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Organization: Park County Environmental Council
Title:
Comments: 8/25/2025

RE: Environmental Assessment for Cooke City Fuels and Forest Health Project

Dear Mr. Jedra,

I am writing on behalf of the Park County Environmental Council (PCEC), a local grassroots environmental group with more than 500 members and 3,500 supporters. For decades, PCEC has worked to safeguard the land, water, wildlife, and people of Park County and Yellowstone's northern gateway. Our members have a deep respect for and connection to this landscape and wild integral ecosystems, where we live, work, and recreate.

We are long-time advocates for the protection of the Absaroka-Beartooth Wilderness and surrounding Gallatin Nation Forest, as it connects and supports our communities in many ways. We have a vested interest in the long-term health of this landscape, including the community of Cooke City, and we appreciate your thoughtful consideration and time reviewing our formal objections to the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the Cooke City Fuels and Forest Health Project.

We acknowledge the efforts made to incorporate public feedback and many of our own concerns into the project design. However, the proposed project, despite its stated purpose of improving forest health, relies on a narrow set of thinning treatments that fail to incorporate the full range of management tools and a comprehensive understanding of current fire ecology.

Background
The Absaroka-Beartooth Wilderness and the Greater Yellowstone Ecosystem (GYE) are considered ecologically significant on a national and global scale, warranting priority consideration and protection due to their exceptional biological integrity and the ecosystem services they provide. Intact temperate ecosystems are extremely rare, with a 2021 study by Plumptre et al. revealing that only 3% of the world's land is still ecologically intact. The proposed project area is a critical refuge for a full complement of native wildlife, including wide-ranging carnivores like the grizzly bear and wolverines, and other species whose long-term population viability depends on the preservation of large, connected habitats.

The Absaroka-Beartooth Wilderness, a core component of this ecosystem, holds legal status under the Wilderness Act of 1964, which is predicated on the preservation of its "untrammeled" character. This legal designation recognizes the area's significant ecological and scientific value. The project area's high-elevation terrain is a critical hydrological system, serving as the headwaters for the Broadwater River-Clarks Fork Yellowstone River and Upper Soda Butte Creek sub-watersheds, along with other important tributaries like Miller Creek. Lastly, the GYE's vast size and elevational diversity make it a recognized climate change refugium, providing a critical buffer where species can adapt to changing climatic conditions.

PCEC acknowledges the importance of proactive forest management and wildfire risk reduction, particularly in the Wildland-Urban Interface (WUI). We support management that is grounded in sound ecology and that enhances ecosystem resilience. We appreciate the Forest Service's efforts to manage a complex landscape for multiple values, including fuels reduction and forest health. However, we urge you to create a more robust plan that directly addresses the specific objections and arguments detailed below.

Objections

1.
We object to the Environmental Assessment (EA) failing to apply the best available science to its analysis of fire ecology, forest management, and climate change. Specifically, the document misapplies fundamental fire ecology principles, as it does not investigate potential fire refugia, provides an incomplete analysis of whitebark pine management, and neglects the critical role of prescribed fire as a management tool. The EA also provides an inadequate assessment of the project's impacts on soils and Inventoried Roadless Areas.

The EA's approach to fire ecology and forest management is not supported by the best available science. Its one-size-fits-all strategy for thinning and fire suppression ignores the complex role of natural fire regimes in fostering forest health. The plan fails to recognize that forest heterogeneity is essential for building resilience and that a nuanced, site-specific approach is required to meet management objectives. The EA's assumption that all stand-replacement fires are undesirable ignores the ecological reality that such events create a mosaic of successional stages, which is critical for long-term biodiversity. The project's proposed treatments, intended to reduce fuel loads, may instead homogenize the landscape, reducing the very heterogeneity that makes a forest resilient to climate change. This contradicts the findings of Keane et al. (2017), which advocates for restoration efforts that "improve landscape heterogeneity" to promote ecosystem resilience, particularly in whitebark pine ecosystems.

The project also demonstrates a critical failure to adequately investigate the role of potential fire refugia, particularly in the areas south of Highway 212. While these areas lack formal designation, ecological indicators such as their location along Soda Butte Creek and north-facing slopes that retain significant moisture suggest they possess the characteristics to function as fire refugia, which are vital for post-fire recovery and biodiversity. The EA's analysis is critically incomplete because it fails to conduct a rigorous, site-specific investigation to confirm this potential. This is a significant omission, as recent research on fire refugia highlights their importance as "locations that burn less severely or less frequently than surrounding areas [that] support late-successional and old-growth forest structure and function" (Meigs et al., 2020). The study further indicates that fire refugia are more likely to occur in forests with higher pre-fire biomass and in specific topographic settings, such as "northern aspects, steep catchment slopes, and concave topographic positions". The project's approach is flawed because its one-size-fits-all model for fuel reduction is "unlikely to be effective and may produce collateral damage in some places" (Schoennagel et al., 2004), thereby risking the ability of these areas to serve as refugia.

The analysis of whitebark pine management is critically incomplete. The project proposes mechanical thinning to enhance whitebark pine stands, but this strategy is presented without a full analysis of its long-term viability against a complex and challenging environment created by compounding stressors (Keane et al., 2017). The EA's focus on removing "competing" species like lodgepole pine, Engelmann spruce, and subalpine fir overlooks their ecological role. These trees are not simply competition but are critical components of a healthy, diverse forest. By proposing their removal across such a vast area, the project risks reducing the very structural heterogeneity that is essential for fire refugia and overall ecosystem resilience, as highlighted by Meigs et al. (2020) and Schoennagel et al. (2004).

While we acknowledge research demonstrating that targeted silvicultural treatments can benefit whitebark pine, the current plan fails to address critical limitations and knowledge gaps identified in recent peer-reviewed studies. A recent study found that a specific form of mechanical thinning successfully increased whitebark pine growth and its defensive resin ducts against bark beetles (Kichas et al., 2024). This same research also highlighted significant unknowns, including whether these increased defenses directly translate to increased tree survival during a major beetle outbreak and the potential for increased blister rust transmission following treatment (Kichas et al., 2024). The Cooke City project, which includes treatments in whitebark pine habitat, fails to specify whether its methods will prioritize the ecological goals of the Kichas et al. study. We cannot support a plan that relies on a limited treatment approach without fully analyzing these known risks and demonstrating a long-term commitment to an adaptive management strategy that is resilient to future environmental pressures.

The EA's analysis of fuels reduction is critically flawed due to its exclusive focus on mechanical treatments and its disregard for prescribed fire. This omission is in direct opposition to the Forest Service's own "National Prescribed Fire Resource Mobilization Strategy", which identifies prescribed fire as a "critical" tool for improving forest resiliency (USFS, 2023). The plan's reliance on thinning alone is particularly ineffective, as mechanical treatments cannot replicate fire's essential ecological role in returning nutrients to the soil, stimulating fire-adapted plant species, and creating the mosaic of habitats necessary for long-term biodiversity. Research from a 2024 meta-analysis provides compelling evidence of this, finding that the combination of thinning and prescribed fire reduced wildfire severity by an average of 72%, while thinning alone was significantly less effective, reducing severity by only 27% (Davis et al., 2024). The report concluded that thinning alone fails to address the surface fuels that are essential to preventing high-severity crown fires. The EA's failure to analyze this demonstrably superior alternative represents a significant flaw and suggests an incomplete and biased approach to management. A more comprehensive and scientifically sound approach is not merely preferable-it is a necessity for the long-term health of this landscape.

The EA's approach to forest management is fundamentally flawed because it fails to incorporate the critical relationship between carbon sequestration, climate change, and wildfire dynamics. The project's rationale, which relies on extensive thinning and logging, is predicated on the outdated belief that these actions will increase forest resilience and reduce fire risk. In fact, research demonstrates that mature, intact forests are the most effective at sequestering and storing carbon, and that large-scale logging can release this stored carbon, exacerbating climate change and potentially increasing fire severity. We object to the project's use of mechanical treatments because it fails to address the critical link between forest management and climate change. The project, which involves harvesting mature trees, could release more carbon than a wildfire event. A meta-analysis published in Frontiers in Forests and Global Change found that commercial harvesting results in a higher density of carbon emissions per area than wildfire, making it an ineffective strategy for climate mitigation (Bartowitz et al., 2022).

2.
We object on the basis that the proposed project poses a significant and avoidable threat to federally listed and sensitive wildlife species, including grizzly bears, Canada lynx, and wolverines, due to inadequate protections and planning. The Environmental Assessment (EA) fails to provide a robust, legally defensible framework for the long-term conservation of these species in the Greater Yellowstone Ecosystem (GYE) and Absaroka-Beartooth Wilderness. The plan relies on generalized forest-wide standards rather than species-specific, enforceable management strategies and monitoring protocols, a deficiency that is legally vulnerable under the Endangered Species Act.

The project's potential for habitat fragmentation is a major concern for grizzly bears, which require large, contiguous landscapes to thrive. Research has long established the connection that a new road in a, especially in a roadless area directly increases human access and disturbance, which is a leading cause of grizzly bear mortality (Waller & Servheen, 2005).

The core of this issue lies in the concept of secure habitat, which is defined as areas more than 500 meters from open roads (Proctor et al., 2019). The project's own analysis acknowledges that the proposed temporary roads will directly affect secure habitat within the project area. The scientific literature indicates that maintaining low road densities is critical for high-quality grizzly bear habitat, with an established threshold of less than 0.6 km/km² (Proctor et al., 2019). The introduction of any new road, regardless of its size, adds to this density, thereby fragmenting the landscape and forcing bears into less suitable habitats, which increases the risk of human-wildlife conflict and impacts the species' long-term viability.

Canada lynx, a snow-adapted specialist, depends on dense, mature forests for denning, foraging, and protection from predators. The proposed mechanical thinning treatments, which involve removing a significant number of trees, risk disrupting this critical habitat. While the EA mentions retaining coarse woody debris, this is a

generalized guideline without an enforceable monitoring plan to ensure habitat connectivity is maintained across the project area. Lynx rely on a continuous network of cover to travel and hunt, and any break in this connectivity can act as a barrier to movement. Maintaining large, undisturbed patches of dense forest is crucial for lynx survival (Ruggiero et al., 1999). The project's one-size-fits-all approach to thinning may homogenize the landscape, reducing the habitat diversity essential for a healthy lynx population.

Wolverines, a species known for their elusive nature and dependence on high-elevation, cold-climate habitats, are particularly vulnerable to climate change and human disturbance. The proposed project area is a critical climate change refugium for this species. The large-scale mechanical treatments and associated human activity could disrupt denning sites and increase the risk of displacement during sensitive periods (McKelvey et. al., 2014). While wolverines are currently recolonizing their historical range from the north, this is happening at a much larger spatial scale and more rapidly than habitat losses from global warming. The EA's failure to provide a detailed, species-specific analysis of these impacts and to include a clear, enforceable plan for monitoring and mitigating disturbance to wolverine denning habitat represents a significant oversight. The general commitment to protecting species without specific, measurable, and enforceable actions is inadequate for a species whose population viability is already under threat from habitat loss and climate change.

The EA's conclusion that this project will have "no significant impact" on endangered and threatened species is scientifically and legally indefensible. The Forest Service's own analysis acknowledges that the project would reduce Canada lynx foraging and denning habitat by hundreds of acres and that mechanical treatments and road construction could disturb grizzlies and wolverines. The agency dismisses these impacts as "temporary" or "unlikely," a conclusion that represents a fundamental disconnect between the project's stated goals and its documented effects. This approach fails to account for the cumulative, long-term harm that such disturbances inflict on species already facing extreme pressures from habitat loss and climate change.

3.
We object on the basis that the Finding of No Significant Impact (FONSI) is legally unsound because the EA fails to provide a complete and enforceable plan for project implementation and monitoring. This deficiency is evident in the EA's lack of legally binding commitments for mitigation measures, and its reliance on vague and unenforceable plans for protecting threatened species, riparian zones, and managing invasive species.

The EA's Finding of No Significant Impact (FONSI) is unreasonable, as it relies on an analysis that fails to adequately address the project's cumulative impacts within a rapidly changing environment. This conclusion is inappropriate and legally unsound, given the scale of the project, the potential for long-term adverse effects, and the significant public controversy. The sheer magnitude of the proposed mechanical work, which includes a combined 1,295.4 acres of commercial harvest, mechanical fuels treatment, and mechanical whitebark pine enhancement, represents a significant disturbance in a sensitive landscape adjacent to a designated wilderness area in addition to the other 1,922.9 treated acres.

The extensive use of heavy machinery for this project's scale raises serious questions about long-term soil health, habitat fragmentation for sensitive wildlife species, and the introduction of non-native species. These are impacts that are not sufficiently analyzed in the EA, particularly when considered in concert with other environmental pressures. The absence of a rigorous Environmental Impact Statement (EIS) to fully explore these concerns and to analyze alternatives and mitigation measures is a major procedural failing and a disservice to the long-term health of this landscape.

The plan demonstrates a critical absence of legally binding monitoring and accountability. The EA's discussion of monitoring is vague and lacks any clear mechanism for enforcement. The plan "outlines a desire to monitor" but provides no specifics on what will happen if the project fails to meet its objectives, such as fuel reduction targets or preventing invasive species spread. Without a clear budget for monitoring or a defined process for adaptive management, these commitments are not legally binding. We demand a clear and enforceable plan for

monitoring with specific metrics and triggers for corrective action.

The project's commitments to protecting threatened and endangered species are another example of the plan's legal vulnerability. The document relies on general, existing forest-wide standards rather than proposing specific, species-level adaptive management frameworks. For instance, the general Forest Plan standard for lynx habitat states: "To provide for the maintenance of lynx habitat connectivity, retain existing coarse woody debris within project areas. Do not remove coarse woody debris greater than 16 inches in diameter, unless it poses a safety hazard." This measure functions as a general guideline only, without an enforceable monitoring plan to measure impacts on habitat connectivity. Similarly, the design feature for whitebark pine: "Within stands with existing whitebark pine, minimize damage to existing healthy whitebark pine trees greater than 5 inches in diameter at breast height (DBH) and retain existing whitebark pine snag habitat (trees greater than 12 inches in diameter at breast height)." This also lacks a robust, enforceable monitoring plan that includes performance standards. The absence of a formal, species-specific adaptive management framework places the project at significant risk of failing to meet its legal obligations under the Endangered Species Act.

The project's invasive species plan is also legally deficient due to its lack of necessary specificity and binding commitments. While the Invasive Resource Analysis identifies a risk of invasive species spread, it fails to provide a concrete, enforceable plan for prevention, management, and monitoring. The analysis states that these actions will be undertaken "as time and funding permit," a phrase that undermines the project's legal obligation for effective prevention and control. A legally defensible plan requires measurable performance standards and a rigorous monitoring protocol, both of which are absent. The plan contains no specific, quantifiable metrics like "no new introductions" or a measurable threshold for the increase or decrease of existing weed patches. It also lacks a detailed, mandatory monitoring schedule. These deficiencies transform the project's commitment to invasive species management from a mandatory, enforceable requirement into a discretionary action, which is a key failure for a mitigated Finding of No Significant Impact (FONSI) under current CEQ guidance (Council on Environmental Quality, 2023).

The EA fails to secure long-term protection for riparian zones, which is another instance of its legal deficiencies. It relies on project-specific "design features" and "Best Management Practices" (BMPs) that lack legally enforceable monitoring and funding mechanisms. While the Aquatics Resource Analysis lists several design features, intended to protect water quality and riparian habitats, the document does not define these measures as mandatory with a clear enforcement mechanism. A sound management plan must include mandatory, quantitative monitoring of water quality indicators (e.g., sediment load and temperature) and vegetation health, with predefined performance standards. The reliance on voluntary or general measures, without a clear enforcement mechanism for long-term funding and implementation, is insufficient to ensure the permanent protection of these critical habitats.

4.
We object to the project's focus on large-scale forest treatments overlooking the primary cause of home loss in wildfires: embers and radiant heat. A growing body of scientific evidence from institutions such as the U.S. Forest Service, the National Institute of Standards and Technology (NIST), and the Insurance Institute for Business and Home Safety (IBHS) demonstrates that the most effective way to protect communities in the wildland-urban interface (WUI) is to prioritize defensible space and structural fire-resistance (Maranghides et al., 2022). A recent report provides a detailed, science-based analysis of the effectiveness and affordability of home hardening, confirming that these measures are a critical defense against wildfire (Headwaters Economics & IBHS, 2024).

This approach, commonly known as "home hardening," involves proven measures such as using fire-resistant roofing and siding, clearing vegetation immediately around structures, and retrofitting vents to prevent ember entry. A key finding from post-fire analyses by institutions like the IBHS and NIST is that embers are the primary cause of home ignition in up to 90% of cases, not the main wildfire front itself. U.S. Forest Service has

consistently shown that a fire's spread to a community is more a matter of "urban fire initiated by wildfires" than a "wildfire problem" (Cohen, 2000).

By implementing these strategies, a home's vulnerability to ignition from direct flame contact, radiant heat, and most importantly, wind-blown embers, is significantly reduced. This not only protects individual structures but also enhances the safety of the entire community by preventing house-to-house fire spread.

While we support management that addresses forest health and wildfire risk, we cannot endorse this project until its analysis is strengthened to reflect the best available science and adaptive management. The proposed action alternative in the EA falls short of adequately addressing our concerns regarding the project's limited and potentially counterproductive management strategies, as well as its insufficient analysis of impacts on fire refugia, the Inventoried Roadless Area, and threatened and sensitive species.

Given the ecological significance of the Absaroka-Beartooth Wilderness and the Greater Yellowstone Ecosystem, a more comprehensive and scientifically sound approach is not merely preferable-it is a necessity. We believe that a new Environmental Impact Statement is the only way to fully analyze the complex, long-term, and cumulative effects of this project and ensure the protection of this globally significant landscape.

Thank you for the opportunity to elevate our concerns, which we believe merit further consideration during the final phases.

Sincerely,
Max Hjortsberg & Bethany Allen
Park County Environmental Council

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