
3. Density of human residences within 1.5 miles from the Project unit boundaries;
4. Hiding cover in the Project area according to the Forest Plan definition;
5. Old growth forest in the Project area;
6. Big game security areas;
7. Moose winter range;

The Forest Service responded:

As stated in the EA, we prepared the EA in order to determine whether the effects of the proposed activities may be significant and require preparation of an EIS. Comments are the commenter's opinion and does not provide new information that demonstrates an EIS is warranted.

The EA and resource reports cite relevant literature, inventory, and monitoring data to discuss the existing condition of resources and potential effects of the Proposed Action. They also contain information on past, present, and reasonably foreseeable actions that could contribute to cumulative effects. The general nature of the comments does not help us identify specific information that the commenter believes is necessary for the analysis or describe how that information might change the results of the analysis.

The Greenhorn project does not demonstrate that the project complies with the Forest Plan in violation of NEPA, NFMA, and the APA.

We wrote in our comments:

<u>Weeds</u>

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

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

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

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

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

Logging activities within the analysis area would likely cumulatively contribute to increases to noxious weed distribution and populations. As a disturbance process, logging has the potential to greatly exacerbate infestations of certain noxious weed species. Please disclose the amount of detrimental soil disturbance that currently exists in each proposed unit from previous logging and grazing activities. Please disclose the expected amount of detrimental soil disturbance in each unit after ground disturbance and prior to any proposed mitigation/remediation. Please disclose the expected amount of detrimental soil disturbance in each unit after proposed mitigation/remediation. Please also disclose the analytical data that supports proposed soil mitigation/remediation measures.

Dry site vegetation types and road corridors are extremely vulnerable, especially where recent ground disturbance (timber management, road construction) has occurred. Units proposed for logging within project area may have closed forest service access roads (jammers) located within units. These units have the highest potential for noxious weed infestation and exacerbation through fire activities. Please provide an alternative that eliminates units that have noxious weeds present on roads within units from fire management proposals.

Please address the ecological, social and ascetic impact of current noxious weed infestations within the project area. Include an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations. What treatment methods will be used to address growing noxious weed problems? What noxious weeds are currently and historically found within the project area? Please include a map of current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's-tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the MONTANA COUNTY NOXIOUS WEED LIST. State-listed Category 2 noxious weed species yellow and orange hawkweeds are recently established (within the last 5 to 10 years) in Montana and are rapidly expanding in established areas. They can invade undisturbed areas where native plant communities are intact. These species can persist in shaded conditions and often grow underneath shrubs making eradication very difficult. Their stoloniferous (growing at the surface or below ground) habit can create dense mats that can persist and spread to densities of 3500 plants per square mile (Thomas and Dale 1975). Are yellow and orange hawkweeds present within the project area?
Please address the cumulative, direct and indirect effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been

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

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

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

When areas treated with herbicides are reseeded on national forest land, they are usually reseeded with exotic

grasses, not native plant species. What native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project? Will disturbed areas including road corridors, skid trails, and burn units be planted or reseeded with native plant species?

The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest Service concedes that preventing the introduction of weeds into uninfested areas is "the most critical component of a weed management program." The Forest Service's national management strategy for noxious weeds also recommends "develop[ing] and implement[ing] forest plan standards . . . ." and recognizes that the cheapest and most effective solution is prevention. Which units within the project area currently have no noxious weed populations within their boundaries? What minimum standards are in the Beaverhead-Deerlodge National Forest Plan to address noxious weed infestations? Please include an alternative in the DEIS that includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation. The failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native plant commu-

nities. Additionally, the omission of an EIS alternative that includes preventive measures would violate NEPA because the Forest Service would fail to consider a reasonable alternative. Disclose the impact of the Project on noxious weed infestations and native plant communities;

<u>Rare Plants</u>

The ESA requires that the Forest Service conserve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which population viability is a concern as "sensitive species" designated by the Regional Forester (FSM 2670.44). The response of each of the sensitive plant species to management activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural processes such as fire, insect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be altered may have impacts on native vegetation, including threatened and sensitive plants. Herbicide application – intended to eradicate invasive plants – also results in a loss of native plant diversity because herbicides kill native plants as well as invasive plants. Al-

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

What threatened, endangered, rare and sensitive plant species and habitat are located within the proposed project area? What <u>standards</u> will be used to protect threatened, rare, sensitive and culturally important plant species and their habitats from the management actions proposed in this project? Describe the potential direct and indirect effect of the proposed management actions on rare plants and their habitat.

The Forest Service responded:

Direct, indirect, and cumulative effects of the proposed action on weed introduction, spread and persistence are addressed in detail in the Invasive Plants section of the EA and design features for noxious weeds in Appendix B.

Please refer to the noxious weed inventory map and Table 69. Cheatgrass is not classified as a noxious weed in Montana. Only Montana and Madison County listed noxious weeds species present in the project area are included

in the table. There are no known yellow or orange hawkweed populations present in the project area.

The noxious weed inventory map has been updated and displays known noxious weed infestations and proximity to proposed treatment units. There are known knapweed infestations along the Timber Creek Road as displayed on the noxious weeds map.

We appreciate Ruby Valley Conservation District providing information of areas monitored for presence of noxious weeds. As identified in design feature NW-5, monitored areas with noxious weed presence will be emphasized to determine species, size of infestation, and appropriate treatment method. Areas monitored have been added to the EA, including houndstongue in North Meadow Creek.

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Thank you for your comments, please read the Sensitive Plant Section and Design Features in the EA to answer your questions. Consultation with USFWS is in progress.

Invasive Plant Prevention Alternative

The public suggested that the Forest Service "provide an alternative that eliminates units that have noxious weeds present on roads...", that the Forest Service consider an alternative "that includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation" and proposed the Forest Service consider alternative means to address noxious weeds. This alternative was eliminated from detailed study because:

- *Eliminating treatment areas with weeds would fail to meet the purpose and need of the project. Reducing conifer encroachment, and diversifying timber size and age classes will move areas toward desired conditions. Refer to the purpose and need section above*

for a detailed discussion of the need for project treatments.

- *Project design features and mitigation measures have been developed to address the risk of the proposed project resulting in the establishment or spread of invasive weeds. See "Design Features and Mitigation Measures" under Range and Sensitive Plants in the Environmental Effects section.*

Noxious weeds: Risk of invasive plant species spreading in the project area is a major concern. Each of the invasive plant species that occur within the project area have a known response to the types of proposed treatment activities for this project. Most often these species need disturbance to establish or spread. Any ground disturbing activities such as burning, road construction or maintenance activities such as road grading and resurfacing can provide enough disturbance to allow the spread of existing populations or establishment of new ones. Table 69 shows the results of the 2011 inventory. The number of polygons is the number of infestations large enough to make an acreage estimate. Total observations include these polygons as well as small clumps of invasive plants too small to assign an acreage figure. Some or all weed species listed below may occur within any or all of the polygons delineated on the map in Appendix D. The most common occurrence is knapweed as it occurs on drier sites and can easily invade relatively undisturbed areas.

Table 69. Project area noxious weed populations states 1002 acres of the project area have noxious weeds but this does not include cheatgrass because it is not considered a noxious weed.

In the context of this analysis, risk is defined as the probability, or potential, that: 1) invasive plant species seed would be transported and then deposited into areas that are currently not infested by weeds, and 2) proposed treatment activities would increase the density and spread of invasive plant species within the project area.

Understanding the interactions among invasive plant species, native plant communities, and the proposed treatments of this project requires an understanding of invasibility. Invasibility is the susceptibility of a plant community to invasion (Zouhar et al. 2008). This is determined by many factors, including the existing vegetation, available nutrients, availability of seed from invasive plants, and amount of past human activity in the area. Lower elevations within the project area have a greater likelihood of invasion than higher elevation areas. This is mainly due to the associated human activities in the area such as roads, livestock grazing, recreation, and the readily available seed source from existing invasive plant species. Higher elevations also receive a higher average precipitation where native species tend to outcompete invasive plant species.

Page 6 of Appendix B of the Greenhorn Project EA states the project complies with Multiple Use Sustained Yield Act (MUSA), NEPA and NFMA:

MUSA

Yes, consistent because vegetation management activities would ensure that the productivity of the land is not impaired, including grazing lands that produce forage for livestock.

NEPA

Yes, consistent because project design features would be implemented to reduce, or minimize, potential adverse effects of invasive plants.

NFMA

Yes, consistent because the project would be consistent with the Forest Plan Vegetation Objective to prevent, reduce, or eliminate infestations of noxious weed species.

The Record of Decision

For the

Noxious Weed Control Program Environmental Impact Statement states

Noxious weeds are increasing and expanding their range. This knowledge is uncontested. We expect the pattern of expansion to continue through transportation of seeds from increasing commercial and recreational travel

across the BDNF and through continued disturbance on all lands (agricultural, residential, recreational and commercial developments). The spread of weeds from non-Forest lands inside and adjacent to Forest land will also contribute to increased weed infestation. The number of invader species and their distribution will increase if we do not treat weeds.

The project is in violation of the National Forest Noxious Weed Management Policy (FSM 2080-2083)

This Act provides for designation of noxious weeds within the State, and directs control efforts. Provisions are made for registration of pesticides, licensing of distributors and applicators, and enforcement of State statutes. An enforcement responsibility for the control of noxious weeds within Montana is delegated to County Commissioners through weed management District weed boards.

Management Policy (FSM 2080-2083)

The Greenhorn project is in violation of Executive Order 13112, Invasive Species, February 3, 1999.

This order directs Federal Agencies whose actions may affect the status of invasive species to (i) prevent the introduction of invasive species, (ii) detect and respond rapidly to, and control, populations of such species in a cost-effective and environmentally sound manner, as appropriations allow.

The Greenhorn project DDN and FONSI are in violation of the State of Montana County Noxious Weed Management Act

This Act provides for designation of noxious weeds within the State, and directs control efforts. Provisions are made for registration of pesticides, licensing of distributors and applicators, and en-

forcement of State statutes. An enforcement responsibility for the control of noxious weeds within Montana is delegated to County Commissioners through weed management District weed boards.

The project is in violation of MUSA, NEPA, NFMA, the ESA, and the APA because the Forest Service refused to consider an alternative that did not spread noxious weeds in spite of their weed report stating:

Noxious weeds are increasing and expanding their range. This knowledge is uncontested. We expect the pattern of expansion to continue through transportation of seeds from increasing commercial and recreational travel across the BDNF and through continued disturbance on all lands (agricultural, residential, recreational and commercial developments)

The project violates the ESA because of the it will harm and take whitebark pine.

Remedy:

Withdraw the Draft Decision Notice and FONSI and write an EIS that fully complies with the law or choose the No Action Alternative.

We wrote in our comments starting with:

Climate Change

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.

The Forest Service responded:

A carbon cycling and storage report was prepared for the project that concluded that "neither no action nor the proposed action would have a measurable impact on carbon stocks in either the short nor long term, because the area of treatment is a small fraction relative to regional and global carbon stocks." In the short term the proposed action would remove some carbon currently stored in live biomass through the cutting of timber and prescribed burning in the treatment units. But a substantial portion of this carbon would remain stored for a time in wood, reducing some of the carbon emitted through decomposition. Forest lands would remain forested and are not converted to other land uses, maintaining long-term net carbon storage.

Effects of climate change on forest resources are considered throughout the EA, and a discussion of climate

change and how the treatments in the proposed action would modify susceptibility to climate change is included in the silviculturist report.

The project record refers to Forest-wide Carbon Assessment which provides estimations of carbon stocks at Forest and Regional scales. Vegetation/silviculture report uses this information to conclude that direct effects of the project would constitute a "negligible proportion of the global atmospheric greenhouse gas concentration".

The Greenhorn project would not have a discernible impact on atmospheric concentrations of greenhouse gases or climate change since continuing to manage forested areas as forests would maintain their long-term ability to sequester carbon. Proposed activities are consistent with the Forest's Climate Change Report that contains an in-depth discussion of the effects of climate change on natural resources across the forest.

The project record includes a "Forest Carbon Cycling and Storage Report" that is a qualitative comparison of alternatives that disclose that short-term project activities would result in carbon release for carbon currently acting as sinks as well as emit gases from equipment activities. The basis for doing a qualitative comparison is based on statements that the actions would not have "discernable" impacts to global warming. This project, along with other past and reasonably foreseeable projects will not convert the forest into non-forest lands – and will continue to sequester carbon as the forest cycles through age classes.

The Forest Service is violating NEPA by claiming that the project would have such minimal effect on climate change that they didn't bother to analyze it.

Please see the attached order, Case 4:20-cv-00076-BMM, by the Montana Federal district Court where the court riled that BLM once again failed to consider possible damage to the environment caused by mining coal when setting land management policies governing a major coal-producing region in Wyoming and Montana.

This is no different from what the Forest Service is doing with the Greenhorn Project. The Greenhorn project is in violation of NEPA, NFMA, and the APA and the Forest Plan.

We wrote in our comments:

Monarch Butterfly.

Monarch butterflies have been proposed for listing under the ESA.

The project is in violation of the ESA, NFMA, and the APA for not formally consulting with the FWS on the impact of the project on the Monarch butterfly.

Please formally consult with the FWS on the impact of the project on the Monarch Butterfly.

The Forest Service responded:

Consultation with USFWS will be submitted and completed prior to decision which includes effects to grizzly bear and Canada lynx. The monarch butterfly is not a listed species, however was addressed in the sensitive species table in Appendix A: Wildlife Report of the Greenhorns EA on page 43.

The monarch butterfly was added to the sensitive species table in the EA.

The project analysis discussed how the proposed action may affect grizzly bears and Canada lynx, EA pages 63-68 and Appendix A: Wildlife Report pages 5-22.

The Wildlife Report states in page 47:

This species requires open grasslands, foothills, valley bottoms, roadsides, pastures, and suburban areas with sufficient milkweed for breeding and/or sufficient nectar resources from flowers during breeding and migration. This project area does not have sufficient milkweed for breeding but does have nectar resources. Prescribed fire from the proposed project should enhance flowering forbs which could benefit migrating monarchs. Other proposed actions are not expected to impact the species.

The Forest Service clearly states that the project will have an effect on monarch butterflies. Even though they claim it is a positive effect, they still need to formally conference with the U.S. FWS.

Remedy:

Conference with the U.S. Fish and Wildlife Service on the impact of the Greenhorn project on Monarch butterflies.

Thank you for your time and consideration of our objection.

Sincerely yours,
/s/
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