

October 15, 2019, Via EMail

Objection against the Draft Decision Notice and Final Supplemental Environmental Impact Statement for the Stonewall Vegetation Project,

Forest Service,

Helena National Forest,

Lincoln Ranger District

Identification of Objectors:

Lead Objector: Michael Garrity, Director, Alliance for the Wild Rockies (AWR) PO Box 505, Helena, MT 59624; Phone [406-459-5936](tel:406-459-5936).

Signed for Objectors this 15th day of October, 2019

/s/ Michael Garrity

Michael Garrity

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

The Responsible Official, Helena National Forest Supervisor William Avey, has made available a Final Supplemental Environmental Impact Statement (FSEIS) for the Stonewall Vegetation Project and its associated draft Record of Decision

(draft ROD). The Stonewall Vegetation Project area is in the Lincoln Ranger District of the Helena National Forest and covers approximately 24,010 acres within Lewis and Clark and Powell Counties, Montana. The Stonewall project area is approximately 4 miles north and west of the town of Lincoln, Montana.

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 or draft decision specifically violates law, regulation, or policy: The FEIS and DROD are contained in the USFS webpage at:

<https://www.fs.usda.gov/project/?project=53872>

The Forest Supervisor is planning on implementing alternative 4. This decision includes management activities on 1381 acres. Alternative 4 calls for logging (784 acres), clearcutting (328 acres, prescribed burning (269 acres), temporary road building (0.9 miles -,which will be obliterated after implementation), and road-maintenance (25 miles). Alternative 4 requires a site Specific Forest Plan amendment for hiding cover on summer range, open road densities during the big game hunting season (Bfg .Game Standards 3 and 4(a) respectively), and Management Area T2.

As a result of the Draft ROD, 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 bio-

logical diversity and ecosystem integrity in the Wild Rockies bioregion (including the HLCNF). 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

2. Signature of Lead Objector:

Signed this ____ 15th ____ day of October, 2019 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:

Stonewall Vegetation Project; Helena-Lewis and Clark Forest Supervisor William Avey is the Responsible Official; The project is in the Linclon Ranger District of the Helena-Lewis and Clark National Forest. Supervisor Avey chose modified version of alternative 4 in the Draft Record of Decision

NOTICE IS HEREBY GIVEN that AWR object pursuant to 36 CFR section 218 to the Responsible Official's adoption of the selected Alternative 4. As discussed below, the Stonewall 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 Helena Forest Plan and the Administrative Procedure Act (APA).

Location

This Draft Decision Notice calls for: This decision includes management activities on 1381 acres. Alternative 4 calls for logging (784 acres), clearcutting (328 acres, prescribed burning (269 acres), temporary road building (0.9 miles -, which will be obliterated after implementation), and road maintenance (25 miles). Alternative 4 requires a site Specific Forest Plan amendment for hiding cover on summer range, open road densities during the big game hunting season (Bfg Game Standards 3 and 4(a) respectively), and Management Area T2.

The Stonewall project area is approximately 4 miles north and west of the town of Lincoln, Montana in the Lincoln Ranger District of the Helena-Lewis and Clark National Forest.

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 Stonewall Vegetation Project. Please accept this objection from me on behalf of the Alliance for the Wild Rockies and Native Ecosystems Council.

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, big game species, and wildlife dependent upon unlogged. The project is also in lynx critical habitat. 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.

Supporting Reasons for the Reviewing Office to Consider

This landscape has very high wildlife values, including for the threatened grizzly bear, bull trout and lynx, big game species, and wildlife dependent upon mature forest habitat. The project area is 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.

Thank you for the opportunity to object.

NOTICE IS HEREBY GIVEN that, pursuant to 36 CFR Part 218, AWR objects to the Draft Record of Decision (ROD) and Final Supplemental Environmental Impact Statement (FSEIS) with the legal notice published on August 30, 2019, including the Responsible Official's adoption of Alternative 4.

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, the Helena National Forest (HNF) Forest Plan and the APA,

in-cluding 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 HNF). 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

We wrote in our comments: ***Grizzly Bear***

The effects to grizzly bears from the project include potential disturbance or displacement due to human presence, road construction and use, motorized use and other mechanized equipment. The presence of these activities and the presence of roads may lead grizzly bears to avoid otherwise suitable habitat.

The Interagency Grizzly Bear Guidelines (IGBC 1986) document directs the FS to manage for “multiple land use benefits” to the extent that these uses are compatible with grizzly recovery.

The project falls within Management Situations 1 and 2 (MS1, MS2). Therein, management must focus on grizzly bear habitat maintenance, improvement and minimization of grizzly-human-conflict. Management decisions will favor the needs of the grizzly bear when grizzly habitat and other land use values compete. The DSEIS does not disclose if adverse project or cumulative impacts are consistent with the requirement to prioritize the needs of the grizzly bear for the applicable Management Situations.

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

Logging and/or fire management activities which will adversely affect grizzly bear populations and/or their habitat will not be permitted; adverse population effects are

population reductions and/or grizzly positive conditions; adverse habitat effects are

reduction in habitat quantity and/or quality.

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

Grizzly bears are winter-sleepers rather than true hibernators. If high density motorized routes are known to disturb, displace, habituate, and raise mortalities among grizzlies in spring, summer, and fall, there's no logical, or scientific reason to believe they don't do the same to sleeping bears in winter. The Biological Opinion on the forest plan for the Kootenai National Forest states:

In the CYE and NCDE, incidental take may occur where late season snowmobiling overlaps with grizzly bear post-denning habitat. The incidental take is expected to be in the form of harassment to individual female grizzly bears and/or cubs caused by premature den emergence or premature displacement from the den site area, resulting in reduced fitness of females and cubs. We expect the amount and extent of take would be very low.

The Stonewall DSEIS fails to demonstrate that such incidental take is in fact low, admitting that snowmobile effects are expected to increase because of the logging. That BO also recognizes:

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

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

The current management strategy allows "temporary" reductions in Core and "temporary" increases in road density as if the habitat would then get reprieve from such "temporary" adverse effects.

However, the FS recognizes no genuine limitations on how much, how often and for how long these "temporary" adverse effects will occur or persist.

Hammer, 2016 explains how the proposed post-delisting NCDE conservation strategy "will (not) maintain bear habitat security

levels that existed in 2011, it is instead lowering the goal posts on what is considered secure bear habitat.” The NCDE conservation strategy would lower current protections by allowing such harmful activities in Security Core as the opening of roads to public motorized uses like firewood gathering, unlimited amounts of non-motorized trails and human activity, and logging projects that reduce Security Core for half a decade. Moreover, the strategy would excuse logging roads from limits on Total Motorized Route Density even though they have not been decommissioned, have not been removed from the road system, and are instead being “stored” for future logging—which also makes them more vulnerable to continued use as trails. (Hammer, 2016.)

We also incorporate McLellan, et al (2000), Hammer, 2013, Natural Resources Defense Council, 2013; and Bader, 2016 which support the conclusions of Hammer, 2016.

The DEIS states:

The grizzly bear analysis in the environmental impact statement and the biological

assessment used the following indicators to evaluate effects of the Stonewall Project:

- *Compliance with Helena Forest Plan (USDA Forest Service 1986) standards and*

guidelines

- *Amendment 19 compliance and changes in total motorized route density, open*

motorized route density and Security CORE habitat for affected subunits within the

Northern Continental Divide Ecosystem recovery zone.

- *Effects to denning bears and den habitat*

- *Effects to bears outside the denning period and changes in cover and forage.*

The DEIS is apparently not demonstrating consistency with the Amendments to the Forest Plans of the Helena National Forest concerning habitat management direction for the Northern Continental Divide Ecosystem grizzly bear population.

Within these comments, we incorporate AWR's February 12, 2018

Objection1

to the draft Record of Decision for the Amendments to the Forest Plans of the Lolo, Kootenai, and Helena-Lewis and Clark national forests concerning habitat management direction for the Northern Continental Divide Ecosystem grizzly bear population. This is necessary because the Stonewall Restoration Project would be implementing the forest plan as amended by those Amendments (hereinafter, "Grizzly Amendments" or "Grizzly Amendment") and subsequent to our Objection,

the Forest Service (FS) did not provide adequate relief to rectify the deficiencies in law, policy

and regulation our Objection identified.

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

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

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

That was also an Objection to the Flathead National Forest Land and Resource Management Plan and the Flathead National Forest Species of Conservation Concern determination and list, and to the degree the science, law, and policy we discuss therein apply to Forest Plan implementation of Helena National Forest projects, it also applies to the Stonewall Restoration Project.

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

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

*[http://www.swanview.org/articles/whats-
new/svcs_comments_on_draft_flathead_forest_plan/230](http://www.swanview.org/articles/whats-new/svcs_comments_on_draft_flathead_forest_plan/230)*

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

The DSEIS fails to disclose how effective road closures are for the purpose of eliminating human access behind the closures. We incorporate the Amended Complaint for case CV-18-67-DWM for the

purposes of explaining how roads affect wildlife and that ineffective closures on national forest land how are all too common.

The DSEIS fails to consider loss of vegetative cover from the 2017 fires, which has affected security for grizzly bears and other wildlife depending upon seclusion from humans.

Forest Service Response: *The final Record of Decision for the Forest Plan Amendments (Helena – Lewis and Clark, Kootenai, and Lolo National Forests) to Incorporate Habitat Management Direction for the Northern Continental Divide Ecosystem Grizzly Bear Population was signed December 24, 2018. The amendments became effective with the publication of the notice of approval in the Federal Register on December 27, 2018. The final environmental impact statement for the amendment has been posted to the Forest Service website since November 2018 and record of decision since December of 2018 (see: <https://www.fs.usda.gov/main/hlcnf/landmanagement/planning>). This amendment provides new direction to guide future land management actions related to motorized access*

and secure core, developed recreation sites, vegetation management, livestock grazing, and energy and mineral development. This new amendment replaces Helena Forest Plan management direction pertaining to grizzly bear including Forest Plan standard 3 for open road densities in occupied habitat. Comments that expressed concerns directly related to the amendment itself such as calculations for determining baseline total and open motorized road densities, use of best available science, desire to apply the amendment to a larger ecosystem scale, and the adequacy of the amendment in general are simply outside the scope of the Stonewall Project thus, do not warrant further agency response. The Stonewall Vegetation Project's purpose and need is to: Improve the mix of vegetation composition and structure across the landscape, modify fire behavior to enhance community protection while creating conditions that allow the reestablishment of fire as a natural process on the landscape, and integrate restoration with socioeconomic considerations – not develop management direction for grizzly bear. The Stonewall Vegetation Project final supplemental environmental

impact statement, chapter 3, wildlife section has been updated with relevant Amendment information. The wildlife section of chapter three also demonstrates how the project analysis for grizzly bear is consistent with the new direction for grizzly bear management as outlined in the amendment.

This Forest Plan amendment for grizzly bears abandons a longstanding Forest Service commitment to limit road development in key grizzly bear habitat in the Helena National Forest and to limit human uses of grizzly bear secure habitat. The Forest Service and FWS have sought to dismiss the impact of this new management direction by asserting that the Forest Service will maintain the habitat conditions, but the agencies ignored that the amendment does not constrain the construction of new road mileage as long as the Service takes minimal measures to block or obscure the entrances to the new roads even though the federal district court just ruled that Forest Service road closures are not effective. Please see the attached order for case 9:18-cv-00067-DWM.

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

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

In conducting its review of the amendment to the Forest Plan under the ESA, FWS did not rationally grapple with the impacts of this new management direction, as the law requires, before concluding in a Biological Opinion that the revised amendment will not jeopardize grizzly bears in the Helena-Lewis and Clark National Forest. The re-

vised Plan and Biological Opinion therefore violate section 7 of the ESA. 16 U.S.C. § 1536. Please see the attached 60 day notice Earth Justice filed on the grizzly bear amendment and the revised Flathead Forest Plan.

FWS and the Forest Service violated the ESA by arbitrarily dismissing the threat to grizzly bears and bull trout posed by roadbuilding and the proliferation of human use of roads and trails permitted under the final Record of Decision for the Forest Plan Amendments (Helena – Lewis and Clark, Kootenai, and Lolo National Forests) to Incorporate Habitat Management Direction for the Northern Continental Divide Ecosystem Grizzly Bear Population.

The Forest Service must reconsult with the USFWS on the impact of this project and the Forest Plan Amendments (Helena – Lewis and Clark, Kootenai, and Lolo National Forests) to Incorporate Habitat Management Direction for the Northern Continental Divide Ecosystem Grizzly Bear Population on grizzly bears and bull trout and give the public a chance to comment on this consul-

tation. It is a violation of NEPA, NFMA, the APA, and the ESA to not do so.

The Remedy is to reissue the ROD and FEIS after the public has a chance to see and comment on the Forest Service's reconsultation with the USFWS on this impacts of this project and the Forest Plan Amendments (Helena – Lewis and Clark, Kootenai, and Lolo National Forests) to Incorporate Habitat Management Direction for the Northern Continental Divide Ecosystem Grizzly Bear Population.

We wrote in our comments:

The supplemental EIS states on page v that part of the purpose and need is:

The purpose of the project is to

•Improve the mix of vegetation composition and structure across the landscape that is diverse, resilient, and sustainable to wildfire and insects.

oEnhance and restore aspen, western larch, and ponderosa pine species and habitats.

•Modify fire behavior to enhance community protection while creating conditions that allow the reestablishment of fire as a natural process on the landscape.

What peer-reviewed scientific evidence do you have to support the conclusion that the proposed action alternative will do this?

How will this project make the forest more sustainable to insects and wildfire? What scientific evidence to you have to support your answer?

Please answer the questions we have below.

Was the Park Creek fire a high intensity fire?

Is the forest in the project area unnaturally dense?

Will the project increase weeds in the project area?

Is getting more weeds meet the purpose and need of the project?

Does more cheat grass make the project are more resilient, and sustainable to wildfire and insects?

How will this project make the forest more sustainable to insects and wildfire? What scientific evidence do you have to support your answer?

Did it destroy wildlife habitat?

What species benefited from this fire?

What species were harmed by the Pro Creek fire?

Did the Park Creek fire sterilize the soils?

Was it a catastrophic wildfire?

What is your definition of a catastrophic wildfire?

Was it an unnatural fire?

Did it burn down any homes?

Building with fire resistance materials is something that FS researcher, Dr. Jack Cohen has been saying for more than a decade. It's the best way to ensure that a community can survive a major fire--and far more efficient and effective than thinning, etc. the forest.

<https://www.businessinsider.com/how-to-build-fireproof-homes-2019-3>

How are you meeting the purpose and need if you aren't encouraging homeowners to fireproof their homes?

Are you assuming that current fires burn mostly at high-intensity due to past fire suppression?

From your own analysis the fire that burned through the Park Creek fire that burned through the Stonewall project area in the summer of 2017 was a mostly low/moderate-intensity fires as are most fires in western US forests, including the largest fires (Mallek et al. 2013, Baker et al. 2018). The most long-unburned forests experience mostly low/moderate-intensity fire (Odion and Hanson 2008; Miller et al. 2012; van Wagtendonk et al. 2012).

Are you assuming that most large high-intensity fire patches destroy wildlife habitat or prevent forest regeneration?

Hundreds of peer-reviewed scientific studies find that patches of high-intensity fire create “snag forest habitat”, which is comparable to old-growth forest in terms of native biodiversity and wildlife abundance (DellaSala and Hanson 2015). In fact, more plant, animal, and insect species in the forest are associated with this habitat type than any other (Swanson et al. 2014). Forests naturally regenerate in ecologically beneficial ways in large high-intensity fire patches (DellaSala and Hanson 2015, Hanson 2018).

Is Climate Change a Factor in Recent Large Fires?

Human-caused climate change increases temperatures, which influences wildland fire. Some mistakenly assume this means we must have too much fire but, due to fire sup-

pression, we still have a substantial fire deficit in our forests. For example, historically, snag forest habitat, from high-intensity fire and patches of snag recruitment due to drought and native bark beetles, comprised 14% to 30% of the forests in the Sierra Nevada (Show and Kotok 1925; Safford 2013; Baker 2014; Baker et al. 2018). Currently, based on federal Forest Inventory and Analysis data, it comprises less than 8% of Sierra Nevada forests.

Is the EIS making the assumption that the project area forests are Unnaturally Dense and “Overgrown”, and the assumption that Denser Forests Necessarily Burn More Intensely?

Our forests actually have a carbon deficit, due to decades of logging. Historical forests were variable in density, with both open and very dense forests (Baker et al. 2018). Recent studies by U.S. Forest Service scientists, regarding historical tree density, omitted historical data on small tree density and density of nonconifer trees. When the missing historical data were included, it was revealed that historical tree density was 7 times higher than previously reported in ponderosa pine forests, and 17 times higher than previously reported in mixed-conifer forests (Please find Baker et al. 2018 attached). Wildland fire is driven mostly by weather, while forest density is a “poor predictor” (Please find Zald and Dunn 2018 attached).

Do Occasional Cycles of Drought and Native Bark Beetles Make Forests “Unhealthy”?

We believe the evidence shows the opposite.

During droughts, native bark beetles selectively kill the weakest and least climate-adapted trees, leaving the stronger and more climate-resilient trees to survive and reproduce (Six et al. 2018). In areas with many new snags from drought and native bark beetles, most bird and small mammal species increase in numbers in such areas because snags provide such excellent wildlife habitat (Stone 1995).

Do Forests with More Dead Trees Burn More Intensely?

The largest analysis, spanning the entire western U.S., found no effect (Hart et al. 2015). Later, after needles and twigs fall and quickly decay into soil, and after many snags have fallen, such areas have similar or lower fire intensity (Hart et al. 2015, Meigs et al. 2016).

Does Reducing Environmental Protections, and Increasing Logging, Curb Forest Fires?

Based on the largest analysis ever conducted, this approach increases fire intensity (Please find Bradley et al. 2016 attached). Logging reduces the cooling shade of the forest canopy, creating hotter and drier conditions, leaves behind kindling like “slash” debris, and spreads combustible invasive weeds like cheatgrass.

Do “Thinning” Logging Operations Stop Wildland Fires?

“Thinning” is used as a euphemism for intensive commercial logging projects that kill and remove many of the trees in a stand, often including

mature and old-growth trees. With fewer trees, winds, and fire, can spread faster through the forest. In fact, extensive research shows that commercial logging, conducted under the guise of “thinning”, often makes wildland fires spread faster, and in most cases also increases fire intensity, in terms of the percentage of trees killed (Cruz et al. 2008, 2014).

Would Landscape-Scale Prescribed Burning Reduce Smoke?

Prescribed fires do not stop wildland fires when they occur (Stephens et al. 2009), though they can alter fire intensity. However, any shortterm reduction in potential fire intensity following prescribed fire lasts only 10-20 years, so using prescribed fires ostensibly as a means to reduce the intensity of wildland fires would require burning a given area of forest every 10-20 years (Rhodes and Baker 2008). This would represent a ten-fold increase, or more, over current rates of burning (Parks et al. 2015). High-intensity fire patches produce relatively lower particulate smoke emissions (due to high efficiency of flaming combustion in higher-intensity fire patches) while low-intensity prescribed fires produce high particulate smoke emissions, due to the inefficiency of smoldering combustion. Therefore, even though highintensity fire patches consume about three times more biomass per acre than low-intensity fire (Campbell et al. 2007), low-intensity fires produce 3-4 times more particulate smoke than high-intensity fire, for an equal tonnage of biomass consumed (Ward and Hardy 1991, Reid et al. 2005). As a result, a landscape-level program of prescribed

burning would cause at least a ten-fold increase in smoke emissions relative to current fire levels.

A review of the fire's rate of spread from publicly available maps (<https://inciweb.nwcg.gov/incident/maps/5367/>) reveals a profoundly different picture than the one promoted by Gianforte. In the first four days, the fire moved about two miles. This equates to about one-50th of a mile per hour, or a little under two feet per minute. After that, it generally moved about three times more slowly. According to the Forest Service's own studies, a fire spreading this slowly is very low intensity, generally with flame lengths of only about 6 to 12 inches in height (https://www.fs.fed.us/rm/pubs_int/int_gtr131.pdf), which is associated with high levels of surviving trees.

The great irony here is that, with such extremely slow rates of spread, the Park Creek lightning fire may have burned at even lower intensity than the Forest Service planned for their prescribed fire as part of the Stonewall project. While only a relatively small portion of the fire intersected with planned logging units of the Stonewall project (mostly along the southern boundary), the fire generally moved at its slowest there, advancing at a rate of less than 6 inches per minute in these areas, typically.

most current science concludes that reducing environmental protections and increasing logging is actually associated with higher, not lower, fire intensity in western U.S. forests (<http://onlinelibrary.wiley.com/doi/10.1002/ecs2.1492/full>).

Please find “Does increased forest protection correspond to higher fire severity in frequent-fire forests of the western United States?” attached.

The truth is that we don’t need to fear wildland fire in our forests. It is a natural and necessary part of forest ecosystems, and it creates some of the very best wildlife habitat. There are very real concerns about protecting homes from fire, but the science is clear that the only effective way to do this is to remove small trees and shrubs within a “defensible space” zone 100 feet around individual homes, and to make homes more fire-safe.

The Forest Service responded:

The Fire and Fuels section in chapter 3 of the 2015 final environmental impact statement discusses the existing condition for fuel types across the project area, treatment effectiveness, and how the different proposed treatments modify fire behavior. The duration treatments would be effective for is also discussed within this section of the final environmental impact statement. Maintenance may be required to maintain resiliency to future disturbances once the desired conditions have been achieved. The need for maintenance treatments would be determined through resource monitoring. Monitoring may identify the need for additional NEPA analysis prior to maintenance treatment. Application of prescribed fire in the future will likely be necessary to maintain vegetation conditions and retain fire as a process in fire-adapted ecosystems.

The FEIS does not place a value judgement on the condition of the forest, but rather explains factors leading to current stand conditions (fire suppression, succession, insect outbreaks, disease), the interaction of various forest conditions on insect activity, disease,

fire behavior and forest structural and successional changes that would occur without disturbance.

The Forest Service does not monitor so the Forest Service will not be able to identify the need for additional NEPA analysis in violation of NEPA. The FEIS clearly places a value judgement on the condition of the forest.

Page v of the FEIS states:

The original purpose, to improve the mix of vegetation and structure across the landscape to make it more resilient to wildfire, remains on those acres not impacted by the 2017 Park Creek Fire. As described in the final environmental impact statement, the current vegetation and hazardous fuels within the Stonewall Vegetation Project area are in need of management because the existing conditions do not meet the desired conditions. The purpose of the project is to •Improve the mix of vegetation composition and structure across the landscape that is diverse, resilient, and sustainable to wildfire and insects.◦Enhance and restore aspen, western larch, and ponderosa pine species and habitats.•Modify fire behavior to enhance community protection while creating conditions that allow the reestablishment of fire as a natural process on the landscape.◦Integrate restoration with socioeconomic considerations.◦Utilize economic value of trees with economic removal.

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

“Are High-Severity Fires Burning at Much Higher Rates

Recently than Historically in Dry-Forest Landscapes of the

Western USA?”

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

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

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

“Management issues

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

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

Remedy, choose the No Action Alternative or write an EIS that complies with the law.

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

Please find (Laughlin and Grace 2006) attached.

We wrote in our comments:

“The Forest Service should use the best available science regarding protecting these structures.

Fire Ecology in Rocky Mountain Landscapes, by William Baker says the Forest Service is over stating the frequency of wildfire. I have included this book as an attachment in my previous comments and incorporate it into these comments.

Dr. Baker writes that we use to think we could control wildfire with tools such as prescribed burns. He writes the science shows this is not true. All we can do is have the good sense to get our homes and infrastructure protected or out of fire prone settings, as fire will

eventually come. This project attempts to tame wildlife, something Dr. Baker says is impossible. This project therefore violates NFMA by not following the best available science and not meeting the purpose and need of the project.”

It is a violation of NEPA to not consider the best available science. We asked you to consider Baker’s Fire Ecology in Rocky Mountain Landscapes and it is not even in your bibliography.

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

“Management issues

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

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

Remedy, choose the No Action Alternative or write an EIS that complies with the law.

In “Fire Ecology in Rocky Mountain Landscapes” by William Baker, Dr. Baker writes on page 435, “ ***...a prescribed fire regime that is too frequent can reduce species diversity (Laughlin and Grace 2006) and favor invasive species (M.A. Moritz and Odion 2004). Fire that is entirely low severity in ecosystems that historically experience some high-severity fire may not favor germination of fire-***

dependent species (M.A. Moritz and Odion 2004) or provide habitat key animals (Smucker, Hutto, and Steele 2005).” Baker continues on page 436: “Fire rotations equal the average mean fire interval across a landscape and are appropriate intervals at which individual points or the whole landscape is burned. Composite fire intervals underestimate mean fire interval and fire rotation (chap 5) and should not be used as prescribed burning intervals as this would lead to too much fire and would likely lead to adversely affect biological diversity (Laughlin and Grace 2006).”

Please find (Laughlin and Grace 2006) attached.

We wrote in our comments:

“The Forest Service should use the best available science regarding protecting these structures.

Fire Ecology in Rocky Mountain Landscapes, by William Baker says the Forest Service is over stating the frequency of wildfire. I have included this book as an attachment in my previous comments and incorporate it into these comments.

Dr. Baker writes that we use to think we could control wildfire with tools such as prescribed burns. He writes the science shows this is not true. All we can do is have the good sense to get our homes and infrastructure protected or out of fire prone settings, as fire will eventually come. This project attempts to tame wildlife, something Dr. Baker says is impossible. This project therefore violates NFMA by not following the best available science and not meeting the purpose and need of the project.”

It is a violation of NEPA to not consider the best available science. We asked you to consider Baker's Fire Ecology in Rocky Mountain Landscapes and it is not even in your bibliography.

I am mailing Fire Ecology in Rocky Mountain Landscapes" by William Baker via U.S. mail. Please put the entire book in the project file.

Dr. Baker estimates the high severity fire rotation to be 135 - 280 years for lodgepole pine forests. (See page 162.). Baker writes on page 457-458 of Fire Ecology in Rocky Mountain Landscapes: ***"Fire rotation has been estimated as about 275 years in the Rockies as a whole since 1980 and about 247 years in the northern Rockies over the last century, and both figures are near the middle between the low (140 years) and high (328 years) estimates for fire rotation for the Rockies under the HRV (chap. 10). These estimates suggest the since EuroAmerican settlement, fire control and other activities may have reduced fire somewhat in particular places, but a general syndrome of fire exclusion is lacking. Fire exclusion also does not accurately characterize the effects of land users on fire or match the pattern of change in area burned at the state level over the last century (fig 10.9). In contrast, fluctuation in drought linked to atmospheric conditions appear to match many state-level patterns in burned area over the last century. Land uses that also match fluctuations include logging, livestock grazing, roads and development, which have generally increased flammability and ignition at a time when the climate is warming and more fire is coming."***

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*), sub-

alpine fir (*Abies lasiocarpa*), and lodgepole pine (*Pinus contorta*), all thin-barked trees easily killed by fire. Extensive stand-replacing fires occurred historically at long intervals (i.e., one to many centuries) in subalpine forests, typically in association with infrequent high-pressure blocking systems that promote extremely dry regional climate patterns.” Please find Schoennagel et al (2004) attached.

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

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

Schoennagel et al (2004) states: “No evidence suggests that spruce–fir or lodgepole pine forests have experienced substantial shifts in stand structure over recent decades as a result of fire suppression. Overall, variation in 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 Yellowstone during 1988, although severe, was neither unusual nor surprising.”

Schoennagel et al (2004) states: “Mechanical fuel reduction in subalpine 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 re-store subalpine forests, because they were dense historically and have not changed significantly in response to fire suppression. Thus, fuel-reduction efforts in most Rocky Mountain subalpine forests probably would not effectively mitigate the fire hazard, and these efforts may create new ecological problems by moving the forest structure outside the historic range of variability.”

Please find Schoennagel et al (2004) attached.

Dr. Baker estimates the high severity fire rotation to be 135 - 280 years for lodgepole pine forests. (See page 162.). Baker writes on page 457-458 of Fire Ecology in Rocky Mountain Landscapes: ***“Fire rotation has been estimated as about 275 years in the Rockies as a whole since 1980 and about 247 years in the northern Rockies over the last century, and both figures are near the middle***

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

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Please find Schoennagel et al (2004) attached.

The NEPA requires a “hard look” at climate issues, including cumulative effects of the “treatments” in the proposed project when added to the heat, drought, wind and other impacts associated with increased climate risk. Regeneration/Restocking failure following wildfire, prescribed fire and/or mechanical tree-killing has not been analyzed or disclosed. There is a considerable body of science that suggests that regeneration following fire is increasingly problematic.

NEPA requires disclosure of impact on “the human environment.”

Climate risk presents important adverse impacts on cultural, economic, environmental, and social aspects of the human environment – people, jobs, and the economy – adjacent to and near the project area. “Challenges in predicting responses of individual tree species

to climate are a result of species competing under a never-before-seen climate regime – one forests may not have experienced before either.

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

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

Stands are at risk of going from forest to non-forest, even without the added risk of “management” as proposed in the project area.

The Helena Lewis and Clark National Forest has not yet accepted that the effects of climate risk represent a significant issue, and eminent loss of forest resilience already, and a significant and growing risk into the “foreseeable future?”

It is now time to speak honestly about unrealistic expectations relating to desired future condition. Forest managers have failed to dis-

close that at least five common tree species, including aspens and four conifers, are at great risk unless atmospheric greenhouse gases and associated temperatures can be contained at today's levels of concentration in the atmosphere. (See attached map). This cumulative ("reasonably foreseeable") risk must not continue to be ignored at the project-level, or at the programmatic (Forest Plan) level.

Global warming and its consequences may also be effectively irreversible which implicates certain legal consequences under NEPA and NFMA and ESA (e.g., 40 CFR § 1502.16; 16 USC §1604(g); 36 CFR §219.12; ESA Section 7; 50 CFR §§402.9, 402.14). All net carbon emissions from logging represent "irretrievable and irreversible commitments of resources."

It is clear that the management of the planet's forests is a nexus for addressing this largest crisis ever facing humanity. Yet the FSEIS fails to even provide a minimal quantitative analysis of project- or agency-caused CO₂ emissions or consider the best available science on the topic. This is

immensely unethical and immoral. The lack of detailed scientific discussions in the FSEIS concerning climate change is far more troubling than the document's failures on other topics, because the consequences of unchecked climate change will be disastrous for food production, sea level rise, and water supplies, resulting in complete turmoil for all human societies. This is an issue as serious as nuclear annihilation (although at least with the latter we're not already pressing the button).

The FSEIS provided a pittance of information on climate change effects on project area vegetation. The FSEIS provides no analysis as

to the veracity of the project's Purpose and Need, the project's objectives, goals, or desired conditions. The FS has the responsibility to inform the public that climate change is and will be bringing forest change. For the Galton project, this did not happen, in violation of NEPA.

The FSEIS fails to consider that the effects of climate change on the project area, including that the "desired" vegetation conditions will likely not be achievable or sustainable. The EA fails to provide any credible analysis as to how realistic and achievable its desired conditions are in the context of a rapidly changing climate, along an unpredictable but changing trajectory.

The Forest Plan does not provide meaningful direction on climate change. Nor does the FSEIS acknowledge pertinent and highly relevant best available science on climate change. This project is in violation of NEPA.

The FSEIS does not analyze or disclose the body of science that implicates logging activities as a contributor to reduced carbon stocks in forests and increases in greenhouse gas emissions. The EA fails to provide estimates of the total amount of carbon dioxide (CO₂) or other greenhouse gas emissions caused by FS management actions and policies—forest-wide, regionally, or nationally. Agency policymakers seem comfortable maintaining a position that they need not take any leadership on this issue, and obfuscate via this EA to justify their failures.

The best scientific information strongly suggests that management that involves removal of trees and other biomass increases atmospheric CO₂. Unsurprisingly the FSEIS doesn't state that simple fact.

The FSEIS fails to present any modeling of forest stands under different management scenarios. The FS should model the carbon flux over time for its proposed stand management scenarios and for the various types of vegetation cover found on the GNF.

The FSEIS also ignores CO₂ and other greenhouse gas emissions from other common human activities related to forest management and recreational uses. These include emissions associated with machines used for logging and associated activities, vehicle use for administrative actions, and recreational motor vehicles. The FS is simply ignoring the climate impacts of these management and other authorized activities.

The Committee of Scientists, 1999 recognize the importance of forests for their contribution to global climate regulation. Also, the 2012 Planning Rule recognizes, in its definition of Ecosystem services, the “Benefits people obtain from ecosystems, including: (2) Regulating services, such as long term storage of carbon; climate regulation...”

We have no more time to prevaricate, and it's not a battle we can afford to lose. We each have a choice: submit to status quo for the profits of the greediest 1%, or empower ourselves to limit greenhouse gas emissions so not just a couple more generations might survive.

The District Court of Montana ruled in Case 4:17-cv-00030-BMM that the Federal government did have to evaluate the climate change impacts of the federal government coal program. Please find the order attached.

In March 2019, U.S. District Judge Rudolph Contreras in Washington, D.C., ruled that when the U.S. Bureau of Land Management (BLM) auctions public lands for oil and gas leasing, officials must consider emissions from past, present and foreseeable future oil and gas leases nationwide. The case

was brought by WildEarth Guardians and Physicians for Social Responsibility.

In March of 2018 the Federal District Court of Montana found the Miles City (Montana) and Buffalo (Wyoming) Field Office's Resource Management Plans unlawfully overlooked climate impacts of coal mining and oil and gas drilling. The case was brought by Western Organization of Resource Councils, Montana Environmental Information Center, Powder River Basin Resource Council, Northern Plains Resource Council, the Sierra Club, and the Natural Resources Defense Council.

The project is in violation of NEPA, NFMA, the APA, the ESA for not examining the impacts of the project on climate change. The project will eliminate the forest in the project area. Forests absorb carbon. The project will destroy soils in the project area. Soils are carbon sinks.

Please see the following article that ran in the Missoulian on March 11, 2019.

Fire study shows landscapes such as Bitterroot's Sapphire Range too hot, dry to restore trees

ROB CHANEY rchaney@missoulian.com Mar 11, 2019

Burned landscapes like this drainage in the Sapphire Mountains hasn't been able to grow new trees since the Valley Complex fire of 2000, due to lack of soil moisture, humidity and seed trees, as well as excess heat during the growing season. University of Montana

students Erika Berglund and Lacey Hankin helped gather samples for a study showing tree stands are getting replaced by grass and shrubs after fire across the western United States due to climate change.

Courtesy Kim Davis





Fire-scarred forests like the Sapphire Range of the Bitterroot Valley may become grasslands because the growing seasons have become too hot and dry, according to new research from the University of Montana.

“The drier aspects aren’t coming back, especially on north-facing slopes,” said Kim Davis, a UM landscape ecologist and lead investigator on the study. “It’s not soil sterilization. Other vegetation like grasses are re-sprouting. It’s too warm. There’s not enough moisture for the trees.”

Davis worked with landscape ecologist Solomon Dobrowski, fire paleoecologist Philip Higuera, biologist Anna Sala and geoscientist Marco Maneta at UM along with colleagues at the U.S. Forest Service and University of Colorado-Boulder to produce the study, which was released Monday in the Proceedings of the National Academy of Sciences journal.

“What’s striking is if you asked scientists two decades ago how climate warming would play out, this is what they expected we’d see,” Higuera said. “And now we’re starting to see those predictions on the impact to ecosystems play out.”

The study concentrated on regrowth of Ponderosa pine and Douglas fir seedlings in Montana, Idaho, Colorado, New Mexico,

Arizona and northern California. Field workers collected trees from 90 sites, including 40 in the northern Rocky Mountains, scattered within 33 wildfires that had occurred within the past 20 years.

“We did over 4,000 miles of road-tripping across the West, as well as lots of miles hiking and backpacking,” Davis said. The survey crews brought back everything from dead seedlings to 4-inch-diameter tree rings; nearly 3,000 samples in total. Then they analyzed how long each tree had been growing and what conditions had been when it sprouted.

Before the 1990s, the test sites had enough soil moisture, humidity and other factors to recruit new seedlings after forest fires, Dobrowski said.

“There used to be enough variability in seasonal conditions that seedlings could make it across these fixed thresholds,” Dobrowski said. “After the mid-‘90s, those windows have been closing more often. We’re worried we’ll lose these low-elevation forests to shrubs or grasslands. That’s what the evidence points to.”

After a fire, all kinds of grasses, shrubs and trees have a blank slate to recover. But trees, especially low-elevation species, need more soil moisture and humidity than their smaller plant cousins. Before the

mid-90s, those good growing seasons rolled around every three to five years. The study shows such conditions have evaporated on virtually all sites since 2000.

“The six sites we looked at in the Bitterroots haven’t been above the summer humidity threshold since 1997,” Higuera said. “Soil moisture hasn’t crossed the threshold since 2009.”

The study overturns some common assumptions of post-fire recovery. Many historic analyses of mountain forests show the hillsides used to hold far fewer trees a century ago, and have become overstocked due to the efforts humans put at controlling fire in the woods. Higuera explained that some higher elevation forests are returning to their more sparse historical look due to increased fires.

“But at the lower fringes, those burn areas may transition to non-forest types,” Higuera said, “especially where climate conditions at the end of this century are different than what we had in the early 20th Century.”

The study also found that soil sterilization wasn’t a factor in tree regrowth, even in the most severely burned areas. For example, the 2000 Sula Complex of fires stripped forest cover in the southern end of the Bitterroot Valley. While the lodgepole pine stands near Lost Trail Pass have recovered, the lower- elevation Ponderosa pine and Douglas firs haven’t.

Another factor driving regeneration is the availability of surviving seed trees that can repopulate a burn zone. If one remains within 100 meters of the burned landscape, the area can at least start the process of reseeded. Unfortunately, the trend toward high-severity

fires has reduced the once-common mosaic patterns that left some undamaged groves mixed into the burned areas.

Higuera said he hoped land managers could use small or prescribed fires to make landscapes more resilient, as well as restructure tree-planting efforts to boost the chances of heavily burned places.

Rob Chaney

Natural Resources & Environment Reporter

Natural Resources Reporter for The Missoulian.

Remedy: Choose the No Action Alternative. Revise the Forest Plan to take a hard look at the science of climate change. Alternatively, draft a new EIS for this project if the FS still wants to pursue it, which includes an analysis that examines climate change in the context of project activities and Desired Conditions. Better yet, it's time to prepare an EIS on the whole bag of U.S. Government climate policies.

The NFMA requires in the face of increasing climate risk, growing impacts of wildfire and insect activity, plus scientific research findings, the FS must disclose the significant trend in post-fire regeneration failure. The forest has already experienced considerable difficulty restocking on areas that have been subjected to prescribed fire, clear-cut logging, post-fire salvage logging and other even-aged management “systems.”

NFMA (1982) regulation 36CFR 219.27(C)(3) implements the NFMA statute, which requires restocking in five years.

Forest managers must analyze and disclose the fact that the Helena Lewis and Clark National Forest can no longer “insure that timber will be harvested from the National Forest system lands only where...there is assurance that such lands can be restocked within five years of harvest?” (NFMA§6(g)(3)(E)(ii)).

The project goals and expectations are not consistent with NFMA’s “adequate restocking” requirement. Scientific research can no longer be ignored.

“At dry sites across our study region, seasonal to annual climate conditions over the past 20 years have crossed these thresholds, such that conditions have become increasingly unsuitable for regeneration. High fire severity and low seed availability further reduced the probability of post-fire regeneration. Together, our results demonstrate that climate change combined with high severity fire is leading to increasingly fewer opportunities for seedlings to establish after wildfires and may lead to ecosystem transitions in low-elevation ponderosa pine and Douglas-fir forests across the western United States.” Wildfires and climate change push low-elevation forests across a critical climate threshold for tree regeneration, PNAS (2018), Kimberley T. Davis, et al. (Please, find attached)

Forests are already experiencing emissions-driven deforestation on both the post-fire and post-logging acreage. Areas where the cumulative effects of wildfire, followed by salvage logging on the same piece of ground are error upon error, with decades of a routine that can rightfully be described as willful ignorance and coverup.

Where is the reference to restocking? Monitoring data and analysis? If monitoring has been done there is no disclosure documenting the scope and probability of post-fire regeneration failures in the project area. NFMA requires documentation and analysis that accurately estimates climate risks driving regeneration failure and deforestation – all characteristic of a less “resilient” forest.

“In the US Rocky Mountains, we documented a significant trend of post-fire tree regeneration, even over the relatively short period of 23 years covered in this analysis. Our findings are consistent with the expectation of reduced resilience of forest ecosystems to the combined impacts of climate warming and wildfire activity. Our results suggest that predicted shifts from forest to non-forested vegetation.” Evidence for declining forest resilience to wildfires under climate change, Ecology Letters, (2018) 21: 243–252, Stevens-Rumens et al. (2018). (Please find attached)

The Forest Plan is based on assumptions largely drawn from our past that no longer hold true. These assumptions, made decades ago, must be challenged, and amended, where overwhelming evidence demon-

strates a change of course is critical. It is time to take a step back, assess the present and future and make the necessary adjustments, all in full public disclosure to the Congress and the American people. Many acres of (conifers) In many areas, conifers haven't shown "resilience" enough to spring back from disturbance. Regeneration is already a big problem. (Emphasis added).

Both RPA and NFMA mandate long-range planning which impose numerous limitations on commodity production, including grazing, timber harvesting practices and the amount of timber sold annually. These long-range plans are based on assumptions, which are based on data, expert opinion, public participation and other factors that all, well almost all, view from a historical perspective. Assumptions that drove forest planning guidance decades ago, when climate risk was not known as it is today, are obsolete today.

Present and future climate risk realities demand new assumptions and new guidance.

A proper reexamination of the assumptions relating to resilience and sustainability contained in the Forest Plan is necessary. Scientific research supporting our comments focus on important data and analysis. A full discussion and disclosure of the following is required: 1) trends in wildfires, insect activity and tree mortality, 2) past regeneration

success/failure in the project area, and 3) climate-risk science – some of which is cited below. Our comments, and supporting scientific research clearly “demonstrates

connection between prior specific written comments on the particular proposed project or activity and the content of the objection...”

The project is in violation of NEPA, NFMA, the Forest Plan and the APA.

Sec. 6. of the National Forest Management Act states:

(g) As soon as practicable, ... the Secretary shall ... promulgate regulations, under the principles of the Multiple-Use, Sustained-Yield Act of 1960...

The regulations shall include, but not be limited to-

(3) specifying guidelines for land management plans developed to achieve the goals of the Program which-

(E) insure that timber will be harvested from National Forest System lands only where-

(i) soil, slope, or other watershed conditions will not be irreversibly damaged;

NFMA regulations at 36 C.F.R. § 219.27 (Management requirements) state:

(a) Resource protection. All management prescriptions shall—

(1) Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land;

(b) Vegetative manipulation. Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall--

(5) Avoid permanent impairment of site productivity and ensure conservation of soil and water resources;

The project-level, and programmatic-level (Forest Plan) fail to publicly disclose the current and future impacts of climate risk to our national forests. NEPA requires cumulative effects analysis at the programmatic level, and at the project-level. The failure to assess and disclose all risks associated with vegetative-manipulation (slash and burn) units in the project area in the proper climate-risk context/scenario violates the NFMA, NEPA and the APA.

In the face of increasing climate risk, growing impacts of wildfire and insect activity, plus scientific research findings, NEPA analysis and disclosure must address the well-documented trend in post-fire regeneration failure. The project has already experienced difficulty restocking on areas that burned in the 1988 wildfire. NFMA (1982) regulation 36 CFR 219.27(c)(3) implements the NFMA statute, which requires adequate restocking in five years.

Given the forest's poor history of restocking success and its failure to employ the best available science, the adequacy of the site-specific and programmatic NEPA/NFMA process begs for further analysis and disclosure of the reality of worsening climate conditions which threaten – directly and cumulatively – to turn forest into non-forested vegetation, or worse. The desired future condition described in the Purpose and Need, or in the Forest Plan is not deforestation.

The Forest Plan is based on assumptions largely drawn from our past. These assumptions must be challenged, and amended, where overwhelming evidence demonstrates a change of course is critically important. It is time to take a step back, assess the future and make the necessary adjustments, all in full public disclosure to the Congress and the American people.

The FSEIS fails to acknowledge the likelihood that “...high seedling and sapling mortality rates due to water stress, competing vegetation, and repeat fires that burn young stands,” which will likely lead to a dramatic increase in non-forest land acres. Many acres of (conifers) trees already fail to regenerate. (Emphasis added). A map of these areas is required. In many areas, conifers haven't shown “resilience” enough to spring back from disturbance.

Looking to the Future and Learning from the Past in our National Forests: Posted by Randy Johnson, U.S. Forest Service Research and Development Program, on November 1, 2016 at

11:00 AM <http://blogs.usda.gov/2016/11/01/looking-to-the-future-and-learning-from-the-past-in-our-national-forests/>

Excerpt:

“Forests are changing in ways they've never experienced before because today's growing conditions are different from anything in the past. The climate is changing at an unprecedented rate, exotic diseases and pests are present, and landscapes are fragmented by human activity often occurring at the same time and place.

When replanting a forest after disturbances, does it make sense to try to reestablish what was there before? Or, should we find re-plant material that might be more appropriate to current and future conditions of a changing environment?

Restoration efforts on U.S. Forest Service managed lands call for the use of locally adapted and appropriate native seed sources. The science-based process for selecting these seeds varies, but in the past, managers based decisions on the assumption that present site conditions are similar to those of the past.”

“This may no longer be the case.”

Suggested remedies: Choose the No Action Alternative or Forest Plan Amendments are needed to establish standards and guidelines which acknowledge the significance of climate risk to other multiple-uses. Amendments must not only analyze forest-wide impacts, but the regional, national and global scope of expected environmental changes. Based on

scientific research, the existing and projected irretrievable losses must be estimated. Impacts caused by gathering climate risk (heat, drought, wind) and its symptoms, including wildfire, insect activity, and regeneration failure and mature tree mortality must be analyzed cumulatively.

The selected scientific research presented above is only a sampling of the growing body of evidence that supports the need to disclose the consequences of the proposed action in a proper context - a hotter forest environment, with more frequent drought cycles. This evidence brings into question the Purpose and Need for the project. It also requires the FS to reconsider the assumptions, goals and expected desired future condition expressed in the existing Forest Plan. Plan expectations must be amended at the programmatic level before proceeding with proposed project-level action(s). According to best available science, implementing the project will most likely accomplish the opposite of the desired future condition. We can adjust as we monitor and find out more. However, to willfully ignore what we do know and fail to disclose it to the public is a serious breach of public trust and an unconscionable act. Climate risk is upon us. A viable alternative to the proposal is not only reasonable and prudent, but it is the right thing to do.

The draft decision is in violation of NEPA, NFMA, the ESA and the APA because the project will adversely affect biological diversity, is not following the best available science and the purpose and need will not work.

Remedy: Choose the No Action Alternative or write an EIS that fully complies with the law.

We wrote in our comments:

1. *Did the Forest Service conduct NEPA analysis (i.e. an EA or EIS) for the Fire Plan?*
2. *If the Forest Service did not conduct NEPA for the Fire Plan, please immediately start that NEPA process.*
3. *Please provide a map showing the WUI and the locations of all homes in comparison to the project area.*
4. *If the Forest Service did not conduct NEPA for the Fire Plan, please disclose the cumulative effects of Forest-wide implementation of the Fire Plan in the DEIS to avoid illegally tiering to a non-NEPA document. Specifically analyze the decision to prioritize mechanical, human-designed, somewhat arbitrary treatments as a replacement for naturally-occurring fire.*
5. *Did the Forest Service conduct ESA consultation for the FirePlan?*
6. *Did the Forest Service formally consult on the NRLMD in lynx critical habitat?"*

The Forest Service must consult with the USFWS on the Fire Plan and impact of this project on lynx, lynx critical habitat and the NRLMD in lynx critical habitat and give the public a chance to comment on this consultation. It is a violation of NEPA, NFMA, the APA, and the ESA to not do so.

The Remedy is to reissue the ROD and FEIS after the public has a chance to see and comment on the Forest Service's consultation with the USFWS on the impacts of this project and bull trout and bull trout critical habitat.

We wrote in our comments:

- 7. "Will the Forest Service be considering binding legal standards for noxious weeds in its revision of the Helena Forest Plan?"*
- 8. How effective have BMPs been at stopping (i.e. preventing) new weed infestations from starting during logging and related road operations?*
- 9. Is it true that new roads are the number one cause of new noxious weed infestations?*
- 10. Why isn't the Forest Service considering a Forest Plan amendment in this Project to amend the Forest Plan to include binding legal standards that address noxious weeds?*

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

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

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

The SEIS is not clear if any MIS were found. What MIS did you find, how many and how did you look for these MIS?

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

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

Which species and processes do fire-proofing harm?

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

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

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

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

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

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

Why is logging that removes trees considered regeneration (and not loss of existing forest), when a stand-replacing fire is considered loss of the forest (and not regeneration)?

How will the project improve watershed health?

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

After snags are cut down for safety for OSHA requirements will there still be enough snags left for old growth sensitive species?

29. Will tations?

this Project exacerbate existing noxious weed infestations and start new infes-

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

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

32. *Is this Project consistent with “research recommendations (Krankina and Harmon 2006) for protecting carbon gains against the potential impacts of future climate change? That study recommends “[i]ncreasing or maintaining the forest area by avoiding deforestation,” and states that “protecting forest from logging or clear- ing offer immediate benefits via prevented emissions.”*
33. *Please list each visual quality standard that applies to each unit and disclose whether each unit meets its respective visual quality standard. A failure to com- ply with visual quality Forest Plan standards violates NFMA.*
34. *For the visual quality standard analysis please define “ground vegetation,” i.e. what age are the trees, “reestablishes,” “short-term,” “longer term,” and “revegetate.”*
35. *Please disclose whether you have conducted surveys in the Project area for this Project for wolverines, pine martins, northern goshawk and lynx, grizzly bears as required by the Forest Plan.*
36. *Please disclose the last time the Project area was surveyed for Whitebark pine, wolverines, pine martins, northern goshawk, grizzly bears and lynx.*
37. *Please disclose how often the Project area has been surveyed for wolverines, whitebark pine, pine martins, northern*

goshawks, grizzly bears and lynx. Is it im- possible for a wolverines, pine martins, northern goshawks, grizzly bears and lynx to inhabit the Project area?

38. Would the habitat be better for whitebark pine, wolverines, pine martins, north- ern goshawks, grizzly bears and lynx if roads were removed in the Project area?

39. What is the U.S. FWS position on the impacts of this Project on whitebark pine, wolverines, pine martins, northern goshawks, grizzly bears and lynx? Have you conducted ESA consultation?

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

The Forest Service responded: Impacts of forest management activities on carbon storage and emissions are discussed in the 2015 Helena and Lewis & Clark National Forests Forest Plan Assessment Climate Change and Baseline Assessment of Carbon Stocks, 2015 Baseline Estimates of Carbon Stocks in Forests and Harvested Wood Products for the National Forest System Unit Northern Region, Assessment of the Influence of Disturbance, Management

Activities, and Environmental Factors on Carbon Stocks Northern Region (in review), and the 2019 Carbon and Greenhouse Gas Emissions Report for the Stonewall Vegetation Project (see the project record).

The Forest Service did not adequately answer these questions. Almost no surveys were done. No baseline conditions were identified. The Remedy is to write a new Draft ROD and completely answer these questions.

We wrote in our comments:

***“POPULATION VIABILITY AND HABITAT MANAGEMENT
OF MANAGEMENT INDICA-***

TOR AND SENSITIVE SPECIES

The HNF continues to rely on wildlife habitat models for TES and MIS, utilizing the TSMRS or a similar database, of unproven reliability. The HNF cites no on-the-ground studies verifying the assumptions made with the use of these models.¹

¹ In his 1991 book, *In the Absence of the Sacred*, Jerry Mander notes criticisms of the use of computers by the Forest Service biologists, and discusses the loss of relationship between humans and their wildlife neighbors as computers are utilized more widely by biologists (see Mander, 1991).

The HNF has consistently ignored the Region's guidance document for old-growth species' habitat management (USDA Forest Service, 1990). From USDA Forest Service, 1990:

The greater vertical and horizontal diversity found within an old-growth stand allows for niche specialization by wildlife. Although the individual wildlife species occurring may not be unique to old-growth stands, the assemblage of wildlife species and the complexity of interactions between them are different than in earlier successional stages. P. 2

Forest-wide estimates are needed of the relative abundance, patch sizes, and spatial distribution of old-growth habitat by forest type. P. 3

In northwestern Montana, McClelland (1977) described a general trend of increased species richness in cavity-nesting birds from young to old-growth stands of larch and Douglas-fir. Old growth was particularly important in providing an adequate number of suitable nesting trees for cavity-nesters. P. 6

Patch size correlates strongly with the numbers of species and individuals that can be supported and with rates of extinction and re-

colonization.” ... Of 48 old-growth-associated species occurring in the Northern Region, about 60 percent are thought to require stands larger than 80 acres. P. 8

Roads are generally undesirable within an old-growth habitat patch. P. 9

Providing for well-distributed habitat patches with interconnections between patches thus is necessary to maintain species diversity over the long term. P. 9.

McClelland (1979a) noted that pileated woodpeckers usually avoid open areas for feeding, preferring forests with a significant old-growth component and high basal area. ...Bull and Meslow (1977) classified preferred

feeding habitats as having high densities of snags and logs, dense canopies, and tall ground cover, with more than 10% of the ground area covered by logs. Pp. 11-12.

In the northern Rockies, the density of snags and stumps at pileated feeding sites (not throughout the feeding range) averaged 7 per acre (Aney and McClelland 1985). At least 500 acres of suitable feeding habitat is needed within the home range of a pair (McClelland 1979a). P. 12.

Monitoring Old-growth Habitats and MIS

Landres et al. (1988) pointed out that identifying old-growth stands based on habitat requirements of the MIS, and then monitoring habitat conditions for those MIS to assess old-growth conditions, is circular reasoning. Because old-growth associated MIS are intended to represent a community of wildlife species, stand selection, management and monitoring should not be directed only towards the minimum requirements of MIS. Both general habitat conditions in relation to an ecological classification and suitability of the stands or patches to MIS need to be monitored. P. 38, emphasis added.

Three levels of monitoring intensity have been identified for Forest Plan implementation: implementation, effectiveness, and validation monitoring. Monitoring of habitats should be emphasized at all levels, with additional monitoring of habitat occupancy and population trends of MIS as appropriate. P. 38.

Monitoring Intensity

Model predictions can be tested by sampling a portion of the designated old-growth stands to determine the actual rate of occupancy by management indicator species. P. 38.

Validation Monitoring

Model validation should include tests to determine whether model output correctly predicts habitat quality. Reproductive performance over time is a good indicator of site productivity. P. 39.

Validation of Effects of Management Practices on Population

Viability

Monitoring data should enable comparison of ‘control’ and ‘treatment’ territories. Otherwise, it will be unclear whether observed population changes were due to habitat change, weather, prey population cycles, or other factors. P. 39.

Methods For Habitat Monitoring

Aerial photo interpretation or other remotely-sensed data are suitable to determine cover type, overstory tree size, percent canopy cover, and stand acreage. Additional sampling effort will be needed to obtain reasonably accurate estimates of size and density of dead trees, standing and down. P. 40.

Methods For Monitoring Pileated Woodpecker

(field methodologies given, p. 40)

Methods For Monitoring Goshawk

(field methodologies given, pp. 40-41)

Methods For Monitoring Marten

(field methodologies given, p. 41)

Logging and other disturbance associated with the project and Seeley-Swan Fire Plan could affect northern goshawk nesting, post-fledging family habitat, alternative nesting, foraging, competitors, prey and potential habitat, including areas far from cutting units. Research in the Kaibab National Forest found that goshawk populations decreased dramatically even after partial logging and even

when large buffers around nests were provided (Crocker-Bedford, 1990).

The HNF ignores important scientific information on goshawk habitat requirements. Reynolds, et al. 1992 provide a basis for a northern goshawk conservation strategy that could be implemented if forestwide habitat considerations were to be truly taken into account. They suggest that it is essential to viability of goshawks that 20-50% of old growth within their nesting areas be maintained, yet the HNF fails to recognize that (see also Suring et al. 1993). Graham, et al. 1999, USDA Forest Service 2000b, Iverson et al. 1996, and Suring et al. 1993 are more examples of northern goshawk conservation strategies the FS might adopt for this Forest or Region, if emphasis was more appropriately placed on species conservation and insuring viability rather than justification for resource extraction.

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 (Id.). Research suggests that a localized distribution of 50% old growth should be maintained to allow for viability of goshawks (Suring et al. 1993).

The scientific information provided in Center for Biological Diversity, 2004, also conflicts with the HNF's analyses and conclusions

regarding goshawk viability, and includes vital information on goshawks not considered by the HNF.

Goshawks are often associated with a thick overstory cover and areas with a large number of large trees. For example, Hayward and Escano (1989) recommend an overstory canopy between 75 and 80%. According to the BE/BA for the Keystone Quartz EIS in the Beaverhead NF, "Goshawks prefer vegetation structure that permits them to approach prey unseen and to use their flight maneuverability to advantage (Widen, 1989, Beier and Drennan 1997)..."

Opening forests by logging will increase suitability of species as the red-tailed hawk, who competes with goshawks, as well as the great horned owl, a goshawk predator. The problems of habitat conversion from that of goshawk to red-tailed hawk has been reported by La Sorte et al., 2004 based on a study of over 120 goshawk territories.

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.

Greenwald et al., 2005 reviewed the current literature on goshawk habitat relationships applicable to the Northern Rockies. Nine of 12 studies demonstrated selection for stands with higher canopy closure, larger tree size, and greater numbers of large trees than found in random stands. Some notable statements and conclusions include:

...Most studies found that goshawks avoided open areas and logged early-seral stands; none of the studies cited in this paper found selection for such features.

...While some studies suffered from small sample sizes or relatively short sampling peri-

ods, the consistency of results demonstrates goshawk selection for late-successional forest structures (e.g., high canopy closure, large trees for forest type, canopy layering, abundant coarse woody debris) when using areas within their studied home ranges. ... This is not to say that goshawks only forage or roost in mature stands, but rather that such stands are disproportionately selected.

... (R)eviewed studies found goshawks avoided open areas, particularly logged open areas, and none found selection for openings.

... The 5 studies correlating nest occupancy and productivity with habitat features consistently demonstrated a relationship between closed-canopied forests with large trees and goshawk occupancy. Occupancy rates were reduced by removing forest cover in the home range, which thereby resulted in reduced productivity because there were fewer active breeding territories. (Internal citations omitted.)

Seeking to promote abundant populations of 14 prey species, Reynolds et al. (1992) recommend maintaining 20% of the landscape in grass–forb or seedling–sapling stage forest, 20% in young forest, 20% in mid-aged forest, and 40% in mature and old forests. ... Given the above findings that goshawks generally avoid open areas and early-seral forest, that logging reduces goshawk occupancy and productivity, and a lack of evidence that creating openings or young forest through logging benefits goshawks, these recommendations appear to lack support in research produced since 1992.

Across most of the western United States, mature and old-forests have declined to much less than 40% of the landscape. Given these declines and the lack of information on the amounts of mature and old-forest goshawks require, we recommend protecting existing mature and old-forest characteristics and ensuring that such forests are allowed to develop in proportions similar to presettlement conditions. This can be accomplished by restricting cutting to small trees, and prohibiting large reductions in canopy closure. A similar proposal was recently adopted by Region 5 of the United States Forest Service for the Sierra Nevada. In sum, based on apparent inconsistencies between subsequent research and Reynolds et al. (1992), we recommend adaptation of the management guidelines to incorporate results of numerous studies conducted since 1992. (Internal citations omitted.)

The issue of fragmentation should have been more thoroughly considered with respect to goshawks. Other edge-adapted species may compete with the goshawk and displace the goshawk if inadequate amounts of interior forest habitat are available. Crocker-Bedford (1990) recommends that a foraging area of >5000 acres of dense forest, in which no logging is permitted, be designated for

goshawks, with additional areas of 2500-5000 acres of more marginal habitat designated beyond this 5,000 acre foraging area.”

It is a violation on NFMA and NEPA to ignore these issues and concerns. The Remedy is the No Action Alternative.

We wrote in our comments:

“The HNF fails to take seriously the uncertain and precarious population status of the fisher, as described in Witmer, et al., 1998:

The status of the fisher in the Western United States is poorly known but generally perceived as precarious and declining. This is a serious issue alone, but it also is a component of the larger problem of the decline of biological diversity. Recovery of species of concern must necessarily focus on the population level, because this is the scale at which genetic variation occurs and because population [sic] are the constituent elements of communities and ecosystems. Systematic habitat alteration and overexploitation have reduced the historical distribution of fishers in suitable habitat in the interior Columbia basin to isolated and fragmented populations. Current populations may be extremely vulnerable to local and regional extirpation because of their lack of connectivity and their small numbers (Id. at 14, internal citations omitted).

The proposed logging could adversely impact fishers and their habitat. Habitat elements for natal and maternal dens are found in large diameter logs or snags, slated to be reduced by the logging. “Though the post-treatment stand condition would not be ‘clear cuts’, they would be fairly open and Jones (1991) did not expect to find substantial fisher hunting use of plantations by fishers until canopy approached 80% and 10-15 feet respectively (depending on snow depths)” (Helena NF’s Spotted Beetle EA, p. 3-62). The logging, snag removal and other activities associated with the Hidden

Lake Fuel Reduction project would negatively affect fisher habitat. Movement, denning, resting areas, genetic diversity, and other aspects of fisher life cycles and fisher survival could be impacted by the project; the FS does not fully consider these elements of the project or adequately mitigate their impacts.

Jones (undated) and the LNF's Johnsen (1996) provide examples of possible conservation strategies for the fisher, something the FS has so far neglected to implement for this Sensitive species.

THE AGENCIES SHOULD CONDUCT ESA CONSULTATION FOR THE NORTHERN ROCKIES FISHER.

This year, USFWS found “substantial scientific or commercial information indicating that listing a [Distinct Population Segment] of fisher in the [Northern Rocky Mountains] of the United States [under the ESA] may be warranted.” 75 Fed. Reg. 19925 – 19935 (April 16, 2010). In particular, USFWS found that listing the Northern Rockies fisher under the ESA may be warranted in primary part “due to the present and potential future modification and destruction of habitat from commercial timber harvest and commercial wood production by methods that may prevent succession to the mature forest stages preferred by fishers.” The Forest Service admits that the fisher and/or its habitat are present within the project area and would be impacted by the project. The Forest Service did no ESA consultation for the fisher for this project.

THE AGENCIES SHOULD CONDUCT ESA CONSULTATION FOR THE WOLVERINE.

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

Objection: The project is in violation of NFMA, NEPA and the APA for the reasons stated above. The Remedy is to choose the No Action Alternative.

We wrote in our comments:

“Regarding another Sensitive species, the black-backed woodpecker, Cherry (1997) states:

The black-backed woodpecker appears to fill a niche that describes everything that foresters and fire fighters have attempted to eradicate. For about the last 50 years, disease and fire have been considered enemies of the ‘healthy’ forest and have been combated relatively successfully. We have recently (within the last 0 to 15 years) realized that disease and fire have their place on the landscape, but the landscape is badly out of balance with the fire suppression and insect and disease reduction activities (i.e. salvage

logging) of the last 50 years. Therefore, the black-backed woodpecker is likely not to be abundant as it once was, and continued fire suppression and insect eradication is likely to cause further decline.

The Region 1 black-backed woodpecker assessment (Hillis et al., 2003) notes that the black-backed woodpecker depends upon dead and dying trees:

Black-backed woodpeckers occupy forested habitats that contain high densities of recently

dead or dying trees that have been colonized by bark beetles and woodborer beetles (Buprestidae, Cerambycidae, and Scolytidae). These beetles and their larvae are most abundant within burned forests. In unburned forests, bark beetle and woodborer infested trees are found primarily in areas that have undergone natural disturbances, such as wind-throw, and within structurally diverse old-growth forests. (Internal citations omitted.)

...Black-backed woodpeckers also occur in unburned landscapes Bull et al.1986, Goggans et al.1987, Bate 1995, Hoffman 1997, Weinhagen 1998, Steeger and Dulisse in press, Taylor unpublished data). Taylor's observations of black-backed woodpeckers in unburned forests in northern Idaho suggest that they may occur at substantially lower densities in unburned forests, but no rigorous comparisons between black-backed woodpecker densities in burned and unburned forests have been done. Hutto (1995) hypothesized that black-backed woodpeckers reproduce at source reproductive levels in burns, but may drop to sink reproductive levels in the intervening periods between large burns.

Dolan (1998a,b) states in regards to impacts on the black-backed woodpecker due to fire suppression and post-fire logging states:

It seems that we have a huge cumulative effects problem here, and that each salvage sale removes habitat that is already very limited. We are having trouble avoiding a “trend to federal listing” call for the BBWO in salvaging burns, unless comparable acres of fire-killed dead are being created through prescribed burns.

The comments by other biologists attached to Dolan, 1998a,b reveal that the FS has yet to design a consistent, workable, scientifically defensible strategy to ensure viable populations of the black-backed woodpeckers. The fire suppression and “salvage” logging policies of the HNF are the biggest threat to black-backed woodpecker population viability on the Forest, unfortunately in failing to create a conservation strategy the cumulative impacts of the HNF’s ongoing fire suppression policy will remain unexamined. The Hidden Lake Fuel Reduction project continues an unspoken management for extinction policy.

Lofroth (1997) in a British Columbia study, found that wolverines use habitats as diverse as tundra and old-growth forest. Wolverines are also known to use mid- to low-elevation Douglas-fir forests in the winter (USDA Forest Service, 1993). The cumulative impacts of logging and road building on a species that depends upon remote, wild areas remain unexplored.

The flammulated, boreal owl and the great gray owl are species of concern that are sensitive to logging and other management activities. The HNF provides inadequate management strategies to insure their viability. See, for example, Hayward and Verner, 1994.

Wright, et al. (1997) point out that habitat restoration for the flammulated owl must be carefully targeted to the correct habitat types. The FS can't simply cut and/or burn forest area and expect flammulated owls to start using it as habitat. Wright, et al. (1997) state:

(W)e never detected Flammulated Owls in mesic old-growth ponderosa pine stands with a Vaccinium understory. Thus, within suitable landscapes, it may be most effective to conserve and restore stand structural characteristics within suitable habitat types (e.g., xeric ponderosa pine/ Douglas-fir stands in our study area), rather than within any stand containing ponderosa pine trees.

The EIS does not adequately consider cumulative effects on upland habitat for boreal toads. This does not make sense, since such small populations that are likely to persist are especially susceptible to fragmentation and extirpation due to isolation of smaller populations. See Maxell, 2000. In fact, the HNF has never performed a genuine analysis of cumulative impacts of logging activities on boreal toads.

From Ch. 3 p. 173 of the Bristow Area Restoration Project EA, Kootenai National Forest, (USDA Forest Service, 2003a:

Little quantitative data are available regarding the boreal toad's use of up- land and forested habitats. However, boreal toads are know to migrate be- tween the aquatic breeding and terrestrial nonbreeding habitats (TNC Database 1999), and that juvenile and adult toads are capable of moving over 5 km between breeding sites (Corn et al. 1998²). It is thought than ju- veniles and female boreal toads travel farther than the males (Ibid). A study on the Targhee National Forest (Bartelt and Peterson 1994) found female toads traveled up to 2.5 kilometers away from water after breeding, and in foraging areas, the movements of toads were significantly influenced by the distribution of shrub cover. Their data suggests that toads may have avoided macro-habitats with little or no canopy and shrub cover (such as clearcuts). Underground burrows in winter and debris were important com- ponents of toad selected micro-sites in a variety of macro-habitats. The bo- real toad digs its own burrow in loose soil or uses those of small mammals, or shelters under logs or rocks, suggesting the importance of coarse woody debris on the forest floor. ...(T)imber harvest and prescribed burning activi- ties could impact upland habitat by removing shrub cover, down woody material, and/or through compaction of soil.

Montana Fish, Wildlife & Parks, 2005 (a more recent version of the above cite "TNC Database, 1999") also discuss boreal toad habitat:

Habitats used by boreal toads in Montana are similar to those reported for other regions, and include low elevation beaver ponds, reservoirs, streams, marshes, lake shores, potholes, wet meadows,

and marshes, to high elevation ponds, fens, and tarns at or near treeline (Rodgers and Jellison 1942, Brunson and Demaree 1951, Miller 1978, Marnell 1997, Werner et al. 1998, Boundy 2001). Forest cover in or near encounter sites is often unreported, but toads have been noted in open-canopy ponderosa pine woodlands and closed-canopy dry conifer forest in Sanders County (Boundy 2001), wil-

² Cited and included as Maxell et al., 1998 herein.

low wetland thickets and aspen stands bordering Engelmann spruce stands in Beaverhead County (Jean et al. 2002), and mixed ponderosa pine/cottonwood/willow sites or Douglas-fir/ponderosa pine forest in Ravalli and Missoula counties (P. Hendricks personal observation).

Elsewhere the boreal toad is known to utilize a wide variety of habitats, including desert springs and streams, meadows and woodlands, mountain wetlands, beaver ponds, marshes, ditches, and backwater channels of rivers where they prefer shallow areas with mud bottoms (Nussbaum et al. 1983, Baxter and Stone 1985, Russell and Bauer 1993, Koch and Peterson 1995, Hammerson 1999). Forest cover around occupied montane wetlands may include aspen, Douglas-fir, lodgepole pine, Engelmann spruce, and subalpine fir; in local situations it may also be found in ponderosa pine forest. They also occur in urban settings, sometimes congregating under street lights at night to feed on insects (Hammerson 1999, P. Hendricks personal observation). Normally they remain

fairly close to ponds, lakes, reservoirs, and slow-moving rivers and streams during the day, but may range widely at night. Eggs and larvae develop in still, shallow areas of ponds, lakes, or reservoirs or in pools of slow-moving streams, often where there is sparse emergent vegetation. Adult and juvenile boreal toads dig burrows in loose soil or use burrows of small mammals, or occupy shallow shelters under logs or rocks. At least some toads hibernate in terrestrial burrows or cavities, apparently where conditions prevent freezing (Nussbaum et al. 1983, Koch and Peterson 1995, Ham- merson 1999).

Maxell et al., 1998 state:

We believe that the status of the Boreal toad is largely uncertain in all Re- gion 1 Forests. ...Briefly, factors which are a cause for concern over the via- bility of the species throughout Region 1 in- clude: (1) a higher degree of ge- netic similarity within the range of Region 1 Forests relative to southern or coastal populations; (2) a general lack of both historical and current knowl- edge of status in the region; (3) indications of declines in areas which do have historical information; (4) low (5-10%) occupancy of seemingly suit- able habitat as detected in recent surveys; (5) some evidence for recent restriction of breeding to low elevation sites and; (6) re- cent crashes in bore-

al toad populations in the southern part of its range which may in- dicate the species' sensitivity to a variety of anthropogenic impacts."

Objection: The Forest Service did not adequately answer these questions. Almost no surveys were done. No baseline conditions were identified. The Remedy is to write a new Draft ROD and completely answer these questions.

Remedy: Monitor these species.

We wrote in our comments;

“LYNX

In December 1999, the Forest Service and Bureau of Land Management completed their “Biological Assessment Of The Effects Of National Forest Land And Resource Management Plans And Bureau Of Land Management Land Use Plans On Canada Lynx” (“Programmatic BA”). The Programmatic BA concluded that the current programmatic land management plans “may affect, and are likely to adversely affect, the subject population of Canada lynx.” The BA team recommended amending or revising Forest Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects to lynx. The Programmatic BA’s determination means that Helena Forest Plan implementation is a “taking” of lynx.

The fact that continued implementation of the Forest Plans constitutes a “taking” of the lynx is not disclosed in the EA or in the EA’s Biological Assessment. Such taking can only be authorized with an incidental take statement, issued as part of a Biological Opinion (B.O.) during a Section 7 consultation. The FS must in-

corporate terms and conditions from a programmatic B.O. into a Forest Plan amendment or revision before projects affecting lynx habitat, such as the North Butte Salvage Project, can be authorized.

The Programmatic BA's "likely to adversely affect" conclusion was based upon the following rationale (p. 4), all of which apply here. Forest Plans within the Northern Rockies:

- *generally direct an aggressive fire suppression strategy within developmental land allocations. ...this strategy may be contributing to a risk of adversely affecting the Lynx by limiting the availability of foraging habitat within these ar-*

eas.

- *allow levels of human access via forest roads that may present a risk of incidental trapping or shooting of Lynx or access by other competing carnivores.*

The risk of road-related adverse effects is primarily a winter season issue.

- *are weak in providing guidance for new or existing recreation developments.*

Therefore, these activities may contribute to a risk of adverse effects to lynx.

- *allow both mechanized and non-mechanized recreation that may contribute to a risk of adverse effects to lynx. The potential effects occur by allowing compacted snow trails and plowed roads which may facilitate the*

movements of lynx competitors and predators.

- *provide weak direction for maintaining habitat connectivity within naturally or artificially fragmented landscapes. Plans within all geographic areas lack direction for coordinating construction of highways and other movement barriers with other responsible agencies. These factors may be contributing to a*

risk of adverse effects to lynx.

- *fail to provide direction for monitoring of lynx, snowshoe hares, and their habitats. While failure to monitor does not directly result in adverse effects, it makes the detection and assessment of adverse effects from other man-*

agement activities difficult or impossible to attain.

- *forest management has resulted in a reduction of the area in which natural ecological processes were historically allowed to operate, thereby increasing the area potentially affected by known risk factors to lynx. The Plans have continued this trend. The Plans have also continued the process of fragmenting habitat and reducing its quality and quantity. Consequently, plans may*

risk adversely affecting lynx by potentially contributing to a reduction in the geographic range of the species.

• The BA team recommends amending or revising the Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects to lynx. The programmatic conservation measures listed in the Canada Lynx Conservation Assessment and Strategy (LCAS) should be considered

in this regard, once finalized.

The BA notes that the LCAS identifies the following risk factors to lynx in this geo-

graphic area:

- Timber harvest and precommercial thinning that reduce denning or foraging habitat or converts habitat to less desirable tree species;*
- Fire exclusion that changes the vegetation mosaic maintained by natural disturbance processes;*
- Grazing by domestic livestock that reduces forage for lynx prey;*
- Roads and winter recreation trails that facilitate access to historical lynx habitat by competitors;*
- Legal and incidental trapping and shooting;*

- *Being hit by vehicles;*
- *Obstructions to lynx movements such as highways and private land devel-*

opment;

It is clear, then, that the FS must do more than follow its Forest Plans to protect lynx. Nonetheless, and in spite of the inadequate analysis population viability fol- lowing adverse modification of habitat perpetuated by the Project, the North Butte Salvage Project BA concludes that the implementation of the proposed action would result in a determination of “may affect but not likely to adversely affect.”

The EA and BA fail to fully demonstrate Project consistency with all LCAS Stan- dards and guidelines. For example, the LCAS sets mandatory Standards that would modify or amend the Forest Plans—steps the LNF has thus far not accom- plished. Important Programmatic Standards include:

Identify key linkage areas that may be important in providing landscape connectivi- ty within and between geographic areas, across all ownerships. (p. 87)

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

Map and monitor the location and intensity of snow compacting activities that coincide with Lynx habitat, to facilitate future evaluation of effects on Lynx as information becomes available. (p. 82)

On federal lands in Lynx habitat, allow no net increase in groomed or designated over-the-snow routes and snowmobile play areas by LAU.

The EA fails to provide adequate maps of LAUs and habitat components along with areas of human activity as the LCAS requires, making it impossible for the public and decision maker to understand the impacts of motorized travel, as well as to understand impacts on habitat and connectivity of habitat. The BA lacks a genuine analysis of the full range of cumulative impacts of other activities. The EA and BA also fail to disclose the cumulative effects of livestock grazing on the grazing allotments in the project area.

The Programmatic BA's analysis of the ability of the Forest Plans, as 'amended' by the LCAS, to prevent a "taking" of the lynx is based upon the Forests' meeting management standards. As the Helena NF has not adequately shown that it is in compliance with its old growth standards, or that it even has valid old growth stan-

dards, as detailed elsewhere in this appeal, the project BA and EA are not in compliance with the LCAS.

We also have to question the validity of the percentage habitat standards set by the LCAS itself. The Forest Service would be hard-pressed to find many Lynx Analysis Unit in the Northern Region—heavily logged or otherwise—that already don’t meet these percentages. Basically, what these Standards accomplish is to validate the management status quo—the very situation that led to the listing of the lynx under the ESA.”

The Forest Service responded:

Concerns about the direction contained within the Northern Rockies Lynx Management Direction and the programmatic consultation on its relevance to lynx critical habitat are outside the scope of the Stonewall Vegetation Project. The Stonewall Vegetation Project’s purpose and need is to: Improve the mix of vegetation composition and structure across the landscape, modify fire behavior to enhance community protection while creating conditions that allow the reestablishment of fire as a natural process on the landscape, and integrate restoration with socioeconomic considerations – not address concerns related to lynx management direction. As shown in the final supplemental environmental impact statement in chapter 3 wildlife section, the existing baseline and the post-project conditions meet the standards and guidelines of the Northern Rockies Lynx Management Direction and the terms and conditions of the BiOp.

The analysis and determinations for lynx and lynx habitat considers best available science at the time of publication. See the refer-

ence sections in the Stonewall Vegetation Project 2015 final environmental impact statement and draft supplemental environmental impact statement for a list of references considered for the analyses. Also, The Canada lynx section in chapter 3 for the final supplemental environmental impact statement has been updated to address new best available science. This includes the following four papers: Holbrook et al 2016, Holbrook et al 2017, Kosterman et al 2018, Kosterman 2014, Holbrook et al 2018. Consideration is also given in this section to an assessment that addressed how these four papers relate to management direction provided in the Northern Rockies Lynx Management Direction and is incorporated by reference and filed in the project record as Hanvey 2018

Objection: The Forest Service did not adequately answer these questions. Almost no surveys were done. No baseline conditions were identified. The Remedy is to write a new Draft ROD, follow the best available science and completely answer these questions and consult with the FWS on the lack of monitoring Lynx. Please see the attached order in Case 4:13-cv-00151-RCC on monitoring and the Mexican spotted owl. In this order the court ruled:

“The Court finds that USFS timber management actions (including timber harvesting) causes irreparable harm which cannot proceed during a Section 7 consultation addressing occupation monitoring of the MSO for recovery. It has been demonstrated

over the past 20 years that “the status quo will not lead to recovery of the listed species.”

See Nat’l Wildlife Fed’n, 422 F.3d 782, 796 (9th Cir. 2005).”

The same issue applies here. The project is in violation of the ESA because adequate monitoring has not occurred and section 7 consultation must occur.

Remedy: Monitor lynx populations and consult with the FWS to see if lynx are being recovered or not as required under the ESA and NFMA.

CONCLUSION

The remedy is to choose the No Action Alternative or prepare a legally valid EIS, comply with all NEPA, NHPA ESA, APA, Roadless Rule, Forest Plan and NFMA requirements noted herein.

Pursuant to 36 CFR Part 218, and the APA, the Regional Office must respond to each of the above issues. As shown above, the DN/FONSI and EA must be overturned and vacated and the project cannot be approved as currently re-viewed and proposed.

Thank you for your attention to these concerns.

Sincerely yours,

Michael Garrity (Lead Objector)

Alliance for the Wild Rockies

P.O. Box 505

Helena, Montana 59624

406-459-5936

And for

Native Ecosystems Council

P.O. Box 125

Willow Creek, MT 59760

and for

Steve Kelly

Montana Ecosystems Defense Council

P.O. Box 4641

Bozeman, MT 59772

Tel: (406) 586-4421

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