

Data Submitted (UTC 11): 5/3/2023 6:00:00 AM

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Comments: Please accept these attached additional scoping comments from me on the proposed Helena-Lewis and Clark Forestwide Prescribed Burn Project.

Please accept these additional scoping comments from me on behalf of the Alliance for the Wild Rockies (Alliance), Council on Wildlife and Fish, and Native Ecosystems Council (NEC) on the proposed Helena-Lewis and Clark Forestwide Prescribed Burn Project.

The project does not meet the purpose and need of the project. Please see the attached paper by Baker et al. 2023. This landmark study found a pattern of "Falsification of the Scientific Record" in government-funded wildfire studies.

This unprecedented study was published in the peer-reviewed journal Fire, exposing a broad pattern of scientific misrepresentations and omissions that have caused a "falsification of the scientific record" in recent forest and wildfire studies funded or authored by the U.S. Forest Service with regard to dry forests of the western U.S. Forest Service related articles have presented a falsified narrative that historical forests had low tree densities and were dominated by low-severity fires, using this narrative to advocate for its current forest management and wildfire policies.

However, the new study comprehensively documents that a vast body of scientific evidence in peer-reviewed studies that have directly refuted and discredited this narrative were either misrepresented or omitted by agency publications. The corrected scientific record, based on all of the evidence, shows that historical forests were highly variable in tree density, and included "open" forests as well as many dense forests. Further, historical wildfire severity was mixed and naturally included a substantial component of high-severity fire, which creates essential snag forest habitat for diverse native wildlife species, rivaling old-growth forests.

These findings have profound implications for climate mitigation and community safety, as current forest policies that are driven by the distorted narrative result in forest management policies that reduce forest carbon and increase carbon emissions, while diverting scarce federal resources from proven community wildfire safety measures like home hardening, defensible space pruning, and evacuation assistance.

"Forest policy must be informed by sound science but, unfortunately, the public has been receiving a biased and inaccurate presentation of the facts about forest density and wildfires from government agencies," said Dr. William Baker in their press release announcing the publication of their paper.

"The forest management policies being driven by this falsified scientific narrative are often making wildfires spread faster and more intensely toward communities, rather than helping communities become fire-safe," said Dr. Chad Hanson, research ecologist with the John Muir Project in the same press release. [Idquo]We need thinning of small trees adjacent to homes, not backcountry management.[rdquo]

"The falsified narrative from government studies is leading to inappropriate forest policies that promote removal of mature, fire-resistant trees in older forests, which causes increased carbon emissions and in the long-run contributes to more fires" said, Dr. Dominick A. DellaSala, Chief Scientist, Wild Heritage, a Project of Earth Island Institute concluded in the press release.

Following is a summary of their paper.

Landmark Study Finds Pattern of "Falsification of the Scientific Record" in Government-Funded Wildfire Studies
Short Summary of the Newly Release Study "Countering Omitted Evidence of Variable Historical Forests and Fire Regime in Western USA Dry Forests: The Low-Severity- Fire Model Rejected":

An unprecedented new study, Baker et al. (2023), published in the peer-reviewed journal *Fire*, exposed a broad pattern of scientific misrepresentations and omissions by government forest and wildfire scientists. This "falsification of the scientific record" is driving bad policies and government mismanagement of public forests, including clearcutting and commercial logging of mature and old-growth trees under deceptive euphemisms like [ldquo]thinning[rdquo], [ldquo]restoration[rdquo], and [ldquo]fuel reduction[rdquo]. In particular, studies funded by the U.S. Forest Service, an agency that financially benefits from commercial logging on public lands, have presented a falsified narrative that historical forests had low tree densities and were heavily dominated by low-severity fires, using this narrative to push for increased commercial logging. While Baker et al. (2023) documents a broad pattern of scientific omissions by Forest Service studies, it focuses on Hagmann et al. (2021), a Forest Service study that has received much media attention and has been used as the justification for a series of unprofessional public attacks and character assassination efforts by Forest Service-funded scientists against independent forest/fire scientists. Centrally, Baker et al. (2023) found that, while Hagmann et al. (2021) was presented ostensibly as a review, that paper listed a series of studies by independent scientists, and then listed the Forest Service[rsquo]s published critiques of those studies, but never mentioned the stacks of reply studies by independent scientists that completely refuted and discredited the Forest Service critiques. Through this glaring omission of a huge body of scientific evidence, Hagmann et al. (2021) created the false appearance that the Forest Service critiques were the last word on the subject. The scientific reply studies by independent scientists note that the Forest Service critiques do not challenge the central evidence or conclusions of the initial studies, and the reply articles provide exhaustive evidence documenting why the tangential critiques in the Forest Service articles are unfounded and inaccurate[ndash] all of which was concealed by Hagmann et al. (2021). The corrected scientific record, based on all of the evidence, shows that historical forests were highly variable in tree density, and included "open" forests as well as many dense forests. Further, historical wildfire severity was mixed and naturally included a substantial component of high-severity fire, which creates essential snag forest habitat that rivals old-growth forest in terms of native biodiversity. These findings have profound implications for climate change mitigation and community safety, as current forest policies that are driven by the distorted narrative result in forest management policies that reduce forest carbon and increase carbon emissions, while diverting scarce federal resources away from proven community wildfire safety measures like home hardening, defensible space pruning, and evacuation assistance.

Why is this project not in violation of NEPA because the HLCNF appears to be using the same false narrative that Baker et al. criticize?

The project as proposed is in violation of NEPA, NFMA and the APA because it is claiming that historical were not highly variable in tree density.

Page one of the scoping notice states:

Much of the 2.9-million-acre Forest is at risk of wildfire and other disturbances that are larger and more intense than they were historically.

What areas of the Forest are at risk of wildfire and other disturbances that are larger and more intense than they were historically?

Baker et al. 2023 state in their abstract: 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 [ldquo]low-severity[rdquo] model is that dry forests were relatively uniform, low in tree density, and dominated by low- to moderate-severity fires; the

[ldquo]mixedseverity[rdquo] model is that dry forests were heterogeneous, with both low and high tree densities and a mixture of fire severities.

What HRV model is the HLCNF using?

Baker et al. 2023 also state in their abstract: Here, we simply rebut evidence in the low-severity model[rsquo]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, [ge]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.

What areas of the forest are outside of the normal range of variability?

For example, the following paragraph on page 2 states:

The scientific literature is exceedingly clear that the most effective way to reduce fire spread rates and severity is with some combination of management that includes prescribed fire. When we use prescribed fire, we apply fire to the landscape under mild or sometimes moderate weather conditions. Currently, some areas of the Helena-Lewis and Clark National Forest are so dense that some small trees would need to be removed before prescribed fire can be implemented effectively and safely. The project would improve forest resistance to disease and drought and increase tree growth and vigor. Thinned forests create less resource competition between remaining trees which allows for increased moisture and nutrient uptake leading to greater diameter growth and a greater resistance to insect and disease outbreaks. Wildlife habitat and watershed function across the Forest would also be improved. Management would include a suite of vegetation density reduction and hazardous fuel treatment actions designed to increase resistance to effects from wildfire, insects, and disease, and decrease but not eliminate levels of mortality from disturbance events like wildfire. The proposed project would help protect high-quality scenery and recreation infrastructure.

What scientific literature are you referring to when the scoping notice states:

The scientific literature is exceedingly clear that the most effective way to reduce fire spread rates and severity is with some combination of management that includes prescribed fire.

Please show some scientific evidence to back up the following statement:

The project would improve forest resistance to disease and drought and increase tree growth and vigor. Thinned forests create less resource competition between remaining trees which allows for increased moisture and nutrient uptake leading to greater diameter growth and a greater resistance to insect and disease outbreaks.

The scoping notice states: Wildlife habitat and watershed function across the Forest would also be improved.

How will wildlife habitat and watershed function be improved?

What species will be hurt by this project?

What species will benefit?

How will the project help protect high-quality scenery and recreation infrastructure?

The scoping notice states: Fireline would be constructed where existing features such as roads, trails, or wet drainages, are not sufficient to meet prescribed fire control objectives.

Where will these firelines be built and how will they be built? Will they be built with motorized equipment? Will they be built in roadless areas?

How close will they be built to streams.

How will the firelines effect water quality?

Will constructing the firelines spread noxious weeds?

Page 4 of the scoping notice states: Planned management that include tree cutting would only proceed within inventoried roadless areas if the activity complies with one of the exceptions to the 2001 Roadless Rule.

How will the public know if the project is complying with the roadless rule if you are not telling the public where and when you are going to burn in roadless areas?

Please clearly tell the public when and where you are going to burn and specifically what exception to the 2001 Roadless Rule you are using and why?

Please disclose the last time the Project area was surveyed for whitebark pine, grizzly bears, wolverines, monarch butterflies, whitebark pine, pine martins, northern goshawk, and lynx.

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

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

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

Whitebark Pine

Have you surveyed the entire forest for whitebark pine? This must be done before a draft decision is signed so the public has a chance to comment. Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning, would experience mortality from project activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the presence of adequate seed source and dispersal mechanisms (Clarks Nutcracker or humans planting whitebark pine seedlings).

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

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

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

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

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

Since Whitebark pine are now listed as threatened the ESA, you must formally consult with the FWS on the impact of the project on whitebark pine and consult with the FWS on the revised Forest Plan[rsquo]s effect onwhitebark pine. To do this the Forest Service will need to have a complete and recent survey of the entire project area for whitebark pine and consider planting whitebark pine as the best available sci-ence by Keene et al. states is the only way to get new whitebark pine to grow. The Forest Service is incorrect when it states that the project will have [ldquo]No significant effects would result from this project or cumulatively with other activities on National Forest or adjacent lands that would affect at-risk plant species[rsquo] ability to persist on the landscape.[rdquo] Since you have done no surveys of whitebark pine what is the basis of the [ldquo]No effect[rdquo] statement? Please formally consult with the FWS on the impact of the project on Whitebark pine. Since whitebark pine are very slow growing trees and take years to mature, what scientific evidence to you have to back up the following statement on page 29? [ldquo]Some immature trees may be lost, but this would not result in a trend toward federal listing.[rdquo]

REFERENCE: Baker et al 2023.pdf