



Friends of the Clearwater

Preserving, Protecting and Defending the Forests, Waterways and Wildlife in the wild heart of north central Idaho since 1987.

March 31, 2025

Transmitted via the project web portal at:

<https://cara.fs2c.usda.gov/Public/CommentInput?Project=60853>

Objection Reviewing Officer
USDA Forest Service, Northern Regional Office
Attn: Lacy Lemoosh
26 Fort Missoula Road
Missoula, MT 59804

Pursuant to 36 CFR Part 218, Friends of the Clearwater (FOC), Alliance for the Wild Rockies (AWR), WildEarth Guardians, and Inland Empire Task Force file this objection to the final Environmental Assessment (EA) and draft Decision Notice and Finding of No Significant Impact (DN) for the Lacy Lemoosh Project. This action is proposed by the U.S. Forest Service for the St. Joe Ranger District of the Idaho Panhandle National Forests (IPNF). The responsible official is Acting District Ranger Staś Moszynski.

The DN documents the Responsible Official’s decision to implement Alternative 2 from the EA. The DN states, “Alternative 2 includes the following actions:”

Treatment Type	Alternative 2
Commercial Vegetation Treatment (Acres)	2,643
Commercial Vegetation Treatment (# of Units) **	139
Precommercial Thinning (Acres)	161
Fuel Breaks (Acres) ***	210
Prescribed Fire in Natural Fuels (Acres)	715
Total Acres of Vegetation Treatments	3,729
WUI Benewah Vegetation Treatments (Acres)	173
WUI Latah Vegetation Treatments (Acres)	25
RHCA Buffer (Acres)	4,164
Stream Crossings	7 (one is a Bridge Replacement)
Stream Restoration (Miles)	1 (two sites)

Treatment Type	Alternative 2
Road Construction (Miles)	15
Temporary Roads (Miles)	11
Road Reconstruction (Miles)	20
Road Reconditioning (Miles)	13
Road Storage (Miles)	5
Haul Route (Miles)	69
Openings Greater than 40 acres (Total Acres)	2,290
Openings Greater than 40 acres (# of Openings)	22

*Acres may vary by +/- five acres due to rounding.

The DN states, “Additionally, the following transportation management changes are approved:”

Transportation Management	Alternative 2 Estimated Miles*
New road construction (to be gated, barriered, or stored after project is complete)	7
New road construction (placed in long term storage after project is complete)	3
New road construction (to be converted to OHV Trail post project - Roads 10A1, 10A2, 20, 25A, 25B, and Trail 320)	5
Temporary road construction (to be obliterated after project is complete)	11
Road reconstruction	20
Road reconditioning	13
Road Maintenance NFS Lands	20
Road Maintenance Non-NFS Lands	13
Road Storage (existing roads not open to the public)	5
Road Storage (existing open systems)	0
System roads to be decommissioned after project is complete	4
Non-system roads to be decommissioned after project is complete	21
New system Trail (Trail 320X and 1479B Cutoff)	1
OHV added onto existing trails system routes from formerly barriered road: about 3 miles (Road 200 converted to OHV)	3
Add existing non-system road templates to OHV (Roads 299E, 364A)	1
Converting OHV trail 3482 to an open Forest System Road	1
OHV Trail Decommissioning (Trails 299B, 299E, 320, 364A)	3

* All miles are approximate

Within this objection we incorporate our September 29, 2024 comments on the EA and also our May 25, 2023 comments on the Proposed Action for Scoping. Those letters include subject headings which are not discussed further in this objection, but that doesn't mean we are waiving or dropping those as objection concerns. The Forest Service's written responses to our comments were so evasive and nonresponsive, the problems we identified go unresolved and are thus fully pertinent and relevant during this objection phase.

We also incorporate within this objection the comments and the objections submitted by Mike Garrity on behalf of Alliance for the Wild Rockies et al. and Sara Johnson on behalf of Native Ecosystems Council, et al.

These objection statements are connected to our prior comments or issues that arose after the EA comment period. Attachments, references, and other incorporated documents are included on the data disk along with the objection, sent to the Forest Service (FS) via US mail postmarked this date.

In this objection, statements in quotes are from the EA unless otherwise attributed.

REMEDY REQUESTED

This Objection explains the numerous ways the EA and DN fall short of compliance with the National Environmental Policy Act (NEPA) the National Forest Management Act (NFMA), the Endangered Species Act, the 2012 Planning Rule, and other laws, regulations, and policy. The only way for the FS to properly remedy this situation is to withdraw the EA and DN, address the issues raised in this Objection and previous comments, and engage in a genuine NEPA process that welcomes, considers, and analyzes a full range of alternatives.

This project may significantly affect the human environment. Analysis in this EA violates NEPA by failing to take a "hard look." The FS must prepare an EIS to carefully consider the best available science, and determine the efficacy and propriety of its proposed "treatments."

PUBLIC INVOLVEMENT AND THE NATIONAL ENVIRONMENTAL POLICY ACT

In 2006 the Ninth Circuit U.S. Court of Appeals opinion observed in *Earth Island Institute v. United States Forest Service* [442 F.3d 1147 (2006)]:

We have noticed a disturbing trend in the [Forest Service's] recent timber-harvesting and timber-sale activities...It has not escaped our notice that the [Forest Service] has a substantial financial interest in the harvesting of timber in the National Forest. We regret to say that in this case, like the others just cited, the [Forest Service] appears to have been more interested in harvesting timber than in complying with our environmental laws."

The EA's purpose and need statement does not conform the letter or the spirit of NEPA. That there is only one action alternative is one problem. NEPA requires consideration and analysis of a reasonable range of alternatives. The FS cherry-picks forest plan direction emphasizing

manipulation of forest vegetation. And the proposed action would make no lasting progress toward plan conditions for water quality and aquatic habitat.

We also notice the “Forest Plan Consistency” document is extremely inadequate for demonstrating and explaining how the project is consistent with the Forest Plan and other applicable regulatory mechanisms. It often suggests without any analytic support that a given standard does not apply to the project for various reasons. And along with the EA it ignores direction such as that contained in the Forest Service Manual and Forest Service Handbook for which notice and comment procedures have been conducted, rendering them nondiscretionary.

FOREST SERVICE DECEIVINGLY AND DELIBERATELY WORSENS CLIMATE CHANGE, ALREADY ON AN EXTREMELY DANGEROUS TRAJECTORY

Our comments on scoping the Proposed Action mostly dealt with this topic. Our EA comments further discussed this issue by incorporating comments on the National Old Growth Amendments (NOGA) and the other actions and executive orders leading up to the NOGA Draft EIS. We incorporate our previous comments in their entirety within this objection.

In sum, the FS further augurs its head into the sand rather than face the climate crisis or critically and objectively examine its role in exacerbating it. The science is well settled by now and the FS is quite aware. Agency bureaucrats are fully complicit in severely disrupting the Earth’s biosphere to the point where human survival is in peril.

“We are on the brink of an irreversible climate disaster. This is a global emergency beyond any doubt. Much of the very fabric of life on Earth is imperiled. We are stepping into a critical and unpredictable new phase of the climate crisis.” (Ripple et al., 2024a.)

Climate change and its consequences are 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.”

The FS fails to properly quantify greenhouse gas emissions. Talberth, 2023 analyzes and estimates carbon emissions from alternatives of the NPCNF draft revised Forest Plan/DEIS. And Talberth (2024) “provides an estimate of the greenhouse gas (GHG) emissions associated with logging and logging road construction in Shasta and Siskiyou Counties using publicly available forest carbon data from 2012 to 2022.” Other quantitative tools for this analysis include USDA 2014. Our previous comments cite much scientific evidence that the FS ignores, contradicts, and/or fails to reconcile.

In a recent federal court decision (*Center for Biological Diversity et al v. U.S. Forest Service*; CV 22-114-M-DWM) regarding the Black Ram timber sale on the Kootenai National Forest, Judge Molloy recognizes (emphasis added):

Ultimately, “[greenhouse gas] reduction must happen quickly” and removing carbon from forests in the form of logging, even if the trees are going to grow back, will take decades to

centuries to re-sequester. FS-038329. Put more simply, logging causes immediate carbon losses, while re-sequestration happens slowly over time, **time that the planet may not have**. FS-020739 ([t] is recognized that global climate research indicates the world's climate is warming and that most of the observed 20th century increase in global average temperatures is very likely due to increased human-caused greenhouse gas emissions.”).

...NEPA requires more than a statement of platitudes, it requires appraisal to the public of the actual impacts of an individual project. ... (T)he USFS has the responsibility to give the public an accurate picture of what impacts a project may have, no matter how “infinitesimal” they believe they may be.

ECOLOGICALLY DEFICIENT FOREST PLAN “DESIRED CONDITIONS”

As discussed in our EA comments at pp. 2-3, the Lacy Lemoosh project would implement the 2015 Revised Forest Plan. Second in distastefulness only to the climate and ecological harm from logging and road building are the FS's *portrayals* of the logging and road building as somehow conducive to improved forest conditions. Such claims are made citing to generally unmeasurable project objectives or unscientific “desired conditions” outlined in the Forest Plan. The EA is an echo chamber set ringing by zealous tree farmers and other specialists who reinforce the baloney with noncredible analyses. The EA and DN are full of circular reasoning and strained logic, and are based on metrics purported to represent ecological integrity but which lack scientific validation.

The primary “Purpose and Need” is “to improve resiliency and resistance of forest vegetation to disturbances such as insects, diseases, wildfire, drought, etc.” The FS doesn't explain how resiliency and resistance are measured. This statement is meant to demonize native agents of tree mortality, even though they drive natural forest succession and help create the diversity of habitats and life forms that define these forest ecosystems. To the FS, the forest needs to be punished for acting naturally.

“Forest conditions in the project area have deviated from the desired conditions set forth in the Forest Plan... .” “Deviated”? The FS spews much propaganda with its terminology. Insect presence is characterized as “attacks” and a native fungus as “severe.” One is asked to accept the absurd premise that natural processes are a menace to the forests, which is absurd given that they have, over the course of countless centuries, produced the biological diversity and thus ecosystem services humans now enjoy. The EA says nothing about the range of occurrence of such native species down through time and thus dismisses the forest's inherent capability for “recovering to its original state” without the intrusion of human management.

An analysis of EA Table 8 as illustrates the hogwash.

Table 8. Pre- and post-treatment acres and proportions of dominance groups at the Lacy Lemoosh project level.

Forest Cover Type	Existing Acres	Existing Proportion (percent)	Post-Treatment Acres	Post-Treatment Forest Cover Type Proportion of LLPA (percent)	Post-Treatment Dominance Group Proportion of LLPA (percent)	Forest Wide Dominance Group	Desired Range (percent)
Grand Fir	2,823	18	2,312	14	N/A	N/A	N/A
Shade Tolerant Mix	2,254	14	1,747	11	31	Grand fir/ cedar/Western hemlock mix	10-20
Western Hemlock	101	<1	99	<1	N/A	N/A	N/A
Douglas-fir	6,352	39	5,465	34	34	Douglas-fir	15-28
Western Larch	775	3	1,211	9	9	Western larch	15-25
Western White Pine	45	<1	1,483	11	11	Western white pine	30-60

The EA says, “The proposed action would trend the forest composition in a direction consistent with the Forestwide desired conditions.” For “desired conditions” that’s all the forest plan requires. There’s no mandate to actually achieve any state of conditions. “Desired conditions” are written in the Forest Plan so that logging will automatically “trend” the forest “in a direction ... toward”. We notice that of the Douglas-fir, Western Larch, and Western White Pine cover types Desired Conditions the EA and Forest Plan covet so highly, achievement of the “desired ranges” will not happen even with this massive Lacy Lemoosh clearcutting project. And although the Shade Tolerant Mix “desired range” is already achieved without logging, this desire is still being pursued.

The same goes with Table 9 size class distribution desires:

Table 9. Existing and post-treatment size class distribution at the project level.

Size Class	Acres	Proportion (percent)	Desired Range (percent)	Post-Treatment Acres	Post-Treatment Percent
Large (≥15.0" DBH)*	7,669	48	31-61	6,407	40
Medium (10.0"-14.9" DBH)	6,563	41	15-25	5,250	33

If it isn’t in the desired range, the project won’t get it there. If it is, it gets logged anyway. Yet the Lacy Lemoosh EA paints a rosy picture of the post-project clearcut forest, rather than admit it would be but a miniscule “improvement” from the terrible condition it attributes to the no-action alternative. This is the management regime the public gets from the IPNF revised forest plans—intentionally heavily biased by the FS toward timber extraction.

“Lodgepole pine, grand fir, western redcedar, and Douglas-fir will also naturally regenerate because these species may be retained as leave trees and are present in the adjacent stands.” So the FS anticipates needing future slashing (and burning?) of what it proposes to clearcut now.

The FS is obligated to amend the IPNF Forest Plan in the acknowledgement of scientific information that indicts the active management bias. Lindenmayer, et al. (2025) is a recently published document addressing this issue. The Abstract states:

The increase in extent and severity of disturbances such as wildfires and insect outbreaks in forests globally has led to calls for greater levels of “Active Management” (AM), including in High Conservation Value Forests (HCVF) such as old growth stands. AM includes such activities as thinning, selective logging of large trees (that are sometimes fire resistant), post-disturbance (salvage) logging, recurrent prescribed burning, and road building; singularly or in combinations. We urge caution when implementing these aspects of AM, especially in HCVF such as old growth stands, intact areas, and complex early seral forests. This is because AM may have substantial impacts on ecosystem conditions and biodiversity, and could amplify subsequent natural disturbances. We illustrate potential impacts of AM in HCVF in case studies from western North America and southeastern Australia. AM has overlooked or downplayed collateral ecosystem damages in HCVF, including: (1) habitat needs of at-risk species, (2) thinning effects on ecosystem function, carbon emissions and biodiversity, (3) the role of stand-replacing or partial stand-replacing natural disturbances (e.g. wildfire, insect outbreaks) that produce complex early seral habitats, and (4) extensive road networks with associated impacts. We argue the underlying science to support AM may be lacking in some cases and that more scrutiny is needed to ensure objectives are supported by rigorous science, including transparency in identifying collateral damages and ways to mitigate them. Large reference areas such as extensive old growth stands are needed to assess the cumulative impacts of AM, especially in in HCVF where its potential effects on biodiversity are greatest.

Remedy: Select the No Action Alternative. Otherwise, prepare an EIS that addresses the issues identified in our objection to the Forest Plan and also those in our comments on Lacy Lemoosh.

FIRE! FIRE! FIRE!

The next claim to virtue of the project is to “Reduce hazardous fuels¹ within the wildland urban interface and other areas to lessen the severity of wildfires and to enable safe fire suppression efforts.” Because the FS is obsessed with the idea its sacred timber might combust in a natural wildfire and not be available for clearcutting under its controlled schedule of lumber production. This is indicated:

Over the past 80 years, wildfire suppression has been a priority and led to the exclusion of natural fires from the landscape. Fire suppression will likely continue, per Forest Plan

¹ According to the Wildlife Biological Evaluation-Biological Assessment for fisher, “(Jones 1991) found most resting sites to be in the canopies of live trees, but **large snags and down logs were preferred as maternal dens.**” (Emphasis added.)

direction, due to the values in and around the project area. Because of this, management actions are needed to aid in suppression success.

The EA then makes the questionable statement, “Manipulation of fuels and vegetation will allow for protection of human life, property, and safety of firefighting resources.” But yet it says “Vegetation treatments that **reduce fuels will not stop wildfires** (Finney 2001)” (emphasis added). But then it propagandizes that natural process are really all about creating nasty “dead and down wood” (not vital wildlife habitat components), “ladder fuels” (not young trees, cover by brush species, foods for wildlife, etc.), “dense canopy fuels” (not shade maintaining forest floor moisture to reduce the chances of those nasty “ladder fuels” from burning), and of course we can’t allow “mortality in residual, large mature trees” because they’re just timber after all and so “more wildfire-resilient **stands**” (emphasis added) are **DESIRED** (see objection section immediately preceding this one).

The EA doesn’t specify how “human life” is being endangered by this horrible forest, but it does imply a FS choice to send firefighters into battle would be the main endangerment. More vague BE AFRAID OF THE FOREST propagandizing: “In many instances, large quantities of forest fuels on public lands occur next to homes and private property.” The “property” to be protected is depicted in two small locations of “Private Land Ownership” on the Proposed Action map (p. 10).

“The Project has areas defined as rural WUI for Benewah County, Idaho and infrastructure WUI for Latah County, Idaho, totaling 650 acres.” So we see that WUI is not really much of a factor driving this project. The EA doesn’t even explain what exists in these two WUI portions other than a “communication site and recreation rental lookout tower on Bald Mountain.” And the town of Emida is nearly a mile from the Benewah County WUI parcel of the project area—much of it separated from the project area by paved State Highway 6, which the FS would say is an effective “fuel break.” It is absurd to assert that the massive clearcutting would genuinely enhance safety.

More evidence this “protection” claim is bogus is that there is nothing in the EA that examines “fuel” or “fire risk” conditions on lands of other ownership, which would have more direct implications for the “properties.” How any of that might affect fire behavior doesn’t matter to the FS because those are not trees the FS can sell for timber.

Baker et al., 2023 reveals manipulation of evidence by researchers associated with the federal approach to fire management, providing an in-depth look at how the FS’s prevailing hypothesis underlying forest thinning projects in the western U.S.—its low-severity open forest model—has been falsified.

Two recent peer-reviewed scientific articles provide intelligent perspectives. First, Baker et al. (2023b) provides an alternative approach to fire and insect outbreaks that focuses on using wildfire for ecosystem benefits and redirecting fire prevention efforts towards communities. Importantly, they explain that high-severity fire rotation intervals (landscape scale) are on the order of centuries (within historic bounds), providing ample time for old-growth forests to develop even if fire rates were to double due to climate change. Additionally, beetle/drought cycles are on very long rotation intervals (within historic bounds). This indicates that large-scale

logging to contain fires and beetles will not work in a period of changing climate, and in fact will do far more damage.

Secondly, Law et al. (2023) emphasizes working with fire for ecosystem benefits and prioritizing community protections over massive thinning/logging that end up emitting far more greenhouse gasses into the atmosphere. They buttress calls from scientists for coexisting with wildfires and rejecting false solutions such as more logging. The lead author, Dr. Law, is a leading climate scientist that has worked on IPCC reports.

Atchley et al., 2021 note that naturally dense forest stands actually slow fire spread. They also note:

Wind entrainment associated with large, sparse canopy patches resulted in both mean and localised wind speeds and faster fire spread. Furthermore, the turbulent wind conditions in large openings resulted in a disproportional increase in TKE [Turbulence Kinetic Energy] and crosswinds that maintain fire line width.

Portraying the proposed timber sale as restoring species composition, etc. is disingenuous—this project is all about timber production. The FS's perceived need to smokescreen its logging agenda, featuring phony “restoration” greenwashing and associated propaganda, merely highlights wrongheaded agency priorities.

The premise that thinning and other mechanical treatments replicate natural fire is contradicted by much science (e.g., Rhodes and Baker 2008, McRae et al 2001, and Rhodes 2007). DellaSala, et al. (1995) are skeptical about the efficacy of intensive fuels reductions as fire-proofing methods.

Baker et al., 2023 is more recent scientific information pertaining to fire. The Abstract states:

The structure and fire regime of pre-industrial (historical) dry forests over ~26 million ha of the western USA is of growing importance because wildfires are increasing and spilling over into communities. Management is guided by current conditions relative to the historical range of variability (HRV). Two models of HRV, with different implications, have been debated since the 1990s in a complex series of papers, replies, and rebuttals. The “low-severity” model is that dry forests were relatively uniform, low in tree density, and dominated by low- to moderate-severity fires; the “mixed-severity” model is that dry forests were heterogeneous, with both low and high tree densities and a mixture of fire severities. Here, we simply rebut evidence in the low-severity model's latest review, including its 37 critiques of the mixed-severity model. A central finding of high-severity fire recently exceeding its historical rates was not supported by evidence in the review itself. A large body of published evidence supporting the mixed-severity model was omitted. These included numerous direct observations by early scientists, early forest atlases, early newspaper accounts, early oblique and aerial photographs, seven paleo-charcoal reconstructions, ≥ 18 tree-ring reconstructions, 15 land survey reconstructions, and analysis of forest inventory data. Our rebuttal shows that evidence omitted in the review left a falsification of the scientific record, with significant land management implications.

The low-severity model is rejected and mixed-severity model is supported by the corrected body of scientific evidence.

The Forest Plan FEIS states, “Mixed-severity fires kill a moderate amount of the overstory tree canopy, but do not replace the whole stand.” This misrepresents mixed severity fire regimes, which by definition have a mosaic effect including unburned, lightly burned, and severely burned patches within the fire perimeter. DellaSala and Hanson (2015) state:

Along with the surge in scientific investigation into historical fire regimes over the past 10-15 years has come enhanced understanding of the naturalness and ecological importance of mixed- and high-severity fire in many forest and shrub ecosystems. Contrary to the historical assumption that higher-severity fire is inherently unnatural and ecologically damaging, mounting evidence suggests otherwise. Ecologists now conclude that in vegetation types with mixed- and high-severity fire regimes, fire-mediated age-class diversity is essential to the full complement of native biodiversity and fosters ecological resilience and integrity in montane forests of North America (Hutto, 1995, 2008; Swanson et al., 2011; Bond et al., 2012; Williams and Baker, 2012a; DellaSala et al., 2014). Ecological resilience is essentially the opposite of “engineering resilience,” which pertains to the suppression of natural disturbance to achieve stasis and control of resources (Thompson et al., 2009). Ecological resilience is the ability to ultimately return to predisturbance vegetation types after a natural disturbance, including higher- severity fire. This sort of dynamic equilibrium, where a varied spectrum of succession stages is present across the larger landscape, tends to maintain the full complement of native biodiversity on the landscape (Thompson et al., 2009).

...As discussed above, in mixed-severity fire regimes, higher-severity fire occurs as patches in a mosaic of fire effects (Williams and Baker, 2012a; Baker, 2014). In conifer forests of North America, higher-severity fire patches create a habitat type, known as complex early seral forest (DellaSala et al., 2014), that supports levels of native biodiversity, species richness, and wildlife abundance that are generally comparable to, or even higher than, those in unburned old forest (Raphael et al., 1987; Hutto, 1995; Schieck and Song, 2006; Haney et al., 2008; Donato et al., 2009; Burnett et al., 2010; Malison and Baxter, 2010; Sestrich et al., 2011; Swanson et al., 2011; DellaSala et al., 2014). Many rare, imperiled, and declining wildlife species depend on this habitat (Hutto, 1995, 2008; Kotliar et al., 2002; Conway and Kirkpatrick, 2007; Hanson and North, 2008; Bond et al., 2009; Buchalski et al., 2013; Hanson, 2013, 2014; Rota, 2013; Siegel et al., 2013; DellaSala et al., 2014; Baker, 2015; see also Chapters 2–6). The scientific literature reveals the naturalness and ecological importance of multiple age classes and successional stages following higher-severity fire, as well as the common and typical occurrence of natural forest regeneration after such fire (Shatford et al., 2007; Donato et al., 2009; Crotteau et al., 2013; Cocking et al., 2014; Odion et al., 2014). These and other studies suggest that mixed-severity fire, including higher-severity fire patches, is part of the intrinsic ecology of these forests and has been shaping fire- dependent biodiversity and diverse landscapes for millennia.

The concept of “fire refugia” is not considered in IPNF project or programmatic planning. From Meddens, et al., 2018:

- Fire is a global disturbance process that interacts with landscape pattern to create mosaics of ecosystem effects, including patches that remain both unburned and only minimally affected by low-intensity burning. These patches are increasingly of interest to ecologists and are often referred to as fire refugia (Kolden et al. 2012, Robinson et al. 2013, Krawchuk et al. 2016).
- The term *fire refugia* has various definitions (e.g., Gill 1975, Camp et al. 1997, Mackey et al. 2002, Krawchuk et al. 2016), all of which focus on the idea of locations disturbed less frequently or less severely by wildfire relative to the surrounding vegetation matrix. Fire refugia provide habitat for individuals or populations in which they can survive fire, in which they can persist in the postfire environment, and from which they can disperse into the higher-severity burned landscape (Robinson et al. 2013). In this way, fire refugia can function similarly to islands in a biogeographic context, particularly in severely burned areas, recognizing that the matrix of burned areas still provides some habitat to many taxa. Mosaics of fire effects spanning the full range of burn severity—including refugial patches—influence succession, ecosystem processes, and the distribution of biological legacies (Franklin et al. 2000, Turner 2010, Johnstone et al. 2016). Locations in which biota survive fire have been shown to strongly influence postfire recovery and ecosystem dynamics (e.g., Haire and McGarigal 2010, Robinson et al. 2013, Stevens-Rumann et al. 2017). Uniquely, however, fire refugia are not purely ecological or biophysical phenomena; they are also a socioecological construct—for example, because of human manipulation of vegetative fuels and fire suppression activities that can both facilitate and impede their formation.
- Fire refugia are defined and characterized variably in the literature. Other terms used to describe them include *unburned islands*, *habitat refugia*, *remnants*, *residual vegetation*, *fire shadows*, *skips*, *stringers*, *refuges*, *islands*, *biological legacies*, and *late-successional forest*.
- Climate-change refugia have been defined as “areas relatively buffered from contemporary climate change that allow for habitat stability and species persistence over time” (Morelli et al. 2016). However, climate refugia identified for conservation and management purposes require that these areas also be buffered from severe disturbance events if they are to function as holdouts within a changing environment. Accordingly, fire refugia are a necessary complement to climate change refugia in fire-prone landscapes.
- To meet regulatory mandates to preserve such species under global change, however, habitat requirements must be embedded in more comprehensive landscape processes that facilitate specific ecosystem functions, particularly when multiple management objectives must be met.

- Over multiple fire-return intervals, fire refugia that last through only a single fire event are defined in the present article as *ephemeral*, whereas refugia that survive through multiple fires are defined as *persistent* refugia.
- (P)ersistent fire refugia are those that remained intact through multiple fire events (including reburns; Prichard et al. 2017), and this persistence suggests that they are more likely to be predictably associated with stable landscape features.
- Persistent fire refugia may also be more vulnerable to losses associated with anthropogenic climate change and changing fire regimes (Kolden et al. 2017), because the climatic conditions that previously sustained persistent refugia may give way to conditions that support and facilitate fire spread into a previously persistent patch. This novel introduction or reintroduction of fire would have considerable implications for ecosystems that have been dependent on such refugia.
- Remnant vegetation following fire provides functional habitat and other crucial ecological functions days to months after fire. Refugia can supply food resources (Schwilk and Keeley 1998, Henriques et al. 2000) that are otherwise consumed by fire in the surrounding landscape, provide cover or protection from predators, or reduce influences from exposure to abiotic stressors (e.g., wind and solar radiation). Competition within refugia may increase from before to after a fire, because of decreases in available resources in the surrounding burned landscape (Banks et al. 2012). In addition, these refugia can function as buffers against erosion and landslides that can occur following fires (Shakesby and Doerr 2006), mediating detrimental habitat loss.
- There is a crucial need to prioritize fire refugia for conservation and management under global change. The fire refugia taxonomic dichotomies presented in the present article provide a framework to consider conservation values and potential trends in fire refugia characteristics. Understanding the distribution, abundance, composition, and function of fire refugia may help in prioritizing land management activities on the basis of the concepts of resistance and resilience to fire and of the vulnerability to further disturbances. This prioritization will likely require a comprehensive understanding of both the spatial and the temporal predictors of refugia, integrated with conservation needs and policy limitations.
- Because fire activity is projected to increase under future climate scenarios, fire refugia will likely be important to preserving ecosystem resiliency for a variety of taxa (tables S1 and S2). Therefore, future management actions should focus on identifying, maintaining, or promoting fire refugia within landscapes holistically. For example, the actual locations of ephemeral fire refugia may be less important than their aggregate area and their spatial configuration. On the other hand, understanding the location and environmental determinants of predictable, persistent, and semipersistent fire refugia may be vital for increasing the resilience of both natural and human-occupied landscapes (Smith et al. 2016).

- (O)ne management strategy that would have clear positive outcomes for conserving fire refugia could be reducing the use of backfires and burnouts (or “blackout burning”) as wildfire suppression tactics where feasible. During large fire events, firefighters routinely use firing operations to consume available fuel ahead of an advancing fire front; as the flaming front passes or reaches containment lines, they subsequently burn out any remnant green vegetation (i.e., fire refugia) to reduce the potential for flare-ups and ember-ignited spot fires across the containment line. Although this operation tactic is highly effective for protecting crucial infrastructure and resources, it may not be necessary to achieve containment on fires that are remote or being managed to meet natural resource objectives.

Camp, et al., 1997 add, “Locating probable sites of historical fire refugia across a landscape will assist managers in determining an appropriate level of late-successional connectivity. Connectivity is a term that describes the connectedness or spatially continuity of a patch type (Merriam, 1984). It has been stated that, without connectivity, disjunct patches may not function as habitat (Harris, 1985; Noss and Harris, 1986).”

FOREST “RESILIENCE”

Our comments on the draft EA discuss this issue (pp. 9-11). We incorporate that section in its entirety, within this objection.

The EA promotes the idea that the project would increase the resilience of the forest to insects, disease, and fire. Yet it fails to disclose an objective, measurable definition of “resilience.” The FS’s 2019 Sanpoil EA (Colville National Forest) defines resilience as “the ability of a forested area to survive a disturbance event, specifically wildfire and insect attack, relatively intact and without large scale tree mortality.” Consistently, the FS demonizes significant disturbance events that cause tree mortality, a view that conflicts with best available science and ecological knowledge. This also conflicts with the most of the values national forests were established to protect, which don’t prioritize timber extraction to the degree the EA and IPNF Forest Plan do.

In discussing the No Action alternative the FS claims increasing tree density and tree succession will result in a higher susceptibility and less resistance to native insects and disease. The EA thus paints a picture of a looming disaster if the agency doesn’t insert its clearcutting, heavy machinery and its associated, soil damage, increase of invasive species plus widespread reductions of canopy cover, dead tree habitat and large down wood habitat components. In its singular zeal to subsidize logs for the timber industry the FS downplays the significant adverse ecological impacts of its tree farming activities.

Furthermore, plenty of scientific information questions the efficacy of vegetation treatments in reducing the effects from what can be characterized as a natural response to changing climate conditions. See Hart, et al., 2015 (finding that although mountain pine beetle infestation and fire activity both independently increased with warming, the annual area burned in the western United States has not increased in direct response to bark beetle activity); see also Hart and Preston, 2020 (finding “[t]he overriding influence of weather and pre-outbreak fuel conditions on daily fire activity . . . suggest that efforts to reduce the risk of extreme fire activity should focus

on societal adaptation to future warming and extreme weather”); see also Black, et al., 2010 (finding, inter alia, that thinning is not likely to alleviate future large-scale epidemics of bark beetle); see also Six, et al., 2018 (study that found during mountain pine beetle outbreaks, beetle choice may result in strong selection for trees with greater resistance to attack, and therefore retaining survivors after outbreaks—as opposed to logging them—to act as primary seed sources could act to promote adaptation); see also Six et al., 2014 (noting “[s]tudies conducted during outbreaks indicate that thinning can fail to protect stands”).

The EA fails to reconcile the characteristic and positive role of decadence in its resilience narrative. For example Green et al., 1992 recognize positive attributes of old growth include:

- (A)tttributes such as decadence, dead trees ...are important...
- Accumulations of large-size dead standing and fallen trees that are high relative to earlier stages.
- Decadence in the form of broken or deformed tops or bole and root decay.

Green et al., 1992 describe Defining characteristics of old growth, which include:

Old growth forests encompass the late stages of stand development and are distinguished by old trees and related structural attributes. These attributes, such as tree size, canopy layers, snags, and down trees generally define forests that are in and old growth condition.

Definition

Old growth forests are ecosystems distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics which may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function.

(O)ld growth is typically distinguished from younger growth by several of the following attributes:

1. Large trees for species and site.
2. Wide variation in tree sizes and spacing.
3. Accumulations of large-size dead standing and fallen trees that are high relative to earlier stages.
4. Decadence in the form of broken or deformed tops or bole and root decay.
5. Multiple canopy layers
6. Canopy gaps and understory patchiness.

The FS’s “desired conditions” obsession focuses on achieving static conditions, instead of valuing the natural dynamic characteristics of ecosystems. An abundance of scientific evidence indicates desired future dynamics—not the FS’s static desired conditions—align with best available science. FS researcher Everett (1994) states, “To prevent loss of future options we need to simultaneously **reestablish ecosystem processes and disturbance effects that create and maintain desired sustainable ecosystems**, while conserving genetic, species, community, and landscape diversity and long-term site productivity.” (Emphasis added.) Hessburg and Agee, 2003 emphasize:

Ecosystem management planning must acknowledge **the central importance of natural processes and pattern–process interactions, the dynamic nature of ecological systems** (Attiwill, 1994), the inevitability of uncertainty and variability (Lertzman and Fall, 1998) and cumulative effects (Committee of Scientists, 1999; Dunne et al., 2001).

(Emphasis added.) Collins and Stephens (2007) suggest direction to implement restoring the process of wildland fire using public education, which means explaining the inevitability of wildland fire, teaching about fire ecology, and assisting landowners as the nexus for acting to protect private property. Unsurprisingly, since proper education would result in more widespread mistrust of the FS’s manipulate-and-control tree farming paradigm, we don’t find it in the Longleaf EA.

Sallabanks et al., 2001 state:

Given the dynamic nature of ecological communities in Eastside (interior) forests and woodlands, particularly regarding potential effects of fire, **perhaps the very concept of defining “desired future conditions” for planning could be replaced with a concept of describing “desired future dynamics.”** (Emphasis added.)

The FS ignores scientific information that strongly suggests a better alternative to the FS’s management paradigm.

Static “desired conditions” are based on the notion of mimicking historic range of conditions, also known as the natural range of variability. Frissell and Bayles (1996) state:

...The concept of range of natural variability ...suffers from its failure to provide defensible criteria about **which factors ranges should be measured**. Proponents of the concept assume that a finite set of variables can be used to define the range of ecosystem behaviors, when ecological science strongly indicates many diverse factors can control and limit biota and natural resource productivity, often in complex, interacting, surprising, and species-specific and time-variant ways. **Any simple index for measuring the range of variation will likely exclude some physical and biotic dimensions important for the maintenance of ecological integrity and native species diversity.** (Emphases added.)

McClelland (undated) criticizes the aim to achieve static desired conditions, in that case retaining specific numbers of snags:

The snags per acre approach is not a long-term answer because it **concentrates on the products of ecosystem processes rather than the processes themselves**. It does not address the most critical issue—long-term perpetuation of diverse forest habitats, a mosaic pattern which includes stands of old-growth larch. **The processes that produce suitable habitat must be retained or reinstated by managers. Snags are the result of these processes** (fire, insects, disease, flooding, lightning, etc.). (Emphases added.)

Castello et al. (1995) discuss some things that would be lost chasing static Desired Conditions:

Pathogens help decompose and release elements sequestered within trees, facilitate succession, and maintain genetic, species and age diversity. Intensive control measures, such as thinning, salvage, selective logging, and buffer clearcuts around affected trees remove crucial structural features. Such activities also remove commercially valuable, disease-resistant trees, thereby contributing to reduced genetic vigor of populations.

Hayward, 1994 states:

Despite increased interest in historical ecology, scientific understanding of the historic abundance and distribution of montane conifer forests in the western United States is not sufficient to indicate how current patterns compare to the past. In particular, knowledge of patterns in distribution and abundance of older age classes of these forests is not available. ... Current efforts to put management impacts into a historic context seem to focus almost exclusively on what amounts to a snapshot of vegetation history—a documentation of forest conditions near the time when European settlers first began to impact forest structure. ... The value of the historic information lies in the perspective it can provide on the potential variation... I do not believe that historical ecology, emphasizing static conditions in recent times, say 100 years ago, will provide the complete picture needed to place present conditions in a proper historic context. Conditions immediately prior to industrial development may have been extraordinary compared to the past 1,000 years or more. Using forest conditions in the 1800s as a baseline, then, could provide a false impression if the baseline is considered a goal to strive toward.

Noss, 2001, believes “If the thoughtfully identified critical components and **processes of an ecosystem are sustained**, there is a high probability that the ecosystem as a whole is sustained.” (Emphasis added.) Noss 2001 describes basic ecosystem components (emphasis added):

Ecosystems have **three basic components: composition, structure, and function**. Together, they define biodiversity and ecological integrity and provide the foundation on which standards for a sustainable human relationship with the earth might be crafted.

Noss, 2001 goes on to define those basic components (emphases added):

Composition includes the kinds of species present in an ecosystem and their relative abundances, as well as the composition of plant associations, floras and faunas, and habitats at broader scales. We might describe the composition of a forest, from individual stands to watersheds and regions.

Structure is the architecture of the forest, which includes the vertical layering and shape of vegetation and its horizontal patchiness at several scales, from within stands (e.g., treefall gaps) to landscape patterns at coarser scales. Structure also includes the presence and abundance of such distinct structural elements as snags (standing dead trees) and downed logs in various size and decay classes.

Function refers to the **ecological processes** that characterize the ecosystem. These processes are both biotic and abiotic, and include decomposition, nutrient cycling, disturbance, succession, seed dispersal, herbivory, predation, parasitism, pollination, and many others. Evolutionary processes, including mutation, gene flow, and natural selection, are also in the functional category.

Hutto, 1995 also addresses natural processes, referring specifically to fire:

Fire is such an important creator of the ecological variety in Rocky Mountain landscapes that the conservation of biological diversity [required by NFMA] is likely to be accomplished only through **the conservation of fire as a process**... Efforts to meet legal mandates to maintain biodiversity should, therefore, be directed toward **maintaining processes like fire**, which create the variety of vegetative cover types upon which the great variety of wildlife species depend. (Emphases added.)

Noss and Cooperrider (1994) state:

Considering process is fundamental to biodiversity conservation because process determines pattern. Six interrelated categories of ecological processes that biologists and managers must understand in order to effectively conserve biodiversity are (1) energy flows, (2) nutrient cycles, (3) hydrologic cycles, (4) disturbance regimes, (5) equilibrium processes, and (6) feedback effects. (Emphasis added.)

The Environmental Protection Agency (1999) recognizes the primacy of natural processes:

(E)cological processes such as natural disturbance, hydrology, nutrient cycling, biotic interactions, population dynamics, and evolution determine the species composition, habitat structure, and ecological health of every site and landscape. **Only through the conservation of ecological processes** will it be possible to (1) represent all native ecosystems within the landscape and (2) maintain complete, unfragmented environmental gradients among ecosystems. (Emphasis added.)

Forest Service researcher Everett (1994) states:

To prevent loss of future options we need to simultaneously **reestablish ecosystem processes and disturbance effects that create and maintain desired sustainable ecosystems**, while conserving genetic, species, community, and landscape diversity and long-term site productivity.

... We must address **restoration of ecosystem processes and disturbance effects** that create sustainable forests before we can speak to the restoration of stressed sites; otherwise, we will forever treat the symptom and not the problem. ... **One of the most significant management impacts on the sustainability of forest ecosystems has been the disruption of ecosystem processes** through actions such as fire suppression (Mutch and others 1993), dewatering of streams for irrigation (Wissmar and others 1993), **truncation of stand succession** by timber harvest (Walstad 1988), and maintaining numbers of desired

wildlife species such as elk in excess of historical levels (Irwin and others 1993). Several ecosystem processes are in an altered state because we have interrupted the cycling of biomass through fire suppression or have created different cycling processes through resource extraction (timber harvest, grazing, fish harvest). (Emphases added.)

In other places, the FS **has** recognized natural processes are vital for ecological integrity. USDA Forest Service, 2009a incorporates “ecological integrity” into its concept of “forest health” thus:

“(E)cological integrity”: Angermeier and Karr (1994), and Karr (1991) define this as:

The capacity to support and maintain a balanced, integrated, and adaptive biological system having the full range of elements and processes expected in a region’s natural habitat.

“...the ability to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.” That is, an ecosystem is said to have high integrity if its full complement of native species is present in normal distributions and abundances, and if **normal dynamic functions are in place and working properly**. In systems with integrity, the “...capacity for self-repair when perturbed is preserved, and minimal external support for management is needed.” (Emphasis added.)

That last sentence provides a measure of resilience the EA doesn’t acknowledge. In their conclusion, Hessburg and Agee, 2003 state “Desired future conditions will only be realized by planning for and creating the desired ecosystem dynamics represented by ranges of conditions, set initially in strategic locations with minimal risks to species and processes.”

Factors that create significant adverse impacts on native species diversity include those not historically not found in nature, including road densities, edge effects due to logged openings, noxious weeds and other invasive species, livestock, compacted and otherwise productivity-reduced soil conditions, and many human-caused fires. There is no natural range of variability of those factors, so the FS must include an analysis that explains how they influence achieving Desired Conditions.

Ecological resilience is not the absence of natural disturbances such as wildland fire or insects, etc. Rather, it is the opposite (DellaSala and Hanson (Editors), 2024). What the FS is promoting here is engineering the forest ecosystem through intrusive mechanical methods in order to eliminate, suppress or altering natural disturbances such as wildland fire and insect or disease effects, to maximize the commercial potential of natural resources. In other words, tree farming. This is the antithesis of ecological resilience and conservation of native biodiversity. Dynamic equilibrium, where a varied spectrum of succession stages is present across the larger landscape, tends to maintain the full complement of native biodiversity on the landscape. (Thompson et al., 2009).

Vegetation treatments based on historical reference conditions to reduce high-intensity wildfire risk on a landscape scale are undermined by the fact that land managers have shown little ability

to target treatments such that fires that follow will behave as “desired.” Barnett, et al, 2016; Rhodes and Baker, 2008 (finding that fuel treatments have a mean probability of 2-8% of encountering moderate- or high- severity fire during the assumed 20-year period of reduced fuels). Analysis of the likelihood of fire is crucial to estimating likely risks, costs and benefits incurred with “fuel” treatment. Results from Rhodes and Baker, 2008 indicate that “even if fuel treatments were very effective when encountering fire of any severity, treatments will rarely encounter fire, and thus are unlikely to substantially reduce effects of high-severity fire.”

Other FS applications of “resilience” revolve around using what the EA identifies “desired conditions” of vegetation conditions as a proxy for wildlife species viability, and the population trend monitoring specified in the Forest Plan to insure viability. The Committee of Scientists (1999) state, “The presence of suitable habitat does not ensure that any particular species will be present or will reproduce. Therefore, **populations of species must also be assessed and continually monitored.**” (Emphasis added.)

The EA’s use of the term “resilience” ignores the reality of human-induced climate change and its effects on forests. Falk et al. (2019) recognize:

The fact of a rapidly changing world means that resilience, especially the phases of recovery and reorganization, must be understood as an adaptive response to changing conditions, not simply a return to a past state.

Collectively, these trends point to an increasing probability of massive reorganization of forest ecosystems on a scale that has not been previously observed for thousands of years.

(Emphasis added.) In that vein, Baker et al. (2023b) examined whether natural disturbances (wildfires, droughts, beetle outbreaks) which have shaped temperate forests for millennia, might now best restore and adapt dry forests to climate change while protecting nearby communities. They conclude, “natural disturbances, possibly aided by reinvented prescribed fire and wildland fire use, could more effectively restore and adapt dry forests to climate change within 30–40 years compared with the expansion of mechanical fuel-reduction treatments. A (nature-based solution) would allow most funding for active management of federal forests to be redirected to more fully protect and adapt nearby communities and the built environment at high risk of fires, which is an essential first step for this nature-based solution.”

And the results of climate change mean: “...reorganization may be not only unavoidable but also adaptive to future conditions. **We cannot assume that all types, or even biome conversions, are adverse outcomes; there may be cases in which ecosystem adaptation will take forms that do not align with our limited perception of ecological change.**” (Falk et al. 2019, emphases added.)

The EA’s limited perception of ecological change is also exhibited in its failure to consider temporal scales. Falk et al., (2019) state:

“Ecological ...resilience requires **taking a long view**, because **ecological time is often**

longer than our typical narrow temporal frame of reference. What may appear to be novel post-disturbance trajectories may actually be slow recovery arcs beyond our ability to estimate. ... We are more likely to judge a system that recovers rapidly to its pre-disturbance state as “resilient,” whereas one that recovers more slowly—according to our criteria—may be considered less resilient. However, these judgments are not always ecologically justified; ecological succession does not necessarily proceed at a pace to which humans can relate (i.e., **decades to centuries**). ... Some communities may take decades to centuries to resemble the original pre-disturbance condition. **These time scales ...do not necessarily indicate a resilience failure.** (T)he trajectory of return to the pre-disturbance community, depends on ... **the climate of the post-disturbance period.**

(Id., emphases added.) The FS’s use of the term “resilience” is scientifically bankrupt.

IMPACTS ON QUIET RECREATION

Our scoping comments stated, “The project area abuts the privately owned Palouse Divide Lodge. Massive clearcutting would reduce the scenic value of the area and create a serious concern to long-term financial sustainability of the business.”

The 12-2-24 Recreation Report states: “There would be some disruptions of recreational activities in the areas with logging or road building; these activities would be signed to inform visitors.” Then it contradicts itself: “Cross country skiing on the Palouse Divide Nordic Ski Trails **would not be affected** and may possibly be improved with the proposed construction of Roads 1479D reroute and the 1479D cutoff route.” (Emphasis added.)

There is no map we can find in the project documents that identify the location of the cross-country ski trails and/or the ones typically groomed during the ski season. It doesn’t seem the FS knows their locations well enough to inform an analysis of logging/motorized route building conflicts with skiers.

The perception of the owner/operator of the Palouse Divide Lodge is that Lacy Lemoosh project activities and other cumulative effects will harm both their business operation and their living experience. (See March 23, 2025 Hathaway statement.)

Remedy: Do the proper analysis that demonstrates how motorized OHV trail construction is “minimizing” impacts on skiers and discloses how road building and logging activities affect people and the skiing experience.

TRAVEL MANAGEMENT

Our comments on the EA were highly detailed and made several specific requests for information and analyses consistent with law and policy. The FS was mostly unresponsive, so the concerns our incorporated comments express remain unresolved.

The EA indicates:

Newly developed OHV access (motorized trails) from adding onto existing trails system routes from formerly barriered road and from converting roads to trails would add about 4 miles of motorized trail.

New construction would add around 6 miles of new OHV trail access.

Some motorized trails will be relocated, decommissioned, or removed while new construction and conversion of roads to trails will provide OHV access.

With Alternative 2, new construction and conversion to trails (about 10 miles) would increase the available miles for OHV riders by approximately 7 miles, as 3 miles would be decommissioned. New routes provided in the Tyson area would become transportation loops using RD 200, 3749, 3748 and connecting new construction.

And the 12-2-24 Recreation Report, which like many project reports was not available prior to this Objection phase, states:

With Alternative 2, new construction and conversion to trails (about 10 miles) would increase the available miles for OHV riders by approximately 7 miles, as 3 miles would be decommissioned. New routes provided in the Tyson area would become transportation loops using RD 200, 3749, 3748, and connecting new construction. See Table 1 below.

Yet with all new motorized trails to be added, the EA lack any determination on how motorized impacts on the resources analyzed are being minimized as regulations require. “What is required is that the Forest Service document how it evaluated and applied the data on an area-by-area basis with the objective of **minimizing impacts** as specified in the (Travel Management Rule)” (*WildEarth Guardians v. USFS*, emphasis added). “(I)t is apparent that the Forest Service must provide a more granular **minimization analysis** to fulfill the objectives of Executive Order 11644, which the TMR was designed to implement.” (Id., emphasis added.)

The 12-2-24 Recreation Report mentions “a number of user-created roads/trails that are causing environmental damage.” The EA states, “Alternative 2 implementation provides a good opportunity to decommission user trails that are causing sediment delivery and water quality concerns” but the FS makes no commitment to do so. A timber sale featuring even more motorized trails is not needed to accomplish true watershed restoration goals. Furthermore, it’s crystal clear that some motorized trails are being created only to expand that type of recreation. There’s nothing in the EA about implementing the kind of increased law enforcement to minimize damage and/or eliminate illegal motorized use.

The Executive Orders (11644 and 11989) and Travel Management Regulations' minimization criteria must be applied to designation of all motorized trails and areas. The EA fails to properly address how the Executive Orders and the Travel Management Rule minimization criteria were applied to assure a decision would be consistent with minimizing effects on other forest resources and users.

The EA admits that “Portions of the motorized route network east of Charlie Creek are unsustainable due to the proximity to Brown and Moolock Creeks and the steep terrain.” In

response the EA says, “**Some** motorized trails will be relocated, decommissioned, or removed...” (emphasis added). “Some” is not minimization. Nor does the EA clearly disclose how Alternative 2 is genuinely responsive to “sustainable” practices, because the analysis doesn’t provide quantified analysis of this issue.

The EA also doesn’t respond to our concerns as to the entirety of the non-system roads in the project area—how those **not** dealt with under Alternative 2 might remain as ecological liabilities for water, wildlife, soils, etc. See, for example the extreme road system inside the red rectangle displayed on the map, “Lacy_Watershed_TAPS_MD_011425.” The EA also says, “Roads recommended for storage would not be regularly maintained, so drainage structures (culverts) **may** be removed to lower the risk of sediment entering the stream system” (emphasis added). Since drainage structure removals on stored roads is a maybe, the FS is obligated to disclose the water quality impacts of situations where it wouldn’t happen. The maps show a lot of stream crossings along roads to be stored.

The February 2012 Charlie Preston Decision Notice map shows a “temporary” road just east of Preston Creek, which should have been fully decommissioned by now. However it appears as an “Existing Road” in the “Lacy_Watershed_TAPS_MD_011425” map, as “B1 BARRIERED, NO OHV ACCESS”. The FS is unable to meet previous commitments for road management.

Remedy: Prepare an EIS that conforms to NEPA, Executive Orders 11644 and 11989 and Travel Management Regulations.

WATER QUALITY, TOTAL MAXIMUM DAILY LOADS, ANALYSIS METHODOLOGY AND SCIENCE

The Charlie Preston Watershed Report (2011) discusses addressing Total Maximum Daily Load (TMDL) considerations for Santa Creek (including Charlie Creek), a watershed overlapping that timber sale and Lacy Lemoosh analysis areas. We see no Lacy Lemoosh analysis that analyzes or discloses the actual effects (based on monitoring and post-project assessment) of that previous timber sale. The EA does not include enough analysis to demonstrate TMDL consistency.

That 2011 report also cites numerous sources, including scientific information and analysis methodology, the FS should consider when it finally prepares the necessary EIS for Lacy Lemoosh.

Our EA comments stated, “US Fish and Wildlife Service, 1998 recognizes, upland forest canopy removal raises stream temperatures.” The FS ignored that comment, merely concluding that implementing INFISH buffers is all it takes to avoid stream temperature increased. The FS does not explain why the USFWS’s Biological Opinion, citing scientific sources on the topic, should be ignored. In short, the huge clearcuts will increase the solar radiation on soils, increasing the temperature of infiltrated or infiltrating groundwater which shortly re-emerges into streams warmer than it would have if not for the clearcuts. Basic science stuff.

FISHER

Objectors' comments on the EA raised this issue in detail at pp. 59 – 61, and are incorporated herein. The FS was largely unresponsive to our comments, leaving this issue unresolved.

The 2/10/2025 Lacy Lemoosh Biological Evaluation and Biological Assessment (BE/BA) discloses:

The Lacy Lemoosh Project would regenerate up to 1,622 acres in stands that provide potentially suitable fisher denning/resting habitat. Alternative 2 would reduce the amount of mature (more than 60 years old) forest by 2,419 acres in the Lacy Lemoosh Project area. This equates to a 20 percent change (from 75 percent to 59 percent) in a mature (60+ year old) forest following project implementation...

Large-diameter snags and logs are used for denning, resting and foraging; and the structure of habitat (i.e., complex vertical and horizontal structure with larger live trees, snags and logs) is more important to fisher than any particular forest types (Raley et al. 2012).

Past logging activities, including salvaging of occasional large stems, likely deteriorated fisher habitat by removing forest canopy, snags, and current and future dead and down material.

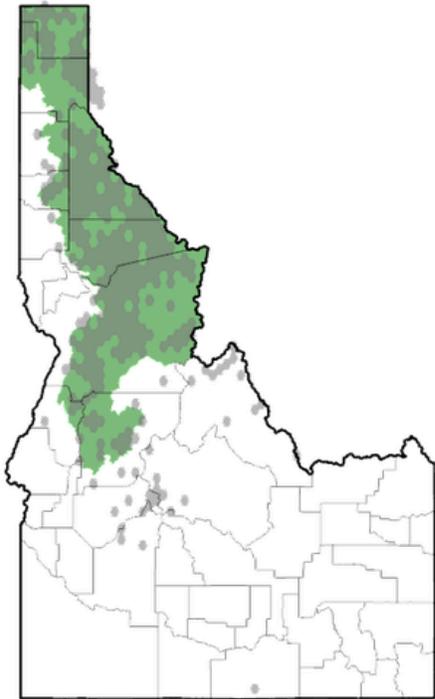
The FS realizes:

The Nez Perce-Clearwater National Forests and southern Idaho Panhandle National Forests are **the primary areas that support fisher in the U.S. Forest Service Northern Region** (Raley et al. 2012) (personal communication Sauder 2013, personal communication Schwartz 2013). The fisher is a forest-dependent species that evolved in the Northern Rocky Mountains in a complex landscape mosaic shaped by regularly occurring environmental influences on its preferred habitat, such as fire, tree disease, and wind-throw. Fishers are associated with areas of high cover and structural complexity in large tracts of mature and old-growth forests (Powell and Zielinski 1994, Sauder and Rachlow 2014, Schwartz et al. 2013).

(NPCNF Revised Forest Plan Final EIS, emphasis added.) The Draft EIS for that forest plan states:

Fishers are a low-density predator found in mature to late-successional forests with high canopy closure and both live and dead large tree structure. They appear to select areas with higher amounts of coarse woody debris and den in large diameter trees or snags with cavities ((Heinemeyer, 1993; Jeffrey L. Jones, 1991; J. L. Jones & E. O. Garton, 1994; Weir & Harestad, 2003; Weir, Lofroth, & Phinney, 2011). Female fishers use large diameter snags with cavities for denning and have been reported to use a wide variety of tree species.

The Idaho Department of Fish and Game acknowledges occurrence of fisher in both Benewah and Latah County (<https://idfg.idaho.gov/species/taxa/18029>, accessed 3-27-2025):



Species Occurrence



The IPNF (USDA Forest Service, 1999a) states: “Extensive alteration of forest structure as a result of natural and human-caused disturbances (i.e. reduction in canopy closure, snags, old growth, and down woody material) has altered the habitat value for fisher and marten.” Also, “Analysis of the fisher reflects changes in habitat for the marten, since their habitat needs are similar.” (Id.)

The IPNF has recognized the impacts of past management actions on the Forest have been in fact significant: “Based on past reductions of suitable habitat and security, the cumulative effects would be considered high.” (USDA Forest Service, 1999a.)

In response to an information request from Western Watersheds Project, Idaho Department of Fish and Game (IDFG) reported that traps set for wolves had caught 56 fisher (20 of which died in the traps) for a period starting in 2012. See IDFG Non-target wolf trapping LICYEAR2013-

2019 spreadsheet. The year that the FS drafted the assessment, in the 2013-2014 season, IDFG reported that 22 fisher were trapped, 10 of which died in traps. While the trappers reporting these numbers indicated the others were released, it's likely that injuries caused by trapping contributed to mortality shortly thereafter. Also, these are just the numbers reported, so we don't know if there were more unreported, either because trappers chose not to or did not check their traps. While we don't know where this trapping occurred, the FS has recognized that the IPNF contains a lot of fisher habitat, so it follows that at least some of these numbers were likely from this Forest.

Allen et al. (2021) found that fishers in their study scavenged more in the winter than in the summer, and hypothesize this is due to the season making them energetically stressed. This increases cumulative effects from trapping, particularly where baiting is allowed. Such cumulative effects were not analyzed in the EA.

Given that the project area was zoned as Management Area 6 (MA6) in the Forest Plan, where “vegetation management activities have a dominant role in affecting the composition, structure, and pattern of vegetation”, other direction in the Forest Plan for maintaining diversity in such logging dominated areas become especially important. Although in reality woefully little protection for fisher are found in the forest plan, it does include guidelines FW-GDL-VEG-04 and FW-GDL-VEG-05, the former stating:

Vegetation management activities should retain snags greater than 20 inches DBH and at least the minimum number of snags and live trees (for future snags) that are displayed in table 4. Where snag numbers do not exist to meet the recommended ranges, the difference would be made up with live replacement trees. Exceptions occur for issues such as human safety and instances where the minimum numbers are not present prior to the management activities.

Table 4. Recommended Snag and Snag Recruitment Levels to retain (where they exist) after Vegetation Management Activities (including Post-harvest Activities), by Harvest Type

Dominance Group	Biophysical Setting	Snags > 15"+ DBH	Live Trees > 15.0" DBH
Ranges per Acre where Treatments Result in a Seed/Sap Size Class (Regeneration Harvest)			
All except lodgepole pine	Warm/Dry	2.0 – 4.0	0.5 – 3.0
	Warm/ Moist	4.5 – 6.5	1.0 – 5.5
	Subalpine	3.0 – 5.0	1.0 – 3.5
Lodgepole pine	All	1.0 – 2.5	0.5 – 3.0
Ranges per Acre where Treatments Result in a Small or Medium Size Class (e.g., Commercial Thin)			
All except lodgepole pine	Warm/Dry	2.0 – 5.0	20.5 – 32.5
	Warm/Moist	4.0 – 6.5	26.0 – 34.0
	Subalpine	3.0 – 5.0	20.0 – 25.5
Lodgepole pine	All	1.0 – 3.5	11.0 – 19.0
Ranges per Acre for Treatments in the Large Size Class (e.g., Restoration)			
All except lodgepole pine	Warm/Dry	2.5 – 6.0	19.0 – 32.5
	Warm/Moist	6.0 – 12.5	32.5 – 47.0
	Subalpine	4.5 – 11.5	23.0 – 45.0

The EA fails to demonstrate that the logging would conform to forest plan direction in regards to snags and downed logs—extremely important habitat components for fisher. For example, although the EA makes general statements claiming guidelines would be followed, there are no quantified statements as to *how* that would be accomplished.

The EA states:

Even-aged regeneration treatments would remove most of the trees in an area to provide openings and growing space for a new stand. The regeneration method utilized is influenced by existing tree species composition, presence of forest health issues, and site conditions. Trees may be retained in variable densities and arrangements to meet forest plan guidelines for green tree retention and future snag and coarse woody debris recruitment.

This says retention “is influenced by existing tree species composition” etc. so where are the exact unit-by-unit “prescriptions” based on that data? Without providing numbers assigned to specific treatment units, there’s no way to assure that the various “regeneration” methods won’t simply turn out to be complete clearcuts, with practically nothing left for diversity. We know the FS hasn’t surveyed for snags anywhere: “A qualitative assessment for snags was conducted

within about 3,368 acres within the project area.” (BE/BA²) And in fact it appears the FS hasn’t even sent surveyors into the proposed units to document anything, merely relying on database information of questionable accuracy such as FSVeg, VMap, and the FACTS databases (Id.).

“Snag per acre data was limited in the project area, therefore we assumed that there are on average 2.6 snags/acre \geq 20 inches DBH in Mid-seral forests and 5.1 snags/acre \geq 20 inches DBH in Late-seral forests within the Lacy Lemoosh Project area (Bollenbacher et al. 2009).” (BE/BA.) Significant portions of this project area have already been heavily logged, so it’s questionable that the Bollenbacher et al. 2009 data are validly representative here. We don’t believe a 16-year old study, relying on data that is now even older, can be expected to yield accurate and reliable estimates for snags in the Lacy Lemoosh project area, and therefore fisher habitat components. For instance, how could Bollenbacher et al. 2009 have considered the especially high density of roads in the project area, which affect snag abundance via firewood cutting³? Again, the FS only saw fit to survey “qualitatively” and this was likely remotely, declining to validate earlier assumptions with site-specific and up-to-date information.

“The Lacy Lemoosh Project analysis used the FSVeg, VMap (2017), and the FACTS databases to estimate the amount and distribution of mature forest in the project area both before and after project implementation under both alternatives.” (BE/BA.) The FS says nothing about how and whether the estimates have been validated by people on the ground in the project area documenting stand conditions, habitat quality or specific components.

Remedy: Select the No Action alternative. Alternatively, prepare an EIS that addresses the legal, scientific and analytical deficiencies identified in our EA comments and in above objection points.

NORTH AMERICAN WOLVERINE

The EA states, “Wolverine is not expected to be present in the project area. . . .” The February 10, 2025 Biological Evaluation and Biological Assessment (BE/BA) also concludes that “wolverine is not expected to be present in the action area or occur there seasonally.” Yet these conclusions are directly contradicted the U.S. Fish and Wildlife Service’s 1-22-2025 letter to the FS (“Project Code: 2023-0046164/Project Name: Lacy Lamoosh Integrated Restoration”) which identifies “North American Wolverine *Gulo gulo luscus*” on the list of species “that may occur within the boundary of your proposed project and/or may be affected by your proposed project. . . .Species on this list should be considered in an effects analysis for your project.”

Consistent with the FS’s wrong assumption that the native species wolverine is not to be found in the Lacy Lemoosh project area, another FS document entitled “Lacy Lemoosh Species Not

² “The vegetation databases (FSVeg and VMap) don’t typically quantify snag and down woody debris present (unless specifically required within stand exams) within a stand. Snag and down wood parameters were gathered qualitatively during field habitat evaluations conducted by wildlife personnel.” (BE/BA.)

³ “Personal-use firewood gathering is anticipated to continue along seasonally and yearlong open roads, potentially reducing snags within 200 feet of such roads.” (Wildlife BE/BA.)

Analyzed in Detail, Biological Assessment” (SNAD BA) dated 1/30/2025 states, “the may affect threshold required for consultation under 7(a)(2) of the Endangered species Act has not been met and the species will not be evaluated further. The Lacy Lemoosh Project proposed actions would have no effect on DPS of the North American wolverine or designated critical habitat.”

The FS’s denial of the fact that wolverines may in fact occur in the project area led to the agency’s flawed decision to not consult with U.S. Fish and Wildlife Service (USFWS) in any manner whatsoever in regards to project affects on the species. And the FS even contradicts itself:

Approximately 2,643 acres of vegetation management (shelterwood with reserves, clear cut with leave trees, commercial thinning, and seed-tree with leave trees), 19 acres of aspen release, 161 acres of precommercial thinning, and 925 acres of fuels reduction treatments **would occur within male wolverine dispersal habitat.**

...changes will have net benefits to any potential **wolverine that be passing through the area.**

(SNAD BA, emphases added.) Also, “Male dispersal habitat may be modified within the project area, however, the wolverine is a generalist species that appears to be little affected by changes to the vegetative characteristics of its habitat (U.S. Department of the Interior 2013).” (Id.) There, the FS is citing a draft USFWS recovery outline document⁴ while downplaying the value of male dispersal habitat. We do not find that document on the Lacy Lemoosh project website nor via internet search. However a USFWS’s 2023 updated version⁵ states, “Dispersing wolverines (particularly males) can traverse through low-quality habitats in some instances. However, **there is presumably some limit at which wolverines will not cross certain habitats or traverse certain barriers. This threshold is unknown.**” (Emphasis added.)

The St. Joe Ranger District’s Wildlife Report for the Granite Fuels project, which would not construct any roads nor approve logging, concluded those project “activities May Affect” the wolverine. It also recognizes “Research demonstrates that the amount and spatial arrangement of roads reduces the quality of wolverine habitat.”

The NPCNF North Fork Ranger District’s Wildlife Specialist Report for the Sourdough Sheep logging project states: “the area is only considered male dispersal habitat not near maternal or sufficient primary habitat.” Yet it also concluded its project “activities May Affect” the wolverine and so USFWS concurrence was sought as required by the ESA.

⁴ U.S. Department of the Interior, Fish and Wildlife Service. 2013. Draft recovery outline, North American wolverine (*Gulo gulo luscus*), contiguous United States distinct population segment. Helena, MT: U.S. Department of the Interior, Fish and Wildlife Service, Montana Ecological Services Field Office. 22 p.

⁵ U.S. Fish and Wildlife Service, 2023. Recovery Outline for the Contiguous United States Distinct Population Segment of the North American Wolverine (*Gulo gulo luscus*). Portland, Oregon. 12 pp.

In September 2024 the NPCNF issued a Supplement to the Biological Assessment for the Nez Perce-Clearwater Revised Forest Plan, in part to:

...provide an addendum to the Biological Assessment of the Nez Perce-Clearwater National Forest's Revised Forest Plan in response to the listing decision and ESA status change of the North American Wolverine (*Gulo gulo*). The objective is to supplement or amend the wolverine analysis presented in the Biological Assessment (Nez Perce-Clearwater National Forest 2023) to:

1. Update the analysis with the best available scientific information including incorporation of the science presented in the U.S. Fish and Wildlife Service's 2023 Species Status Assessment Addendum and Listing Rule.
2. Amend the wolverine analysis in the Nez Perce-Clearwater National Forest Revised Forest Plan Biological Assessment (2023) so that it meets ESA consultation requirements of a Biological Assessment for wolverine now that is federally listed as threatened.
3. Provide an ESA determination of the effects of the proposed action for the Revised Forest Plan of the Nez Perce Clearwater National Forest based on the existing and updated wolverine analysis in this addendum.
4. Request a consultation and biological opinion on the effects of the plan presented in the wolverine section of the BA and updated science and related analysis presented in this addendum.

We are not aware of any corresponding IPNF programmatic Biological Assessment being prepared since the wolverine was listed under the Endangered Species Act. The USFWS's 2025 Biological Opinion (BO) on the NPCNF programmatic Biological Assessments states:

Activities like timber production, motorized uses, snow mobile use, and recreational uses may occur within Management Area 3⁶. ... Effects to dispersing individuals may negatively impact connectivity and gene flow. Decreased habitat quality from increased human infrastructure and disturbance within home ranges may lead to habitat avoidance or territory abandonment by resident wolverines. ... Overall, the management direction for Management Area 3 would have negative effects on wolverine and wolverine habitats where suitable activities and wolverine habitat overlap. These suitable activities may disrupt dispersal and connectivity between populations, lead to avoidance, and degrade habitat quality potentially leading to decreases in abundance.

When the USFWS listed the wolverine under the ESA, it concluded the Distinct Population Segment (DPS) is likely to become in danger of extinction within the foreseeable future primarily due to habitat loss as a result of climate change and the cumulative impacts of other, lower-level stressors, including winter recreation, development, and major roads. The USFWS

⁶ "Management Area 3 is commonly referred to as the 'Front Country' or 'Managed Front' ... Management area 3 includes lands managed for multiple uses, with emphasis on vegetation management, timber production, road, or motorized access, developed recreation, and wildfire prevention especially within the Wildland Urban Interface, among other uses. As a result, this management area currently has more intensive summer and winter motorized recreational use, high road densities, and fewer constraints on suitability of activities within the plan than other Management Areas." (NPCNF Supplement to the Biological Assessment for the Nez Perce-Clearwater Revised Forest Plan.)

concurrently issued a proposed 4(d) rule exempting logging projects, which we along with others challenged in comments. We incorporate comment letters on the proposed 4(d) rule from Swan View Coalition, Friends of the Wild Swan, Native Ecosystems Council and Western Environmental Law Council, plus the FOC et al December 21, 2022 comments on the request for new information (Federal Register Vol. 87, No. 225, November 23, 2022) to update the wolverine Species Status Assessment.

The USFWS has published a September 2023 Addendum to its previous Species Status Assessment (SSA), and the FS should take note that USFWS acknowledges the climate issue is an even greater problem for wolverine than it had previously. While the FS has limited ability to address declines in snowpack due to the climate crisis, the agency must account for such declines in its analysis. Had it done so, then the FS may have been able to identify specific linkage areas to protect, the importance of which is shown in the following explanation:

New studies in southwestern Canada and the western U.S. have found that wolverine distribution and density are negatively related to road density. In southwestern Canada, consistency of spring snow and road density are the two most important variables correlated with wolverine density (Clevenger 2019, p. 52; Mowat et al. 2020, p. 220). Wolverine population estimates derived from models based on snow and road density predicted that wolverine abundance would be 44% higher without the depressing effect of the road covariate (Clevenger 2019, p. 52; Mowat et al. 2020, p. 220).

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... in southeastern British Columbia, the density of forestry roads that extended into high-elevation wolverine habitat was a strong negative predictor of wolverine distribution in winter, especially for females (Kortello et al. 2019, p. 10). The most likely explanation for this negative relationship is the use of these high-elevation forestry roads by snowmobilers, rather than predator avoidance or trapping pressure (Kortello et al. 2019, p. 10). Other possible explanations are increased trapping access or less abundant food resources near roads (Mowat et al. 2020, p. 224).

(Wolverine SSA Addendum, 2023 (2023 SSA) at 31.)

We incorporate an administrative record (*see* Exhibit C) wherein are found recent studies on the impacts of wolverine trapping on population viability in Canada (where targeted trapping is allowed and where incidental trapping occurs). These studies demonstrate that the current rate of wolverine trapping in southern Canada is unsustainable and that trapping disproportionately impacts younger wolverines that are most likely to constitute the dispersers that the USFWS relies upon to ensure connectivity with the lower-48 population. *See* FWS-0048770–83 (Mowat (2019)); *see also* FWS-0033542–49 (Kukka (2017)). Although the ultimate cause of the lack of connectivity between wolverines in the contiguous United States and wolverines in Canada is not known with certainty, the USFWS previously determined that it may be related to “harvest management in southern Canada.” 75 Fed. Reg. at 78,053. These recent findings demonstrate that unsustainable exploitation of wolverines in Canada threatens wolverines in the lower-48 by impeding dispersal of Canadian wolverines across the international border. *Id.* The same is true in the lower 48 States where trapping can undermine wolverine movement and effective migration which is something needed for the long-term viability of the species. An additional

concern related to snowmobile use is that motorized access leads to increased trapping pressure (direct or indirect capture) for some furbearers that prefer more mesic habitat conditions generally found at higher elevations or in riparian habitats, such as marten, fisher, lynx, and wolverine. Trapping season for these species is limited to the winter months, and most trappers prefer the relatively easy access to suitable habitat provided by snowmobiles. Wolverine populations in small, isolated mountain ranges can be very susceptible to trapping pressure. Trapping pressure for these species is dramatically reduced if there is less snowmobile access. The RFP, Lacy Lemoosh EA and BE/BA fail to properly acknowledge, analyze or address the threats trapping pose.

The FS failed to account for the serious threat posed by the climate crisis, especially within the context of winter motorized recreation, and its effects on wolverine recovery. The USFWS provides more context and clarification regarding these threats:

We expect climate change to exacerbate effects from multi-lane roads, backcountry winter recreation, and human development, all of which could then impact genetic diversity and small population dynamics. 88 FR 83749

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In the 2023 wolverine SSA report addendum, we provide an updated assessment of the effects of winter recreation based on new studies. Research indicates winter recreation is negatively associated with North American wolverine habitat use, and that winter recreation is likely to increase and become more concentrated in the future as snow-covered areas decline due to climate change (Heinemeyer et al. 2019, p. 1). A large multi-State analysis of winter recreation impacts in the Northern Rocky Mountains was published in 2019, indicating greater concern for impacts to wolverines than we found in 2018 and showing a negative functional response to the level of recreation exposure within their home ranges (Heinemeyer et al. 2019a, pp. 13–14, 17–18). Additionally, new research found an incremental loss of wolverines in portions of central Idaho where winter recreation impacts are increasing (Mack and Hagan 2022, p. 13). Furthermore, forest roads used by snowmobilers in the Canadian Rockies were found to have a strong negative correlation with wolverine distribution (Kortello et al. 2019, p. 10). Wolverine detection probability in protected and nonprotected habitat of southwestern Canada was found to be strongly and negatively correlated with nonmotorized recreation in summer and winter (Barrueto et al. 2022, p. 5).

88 FR 83729.

The Nez Perce-Clearwater NF revised forest plan FEIS acknowledges the USFWS's findings in the 2023 SSA by noting:

Core wolverine habitats are projected to become smaller and more fragmented in the future as the result of climate change and human disturbance because climate change is projected to shrink wolverine habitat, increased backcountry winter recreation is likely in shrinking core habitats and human developments could reduce connectivity.

Yet, the IPNF has not accounted for shrinking wolverine habitat or concentration of uses or adjust the habitat models to include the scarcity of snowpack over the life of the Forest Plan. The USFWS (2023 SSA) explains:

Wolverine habitat in the contiguous U.S. is projected to decrease in areas that were modeled and become more fragmented because of climate changes that result in increasing temperatures, earlier spring snowmelt, and loss of deep, persistent spring snowpack, primarily at lower elevations (see Climate Change Effects section above). Winter recreation, which has been shown to negatively influence wolverine behavior, in these diminished habitats may increase as human populations increase (U.S. Forest Service 2016, pp. 12–13, 12–14). In addition, snow-dependent recreation that was formerly distributed over a wider elevation gradient will be constrained to that part of the gradient that contains quality snow into the future.

The FS’s conclusion that its massive Lacy Lemoosh roadbuilding and clearcutting project will have no effect on the Threatened wolverine violates the ESA and is arbitrary and capricious.

Remedy: Withdraw the DN and initiate consultation with the USFWS in regards to project impacts on the wolverine. Reinitiate consultation with the USFWS at the IPNF programmatic/forest plan level in consideration of the wolverine’s listing as Threatened under the ESA.

ELK

Our comments on the EA (pp. 57-59) included extensive discussion on the habitat needs of elk and by extension, other forest ungulates.

In order to meet Forest Plan requirements in Elk Management Unit (EMU) 6-8, the project “should maintain existing levels of elk security” (Forest Plan guideline FW-GDL-WL-13).

The EA cannot demonstrate consistency with Forest Plan direction such as guideline FW-GDL-WL-13, which states, “Management activities in elk management units should **maintain existing levels of elk security** (see glossary). Where possible, management activities in high and medium priority elk management units (determined in cooperation with Idaho Department of Fish and Game; see FW-DC-WL-17) should improve elk security.” (Emphasis added.) The RFP Glossary says “The effects of non-motorized use... would instead be analyzed separately **at the project level** (emphasis added).”

And the EA and Wildlife Report fail to address Forest Plan guideline FW-GDL-WL-14: “Management activities should avoid or minimize disturbance to native ungulates during the birthing/parturition period.”

Remedy: Select the No Action alternative. Alternatively, prepare an EIS that addresses the legal, scientific and analytical deficiencies identified in our EA comments and in above discussions.

UNLAWFUL FOREST PLAN

Our previous comments on the EA raised this issue and are incorporated herein.

George and Zack, 2001 “recommend that managers: (1) identify the wildlife species they want to target for restoration efforts, (2) consider the size and landscape context of the restoration site and whether it is appropriate for the target species, (3) identify the habitat elements that are necessary for the target species, (4) develop a strategy for restoring those **elements and the ecological processes that maintain them**, and (5) implement a long-term monitoring program to gauge the success of the restoration efforts.” (Emphasis added.) None of this is found in the RFP.

Remedy: Select the No Action Alternative. Otherwise, prepare an EIS that addresses the issues identified in our objection to the RFP and in our comments on the Lacy Lemoosh EA.

CUMULATIVE EFFECTS

The announcement of IPNF Forest-wide Prescribed Fire Project is new information (released 3-27-2025) with strong implications for the Lacy Lemoosh project (see IPNF RX – Interested Party.pdf and IPNF Forestwide Prescribed Fire page.jpg). This new proposal is to implement prescribed fire under a conditions-based procedure, covering most if not the entire Lacy Lemoosh project area. The FS is obligated to conduct a cumulative effects analysis in the Lacy Lemoosh EA for reasonably foreseeable FS actions such as the IPNF Forest-wide Prescribed Fire Project.

Our EA comments stated:

The EA does not analyze and disclose the cumulative effects of past, ongoing, and proposed management actions, within a logically defined cumulative effects analysis area, on land of all ownerships. It does not disclose if the FS has performed all of the monitoring and mitigation required or recommended in those NEPA documents, and the results of the monitoring. The FS would be unable to properly analyze and disclose cumulative effects of management plan implementation if it is not adequately informed by past project monitoring and plan-mandated monitoring.

It is vital that the results of past monitoring be incorporated into this project analysis and planning. We request the following be disclosed:

- A list of all past projects (completed or ongoing) implemented in the analysis area. .
-

Please provide an analysis of how well past FS projects met the goals, objectives, desired conditions, etc. stated in their corresponding NEPA documents, and how well the projects conformed to forest plan standards and guidelines.

These considerations are a critical part of the NEPA analysis...

The Lacy Lemoosh EA and resource reports provide nothing of the sort.

OLD GROWTH

The EA makes contradictory statements regarding old growth:

- No timber harvest would occur in stands that meet criteria for old growth or in stands allocated for old growth management.
- Activities proposed within retained existing or recruitment potential old growth will have little to no direct impact to measurable old growth criteria and may benefit old growth such as **thinning in a fuel break...**
- None of the proposed activities would modify stand conditions to the point that existing old growth stands would no longer meet minimum old growth criteria.
- Approximately 530 feet of temporary road construction is proposed within retained existing old growth to gain access to units 38 and 141.
- About 12 acres of fuel break 2 occur within recruitment potential old growth. A fuel break would remove small diameter trees in the understory,

Remedy: Drop project activities in units 38, 141, and also drop the fuel break within existing or recruitment potential old growth.

GRIZZLY BEAR

Hertel et al. (2019) explain that “explorer bears” are important to connectivity and persistence of the species. Given that grizzly bears have been observed near the project area in recent years, the odds are that during the implementation of this project, grizzly bears would be present.

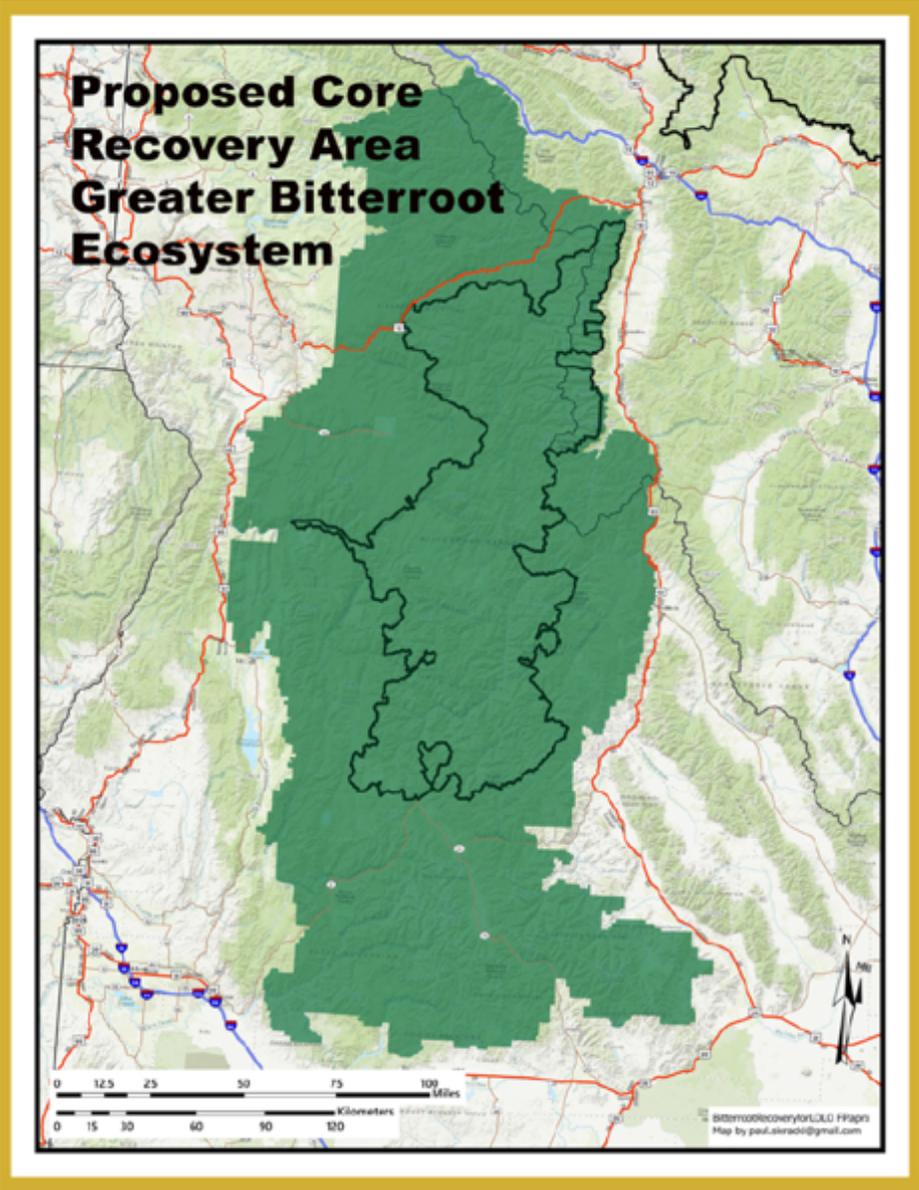
One of the main factors hindering grizzly bear recovery is the lack of connectivity between recovery zones due to degraded habitat conditions caused by a variety of factors, but especially roads. Roads can increase risk of mortality, change bear behavior, resulting in habitat loss, habitat alteration, habitat displacement, habitat fragmentation, and population fragmentation. (Proctor, et al. 2019; MacHutchon & Proctor 2015.) Roads change wildlife habitat in more extreme and permanent ways than other anthropogenic causes of fragmentation. (Forman & Alexander 1998; Spellerberg 1998.) Roads not only cause striking changes to physical landscapes but also alter the ecosystem’s general function and the patterns of wildlife use within these landscapes. (Reed et al. 1996; Transportation Research Board 1997; Shirvani et al. 2020.) Traffic on roads can create barriers or filters to animal movement and in some cases the leading cause of animal mortality. (Chruszcz et al. 2003; Clevenger & Wierzchowski 2006; Northrup et al. 2012.) Increased human use on new roads, including legal use during project implementation and illegal public use after project implementation, creates the potential for increased mortality and poaching of grizzly bears.

Roads and human activity can negatively impact grizzly bear recovery. (Lamb et al. 2018.) Therefore, Proctor, et al. 2019 conclude:

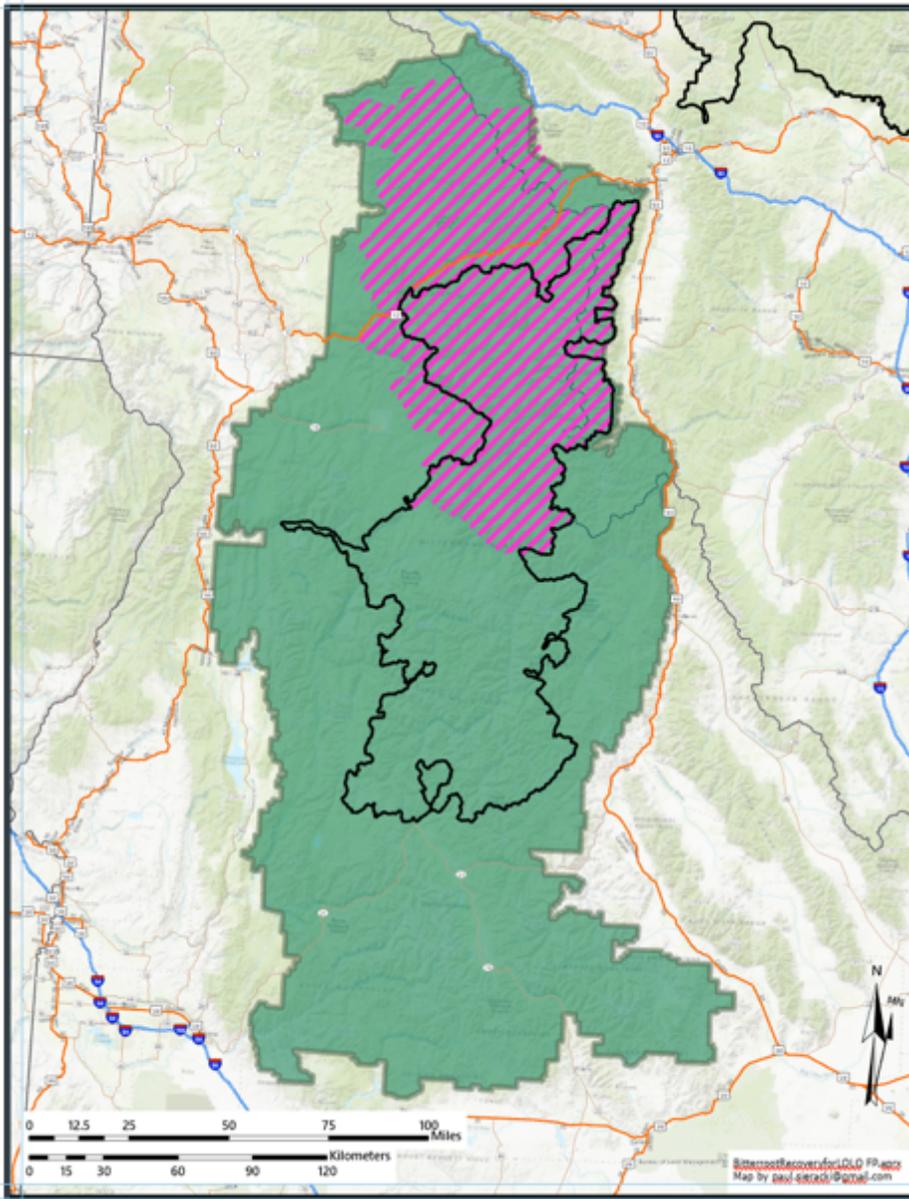
Motorized access management would be most beneficial in threatened populations, in areas where roads occur in the highest quality habitats, within and adjacent to identified linkage areas between population units, and in areas that are expected to exceed motorized route thresholds as a result of resource extraction activities.

Displacing grizzly bears from a secure area would further reduce grizzly bear connectivity and hinder population recovery into the Bitterroot Ecosystem (BE), a Recovery Zone (RZ) identified by the recovery plan. The EA fails to analyze how the proposed actions would affect grizzly bear habitat security and areas of demographic connectivity, such as discussed in Sieracki & Bader, 2022. Such an analysis requires discrete geographic parameters in which to measure habitat security, and motorized route densities. Yet, specific bear management units have yet to be identified in the St. Joe Ranger District by any federal or state wildlife agency. See, e.g. the Sieracki & Bader report, which identifies and displays Bear Management Units (BMUs) throughout the Bitterroot National Forest and Lolo National Forest and parts of the Beaverhead-Deerlodge National Forest. Proposed BMUs for the BE (Mattson 2021) and the secure habitat identified in Sieracki & Bader, 2022 provide a foundation for a more robust grizzly bear analysis both within the project area and considering cumulative effects on demographic connectivity.

We advocate for inclusion of biophysically suitable grizzly bear habitats beyond the Recovery Zone to be more scientifically consistent with the ecology of grizzly bears as a better conceptualization of the “Bitterroot Ecosystem” (BE). Example BE boundaries include as suggested by Bader and Sieracki, 2024 (see below, which is identical to that in Alternative 4 in the 2000 Grizzly Bear EIS). The more traditional conceptualization of Recovery Zone boundary is shown in black:



Next we show the same boundaries with the boundaries from FEIS Alternative 2 (Natural Recovery) from the USFWS's 2000 Recovery Plan displayed in diagonal. That FEIS Alternative 2 area was identical to the Recovery Area in the 1993 Grizzly Bear Recovery Plan.



Next we show the map of “Recovery Zone and Linkage Corridor for Alternative 4 - Restoration of Grizzly Bears as a Threatened Population with Full Protection of the ESA and Habitat Restoration” from the 2000 Recovery Plan:

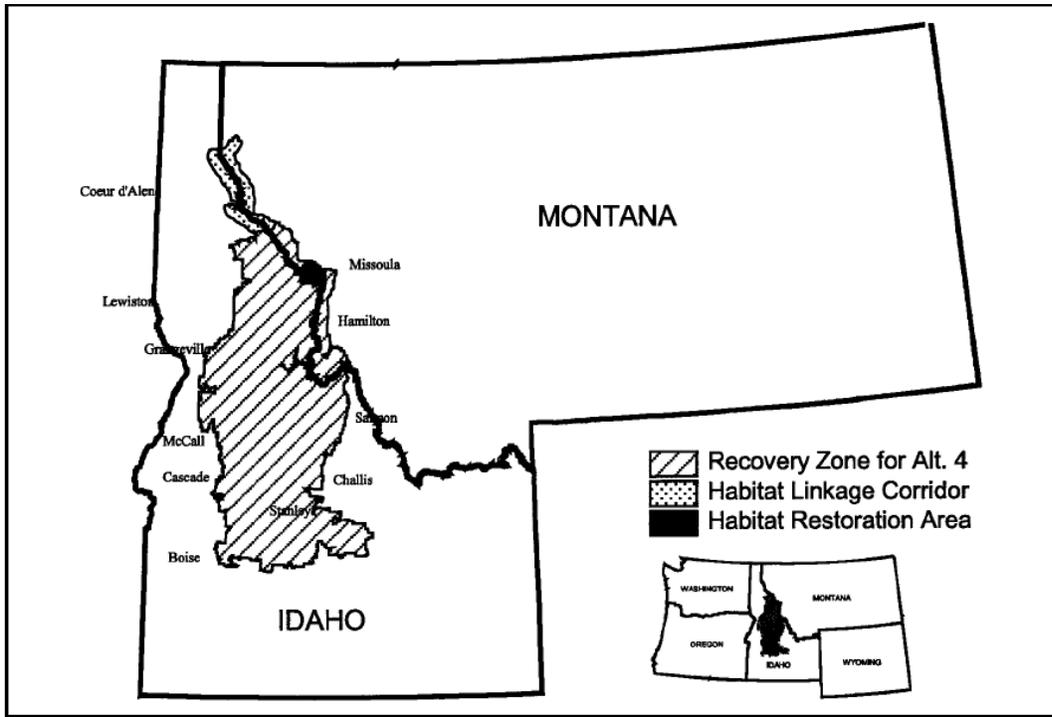
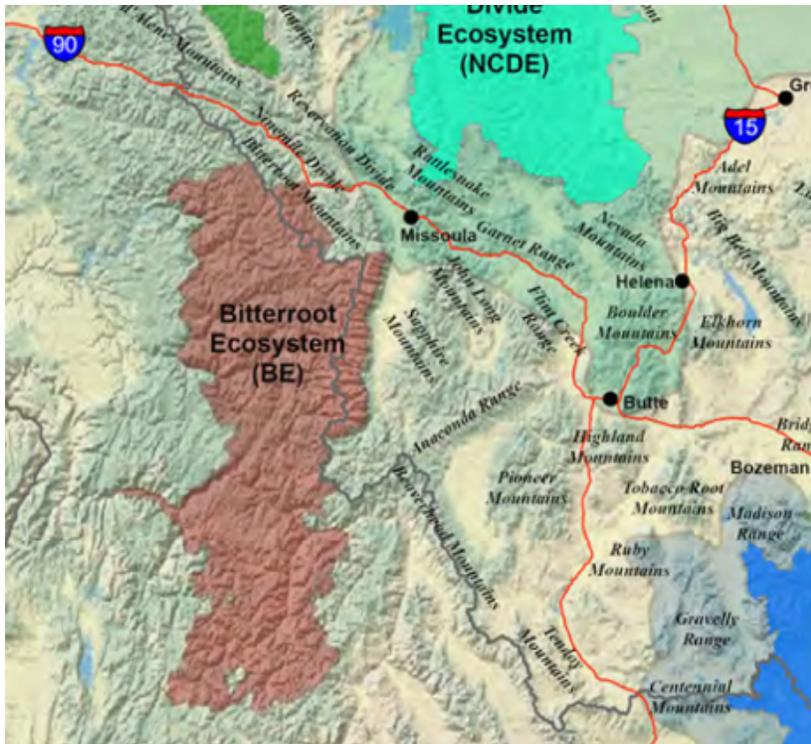


Figure S-5. Bitterroot Grizzly Bear Recovery Zone and Linkage Corridor for Alternative 4 - *Restoration of Grizzly Bears as a Threatened Population with Full Protection of the ESA and Habitat Restoration*.

Sells et al. (2023) is another example of BE delineation uncertainty, conceptualizing the boundaries: “The BE recovery zone boundary was a combination of the recovery zone boundaries identified in alternatives 1 (reintroduction) and 2 (natural recolonization) of the reintroduction plan for the BE (USFWS, 2000).” Below is a partial snip of their Figure 1:



Bader and Sieracki (2022) “predicted 21,091 km² of suitable denning habitats” in the BE and connection areas, noting:

Terrain features, distance to roads, and land cover best explained suitable denning habitats in northern Idaho and western Montana. The results support the demographic model for population connectivity, and independent of other factors there is suitable denning habitat for hundreds of Grizzly Bears in the Bitterroot analysis area. We suggest additions to the Bitterroot Grizzly Bear Recovery Area, and that more effective motorized-access management be applied to demographic connectivity areas.

Merrill et al. (1999), Mattson (2021), Sieracki and Bader (2022), Bader and Sieracki (2022), Sells et al. (2023) and Bader and Sieracki (2024) provide the foundation for the kind of robust grizzly bear analysis of the BE and for considering cumulative effects on demographic connectivity. The FS arbitrarily omits incorporation of demographic connectivity areas (DCAs) and likewise omits implementation of the BORZ concept (bears outside of the recovery zone) between the BE/RZ and other recovery areas, precluding standards and guidelines restraining management actions that would better foster natural recovery for the BE.

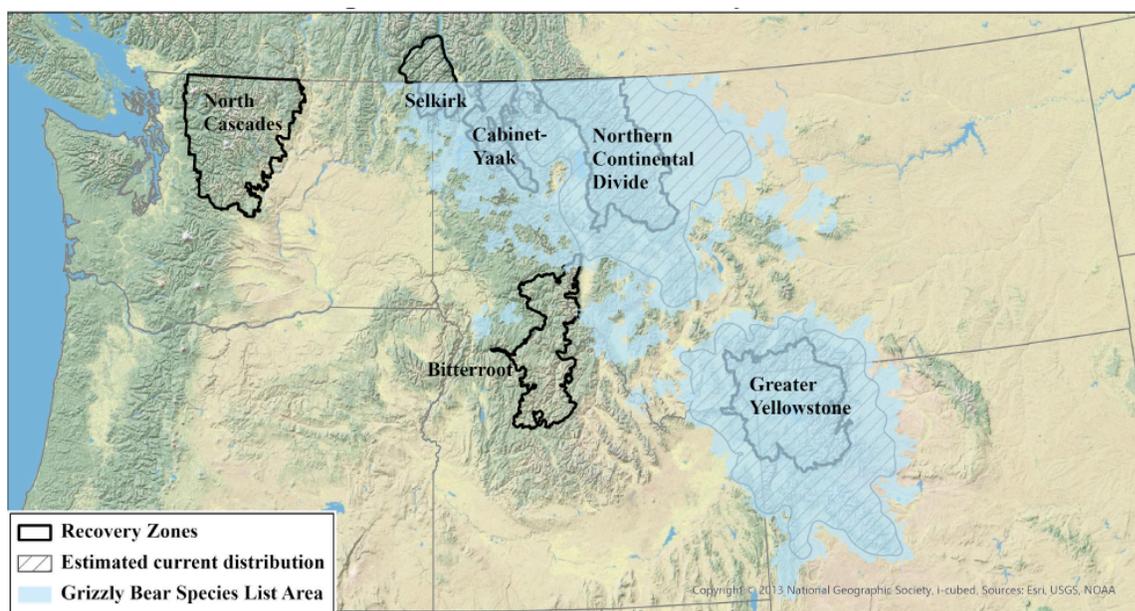
The USFWS’s 2022 Species Status Assessment for the Grizzly Bear (*Ursus arctos horribilis*) in the Lower-48 States finds that the grizzly bear population in the lower 48 states is likely to become in danger of extinction within the foreseeable future throughout all of its range, and that “viability for the grizzly bear in the lower-48 States as a whole only increases under ... future scenarios, which rely on increases in conservation efforts such that the [Bitterroot Ecosystem] and North Cascades support resilient populations.” In other words, true recovery of the

Threatened grizzly population cannot happen without recovery of a robust population in the BE, which is facilitated by connectivity habitat found in the Lacy Lemoosh project area.

Merrill, et al., 1999 identify seasonal productive grizzly bear habitats in Idaho. The authors state that grizzly bears have good chances of surviving and reproducing in the BE “if bears in central Idaho are accorded protection from direct mortality comparable to that provided bears in other recovery areas.”

Hertel et al. (2019) discovered that explorer bears are important to connectivity and persistence of the species: “Bolder individuals seem to be more tolerant towards human encroachment and move more easily through human-modified landscapes...” which has implications for dispersal and population connectivity. Grizzly bears that find their way into areas not densely occupied, or thought to be otherwise unoccupied, are highly important and should be recognized as resident. Yet the FS considers such grizzlies as “transients” instead of the natural agents of population recovery they really are.

In July 2022 the USFWS updated the species list area map of where grizzly bears “may be present.” Below is that “May Be Present” map. The map shows areas in light blue of known recent documentation of grizzly bears.



On March 15, 2023 in *AWR v. Cooley* a U.S. District court in Montana ordered the USFWS to re-analyze the recovery of grizzly bears in the BE. The Court recognized non-discretionary legally binding commitments made in the 2000 Record of Decision and Final Rule, plus the USFWS’s failure to manage accordingly. The Judge recognized that “as recently as October 2022, grizzly bears have been seen in the Bitterroot Ecosystem.” The Judge’s order requires the USFWS to supplement its 2000 Final EIS and come up with a new decision.

The FS should be identifying key habitat components for grizzly bears for prioritizing road density reductions (Proctor, et al., 2020) so populations can recover.

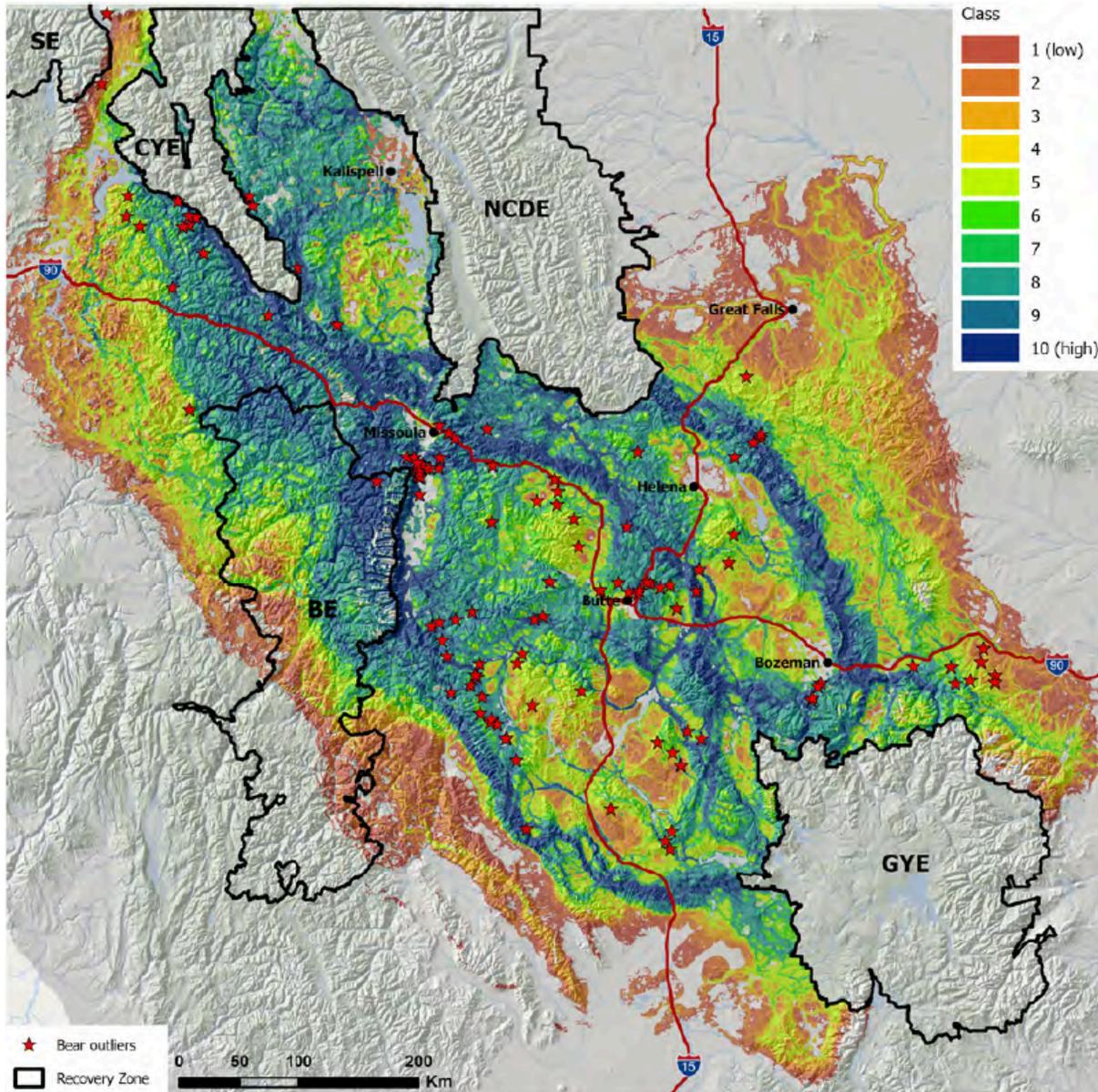
Schwartz et al. (2010) noted that management for grizzly bears requires provisions for security areas and limits of road densities between security areas. Otherwise, grizzly bear mortality risks will be high as bears attempt to move across highly roaded landscapes to other security areas. The Forest Plan lacks direction regarding road densities located outside of and between security areas.

Mattson (2021) investigates grizzly bear recovery in the BE and Nez Perce-Clearwater National Forests (NPCNF). Mattson discusses road densities and core security in proposed BMUs for the NPCNF⁷, which would help facilitate grizzly bear recovery in the BE. As Mattson (2021) explains, grizzly bear habitat quality in the BE is potentially outstanding, but strong steps are needed immediately to remove the human impediments to natural recovery. Recovery of the overall grizzly bear population in the lower 48 states requires its population to grow and its range expand, especially in anticipation of the impending risk of climate change.

The FS is aware of the most protective programmatic agency direction it has adopted to date, that established by Flathead Forest Plan Amendment 19 (USDA Forest Service, 1995c). It established Open Motorized Route Density (OMRD)/Total Motorized Route Density (TMRD)/Security Core indices, based upon the scientific information concerning security from roads and road density requirements for grizzly bears as found in Mace and Manley, 1993 and Mace et al., 1996. Similarly, also see USDA Forest Service, 2009d (programmatic direction for the Selkirk and Cabinet-Yaak Grizzly Bear Recovery Zones).]

Sells et al. (2023) sought to “identify important movement routes and habitat linkage areas between grizzly bear ecosystems “ i.e., “to identify potential dispersal pathways among ecosystems.” Results of their modeling yielded linking zones as identified in maps. For example, their Figure 3 for predicted female grizzly dispersal from the NCDE into the BE is displayed next:

⁷ The NPCNF borders the project area.



Bader and Sieracki (2024) apply recently published research on female grizzly bear habitat connectivity and potential routes to the BE to estimate the likelihood of female grizzly bears reaching the BE within the next decade. The report estimates the contiguous Northern Continental Divide Ecosystem (NCDE) population range could expand six miles into the BE within 5 years, and after 15 years move 18-25 miles. This begins to biologically invalidate federal agencies' current geographical separation of the NCDE and the BE.

The USFWS 2011 Grizzly Bear 5-Year Review includes an "Overview of the DPS Policy Relative to Lower-48 Listing." The relevant criteria it used is, "a vertebrate taxon may be considered discrete if it ...is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors (quantitative measures

of genetic or morphological discontinuity may provide evidence of this separation)...” This argues that the unit of grizzly bear recovery is now the entire lower 48 states DPS.

There exists a false narrative in regards to overall lower 48 states grizzly bear populations, a set of propaganda pushing the notion that grizzly bear populations are, and have been, growing substantially in recent years. Mattson (2017a) and Mattson (2017b) discuss the fallacies of reasoning and the political agendas, disputing this notion of a significantly expanding grizzly bear population.

Mattson (2019) provides plausible explanations for grizzly bear movements that are not transients as the FS claims and disputes the notion that grizzly bear populations are growing. Rather, factors such as climate change, berry crop/food failures over the period of years, and other habitat change factors might explain why grizzly bears have been seen in areas they’ve not been documented in decades or longer. Those factors—not improvements in habitat connectivity or population increases—may easily be why documented occurrence of grizzly bears has increased in and around the Lacy Lemoosh project area and BE in recent years. The above mentioned Mattson Declaration also discusses “Increases in distribution cannot be explained solely by increases in bear numbers.” In sum, changes in conditions within longer-established grizzly bear populations may be leading to fewer bears in those areas because some are forced to find more favorable conditions by migrating out.

With the recent rulemaking reinforcing the grizzly bear’s status as Threatened and recognizing a single DPS including most of Idaho and the IPNF, the FS must undertake programmatic consultation with the USFWS.

Remedy: Select the No Action alternative.

FURTHER REMEDY

Provide the remedy requested AWR’s Objection to the Forest Plan.

Sincerely submitted,



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