BACKCOUNTRY HUNTERS & ANGLERS COLORADO

FROM: Colorado Backcountry Hunters and Anglers

TO: Joshua Peck – District Ranger
Pagosa Ranger District
San Juan National Forest
P.O. Box 310 Pagosa Springs, CO 81147

March 6, 2023

RE: **Jackson Mountain Proposal**

Dear Mr. Peck,

Please accept these comments with regard to the Jackson Mountain Proposal scoping period. We appreciate the opportunity to voice our concerns with this project and its potential impacts on habitat and wildlife.

INTRODUCTION

Backcountry Hunters and Anglers is a sportsperson group that advocates for wildlife, public lands, access and opportunity. Our mission is to ensure North America's outdoor heritage of hunting and fishing in a natural setting, through education and work on behalf of wild public lands, waters, and wildlife. Our passion drives us to be involved in public lands projects and raise concerns when negative effects on wildlife outweigh the benefits of a project. For this reason we are writing to raise concerns over the location of the Jackson Mountain Landscape Project #61809 as it relates to migration corridors; seasonal and critical habitat; trail density and the propensity for wildlife to flee trail users; ignoring Colorado's Guide to Planning Trails with Wildlife in Mind; and lumping a complex project under one environmental assessment. Wildlife in Colorado are struggling from many factors, adding additional stressors in critical habitat flies in the face of sound land management practices. Additionally, this trail proposal, if approved, sets precedent that the USFS not only allows illegal trail construction but encourages and accepts it as a legitimate means of bypassing proper planning procedure.

IMPORTANCE OF MIGRATION CORRIDORS AND SEASONAL HABITAT

Each year, ungulates (i.e., hooved mammals) worldwide migrate a variety of distances between seasonal ranges to avoid severe weather, access high-quality forage, escape predation, reduce insect harassment, or ease intra- and interspecific competition for limited food (Folstad et al. 1991, Fryxell 1991, Hebblewhite et al. 2007, Mysterud et al. 2011, Avgar et al. 2013, Hopcraft et al. 2014). Migration can be an optimal strategy for many ungulates, promoting nutritional condition, survival, reproduction, and population growth. For example, by tracking fleeting waves of emerging plants across the landscape, migrating elk (*Cervus canadensis*) in the Greater Yellowstone Ecosystem gained more fat over the growing season than their non-migratory counterparts (Middleton et al. 2018). Reduced risk of predation on summer range translated into higher calf survival for migrating moose (*Alces alces*) compared with residents in southeastern Alaska (White et al. 2014). Likewise, migrating elk in the Canadian Rocky Mountains exhibited higher pregnancy rates and winter calf weights than residents (Hebblewhite and Merrill 2011). Moreover, migrating mule deer (*Odocoileus hemionus*) in eastern Oregon had overall higher adult survival rates than deer that never migrated (Schuyler et al. 2018). Recently, ecologists have found that long-distance migration promotes population growth for mule deer in western Wyoming (Ortega et al. 2022). Because migration provides ungulates with superior fitness benefits, including survival and reproduction, the need to conserve intact migrations and facilitate habitat connectivity in a rapidly changing world has become increasingly urgent (Kauffman et al. 2021). This is especially true for areas like Southwestern Colorado with declining herd populations and calf recruitment rates with no known cause. The importance of migration corridors cannot be understated and was recognized in 2019 by Colorado executive order D-2019-011.

Unfortunately, ungulate migrations are in peril and disappearing at an unprecedented rate (Harris et al. 2009, Kauffman et al. 2021). Climate change and a growing human footprint are threatening the persistence of ungulate populations across the globe (Bolger et al. 2008, Kauffman et al. 2021). In a study by Middleton et al., an increase in the occurrence and severity of drought has reduced foraging opportunities for migrating elk in the Greater Yellowstone Ecosystem, decreasing pregnancy rates by 19% and calf recruitment by 70% (Middleton et al. 2013). In another example, human transportation, fences, and grazing of domestic sheep eliminated the migration of bighorn sheep (*Ovis canadensis*) in the Teton Range of northwestern Wyoming (Courtemanch et al. 2017). Railroads in central Asia have prevented Mongolian gazelles (Procapra gutturosa) from migrating between seasonal ranges and accessing high-quality forage (Ito et al. 2005, Bolger et al. 2008). In several cases, habitat fragmentation and the severing of migration corridors have decimated entire ungulate populations (Bolger et al. 2008). The loss of migrations will likely reduce viability of ungulates, including their ability to survive and reproduce, thereby affecting ecosystem function, nutrient cycling, and communities that rely on ungulates for sustenance, economic growth, and cultural prosperity. Despite the urgency in conserving intact migrations and preserving ungulate populations, a myriad of anthropogenic disturbances continue to reduce habitat and prevent the free movement of ungulates across the landscape (Bolger et al. 2008, Harris et al. 2009, Kauffman et al. 2021).

EXPECTED IMPACTS

Off-road recreation is among the many anthropogenic disturbances that ungulates face (Stankowich 2008). Growing evidence suggests that ungulates avoid motorized and non-motorized trails used for off-road recreation, including ATV riding, mountain biking, and hiking (Papouchis 2001, Preisler et al. 2005, Stankowich 2008, Scholten et al. 2018, Wisdom et al. 2018, Naidoo and Burton 2020). For example, American bison (*Bison bison*), mule deer, and pronghorn (*Antilocapra americana*) were 70% more likely to flee within 100 meters of mountain bikers and hikers (Taylor and Knight 2003). Likewise, elk in northeastern Oregon shifted their distribution to be out of view from trails and avoided the nearest mountain biking trail by more than 280 meters, thus highlighting the importance of protecting the viewshed surrounding trail systems (Wisdom et al. 2018). Avoidance of recreation trails can lead to “habitat compression” in which previously available habitat is no longer accessible for animals in the presence of humans (Wisdom et al. 2018). Displacement from optimal habitat may be especially detrimental for ungulates that rely on certain habitat patches to acquire food, raise offspring, and seek refuge from predators.

Anthropogenic barriers, including roads, trails, and fences, can limit the free movement of ungulates across the landscape, which may affect their ability to forage on nutritious plants (Sawyer et al. 2012, Lendrum et al. 2013, Wyckoff et al. 2018, Xu et al. 2021, Aikens et al. 2022). Ample evidence suggests that temperate ungulates pace their spring migrations with the wave of green-up that propagates from low-elevation winter ranges to high-elevation summer ranges, also known as “green-wave surfing” (Merkle et al. 2016, Aikens et al. 2017, Jesmer et al. 2018, Middleton et al. 2018). Newly emergent plants contain high amounts of crude protein and digestible energy and low amounts of fiber (Fryxell 1991, Hebblewhite et al. 2008). Thus, by tracking the green-up of plants across the landscape, migrating ungulates can exploit peaks in forage quality and gain fat, which may be particularly important after winter and before the energetically demanding period of parturition. Ungulates efficiently track green-up of plants, however, when human disturbance is minimal. For example, mule deer may stall for prolonged periods of time before entering development and then accelerate through development, decoupling their movements from the green wave (Lendrum et al. 2013, Wyckoff et al. 2018, Aikens et al. 2022). Off-road recreation, such as a high-density network of trails, could alter the movement behavior of ungulates, including their ability to track green-up and time parturition on summer range with peaks in forage quality (Lendrum et al. 2013, Aikens et al. 2021).

Furthermore, anthropogenic stressors associated with recreation may elevate levels of stress (i.e., glucocorticoids), alter heart rate, increase energy expenditure, or change behavior, including the amount of time an animal spends feeding or resting (Stankowich 2008, Naylor et al. 2009). Many ungulates in the Intermountain West spend the winter at low elevations where food abundance and quality is low (Kauffman et al. 2018). Temperate ungulates rely on fat reserves accumulated from the previous growing season to survive the nutritional bottlenecks of winter (Monteith et al. 2013, Aikens et al. 2021, Ortega et al. 2022). Recreational disturbances could cause additional expenditure of fat via increases in flight responses (Parker et al. 1984). Indeed, elk and mule deer may use an additional 2.0–36.0 kilocalories when fleeing from a recreational disturbance (Parker et al. 1984). Increases in energy expenditure from flight responses may alter the seasonal fat dynamics of ungulates, including their ability to reduce risk of malnutrition (body fat <1%) during winter or their allocation of fat toward reproduction.

Based on GPS collar data compiled by Colorado Parks and Wildlife (CPW), critical habitat (i.e., winter range and parturition areas) and migration corridors for mule deer and elk overlap with the proposed recreation trail system on Jackson Mountain (Figure 1). Based on a growing body of literature, off-road recreation will likely alter habitat use, distribution, movement behavior, and energy expenditure of mule deer and elk occupying the Jackson Mountain area. Discussions with biologists from CPW and the U.S. Forest Service have highlighted that the most sensitive habitat in this project plan includes the northern, southern, and western sides of Jackson Mountain. Trails that agency biologists are concerned about on this level should not be constructed to (1) reduce the potential of “habitat compression”, (2) enable the free movement of mule deer and elk between seasonal habitat, facilitating their ability to track peaks in forage quality, and (3) minimize unnecessary energy expenditure for ungulates.

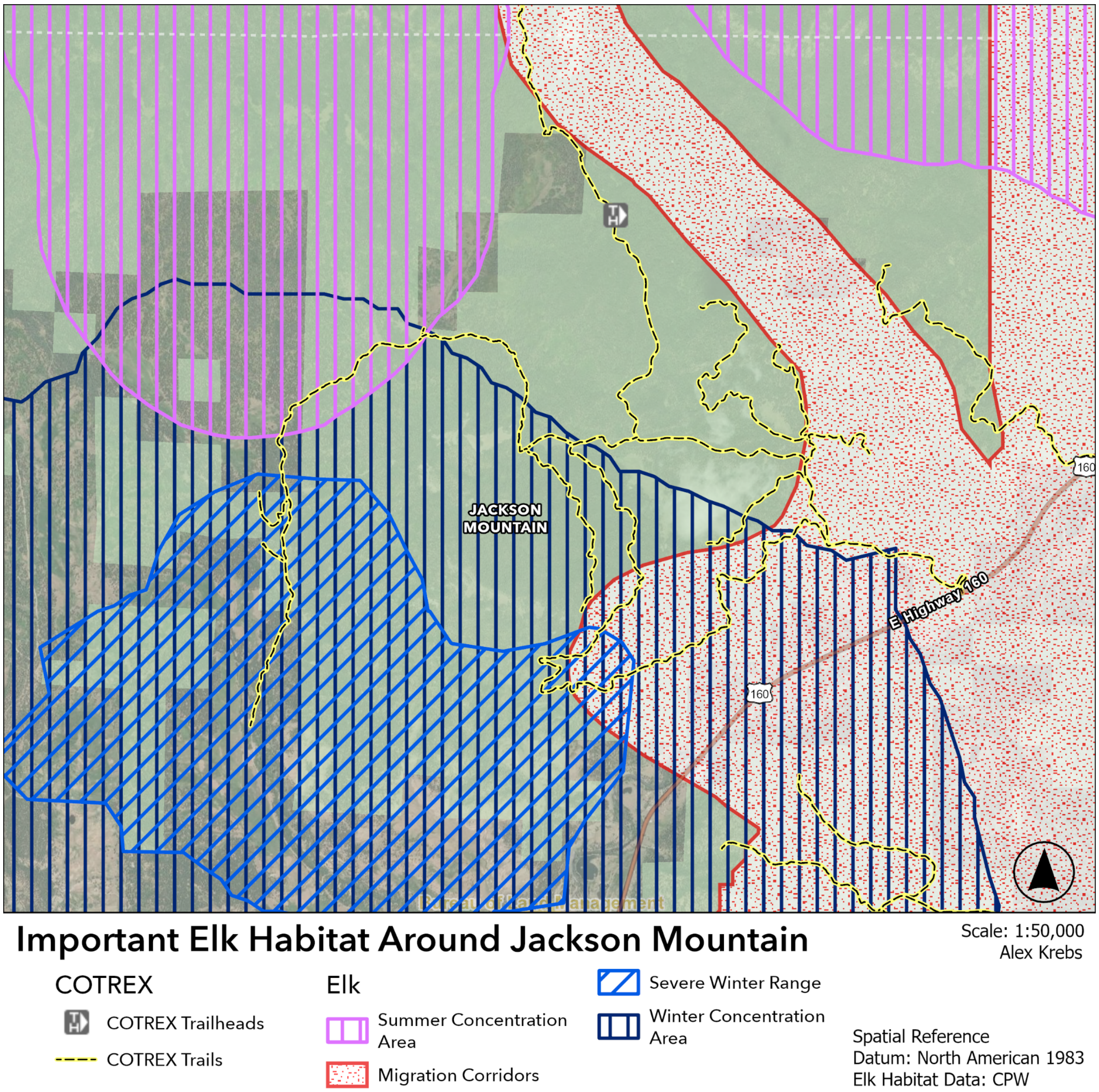

Figure 1. Critical habitat for elk, including winter range, parturition sites, and migration corridors, overlap proposed trail systems on Jackson Mountain.

PLANNING PROCESS

The planning process outlined by CPW's "Colorado's Guide to Planning Trails With Wildlife in Mind" was designed to facilitate sustainable recreation opportunities. The first chapter is "The Collaborative Process." Within this chapter is a process outline that includes the first round of public engagement (Page 9). Stated in this first round of public engagement is that no [trails] will be on the map yet. The Jackson Mountain Landscape already had non-system trails on the ground at this stage, as well as additional miles of trails that are now the foundation for the project scope.

Non-system trails (i.e. illicit, illegal or social trails) have fallen into a pattern of approval by land agencies in Southwestern Colorado. The Log Chutes area north of Durango is a valid example of this. Not only does approval of these trails send a message to the public that they can have what they want as long as they make it first, it also ignores the proper planning steps required to avoid issues like erosion, sedimentation, sensitive wildlife habitat avoidance, trail density and route efficiency. The establishment of illicit, non-system trails is primarily a sign of enforcement deficiency within land agencies. Page 41 of "Planning Trails with Wildlife in Mind" is dedicated to enforcement planning. It states that "Enforcement and education planning should consider current and future capacity. Due to the presence of non-system trails in the Jackson Mountain area, it is evident that the Forest Service lacked necessary enforcement capacity to prevent illicit non-system trail construction. If the Jackson Mountain Project moves forward, what investment will the Forest Service make to step up enforcement? This will be especially important as illicit trails are in a pattern of gaining approval from the agency.

The planning process has statutory and ethical requirements that in the case of Jackson Mountain, are not being met. Another element to planning trails with wildlife in mind is the option to include seasonal trail closures in critical habitat. While this may seem like a viable option to protect stressed wildlife, it has proven to be ineffective due to public ignorance and lack of enforcement. This project proposal is based on a trail system that was created illegally, proving that people's demands for recreation outweigh their conscience to protect wildlife. This project could set a harmful precedent for the process of planning trails with wildlife in mind.

PROJECT COMPLEXITY

Another topic of concern is the myriad of forest projects in the area and the ability of wildlife to navigate synergistic effects from project complexity. Many animals respond to human-caused disturbances (e.g., sounds, approaching objects) in the same manner that they respond to predators (Frid and Dill 2002). Similar to how animals seek refuge from predators, animals that reside in recreation areas may rely on dense understory or thick timber as refuge from human disturbance (Lamont et al. 2020). The distance between an animal and its refuge can influence flight behavior, with nearby refuges reducing total flight distance and energetic costs (Frid and Dill 2002). Any fire safety project that requires a cleared buffer from Jackson Mountain Road, any forestry project that calls for forest health and resilience through understory mastication, and any other impacts from a proposed gravel pit all have the ability to create a synergistic effect on wildlife where animals will be unable to seek adequate refuge when fleeing from human disturbance. Thus, it will be important to maintain substantial understory refuge and naturally occurring visual barriers between and along trails. Overall, the complexity of managing multiple projects of different use at the same time offers too much room for error and will prove to be short-sighted in some capacity. This proposal needs to be broken into more manageable and appropriate pieces for a thorough assessment.

IN CLOSING

It has been demonstrated in this document that human disturbances which fragment habitat and sever migration corridors – including recreational areas – threaten the viability and persistence of ungulate populations. Intact habitat is important for the access of food throughout seasonal transitions. Disturbance of ungulates in winter habitat has been associated with population decline. Trails have been proven to increase disturbance of wildlife. Guidance within Colorado's Planning Trails with Wildlife in Mind has been largely ignored in the Jackson Mountain Landscape Project. The Forest Service has demonstrated a lack of enforcement capacity, leading to a network of non-system trails. Retroactively approving these trails and establishing new trail networks in the same area rewards abuse of publicly owned natural resources. Lastly, the complexity of managing multiple projects on the landscape at the same time raises concerns of unforeseen and unmitigated synergistic impacts on wildlife.

As previously stated, Backcountry Hunters and Anglers recommends the following actions as it relates to the Jackson Mountain Landscape project:

- Trails that CPW and FS biologists have highlighted significant concerns with should not be constructed.
- Colorado Parks and Wildlife guide "Colorado's Guide to Planning Trails with Wildlife in Mind" recommendations need to be addressed in all Jackson Mountain Landscape project planning efforts going forward.
- The Jackson Mountain Landscape Project needs to be broken into development plans with individual EA's for each project (ie silviculture; mining; recreation).
- Lack of enforcement for illegal trail creation, as well as seasonal closures, put wildlife at risk. All current and future proposals need to address the funding mechanisms and manpower necessary to enforce laws and FS regulations.

Sincerely,

Alex Krebs
SW CO BHA Assistant Regional Director
Backcountry Hunters & Anglers
The Voice for Our Wild Public Lands, *Waters and Wildlife*
www.backcountryhunters.org
www.facebook.com/backcountryhabitat

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