

November 23, 2022

Brendan Kelly, Project Lead
Hahns Peak/Bears Ears Ranger District
925 Weiss Drive
Steamboat Springs, CO 80487
Via Electronic Filing Submission and e-mail to brendan.kelly@usda.gov

Re: Opposition to Proposed Action for the Mad Rabbit Trails Project #50917

Dear Mr. Kelly,

Keep Routt Wild (KRW) appreciates the opportunity to submit comments to the U.S. Forest Service (USFS) on this proposed action for the Mad Rabbit Trails Project #50917.

I. Background on KRW

KRW is a community organization dedicated to preserving wildlife and wild places in Routt County. Its mission is to promote policies and practices for the benefit of conserving the Yampa Valley for future generations of outdoor enthusiasts by balancing opportunities for recreational development with the habitat needs of wildlife. Its members are hikers, bikers, hunters, anglers, skiers, ranchers, and local business owners that call Routt County home.

KRW has been engaged with and involved in the Mad Rabbit Trails Project proposal for over four years. KRW participated in the Routt Recreation Roundtable in late 2018 and early 2019, which discussed the Mad Rabbit Trails Project and recreation around Steamboat. KRW submitted its first set of detailed comments on the Mad Rabbit Trails Project on August 9, 2019, submitted a second set of objections on August 14, 2019, and submitted numerous letters to the USFS over the last several years. KRW incorporates by reference previous correspondence with the USFS, attached as Exhibit A, into these comments.

II. Inadequacy of the Draft Environmental Assessment

The USFS issued a new proposal for Mad Rabbit memorialized in its October 2022 Draft Environmental Assessment (DEA) following receipt of public input. KRW is deeply concerned about the adequacy of the DEA and the negative effects of this proposed action. KRW's concerns are described in greater detail below.

A. The DEA's insufficient evidence and analysis

USFS prepared the DEA under the 1978 NEPA regulations and, per those regulations, an environmental assessment must “[b]riefly provide sufficient evidence and analysis for

determining whether to prepare an environmental impact statement or a finding of no significant impact.” 40 C.F.R. § 1508.9(a)(1) (1978). The DEA falls well short of this mark.

1. The DEA fails to use best available science

The DEA anchors its planning and analytic framework, its management area direction, and forest planning standards on the 1998 Routt National Forest Land and Resource Management Plan (Forest Plan). *See, e.g.*, DEA at 5. However, the National Forest Management Act makes clear that the Forest Plan is woefully outdated, *see* 16 U.S.C. 1604 (f)(5) (stating that forest plans shall be “revised. . . at least every fifteen years”), and the Council on Environmental Quality (CEQ) has called into question the utility of proceeding under dated environmental plans of this sort. *See* CEQ, *Forty Most Asked Questions on NEPA*, No. 32 (stating that for ongoing plans and programs, “EISs that are more than 5 years old should be carefully reexamined to determine if” supplemental analysis is necessary).

The outdated Forest Plan is out of step with current science; new planning and impact methodologies; our ecological knowledge on species, habitat, and recreational impacts; and current considerations related to the sustainability of forest resources. Accordingly, consistency with the Forest Plan is insufficient evidence for determining whether to prepare an EIS or FONSI. The USFS must first update the relevant Forest Plan, bringing its science and standards up to contemporary levels of understanding, before authorizing yet more projects under it.

The DEA’s reliance on outdated science extends beyond its broad use of the Forest Plan—outdated science also compromises much of the analysis in the DEA. An example is the DEA’s analysis of elk and elk habitat. The project area is home to the Bears Ears elk herd, the second largest elk herd in Colorado. Elk are important to the human environment, as wildlife viewing and big game hunting contribute \$3B to the Colorado economy annually. They are also important as an indicator species and can serve as a surrogate for multiple other species. Specifically, they are dependent on large undisturbed areas of land, and are prone to avoiding human disturbance. This makes them a surrogate for numerous other species and their protection helps bolster other species who share the same habitat, like dusky and sharp-tailed grouse, lynx, mule deer, pronghorn, goshawks, and other raptors. Being migratory animals, elk require different habitats during different seasons to thrive. Thus, their success depends on preserving ample and beneficial habitat characteristics across their territory. The decline in key metrics related to elk in the project area is concerning, and the DEA does an inadequate analysis of the cumulative impacts presented by the proposed action. *See* discussion *infra* at Section II.B.2.a.

An example is the DEA’s analysis on elk habitat effectiveness. Habitat effectiveness (HE) is a metric measuring the percentage of usable habitat during the nonhunting season. The Forest Plan sets a standard of 50% or more for elk HE, which KRW takes no issue with. Early analytic models used crude estimates of road density and cover availability, irrespective of their location, to estimate HE. Modern methods now use disturbance band analysis superimposed on a habitat to calculate HE. A more contemporary study states the following:

Knowledge has been gained not only about elk response to roads, but also about modeling this relationship. Results from research at Starkey suggested that a road-effects model based on distance bands provides a more spatially explicit and biologically meaningful tool than a traditional model based on road density (Rowland *et al.* 2000). This analysis, based on more than 100,000 radiolocations of cow elk during spring and summer, found no relation between numbers of elk locations and HE scores based on open road density in 15 elk “analysis units.” (We define habitat effectiveness as the percentage of available habitat that is usable by elk outside the hunting season” [Lyon and Christensen 1992:4].) However, elk preference increased strongly (as measured by selection ratios) as distance to open roads increased. Such distance-to-roads analyses are readily accomplished using widely available spatial data layers in a GIS.

Rowland *et al.*, [*Effects of Roads on Elk: Implications for Management in Forested Ecosystems*](#), at 3 (2005). This same study also states the following:

A method to evaluate effects of roads on elk using a distance-band approach has been suggested both by Roloff (1998) and by Rowland *et al.* (2000), as described above. Based on radiolocations of elk at Starkey, Rowland *et al.* (2000) found no relation between number of elk locations and HE based on open road densities. By contrast, the authors found a strong, linear increase in selection ratios of elk as distance to roads increased. For this analysis, elk locations were assigned to 109-yard (100-m) wide bands away from open roads. Roloff (1998) also developed a road-effects module in which habitat adjacent to roads was buffered into distance bands in a GIS. Habitat effectiveness in the bands was adjusted according to level of security cover, as well as road use or road type.

Id. at 5.

Instead of using contemporary methodologies like those described above, the DEA calculates elk HE with an obsolete estimation technique published in 1983. The DEA cites “calculations for habitat effectiveness [that] were completed in 1999 and recently updated in 2021.” DEA at 39. The 1999 calculations used the HE model developed by L. Jack Lyon in 1983. See [*Forest Plan Final EIS Appendix B*](#) at 48 (noting the forest plan revision relied on a slightly modified version of the 1983 methodology when making its 1999 calculations); *see also* DEA at 39 (describing the 1999 calculations in the DEA identically to the calculations in *Forest Plan Final EIS Appendix B*). The 2021 update also relied on the methodology from 1983. Yet, the 1983 technique does not include trails in the indexes for hiding cover or open roads, *see DEA* at 38-39, meaning the DEA does not evaluate the central objective of the Mad Rabbit Trails Project—trail construction and usage—when analyzing elk HE.

Equally important, contemporary methodologies show elk HE is more challenged than the DEA suggests. KRW, in cooperation with Rocky Mountain Wild, performed a GIS analysis of the project area with respect to elk HE. See Larry Desjardin *et al.*, [*Recreational Disturbance Modeling of Elk Habitat in Medicine Bow-Routt National Forests*](#) (Feb. 19, 2022). The analysis

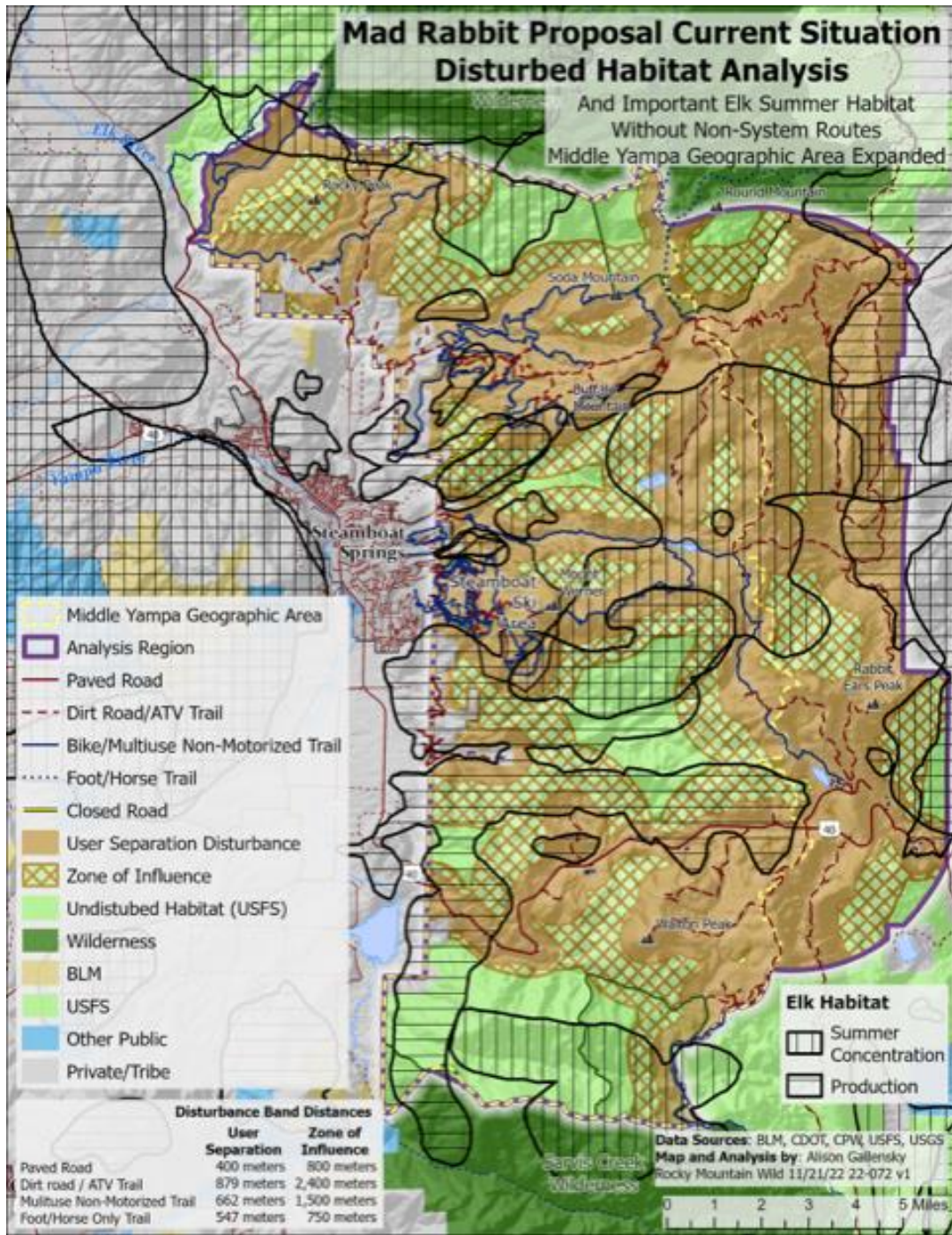
found that it is likely that the elk HE metric of 50% is not being met in either the Middle Yampa Geographical Area (MYGA) or the project area, and that the Mad Rabbit Trail Project will lower elk HE further below the Forest Plan's standard.

The analysis used modern methodologies like performing a disturbance band analysis over the project area, using multiple disturbance metrics, each depending on the activity (hike, bike, ATV, or highway). The smaller disturbance metric, user separation disturbance, matches the mean minimum separation distance calculated in Wisdom *et al.* 2018 for recreational trails, and the observed avoidances from Ward *et al.* 1980 for highways. This metric is a good approximation of pure habitat loss. A wider disturbance metric, the zone of influence, was also calculated. This metric is commonly referred to as flight disturbance. It represents the flight disturbance values for recreational trails from Wisdom *et al.* 2005, and the distance from paved highways in which there was no decrease in elk habitation rate from a slide presentation titled [*Modeling Elk Habitat Use in the Blue Mountains of Oregon and Washington*](#) on February 6, 2020 by Dr. Michael Wisdom.¹ These distances show the outer reach of human disturbance. Outside of these bands, habitat may be considered undisturbed.

Together, the user separation distance and the zone of influence give insight into the impact of human activity on elk habitat. The user separation distance defines an area on both sides of a trail where elk habitation rates are very low compared to their natural state. The distance greater than the user separation distance, but less than the zone of influence, generally shows a lower probability of elk habitation than the natural state, with a lower probability near the boundary of the two areas, and an increasing probability as the distance increases until a unity probability at the edge of the zone.

The figure below is an overlay of elk habitat and Mad Rabbit trail disturbance in the project area. The solid brown areas show where elk habit is severely impacted compared to its natural state; the solid green areas show where habitat is essentially undisturbed; the brown cross hatch shows the transition between the heavily disturbed and undisturbed areas where there is some increasing probability of elk inhabiting the area further from the trail or highway; and the black lines show important elk non-winter habitats. Horizontal black lines show CPW-identified elk production areas while vertical black lines show CPW-identified elk summer concentration areas. The GIS analysis makes clear that there are concentrated disturbances in identified elk habitat areas. The analysis also shows the important value geospatial analysis brings to modern elk habitat effectiveness analysis techniques compared to the simplistic method employed by the USFS where the location of the disturbances is disregarded.

¹ This study is still being peer reviewed.



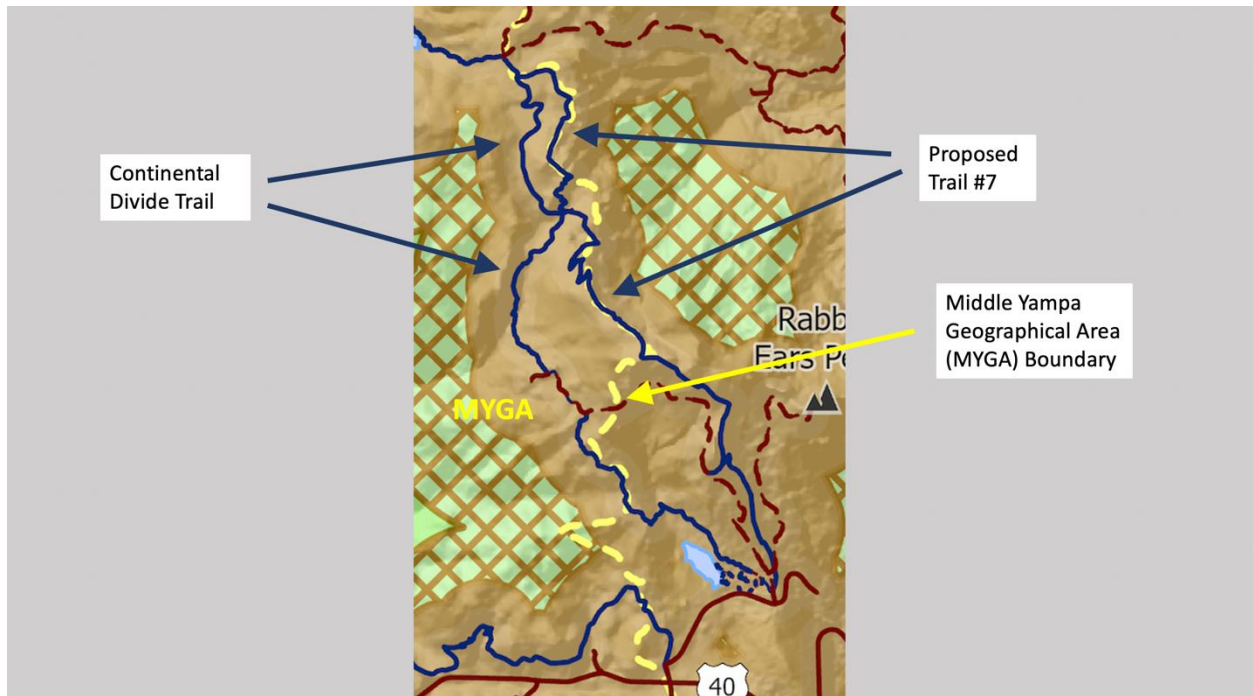
The map shows the cumulative impact of recreational trails. The intense disturbance around Buffalo Mountain shows the impact from the Buffalo Pass Trails Project. This is shown in the close-up below of a similar map, without summer habitat overlaid on the main image:



The project area map also shows the increased impact from the DEA's proposed action. The area from the West Rabbit Ears summit to the Ferndale area shows large incremental habitat loss, with almost the entire area north of U.S. Highway 40 in Colorado Division of Wildlife (CPW) indicated elk production areas. This is shown in the close-up below:



Finally, the impact from proposed Trail #7, which is adjacent to the Continental Divide Trail (CDT), can be seen in the close-up below. The combination of trails creates a large "island" of habitat disturbance between and around the trails. The upper portion of these trails overlap elk summer concentration areas.



This GIS analysis shows the range of cumulative impacts on elk habitat to be between 53% and 82% for the MYGA, potentially reducing the elk HE to between 18% and 47%. Modern elk HE calculation techniques (Rowland *et al.* 2005) use the relative probability of elk based on disturbance bands superimposed over elk habitat. The geometric mean of these values is integrated over the project area to produce a single elk HE metric. Unlike the 1983 elk HE model used by the USFS, this modern technique takes into account both the location and the value of the habitat along with the lowered probability of elk use due to human disturbance. While the GIS analysis did not perform this calculation, the large values of disturbed land suggest it is likely that the elk HE is below 50% for both the MYGA and the project area, and therefore in violation of the Forest Plan.

In sum, the use of outdated science renders the DEA’s analysis insufficient for determining whether to prepare an EIS or FONSI. Indeed, the Rowland study specifically repudiates the 1983 technique used in the DEA, stating “[t]his analysis, based on more than 100,000 radiolocations of cow elk during spring and summer, found no relation between numbers of elk locations and HE scores based on open road density in 15 ‘elk analysis units.’” Rowland 2005 at 3. Basing analysis on outdated science is also inconsistent with the USFS’ NEPA regulations that require the Service to “use the best available scientific information to inform the planning process.” 36 C.F.R. § 219.3.

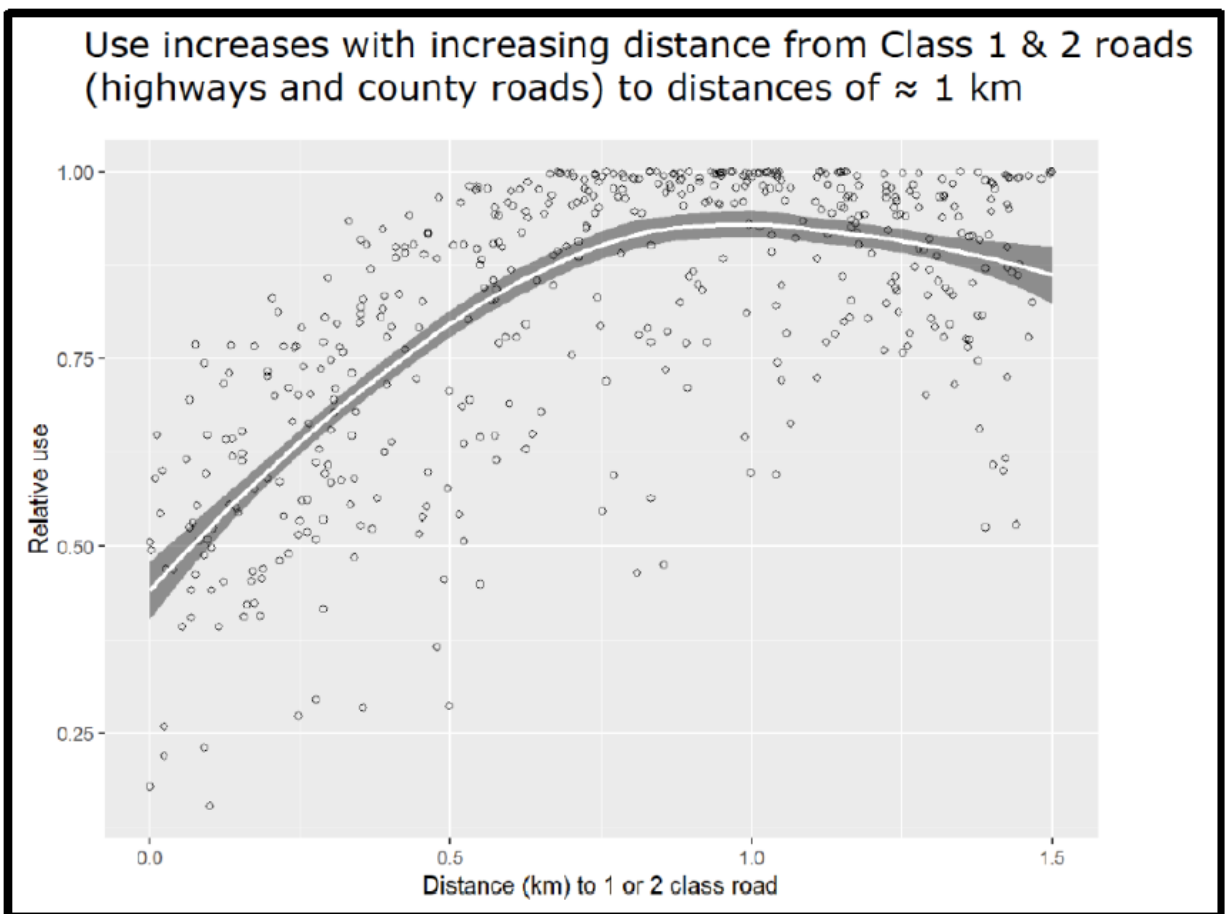
2. The evidence cited in the DEA does not support its conclusions

The DEA reaches conclusions not supported by the reports cited in the DEA. For example, the USFS claims that areas up to one mile away from U.S. Highway 40 are already

disturbed and, therefore, new trails within that area would add little incremental disturbance to elk and deer. It cites Wisdom *et al.* (2018) as support for this proposed action.² See DEA at 38.

This is an incorrect interpretation of the research in Wisdom *et al.* (2018). The Wisdom study analyzes disturbance distances for “forest roads open to traffic,” not nearby highways. It may be true that traffic on unpaved forest roads may cause elk to avoid recreationists in distances similar to ATV traffic on forest roads, but the DEA extends this equivalence to paved highways without any justification. The cited report does not make such a comparison.

In fact, subsequent research from Dr. Wisdom shows the opposite effect—paved highways have smaller disturbance distances than human activity on recreational trails. See Wisdom, *Modeling Elk Habitat Use in the Blue Mountains of Oregon and Washington* (2020). Slide 23 models the relative probability of elk use in relation to highways and county roads when all other conditions are held constant. That slide is reproduced below:



² This is but one example of the USFS reaching a conclusion not supported by evidence in the DEA. However, this is a repeated problem in the DEA. See *infra* Section II.B.2.b. (discussing the DEA’s assumption that closing rarely used non-system trails will offset impacts from trails being proposed explicitly to facilitate high-volume recreational tourism, despite not performing any traffic analysis on either the trails proposed to be decommissioned or built).

The figure above shows elk may use habitat close to a highway at a 50% relative use, but there is little effect past 800m, about 0.5 miles. This matches a previous study performed by the Federal Highway Administration (FHWA) on this issue, which (1) reports elk-based minimum separation distance from walkers of 800m and a 400m minimum separation distance to a highway, and (2) supports the finding that disturbance distances from human recreationists are approximately twice that as from paved highways for a number of ungulate species. See Ward *et al.*, [Effects of Highway Operations, Practices, and Facilities on Elk, Mule Deer, and Pronghorn Antelope](#) (1980). The FHWA study synopsis states that:

Elk show a preference to stay a minimum of 0.25 mile (400 m) from traffic while deer prefer a minimum of 100 yards (91.m), and antelope use the habitat up to the right-of-way fence. All three species are more responsive to people walking; elk prefer a distance of 0.5 mile (800 m), deer 200 yards (182 m) and antelope somewhere between the two distances, depending on habitat and experiences.

Id.

Moreover, merely placing recreational trails within the habitat buffer distance from U.S. highway 40 (1/4 mile) doesn't eliminate disturbance due to trail activity. Trail disturbance occurs on both sides of a trail. The side facing away from the highway will extend a disturbance band significantly beyond the disturbance band of the highway. The USFS did not analyze how much further this disturbance extends. However, the Rocky Mountain Wild/KRW analysis did calculate the incremental lost habitat from the proposed action and found that it removed over 4,000 additional acres of habitat (defined as user separation disturbance distance) over the project area, which equates to greater than 7% of the remaining habitat.

While the above studies pertain to elk, mule deer exhibit the same attribute of avoiding human recreational activity at further distances than avoiding highways, as observed in response to a bike and foot path alongside I-70 built around Vail in the late 1990s. After the path was built, mule deer migration through the Mud Springs Gulch wildlife underpass tunnel decreased. A joint study between the Town of Vail and CPW discovered that the deer were reluctant to use the underpass for their spring migration if they spotted cyclists on the bike path on the other side of I-70. See Phillips *et al.*, [Mitigating disturbance of migrating mule deer caused by cyclists and pedestrians at a highway underpass near Vail, Colorado](#) (2001).

To remedy the situation, a visual barrier was placed to shield the image of cyclists from the mule deer about to use the underpass. The same study observed that “[s]ixty-five percent more deer crossed through the underpass when the visual barrier was in place than when it was not” and “[f]ewer deer appeared disturbed by cyclists when the curtain was in place (16% of 136 deer) than when it was removed (30% of 125 deer).” *Id.* at 627.



The above image on the left shows the approximate location of the visual barrier used in the study, while the image on the right shows the current visible barrier. Even though the deer could always see the entirety of I-70 traffic, hiding cyclists from view on the opposite side of I-70 led to 65% more deer migrating through the underpass. In 2000, Vail installed visual barriers on both sides of the bike path prior to spring migration. This further improved the efficacy of the visual barrier, with only 1 of 130 deer appearing disturbed.

The studies referenced above make the inadequacy of the DEA’s analysis clear. The USFS’s assumption that placing recreational trails within one mile of U.S. Highway 40 significantly reduces or eliminates incremental disturbance is flawed. This conclusion is based on a misunderstanding of Wisdom *et al.* 2018 and inconsistent with the best available science. It also ignores the extended disturbance distances from the recreational trail itself. Accordingly, the USFS should use 400m as the actual habitat buffer from US 40, with 800m being the maximum zone of influence, or it should provide evidence capable of supporting its analysis and proposed actions. If the USFS takes the latter path, KRW requests the Service prepare a proper GIS analysis using disturbance bands based on data from research, as required by NEPA.

3. The evidence cited in the DEA is inconsistent with USFS best practices

The DEA identifies *Colorado’s Guide to Planning Trails with Wildlife in Mind* (Colorado Trails with Wildlife in Mind Taskforce 2021) (Guide) as a compilation of best practices. DEA at 27. It also states the USFS used the Guide “to minimize impacts to other resources and help[] identify trail location and layout that also provides a diversity of recreational trail experiences.” *Id.* The USFS co-authored the Guide with federal, state, and municipal organizations and agencies. Yet, KRW observes several instances where the DEA is inconsistent with the Guide.

First, USFS did not avoid locating new trails within CPW-mapped elk production areas. USFS could have achieved this by moving the trails from the north side of U.S. Highway 40 to the south side of the highway. The DEA refused to analyze this alternative in detail, stating that “[a]dding new trails on the south side of U.S. Highway 40 would require developing several new trailheads, and certain potential trailhead locations raised safety concerns . . . with the Colorado

Department of Transportation.” *Id.* at 8; *see also infra* Section II.D (discussing the USFS’s improper rejection of alternatives). This is inconsistent with the Guide’s finding that it is a best management practice to “[a]void, to the maximum extent possible, locating new trails within CPW-mapped elk production areas, migration corridors, severe winter range, and winter concentration areas.” Guide at 44.

Second, USFS did not limit trails to less than one linear mile of trail per square mile on average within elk production areas. The DEA places a trail network at Ferndale at approximately five miles of density per square mile. This is inconsistent with the Guide’s finding that it is a best management practice to “[l]imit trail densities (including existing trails) to less than one linear mile of trail per square mile on average within elk production areas, migration corridors, severe winter range, and winter concentration areas.” *Id.*

Third, USFS did not implement seasonal timing restrictions for trail users from May 15 through June 30. Over 20 miles of proposed trails (Trails 14, 19, 20, 21, 22, and 30) through CPW-mapped elk production areas have no closure at all. The impact of this failure to impose a seasonal timing restriction is amplified by the fact that other trails in the project area, previously built and sanctioned by the USFS near Buffalo Pass, only have a seasonal closure from May 15 to June 15. This is inconsistent with the Guide’s finding that it is a best management practice to “implement seasonal timing restrictions for all trail users from May 15 through June 30” for “trails within elk production areas” and to “implement seasonal timing restrictions for all trail users from December 1 through April 30” for “trails within elk winter range.” *Id.*

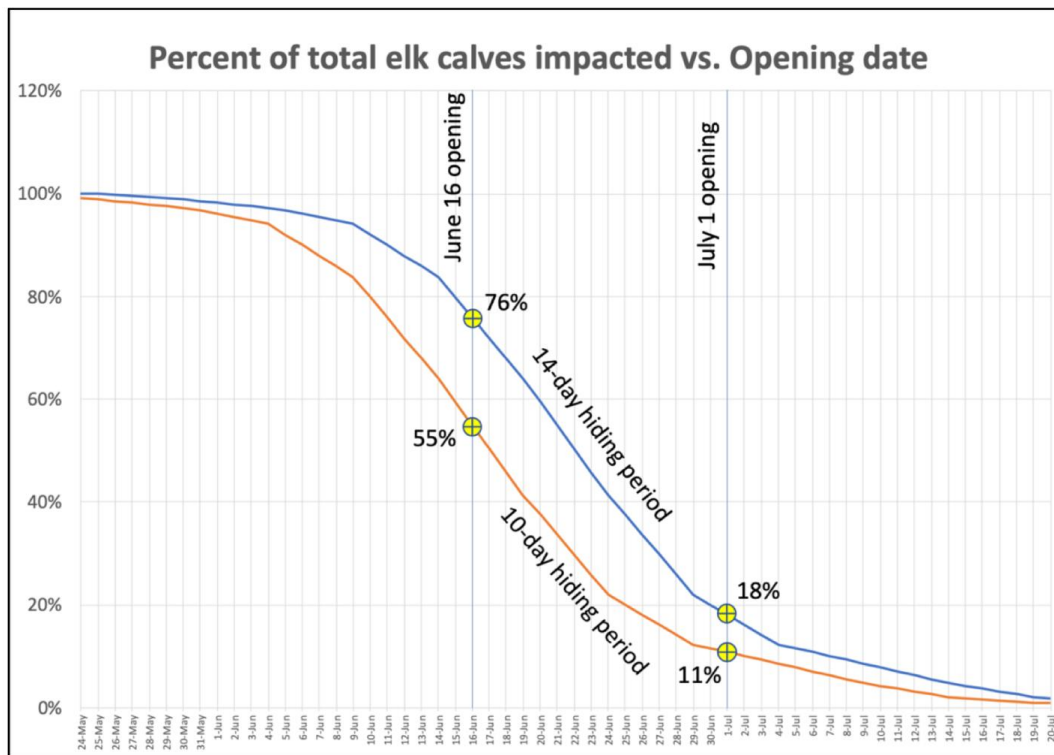
Fourth, USFS did not implement year-round dog-on-leash restrictions. This is inconsistent with the Guide’s finding that it is a best management practice to do so “[f]or trails within elk winter range, production areas, and summer concentration areas.” *Id.*

The DEA is also inconsistent with the broader direction of other stakeholders and federal agencies at the vanguard of land management. This very week, the Bureau of Land Management (BLM) released a new policy designed to prioritize habitat connectivity, thereby “preserving the ability of wildlife to migrate between and across seasonal habitat.” BLM Press Release, [Bureau of Land Management Releases Policy To Support Habitat Connectivity On Public Lands](#) (Nov. 15, 2022). This policy is motivated, in part, by BLM’s recognition that states, tribes, and other stakeholders champion this approach. BLM even cites supporting [Colorado Executive Order 011](#), which conserves big game winter range and corridors, as a reason for enacting its policy.

Not only is the DEA’s deemphasis on habitat connectivity inconsistent with BLM’s approach, but it will also likely make management of public lands materially harder. BLM’s new policy instructs BLM staff to “assess public lands for habitat connectivity” and ensure that “areas of habitat connectivity [are] addressed and appropriately analyzed in new land use plans and revisions.” BLM [IM 2023-005, Change 1](#), Habitat Connectivity on Public Lands (Nov. 18, 2022). The connected habitat utilized by migratory ungulates in the E-2 region, as specified by CPW, depends on a checkerboard landscape of public and private lands. The public lands incorporated in both the summer and winter ranges of deer, elk, and pronghorn as well as the migratory route in between, is a combination of both BLM and USFS lands. The wildlife

management prescriptions, particularly with respect to migratory routes, between the two federal agencies is inconsistent and, in some cases, conflicting with one another. Additionally, having consistent practices for managing the health of the herd is advantageous to their success.

The DEA’s drastic departure from the Guide, USFS’s own best management practices, and broader trends in wildlife and land management is core to the legal infirmities of the DEA. Elk calving areas are important to a thriving elk population. A study jointly executed by CSU and CPW found that reproduction success fell nearly 40% when cow elk were disturbed by simulated recreationists during calving season. See Phillips *et al.*, [Reproductive Success of Elk Following Disturbance by Humans in Calving Season](#) (2000). The definition of disturbance in that study was a cow elk taking flight, the same definition as that used for the flight distance in the Wisdom studies cited in the DEA. Eight disturbances led to the 40% reduction in surviving calves, approximately 5% mortality rate per disturbance. The researchers speculated that causing an elk calf to change locations makes it more susceptible to predation, leading to the decline in the number of surviving calves. This impact is greatest during the calf’s “hiding period,” a period of time 10 to 14 days after birth. Due to the distribution of elk birth dates, this period can extend beyond June and into July. KRW analyzed elk calf birth dates in Northwest Colorado to [calculate](#) the number of elk calves impacted depending on the trail opening dates. The graphic below shows the results:



This data shows that between 11% and 18% of elk calves are subject to human disturbance even with a July 1 trail-opening date. Each disturbance leads to a 5% chance of mortality. If the proposed action in the DEA was implemented, at least 20 miles of trail will

impact elk calves 100% of the time because the USFS will not enforce seasonal closures, causing serious harm to the elk population of the region. Given these drastic departures from the Guide, which the USFS helped author and continues to acknowledge as a compilation of best practices, the USFS must provide more evidence to determine whether to prepare an EIS or FONSI.

B. The DEA, in its current form, cannot comply with NEPA or support a FONSI

The CEQ's NEPA regulations provide that an EA must "[a]id an agency's compliance with the Act when no environmental impact statement is necessary." 40 C.F.R. § 1508.9(a)(2) (1978). KRW recognizes that the DEA endeavors to empower the district ranger to "determine if sufficient site-specific environmental analysis has been completed and whether the proposed action would result in significant impacts to the human environment." DEA at 16. The DEA, in its current form, is not robust enough to comply with NEPA or support a FONSI.

1. Improper Segmentation

The CEQ NEPA regulations require agencies to consider connected, cumulative, and similar actions in the same NEPA document. *See* 40 C.F.R. § 1508.25(a)(1)-(3). Agencies cannot minimize the potential environmental consequences of a proposed action "by segmenting or isolating an individual action that, by itself, may not have a significant environmental impact." *Citizens' Comm. to Save Our Canyons v. U.S. Forest Serv.*, 297 F.3d 1012, 1028 (10th Cir. 2002). If the forthcoming EA results in a FONSI, without significant changes to the identification and analysis of impacts in the current DEA, then the failure to analyze the impacts of this proposed action in concert with the earlier Buffalo Pass Trails Project and subsequent recreation developments in the Hahns Peak/Bear Ears Ranger District violates NEPA.

The Mad Rabbit Trails Project is just one piece of a segmented trails program that NEPA demands be analyzed together. It is part of the larger phased trails program funded by the City of Steamboat Springs under the 2013 ballot proposal 2A, known as the Steamboat Springs Trails Alliance (SSTA) proposal. The SSTA proposal details the trails network to be developed with 2A funding, including many of the Buffalo Pass and Mad Rabbit trails, and was a legal part of the ballot measure. Shortly after approval of Amendment 2A in 2013, the USFS recognized that the 2A tax funds, along with other motorized trails grants, presented "the need for a comprehensive trails planning effort on the District." [USFS Mad Rabbit Trails Project Newsletter](#) at 1. As a result, USFS developed an updated Trails Master Plan in 2015 to guide overall development of trails in the Hahns Peak/Bears Ears Ranger District. To the best of KRW's knowledge, the USFS did not conduct any analysis under NEPA when approving that Master Plan.

The "first area" selected for implementation under this Plan and funded pursuant to the 2A Proposal was the construction of approximately 40 miles of USFS trails in the Buffalo Pass area. *See* Newsletter at 2. The USFS characterized this project as a "subset of the districtwide Trails Master Plan." USFS, Buffalo Pass Trails Project: Environmental Assessment & Finding of No Significant Impact (May 2016) at 4. The USFS approved this first phase after conducting only a brief analysis in an EA and issuing a FONSI. *See id.* at 43.

The USFS has repeatedly stated that the Mad Rabbit Trails Project is the second phase in its decade-long redevelopment of the Hahns Peak/Bears Ears Ranger District. *See* Newsletter at 2 (“With implementation of the Buffalo Pass Trails Project underway, the District is looking at the next phase of trail development with the Mad Rabbit Trails Project”); *see also* USFS, Forest Service Seeking Public Input on Mad Rabbit Trails Project (Jan. 9, 2018) (describing the Mad Rabbit Trails Project as “part of a larger comprehensive trail planning effort by the Hahns Peak/Bears Ears Ranger District, the City of Steamboat Springs, and multiple partners”).

This phased development is further confirmed by an internal email you wrote and sent to the internal USFS Mad Rabbit team, acquired through a FOIA request and attached as Exhibit B. For the record, at the time you were a USFS Recreation Specialist and the team leader of the Mad Rabbit Trails Project. In that email to team members, you described the history behind the Mad Rabbit Trails Project. That email begins with the 2013 Steamboat Trails Alliance proposal, and it describes the Buffalo Pass trail EA as Phase 1 of that proposal and Mad Rabbit as Phase 2. This is a clear admission that the trails considered in the Buffalo Pass EA and those currently being evaluated in the Mad Rabbit EA are connected actions under NEPA and must be considered in a single NEPA document. NEPA prohibits segmenting these connected actions and considering their impacts in isolation.

Indeed, since the time the USFS requested comments on this project, the USFS has begun identifying additional projects to be included in the next phases of its efforts. These subsequent projects have proceeded along similar lines with abbreviated EAs resulting in FONSI. For example, the Buffalo Pass Road Reconstruction Project was announced September 13, 2019, with proposed road improvements and recreation management for the Buffalo Pass Road corridor. This road serves as an access point to many of the trails approved in the Buffalo Pass Trails Project and is an integral part of the recreation network for both the Buffalo Pass and Mad Rabbit Trail Projects. The deterioration of this road has been accelerated by the increased use of the Buffalo Pass trails, and its improvement will increase trail use in the area. KRW articulated its concerns about the project, and the associated NEPA issues, in a letter to the USFS dated October 17, 2019, attached as Exhibit C.

Another connected project is the Muddy Pass gap reroute that the Continental Divide Coalition is currently developing. The purpose of this reroute is to avoid 11 miles of pavement along U.S. Highway 40, State Highway 14, and Jackson County Road 53. The proposal would connect with the CDT in this general area. Despite this, the DEA contemplates adding trails that loop to the current CDT without accounting for how the Muddy Pass gap project will change the geographic area’s terrain. Overlooking these two projects shows why the USFS must create a comprehensive geographic plan as opposed to allowing a collage of haphazardly built trails.

The USFS acknowledges previous and subsequent trail projects are constituent parts of a comprehensive plan to reimagine recreation in the Hahns Peak/Bears Ears Ranger District. Yet the USFS refuses to evaluate the environmental impacts of these connected actions and this comprehensive plan at geographic scale. Instead, it continues to approve each project through EAs that only superficially mention the related projects, that fail to analyze the cumulative and indirect impacts of these connected actions, and that refuse to consider a reasonable range of

alternatives at a programmatic scale accounting for the interconnectedness of these projects. The DEA continues this pattern. *See, e.g.*, DEA at 57 (noting there are “[r]ecent cumulative impacts” relevant to elk habitat effectiveness including the 48.6 miles of trail approved under the Buffalo Pass Trails Project, without any further analysis).

If the USFS fails to include the broader comprehensive analysis absent from the DEA in its forthcoming EA, and then issues a FONSI based on this partial analysis, the USFS will have violated NEPA. Such a result would be inconsistent with the intent of NEPA to provide a thorough, full identification and analysis of a proposal’s impact and reasonable alternatives to incurring that impact prior to approving a project.

2. Necessity of an EIS

In addition to the geographic-scale comprehensive analysis required by NEPA as discussed above, the proposed action in the DEA warrants preparation of an EIS due to its significant effect on the human environment. Thus, the USFS will have violated NEPA if the forthcoming EA results in a FONSI without any major changes to the DEA’s proposed action.

a. Contextual analysis

The CEQ NEPA regulations direct agencies to consider a proposed action’s context and intensity to determine whether it has a significant effect on the human environment. 40 C.F.R. § 1508.27. The regulations further instruct agencies to analyze an action “in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.” *Id.* at § 1508.27(a). Human environment is defined “to include the natural and physical environment and the relationship of people with that environment.” *Id.* § 1508.14.

Here, the affected region is primarily the MYGA as defined in the 1998 Forest Plan. *See* DEA at 38; *see also* Forest Plan at Figure 3-18. “A geographic area is a piece of land, 100,000 acres or less, in which management is directed toward achieving a specified desired condition.” Forest Plan at Ch. 3, p. 1. The MYGA contains the Mad Creek Roadless Area in its north, the Long Park Roadless Area in its center, and the Walton Peak Roadless Area in its south. There are numerous multi-use non-motorized trails in the area, including many new multi-use trails built as part of the Buffalo Pass Trails Project. There are also various motorized trails and forest roads, although all are outside of the Colorado Roadless Areas (CRAs).

The affected region is also part of Game Management Unit (GMU) 14, which is itself part of the E-2 Bear’s Ear elk herd. A significant portion of the area is elk habitat, including production areas, migration corridors, and summer range. Elk are migratory animals that require healthy seasonal ranges at different locations and large, connected landscapes of healthy habitat to thrive. Elk are also an indicator species and their protection helps bolster other species who share the same habitat, like dusky and sharp-tailed grouse, lynx, mule deer, pronghorn, goshawks, and other raptors. Unsurprisingly, the affected region is popular with hunters. It supports archery, muzzleloader, and rifle hunting seasons for elk.

The affected region’s centrality to the second largest elk herd in Colorado is context that strongly weighs in favor of conducting an EIS. Protecting elk habitat is increasingly recognized as a core goal of land management. For example, the Colorado Roadless Rule—which postdates the relevant Forest Plan—aims to protect habitats for “species dependent on large, undisturbed areas of land” like elk. 36 CFR § 294.41; *see id.* § 294.40. Indeed, the DEA notes that “effects to elk have been considered due to the importance of elk identified as a local species of concern during the public scoping period.” DEA at 37.³ But the DEA’s consideration of elk is deficient, especially in light of another key contextual detail—the worrisome decline in the health of the local elk population and their relative reproductive success around the proposed project area.

Over the past fifteen years, there has been a decrease in both the classified population of the resident herd and the associated calf:cow ratio. *See* DEA at 55 (noting local elk herds “have been displaying what would be considered a decreasing trend in both number of elk classified and calf:cow ratios”); *see also* [CPW Commission Issue Paper](#) at 13 (Nov. 2021) (showing the decline in the resident elk population from approximately 750 to 510 individuals from 2006 to 2019). The most recent winter observations classified approximately 400 individuals in the area. The below figures show the decline in the calf:cow ratio of the E-2 herd and GMU 14.

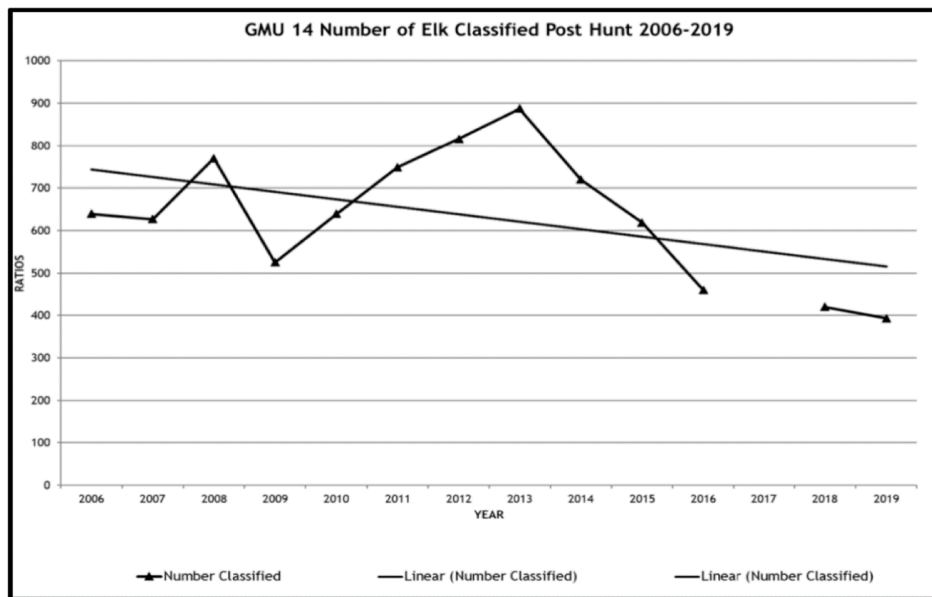


Figure above shows the decline in classified elk in GMU 14. Courtesy of CPW.

³ The DEA repeatedly attempts to justify its underdeveloped analysis of elk by noting that elk “are not a Region 2 sensitive species.” DEA at 57. But this is a misnomer. CPW is currently in the process of conducting a multitude of biological research studies monitoring the elk populations in GMU 14 and 214 within the E2 study region. These studies includes the monitoring of collared elk to determine the impacts of human based outdoor recreation disturbance on elk and the correlation of elk survival rates, calf recruitment ratios, and utilized habitat areas. The various study is expected to be completed by 2024.

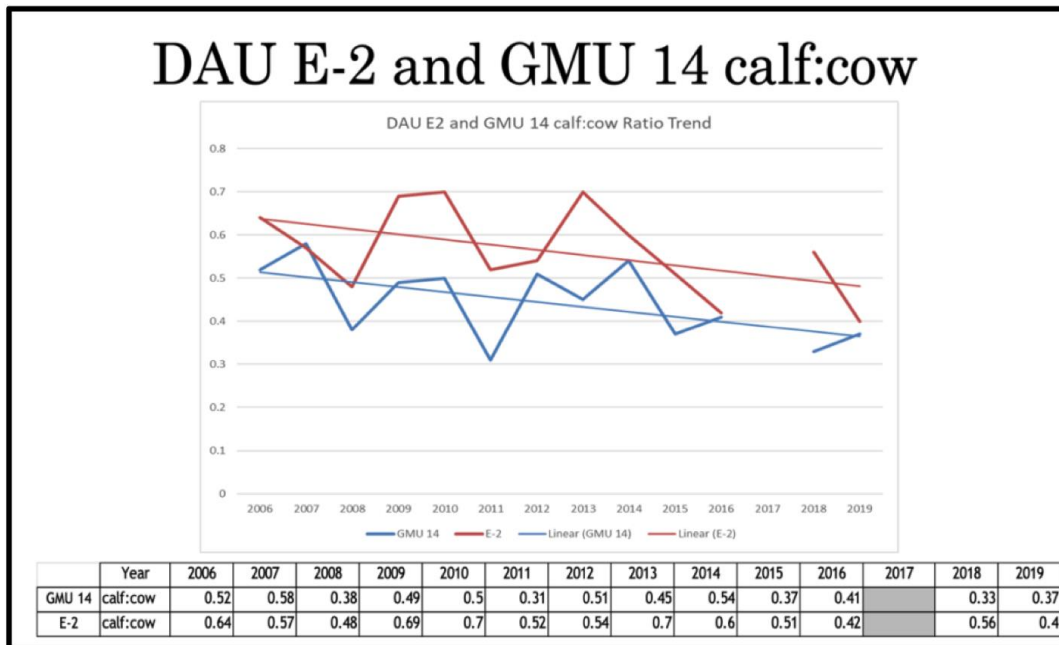


Figure above shows the measured calf:cow ratio for GMU 14, and for the entire E-2 elk herd.

There is also little doubt that this lower calf:cow ratio is driven, in part, by the high degree of recreational development in GMU 14 on USFS lands. However, while GMU 14 data is mentioned in the draft proposal, the cumulative impacts to the herd are only mentioned qualitatively.

In sum, elk are hugely important to local ecosystems and communities, their health is declining, and the proposed action involves the very activities partially responsible for such decline. This context makes the need for an EIS clear, and any failure to prepare such a document would violate NEPA.

b. Intensity analysis

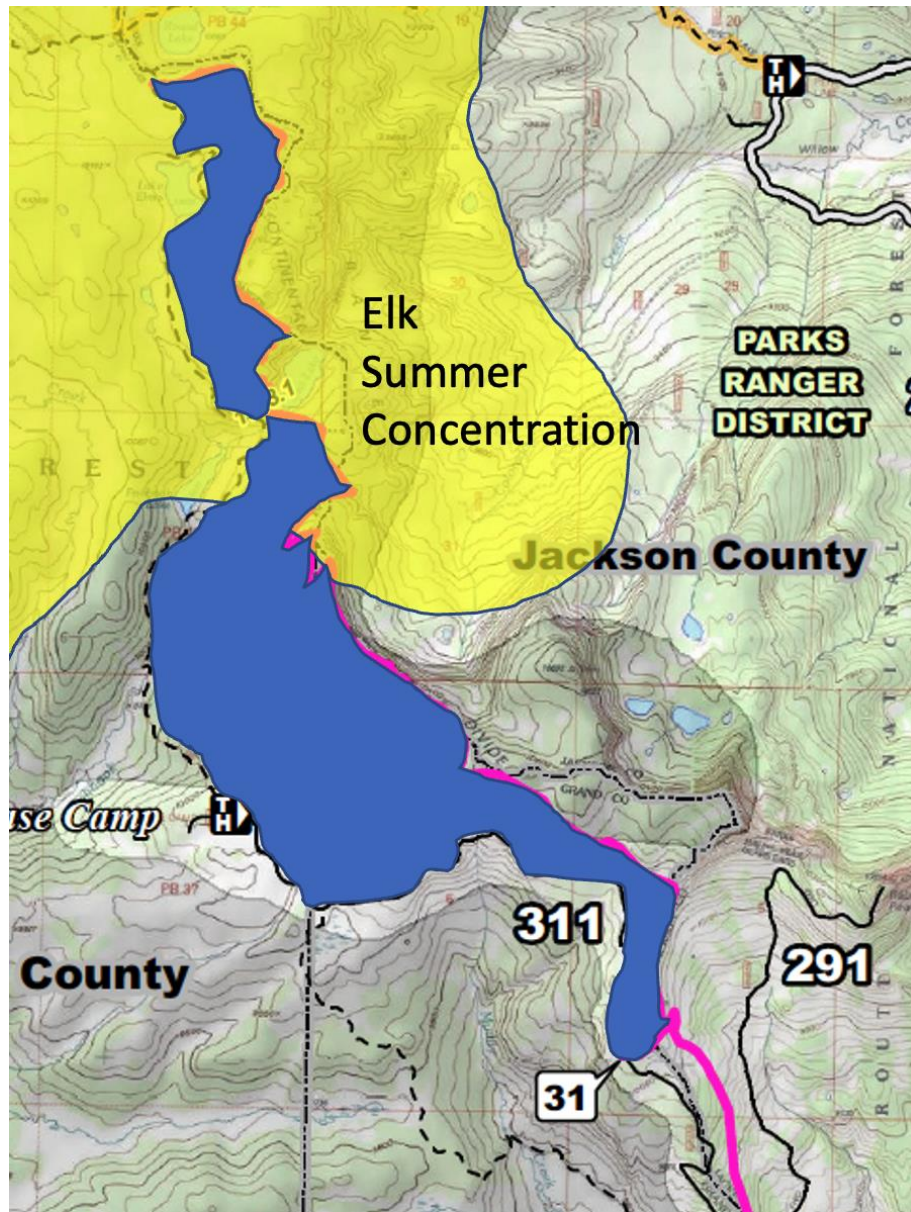
Again, the CEQ NEPA regulations direct agencies to consider a proposed action’s context and intensity to determine whether it has a significant effect on the human environment. 40 C.F.R. § 1508.27. The regulations provide ten factors an agency should consider when evaluating intensity: (1) the scale of beneficial or adverse impacts; (2) the degree to which the proposed action affects public health or safety; (3) unique characteristics of the geographic area; (4) the degree to which the proposed action is highly controversial; (5) the degree to which the proposed action poses unknown risks; (6) the degree to which the proposed action is precedential; (7) whether the action is related to other actions with individually insignificant but cumulatively significant impacts; (8) the degree to which the action may adversely affect scientific, cultural, or historical resources; (9) the degree to which the action may adversely affect endangered species; and (10) whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment. 40 C.F.R. § 1508.27(b). Many of the factors are present here.

i. Scale of Impact

The first factor is implicated by the proposed action's harm to elk and elk habitats. The SSTA proposal states that “[b]iking can do for Steamboat Springs what skiing has done for many years. Project partners estimate that this project will result, at maturity, in an additional 180,000 visitors to Steamboat Springs in the summer and shoulder seasons each year” and “an average stay of 4.3 days.” [SSTA Proposal](#) at 37. Yet, the DEA did not analyze the impact of these numbers. At the Mad Rabbit public forum on October 27, 2022, Mr. Kelly of the USFS orally told the President of the Board of KRW that no traffic analysis had been performed at all, either on the proposed new trails or those proposed to be decommissioned.

KRW performed a traffic estimate based on the SSTA Proposal's estimated incremental number of visitors. The DEA proposes creating approximately 44 miles of non-motorized trails, approximately 30% of the total mileage of the 2A proposal. Prorating the number of incremental visitors-days by 30% results in 229,720 incremental visitor days. These visitors are attracted over the summer months of June, July, and August, and partly May and September. Assuming May and September average half the volume of the other months, there are 123 equivalent visitor-days over this period. This leads us to an incremental 1,868 users per day attracted to the Mad Rabbit Trails Project area over the summer months of June, July, and August. These visitor numbers will fundamentally degrade a multitude of forest values including habitat for elk and other species and opportunities for solitude or quiet enjoyment by visitors, and the increased visitation represents a significant adverse impact.

Moreover, the DEA proposes many high-volume trails traversing elk habitat. Besides the trails at Ferndale, that do have a seasonal closure, the trails along the north of U.S. Highway 40 total over 20 miles in length and will not be seasonally closed. Trail 7 is particularly concerning. It creates two loops along the CDT that may prevent the significant area within them from being a suitable habitat for wildlife because the areas will have human disturbance on all sides. As CPW District Manager Jim Haskins notes, “[n]ew mountain bike [trail] construction will likely result in permanent habitat fragmentation. Habitat fragmentation impedes the movement of wildlife across landscapes. Looped trails may create islands of habitat that may be avoided entirely by wildlife.” David Lien, [Sportsmen: Mountain bikes and wilderness a bad mix](#), Colo. Springs Gazette (Jan. 14, 2018); *see also*, Colorado Backcountry Hunters and Anglers, *Impacts of Off-Road Recreation On Public Lands Habitat* (2018). Below is a graphic that shows the islands of habitat avoidance created by Trail 7.



The upper loop is particularly problematic for elk, as it creates an avoidance island through a critical elk summer concentration area. The USFS understands this risk. At the Mad Rabbit public forum on October 27, 2022, Mr. Kelly of the USFS answered a question on why a previously proposed ATV trail (Trail #10) in the same general area was removed, specifically noting it was removed partly due to its effect on elk habitat. The elk habitat he was referring to is the same block of summer concentration that extends over the proposed Trail 7. If Trail #10 posed a threat to elk habitat, so does Trail #7 and the island it creates.⁴

⁴ If reducing user conflict is the goal of Trail #7, all these issues can be better addressed by the creation of a single CDT with sufficient width to accommodate two-way traffic, with spurs to each lake along the way. This single path may be the current CDT, may be the proposed Trail #7, or may be some combination. But the redundant set of trails

ii. Unique characteristics of the geographic area

The third factor is implicated by the centrality of the project area to the E-2 Bear's Ear elk herd, as discussed *supra* in Section II.B.2.a.

iii. Controversy

The fourth factor is implicated because the project is highly controversial. Community opinion in the City of Steamboat Springs and Routt County has shifted decidedly against this project. A recent survey of Routt County residents showed overwhelming support for a balanced approach to recreation and conservation (>70%). The least-chosen option ("recreation is more important than conservation") gathered only 3% of the respondents.

iv. Precedential

The sixth factor is present because the proposed action is precedential. A lack of USFS enforcement against the creation of unauthorized trails in the project area over the past several decades has led to a number of non-system trails. The USFS can decommission illegal trails without building new trails in sensitive areas. Yet, the DEA conflates these separate actions. The DEA's No Action Alternative assumes the USFS will continue neglecting its duty to administer and enforce against unauthorized trails, stating that this alternative "analyzes the effects to resources if unauthorized, non-system trail use continues to increase in the project area based on anticipated recreational use." DEA at 10. By skewing the baseline this way, the DEA essentially credits the remediation of non-system trails against the impacts associated with new trail construction.

This clever accounting violates NEPA on its own terms because it is unsupported by any evidence cited in the DEA. Human disturbance to wildlife is dependent on the frequency and type of activity, not purely the length of a trail or its status as a system trail, and the DEA does not include any traffic analysis on the trails it proposes be decommissioned or built. Equating the closure of rarely used non-system trails with impacts from trails being proposed explicitly to facilitate high-volume recreational tourism is arbitrary. It also avoids the root cause of the problem—the USFS's underinvestment in enforcement—an issue the DEA fails to address even if the proposed action goes forward. There is no plan presented in the DEA that adds resources to prevent future illegal trail building. In fact, many unsanctioned trails are spurs from sanctioned trails, so adding new trails may even encourage additional illegal trail building.⁵

proposed in the DEA, creating loops and associated habitat islands, are unnecessary and inappropriate. To the extent that a new path for the CDT is pursued, the unused existing CDT trail would be re-brushed to its original natural state. This is a clear alternative that was never examined.

⁵ KRW believes the DEA sends an anti-enforcement message to recreationists. The DEA proposes over 20 miles of trails to traverse CPW-indicated elk production areas without any seasonal closures. Building an extensive trail network through wildlife calving areas without seasonal closures sends a terrible message to the public—that wildlife closures are not that important. Another issue in the project area concerns voluntary closures. Some voluntary closures, such as fishing closures on the Yampa River during high temperatures and low flows, are

But the DEA’s accounting also warrants an EIS because it sets a dangerous precedent. Linking the removal of illegally created trails as a mitigation that allows for new trail construction creates perverse incentives for the unauthorized trail builders. To the best of KRW’s knowledge, the USFS has not counted the positive effects from brushing in unauthorized trails against the negative effects of building new trails in similar projects.

v. Interconnectedness

The seventh factor is implicated because the Mad Rabbit Trails Project is connected to other recreational and road-improvement projects in the Hahns Peak/Bear Ears Ranger District, as discussed *supra* in Section II.B.1.

vi. Violation of environmental laws

The tenth factor is present because the proposed action violates the Colorado Roadless Rule. Section III of these comments, *infra*, describes this violation in greater detail. Still, it is relevant to note that this factor does not measure the degree to which a proposed action violates the law. The factor is binary, asking “[w]hether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.” 40 C.F.R. § 1508.27(b)(10). Proposed actions that violate environmental protection laws, like the proposed action in the DEA, are intense enough to require the preparation of an EIS.

C. The DEA’s stated need is unreasonable

The CEQ’s NEPA regulations require that an EA “include brief discussions of the need for the proposal.” 40 C.F.R. § 1508.9(b). A project’s stated need must be reasonable. *See, e.g., Wyoming v. USDA*, 661 F.3d 1209, 1243 (10th Cir. 2011).

If the USFS were to conduct the required geographic-scale comprehensive analysis discussed *supra* Section II.B.1, it would recognize the need stated in the DEA is unreasonable. The DEA states “[t]he purpose for the Mad Rabbit trails project is to provide designated and sustainable trail-based recreation opportunities in consideration of other resources,” and further notes that there is a need for this project because “[t]he existing National Forest System trails and trailheads in the project area do not meet current and anticipated recreational trail use of National Forest System lands adjacent to the community of Steamboat Springs to accommodate a wide range of user abilities.” DEA at 2.

A study authored by the International Mountain Biking Association (“IMBA”) shows that when the broader region is considered, developing recreation opportunities on nearby non-Forest System lands improves many of the problems the DEA purports to solve—and does so with dramatically less impact to wildlife in the region. *See [IMBA Ride Center Report, Steamboat Bike Town Ride Center](#)* (2017). IMBA performed a need analysis and evaluation in September

followed by the vast majority of the public. However, voluntary closures for trails or areas send a message of “use your own judgment,” which KRW has observed results in lower compliance.

2017 that assessed and rated local trails and services. The plan also identified major unmet needs of studied locations and discussed specific ideas to improve trail infrastructure. The plan designated the Steamboat Springs area as a Silver Level IMBA Ride Center, which indicates the current set of trails and local services are very good. The plan also identified eight specific needs where Steamboat Springs area could improve.

KRW analyzed the IMBA identified needs against the DEA’s proposed trails and generated the below chart showing where the proposed trails meet those identified needs. The column to the left contains a representative quote from the report, while the rightmost column is our assessment. The needs are listed in the order that they appeared in the report, not by priority.

| KEY IMBA SUGGESTED IMPROVEMENT | SOLVED BY MAD RABBIT? |
|---|------------------------------|
| 1. “No lodging that caters specifically to bicyclists” | No. |
| 2. “No Mountain Bike shuttle service” | No. |
| 3. “Emerald Mountain Trails can feel repetitive... Make an effort to augment and enhance some of the older trails...” | No. |
| 4. “Steamboat Resort Bike Park trails are too long for beginners” | No. |
| 5. “Beginner Trails around town push riders comfort level” | No. |
| 6. “Very few truly Beginner to Intermediate Rides... Develop new beginner trails close to town and optimize loop opportunities” | No. |
| 7. “Lower NPR Green is not as easy as it should be” | No. |
| 8. “The Continental Divide Trail doesn’t connect to town with singletrack via Buffalo Pass” | No. |

The IMBA report shows the major trail needs involve more beginner trails close to town. It also identifies key missing services in the Steamboat Springs area. Need #8 is the only identified need in the entire list outside of the town of Steamboat Springs—and the CDT does connect to the town through the ski area and is accessible from both Dumont Lake and Buffalo Pass. The IMBA report makes clear that it is unnecessary to build many new trails, despite the DEA proposing just such an action. With such a large existing local trails network, there is not an urgent need to develop trails at the scale proposed in currently undeveloped areas of Routt National Forest.

The DEA states that “[t]here is a lack of connectivity (looped opportunities), diversity of trail experiences, range of technical and physical difficulties, length (long distance trails that are 4 miles or greater) and accessible trails on National Forest System lands.” DEA at 23. This is not documented in region-wide studies like the IMBA report, and it confuses *desires* with *needs*. USFS lands cannot be all things to all people, and filling out a multi-dimensional matrix of all possible user desires does not then become a need. Clearly, the IMBA proposal didn’t propose such an extensive network. The DEA notes “[t]here are 145 miles of existing designated Forest Service trails in the project area.” *Id.* at 25. This total doesn’t include the trail networks on other public lands, nor does the DEA indicate that it has now satisfied the need. It simply adds more trails to an already extensive inventory. The DEA’s stated need is unreasonable given the significant adverse effects of the DEA’s proposed action, and the lack of need for such an action when the broader region is considered.

D. The DEA’s analysis of alternatives is insufficient

The CEQ’s NEPA regulations also require that an EA must “include brief discussions . . . of alternatives . . . [and] the environmental impacts of . . . [the] alternatives.” 40 C.F.R. § 1508.9(b). This means agencies must “incorporate a range of reasonable alternatives” into any EA prepared for a proposed project. *W. Watersheds Project v. Bureau of Land Mgmt.*, 721 F.3d 1264, 1274 (10th Cir. 2013). An EA that results in a FONSI violates NEPA if its failure to consider certain alternatives “compromised the EA so severely as to render the FONSI arbitrary and capricious.” *Id.* at 1275. If the USFS fails to analyze the alternatives presented below in greater detail, or issues a FONSI based on the meager range of alternatives in the DEA, the USFS will have violated NEPA by acting arbitrarily and capriciously.

First, as discussed *supra* in Section II.B.2.b., the DEA’s No Action Alternative is arbitrary. Addressing non-system trails and building new trails are separate undertakings. The DEA’s insistence on balancing the impacts of closing illegal trails and building new trails is a false comparison that renders the DEA’s broader analysis of alternatives arbitrary and capricious. The non-controversial aspect of decommissioning illegal trails should be separated from the controversial and contentious addition of new trails in sensitive areas. Had this been done earlier, these trails would have already been on their way to being decommissioned, avoiding the negative effects claimed in the No Action Alternative. NEPA requires the USFS to consider a different No Action Alternative that portrays a future scenario reflective of proper USFS land management, administration, and decommissioning of illegal trails.

Second, the DEA analyzes only a single Proposed Action and the No Action Alternative in any detail. As discussed *supra* in Section II.C, the proposed action does not comport with the recreational needs in the area. The USFS needs to weigh additional alternatives more in line with the region’s needs, meaning they include significantly fewer trails and leverage the trail networks in already disturbed locations. A proposed action that includes fewer trails may disappoint some individual recreationists, but it is not likely to result in a loss of recreational viability in the planning area, nor cause a trend toward reduced trail use or any other benefits from that use in the area. This is evident from the IMBA report, which provides an independent and professionally generated assessment of needs from a discrete user perspective—mountain

bikers—that the Mad Rabbit Trails Project aims to accommodate. Yet, the report shows that the preponderance of IMBA-identified needs are not met by Mad Rabbit Trails Project. In all eight cases, the need may be met without any excursion into Colorado Roadless Areas. Accordingly, KRW requests the USFS consider the IMBA report as an alternative to be analyzed and stresses the value of considering broader, geographic-scale approaches to increasing recreation access.

Third, the DEA lists alternatives dismissed preliminarily and not carried forward for more detailed analysis. KRW believes the USFS mischaracterized many of these alternatives, and its failure to consider their more reasonable framings violates NEPA. The DEA’s analysis would be vastly improved by considering a true reasonable range of lower-impact alternatives. Following are KRW’s comments on some of these alternatives. We request that they be further analyzed and considered in detail in the NEPA document.

- **Development of All Mountain Bike Trails at the Steamboat Ski Resort.** USFS dismissed this alternative, stating that “[b]ased on public comment received and visitor use of the project area, it does not appear that additional trails at the ski area would fully meet the recreation needs of the public and would not provide enough opportunities for a wide range of abilities and experiences.” DEA at 8. But limiting the development of all mountain bike trails to the ski resort is too narrow a reading of a viable alternative. The Steamboat Chamber of Commerce states that there are over 500 miles of single-track mountain bike trails in the Steamboat Springs area. *See Staff, [7 Must-Ride Mountain Bike Trails In Steamboat](#), Steamboat Chamber of Commerce (Oct. 12, 2022).* The region is flush with mountain bike trails on non-USFS lands like the Emerald Mountain trails on Bureau of Land Management land. Accordingly, KRW believes this alternative should be redefined as “**Development of Some Mountain Bike Trails at the Steamboat Ski Resort and Other Public Lands.**” There is no agency rule that requires new trail development to be near other newly developed trails, or even on USFS lands at all. Conversely, the CEQ’s NEPA regulations state that alternatives in environmental review documents should “[i]nclude reasonable alternatives not within the jurisdiction of the lead agency.” 40 C.F.R. 1502.14 (c). A better option is placing some trails onto already disturbed lands that extend outside the USFS boundary, or on the ski area, and the USFS should consider these alternatives.
- **Eliminate Proposed Trails from Ferndale and Relocate South of U.S. Highway 40.** USFS dismissed an alternative moving proposed trails from the north of U.S. Highway 40 to south of the highway, stating the agency “ultimately determined that trails using existing infrastructure on the north side of the highway made the most sense as there are several winter trailheads that can be used for summer access” and “[a]dding new trails on the south side of U.S. Highway 40 would require developing several new trailheads, and certain potential trailhead locations raised safety concerns due to their entrance and exit location on U.S. Highway 40 identified through coordination with the Colorado Department of Transportation.” DEA at 8. For reasons discussed *supra* Section II.A.3, this cursory response is inadequate because rejecting this alternative is a drastic departure from USFS best management practices. The response is also inaccurate. By pursuing the

Ferndale developments, USFS will create a high-volume trailhead along a stretch of U.S. Highway 40 with a high-speed descent that will require left turns for entering and exiting, posing serious safety risks. In addition, KRW's compromise proposal, attached as Exhibit D, demonstrates that the USFS's concern is unsubstantiated.

- **The KRW Compromise Proposal.** KRW has presented a specific alternative as a compromise proposal. KRW believes that it is possible for Mad Rabbit trails to meet the requirements for a FONSI upon environmental review if the implementation of trails proceeds under that proposal in a phased manner in order to assure that impacts are not greater than anticipated. In concept, under this approach, we would support implementation of a select subset of trails under the KRW proposal that would provide both short trail use opportunities as well as a longer trails experience. Implementation of higher density trails under the KRW proposal could follow on a phased basis pursuant to a pre-approved mandatory protocol that includes: (A) use of science-based quantitative criteria for measuring physical habitat, soils, visual quality, wildlife, and/or other resource values; (B) baseline monitoring of criteria for those parameters; (C) post-trails monitoring under the first phase for measurable changes to those criteria; and (D) satisfaction of identified performance indicators supporting non-significance findings from the first phase as a prerequisite to "on-ramps" for the additional trails development. It is critical as we move forward that decisions to on-ramp additional trails be based on sound scientific approaches that reflect the benefit of pre- and post-trails monitoring information relevant to impacts. The approach described above will assure that.

III. The Proposed Action Violates the Colorado Roadless Rule

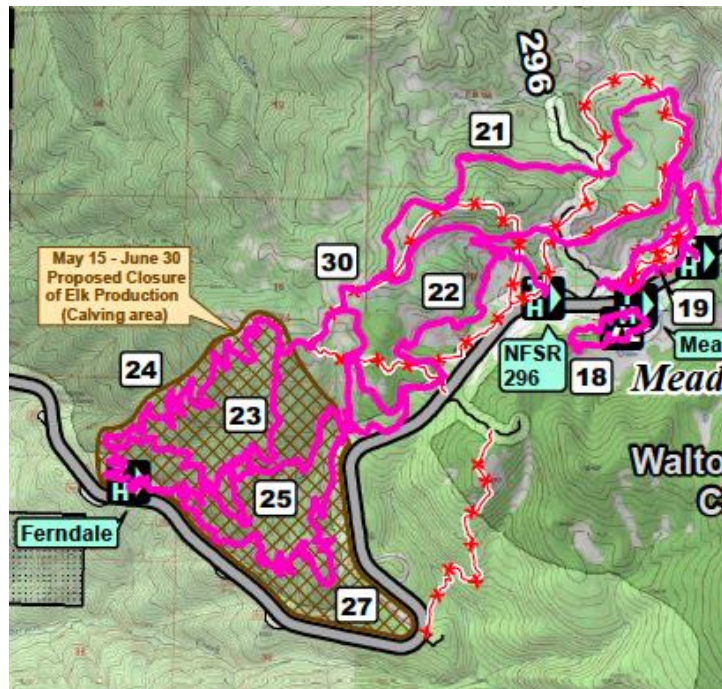
A significant portion of the trails proposed in the DEA are located within the Long Park CRA, the Mad Creek CRA, and the Walton Creek CRA. These lands are protected by the Colorado Roadless Rule, which requires the preparation of an EIS for actions that would "significantly alter the undeveloped character of a [CRA]." 36 C.F.R. § 294.45(a). There was no analysis in the DEA of the proposed action's impact on the undeveloped character of any of the CRAs, particularly the Long Park CRA where most of the development is proposed to occur. And those impacts are immense. Therefore, if the forthcoming EA results in a FONSI, then a failure to prepare an EIS would violate the Colorado Roadless Rule.

The USFS's profile of the Long Park CRA states that "[m]uch of the CRA appears undisturbed, with little evidence of modification" and further states that development and intrusion on the fringes of the CRA detract from its natural appearance. USFS Rocky Mountain Region, [*Profiles of Routt National Forest Roadless Areas*](#) at 13 (July 23, 2008). As the USFS has recognized, recreational use of CRAs can significantly alter the undeveloped character of a roadless area, including opportunities for solitude. *Id.* The 1,868 users per day visiting the Mad Rabbit Trails Project area will significantly alter the undeveloped characteristics of the Long Park CRA, as seen by examining two characteristics "often present in" CRAs. 36 CFR § 294.41.

First, CRAs are a "[h]abitat for threatened, endangered, and sensitive species, and species dependent on large undisturbed areas of land." *Id.* Elk are a species dependent on large

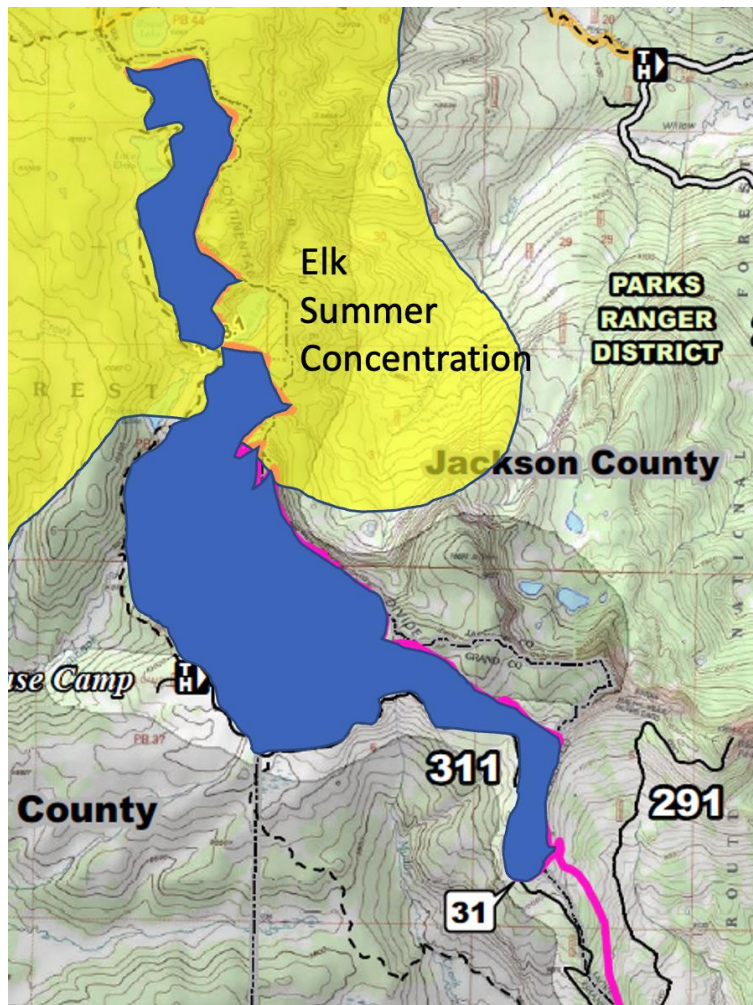
These statistics were collected by a magnetic mountain bike transducer that was placed at the bridge of Flash of Gold in the middle of summer 2020. It detected 3,354 users in August and 3,169 users in September. This equates to 108 users per day in August and 106 users per day in September. Assuming 2 users per party, these are encounter rates of 54 and 53 parties per day, or approximately 3.5 times the CRA limit. BTR—a dedicated and advanced downhill trail—peaked at 1,659 users in July, or about 53 users per day, and 27 parties per day, approximately twice the CRA limit. These numbers are averages and, most likely, the numbers are higher on the weekends and lower on the weekdays. However, they show that even the averages are well over the specified limits, so any variability of use by day or trail leads to other days or trails exceeding the limits even further.

The probability of encounters increases wherever there are more loops and smaller distances between nodes. Thus, there are two key areas when examining the DEA’s compliance with the limits described in the Colorado Roadless Rule. The largest area of concern is the Ferndale area and the proposed network within. The below graphic shows trails in this area:



Trails 23, 24, 25, and 27 total 12.8 miles and exist in an area around 2-1/2 square miles in area. This leads to 5 linear miles of trails per mile. This is a very high trail density for a CRA, especially since these trails are in a CPW-mapped elk production area. Superimposing Flash of Gold or BTR trail use numbers onto this topology (54 and 27 encounters per day respectively) far exceeds the 15 parties per day limit for CRAs. Even those numbers may understate the traffic, as the Ferndale network of trails is proposed to have two access points from U.S. Highway 40, one adjacent to Ferndale, and one at the West Rabbit Ears Summit. Flash of Gold and BTR trails are only accessed via dirt road on Buffalo Pass.

Similarly, the nested loops created by Trails 7 and 31 lead to higher numbers of encounters per day. See the graphic below:



Besides the large number of loops leading to user conflict and increased encounter rate, Trail 7 can be easily accessed from U.S. Highway 40. This easy access suggests that the trail counter data from Buffalo Pass is a conservative estimate, and the expected encounter rates on these trails and the CDT should be higher. Irrespective of access points, in all cases, the large user volume placed in the proposed trail network topology leads to an encounter rate well above semi-primitive recreation and is thus inconsistent with CRA characteristics.

To be clear, the Colorado Roadless Rule does not prohibit the proposed action in absolute terms. But given the directive that an EIS must be prepared for actions that would significantly alter the undeveloped character of a CRA, and given the massive alterations the proposed action would have on the undeveloped nature of the CRAs included in the project area, the USFS must prepare an EIS. Accordingly, if the forthcoming EA results in a FONSI, the EA will violate the Colorado Roadless Rule.

IV. Conclusion

For the above reasons, KRW remains deeply concerned about the Mad Rabbit Trails Project and the associated environmental review processes. The DEA is not robust enough to serve as a compliant EA under NEPA, and the significant effects of the proposed action on the human environment require preparing an EIS under NEPA and the Colorado Roadless Rule.

Despite the issues KRW has flagged throughout these comments, KRW considers the DEA as evidence the USFS is working in good faith. KRW is happy to continue working with the USFS to create a compromise plan that will offer new recreation opportunities while minimizing the impact to wildlife. KRW believes its compromise proposal is the right blend of specific trail segment modifications, seasonal closures, and phased implementation of trails construction to provide reasonable assurance through adaptive management protocols that trail impacts would not rise to a level of significant impact. If the USFS adopts these suggestions, KRW will drop its objections to the Mad Rabbit Trails Project and will promote the final plan as a best practice for meeting the needs of recreation and wildlife conservation.

Thank you for the opportunity to comment on this project and for your consideration of these comments. Please do not hesitate to contact us if you have any questions or would like to discuss these comments.

Sincerely,



Bob Randall
Brandon Rattiner

Attorneys for Keep Routt Wild

Cc: Senator Michael Bennet
Senator John Hickenlooper
Governor Jared Polis
DNR Executive Director Dan Gibbs
Regional Forester Frank Beum
Forest Supervisor Russ Bacon
District Ranger Michael Woodbridge
Board of Directors, Keep Routt Wild

Keep Routt Wild
Comments on Mad Rabbit Trails Project #50917
November 23, 2022

Exhibit A:

Keep Routt Wild Correspondence on Mad Rabbit Trails Project



August 9, 2019

Hahns Peak-Bears Ears Ranger District
Attn: Mad Rabbit Trails Project
925 Weiss Drive
Steamboat Springs, CO 80477

Sent via email: comments-rm-medicine- bow-routt-
hahns-peak-bears-ears@fs.fed.us

Re: Mad Rabbit Trails Project

Dear Ms. Umphries,

Keep Routt Wild has reviewed the Hahns Peak-Bears Ears Ranger District's preliminary proposed action for the Mad Rabbit Trails Project dated July 16, 2019. We sincerely appreciate the District's efforts to advance this trails planning process in a deliberate manner that is informed by input from last winter's roundtable discussions and other information. The preliminary proposed action eliminates some of the most problematic trail segments from a resource perspective and is a constructive step toward accommodating the multiple objectives that need to be balanced in moving forward in this process. We appreciate the Forest Service's consideration of community input and for taking this step. Keep Routt Wild remains committed to working with the Forest Service and other interested parties in finding common ground on this proposal moving forward.

This letter addresses three key points that we believe are critical to the success of this trails proposal. We also attach more detailed comments on select trail segments that remain of concern to Keep Routt Wild along with feedback on what we believe to be more suitable approaches to accomplish the purpose of those trails (Attachment A); specific input on trail closure dates and enforcement considerations (Attachment B); and a list of references to relevant studies and literature addressing impacts associated with the development and use of trails (Attachment C). We thank you in advance for considering our input on these items.

1. Purpose and Need for the Proposed Action. The Forest Service's original purpose and need statement for its proposed action was "to provide trail-based recreation opportunities as well as to protect forest resources by reducing user-created trails." We request that the stated purpose be revised for the formal scoping process and Draft EA as follows: "to provide trail-based recreation opportunities consistent with the protection and conservation of natural resources and retention of the roadless character of protected areas." We request this change because inherent in multiple use management here is the upfront consideration of opportunities to avoid and minimize impacts to resource values through the selective siting and configuration of new trail segments; impact minimization

opportunities are not restricted to the retirement of pre-existing user-created trails as implied by the original purpose and need statement.

2. Phased Implementation of a Modified Proposed Action. Keep Routt Wild believes it is possible for Mad Rabbit trails to meet the requirements for a Finding of No Significant Impact upon environmental review if the trails configuration is refined in the manner outlined in Attachment A *and* if implementation of the trails is phased in order to assure that impacts are not greater than anticipated, particularly in the sensitive Ferndale area. In concept, under such an approach, we would support approval for immediate Phase 1 implementation of a singular connected trail along the Highway 40 corridor that would provide both short trail use opportunities as well as the desired longer epic trails experience. Implementation of a higher density network of branched and parallel trails could follow on a phased basis pursuant to a pre-approved, mandatory protocol that requires:
 - A. Use of science-based quantitative criteria for measuring physical habitat, soils, visual quality, wildlife, and/or other resource values;
 - B. Baseline monitoring of criteria for those parameters;
 - C. Post-trails monitoring under Phase 1 for measurable changes to those criteria; and
 - D. Satisfaction of identified performance indicators supporting non-significance findings from Phase 1 as a prerequisite to “on-ramps” for additional trails development.

It is critical as we move forward that decisions to on-ramp additional trails be based on sound scientific approaches that reflect the benefit of pre- and post-trails monitoring information relevant to impacts. The approach described above will assure that. We believe Colorado Parks and Wildlife expertise should be utilized by the Forest Service in determining how best to define the resource performance criteria, both in terms of establishing a monitoring baseline and the subsequent performance evaluation, to ensure that such criteria are satisfied.

In addition to the above, approval of Phase 1 and any subsequent trails should include requirements for seasonal trail closures with the specific dates to be set based on available species/habitat data, and should require that funding for maintenance and enforcement be secured in advance of construction. Please see Attachment C. Finally, we request that the Forest Service give specific attention to the growing use of e-bikes and, if they are to be excluded from the non-motorized Mad Rabbit trails, to make that explicit. We observe that Colorado Roadless Areas may place additional restraints on the deployment of e-bikes and that, if the USFS desires to retain flexibility to open some trails to e-bikes in the future, moving the location of those trails to outside the CRAs may help preserve this flexibility.

3. Development of a Recreation Plan. As recreation on Forest Service lands continues to increase we believe there is a growing need for a comprehensive trails and recreation

planning effort.¹ The District's 2015 Trails Plan for the Hahns Peak and Bear Ears Ranger District offers only general guidance for non-motorized trail system development and, by its terms, has a temporal scope limited to two to five years.² To the best of our knowledge, there remains to date no holistic, comprehensive long-range plan (or programmatic NEPA environmental review) guiding future trails and dispersed/developed recreation opportunities on federal lands in the area. And we lack the benefit of a current master planning document for the Routt National Forest, as we continue to operate under a Land and Resource Management Plan that dates back to 1997.

Moving forward, Keep Routt Wild believes it essential that a comprehensive long-range planning process be put in place *prior* to consideration of additional trails proposals on forest lands in the District. This effort is overdue and has unfortunately compromised community confidence in Forest Service decisions that have been proceeding and approved under a series of sequential project-by-project EAs and FONSI's, as evidenced by the Buffalo Pass Trails Project and what is now being pursued for this Mad Rabbit proposal. It is our hope that the Routt Recreation Roundtable can be the forum to start this discussion.

Again, Keep Routt Wild appreciates the role that the Forest Service plays in our community and for their ongoing stewardship of our natural resources. We remain committed to being collaborative partners to the Forest Service in balancing recreational development with the conservation needs of wildlife.

We look forward to commenting on the Draft EA when it is released, and to our future engagement with the USFS and others on the proposed action.

Yours sincerely,
Keep Routt Wild

Larry Desjardin,
President of the Board

¹ See, e.g., Mad Rabbit Trails Project Fact Sheet, p. 1

² Trails Plan 2015, page 4.

ATTACHMENT A - Keep Routt Wild comments on specific trails.

Keep Routt Wild appreciates the opportunity to comment on the most recent Mad Rabbit pre-proposal. This section consolidates our comments on the purpose, need, selection, and routing of specific trails. There is considerable merit in many of the proposed trails, and many of our comments will address specific routing alternatives and designs that will make some of them more friendly to wildlife and more consistent with the aims of the Colorado Roadless Rule and the areas designated under it (Colorado Roadless Areas, or CRAs). There are a few trails that are more problematic to those goals, and we encourage those to either be eliminated or changed enough to make them compatible with the wildlife in our area. We believe that implementing these changes may make a proposal consistent with an EA and a FONSI.

MAD CREEK / HOT SPRINGS AREA

We commend the US Forest Service for listening to community input during the Routt Recreation Roundtable facilitation discussions and eliminating the proposed trails in that area. Furthermore, we endorse the USFS proposal to return a number of unauthorized trails back to their natural state. We believe that this sets a proper precedent for dealing with illegal trails and will attenuate the incentive to create illegal trails in the future. Keep Routt Wild would like to offer at this time that we organize a volunteer effort to re-brush these trails, in coordination with the USFS and other organizations.

OHV TRAILS

We support all the OHV trails south of US40 (Trails 15, 16, 17), as well as Trail #13 and #4 to the north. We also support the USFS' decision to remove the OHV trail previously routed to the north of US40 that encroached into the Long Park Colorado Roadless Area. However, we do have a significant issue with one trail, Trail #10. That connector would encourage through traffic from the north in an area that is elk summer range. Besides the habitat fragmentation that would result, there is a significant risk that the increased traffic would push elk onto nearby agriculture lands in Jackson County, causing depredation. Our rich summer range for elk compensates for some of the impact due to loss of winter range, as elk bring their body fat stores up in order to survive the harsh winter. Significant impacts to the summer range may change this dynamic, leading to the possible implementation of summer closures of impacted areas and the associated reduced recreational opportunities.

Due to all of these concerns, we recommend the elimination of Trail #10. At the very least, the trail should be planned and coordinated with CPW and Jackson County officials and landowners, with triggers in-place for potential summer closures.

NEW EPIC TRAIL FROM US40 THROUGH CONTINENTAL DIVIDE

The latest proposal unveils a new "epic" trail system that extends from a western location on US40, through the CDT (Continental Divide Trail), and then towards the Steamboat Ski Area or

Buffalo Pass. Keep Routt Wild can support this network with some modifications to make the path more wildlife friendly, more consistent with the characteristics of CRAs, and with fewer user conflicts. Since this is a lengthy path in total, we will make comments organized by the specific area the trail is traversing. We will start at the West Rabbit Ears Summit and follow the path east counterclockwise in our comments. We will reserve our comments for trails to the west of the summit for a later section.

NON-MOTORIZED TRAILS ALONG US40

We support a well-designed singular connected trail alongside US40 that would provide both short trail use opportunities as well as the desired longer epic trails experience.

We believe a general design constraint for such a trail network, to be compatible with the undeveloped characteristics of CRAs, is to minimize the excursion of trails into the Long Park CRA. Ideally all trails would be outside of the CRA. We note that CRAs may place additional restraints on the deployment of e-bikes and that, if the USFS desires to retain flexibility to open some trails to e-bikes in the future, moving those trails to outside the CRAs may help preserve that flexibility.

We realize that it may not be feasible to route all trails along the north side of US40 outside of the Long Park CRA. In those cases, the excursion into the CRA should be minimized, with none more than a quarter mile into the CRA. We note that some proposed trail routings along US40 violate these design rules, and the extended excursions are not needed in the creation of a singular connected trail that parallels US40. We observe that many of these trails are funded by the Steamboat Springs 2A accommodation tax with the explicit goal of attracting up to 180,000 new visitors to Steamboat Springs. As an explicit commercial operation, care needs to be exercised whenever a trail traverses a CRA, lest it impacts the undeveloped characteristic of a CRA and subsequently mandates the use of an EIS before it can be approved.

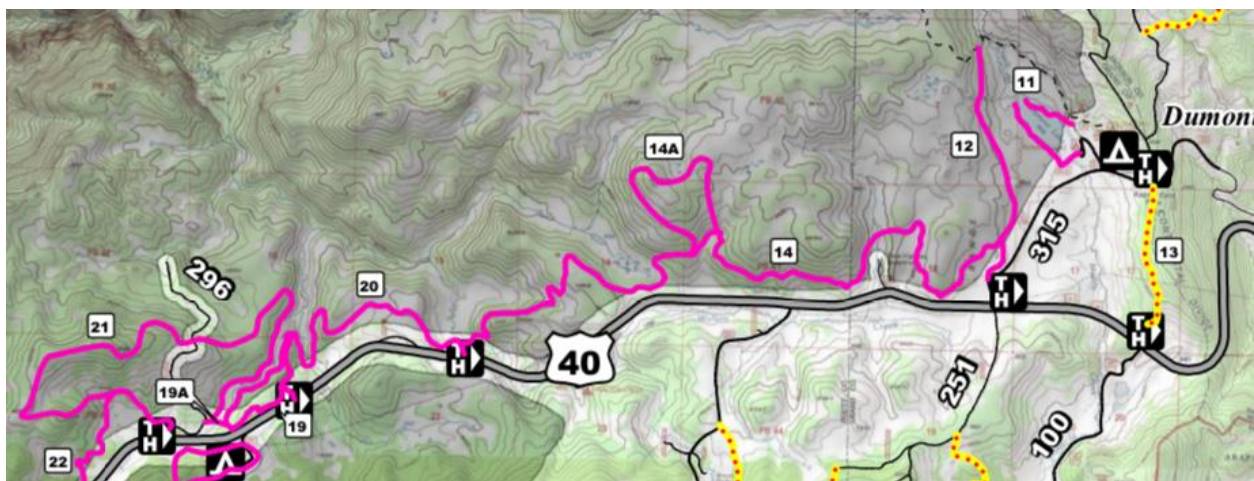


Image 1 shows the currently proposed routing of trails along the north side of US40, starting at the West Summit trailhead

Specific comments we have for the trails along the north side of US40 follows:

- Trail 21 includes routing that goes deep into the Long Park CRA. This is unnecessary for the epic trail experience. The excursions into the CRA should be significantly reduced, or eliminated altogether.
- Trail 19A is a connector trail outside the CRA, and we have no issues with this.
- Trail 19 is a commonly known as the area of Bruce's Trail. We have no issues with this trail as long as the trail is kept within the current envelope of Bruce's Trail.
- Trail 20 appears to fall within the recommended design constraints, and we have no further comments.
- Trail 14 replaced the previously proposed motorized trail. We can support this trail as long as excursions into the CRA are minimized. From the map, it is not clear that this is the case. We ask that the routing of this trail be placed as close to US40 and the edge of the CRA as possible.
- Trail 14A was newly added in this proposal. It intrudes deeply into the CRA and is unnecessary for the epic trail experience. Furthermore, it cannot be accessed just by itself from a nearby trailhead, eliminating its use as a self-contained short loop to be used by hikers or bikers. This trail should be eliminated.
- Trail 12 connects the US40 trail network to the CDT. It unnecessarily intrudes into the CRA to make the connection. The trail should be rerouted to parallel the Dumont Lake access road (315) and connect with the CDT at Dumont Lake or the Dumont Lake Campground.

CAMPGROUND TRAILS

There are new proposed trails in the Meadows Campground and in the vicinity of Dumont Lake. We have no objection to these trails. Our one comment is that there is a large wetland area to the northwest of Dumont Lake that needs to be protected. The new proposal shows the trail configuration not as a loop, but roughly paralleling Dumont Lake on two sides, with no connection through or around the wetland area. We support this concept, and ask that the length and position of these two trails be viewed critically so they do not encourage hikers and anglers to cross into the wetland area to get closer to the edge of the lake.

ALTERNATE CDT (COLORADO DIVIDE TRAIL)

The new pre-proposal shows additional multi-use trail segments (Trails 7 and 8) that “parallel” the current CDT, which is also a multi-use trail. Members of Keep Routt Wild have both hiked and biked the current trail. We have not witnessed significant user conflicts that would warrant the construction of a new trail. Unfortunately, the proposed configuration presents significant wildlife concerns and may unintentionally increase user conflict. If reducing user conflict is the goal, we will present an alternate configuration that resolves that issue, below.

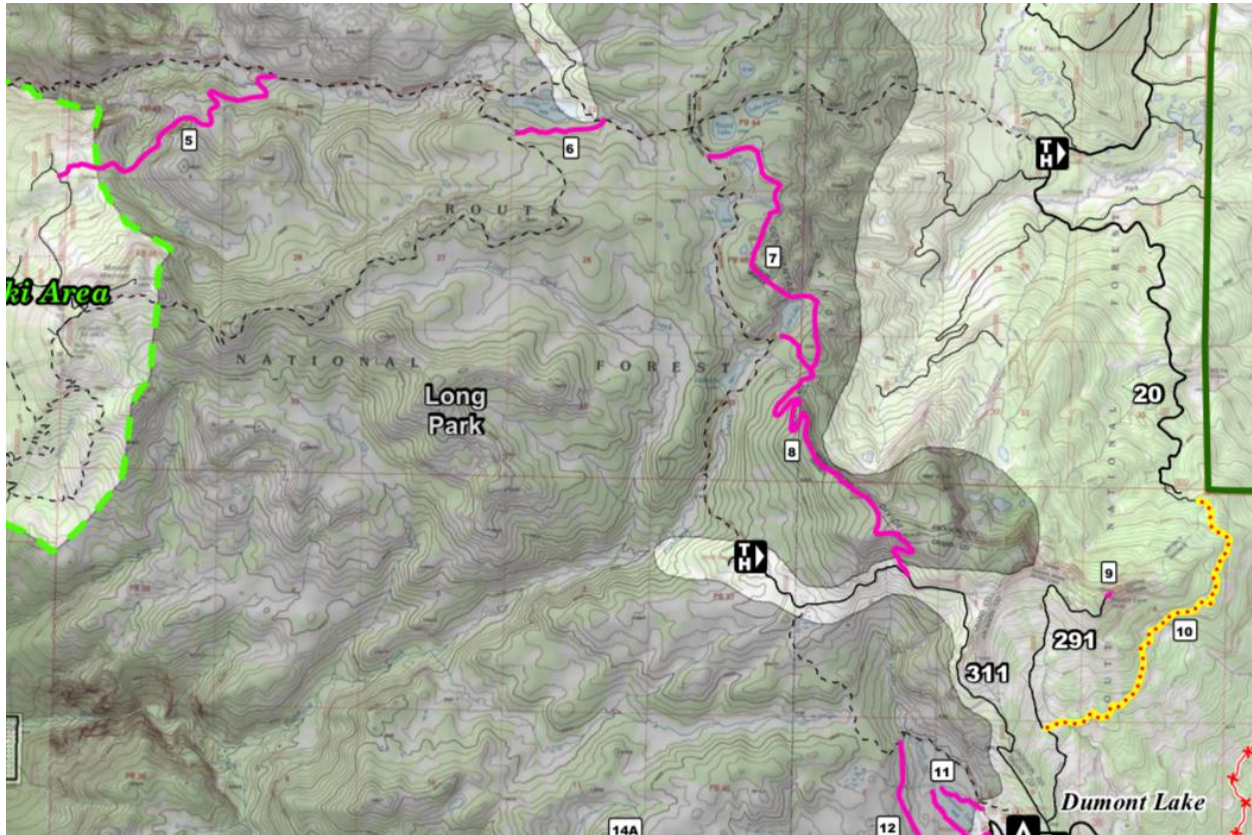


Image 2 shows proposed trails 5 through 8. Note that Trails 7 and 8 create islands that are totally surrounded by human disturbance. They also create the opportunity for recreationalists to use the loops as day excursions, increasing user conflict.

The wildlife concern comes from the two additional trails creating loops that may exclude the significant area within them as suitable habitat for wildlife. Those areas will have human disturbance on all sides. As stated by former CPW District Manager, Jim Haskins, in *Impacts of Off-Road Recreation On Public Lands Habitat* published by Colorado Backcountry Hunters and Anglers, “New mountain bike [trail] construction will likely result in permanent habitat fragmentation. Habitat fragmentation impedes the movement of wildlife across landscapes. Looped trails may create islands of habitat that may be avoided entirely by wildlife.” The link to the report is included in Attachment C. The following two images show the habitat islands formed by these loops, with the second showing the overlay with CPW-designated elk summer concentration.

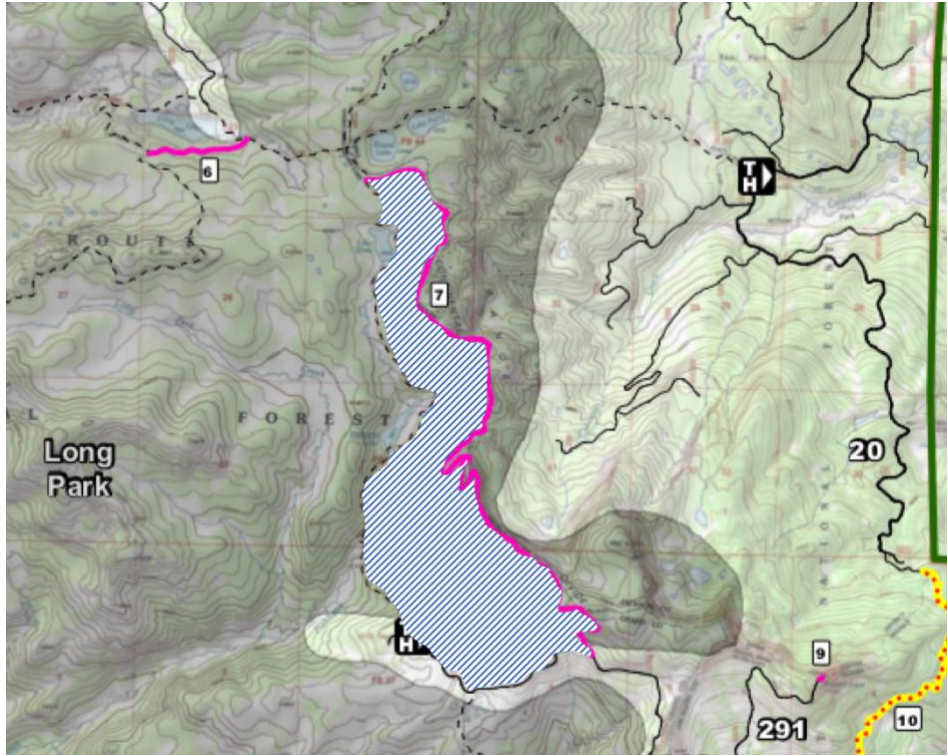


Image 3 shows the island of habitat loss that may be created by implementing two paths for the Continental Divide Trail. This will also lead to significant habitat fragmentation.

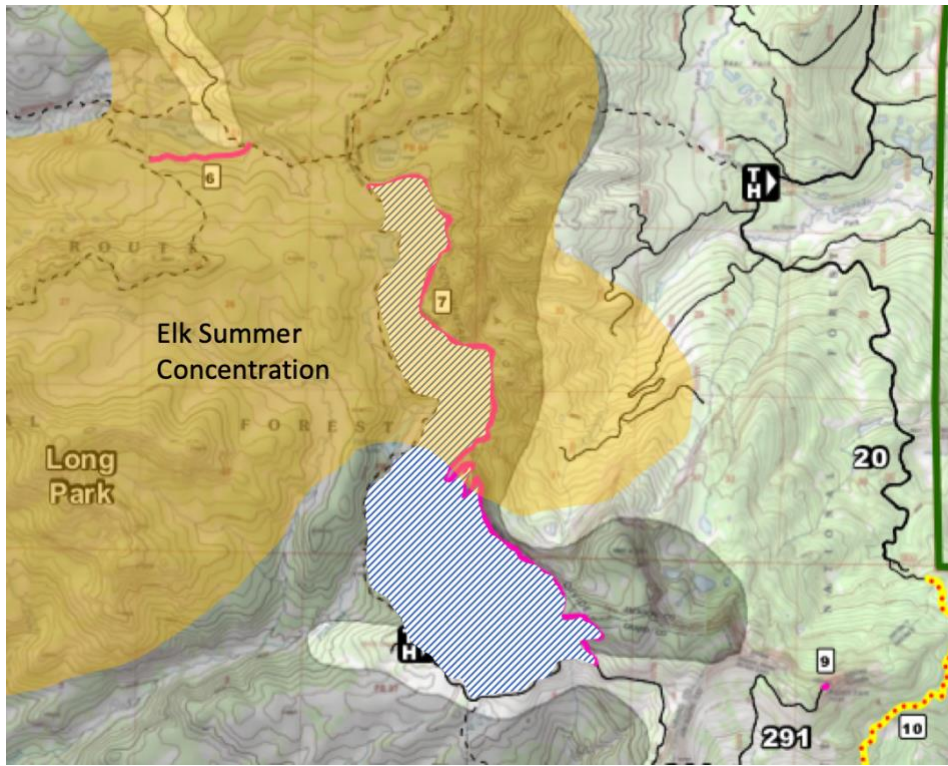


Image 4 overlays CPW-designated elk summer concentration on trails 7 and 8, showing the significant habitat fragmentation caused by the creation of habitat islands.

The concept of these additional trails is to reduce user conflict by offering two paths instead of one. However, this configuration offers a new opportunity for day recreationalists to make looped excursions from the Dumont Lake area, by taking one path in one direction, and another for returning. This increases, rather than decreases, user conflict.

We also note that Trails 7 and 8 nearly double the maintenance required for that area of the CDT, by nearly doubling the length of trails.

If reducing user conflict is the goal, all these issues can be better addressed by the creation of a single CDT with sufficient width to accommodate two-way traffic, with spurs to each lake along the way. This single path may be the current CDT, may be the proposed Trails 7 and 8, or may be some combination. However, it is not a redundant set of trails as proposed that creates loops and the associated habitat islands. To the extent that a new path for the CDT is pursued, the unused existing CDT trail would be re-brushed to its original natural state.

Doing so has many advantages:

- Maintenance is reduced, as there is just one path to be blocked by a fallen tree instead of two, and the total number of miles is reduced.

- Loops are eliminated, so wildlife needs to cross just one path of human disturbance and no islands of human disturbance are created.

- The elimination of loops also eliminates them being used by day recreationalists, and reduces the associated user conflict.

- Spurs to lakes along the path separates destination users from users traveling through, thus reducing user conflict.

A conceptual drawing of the alternative is shown below.

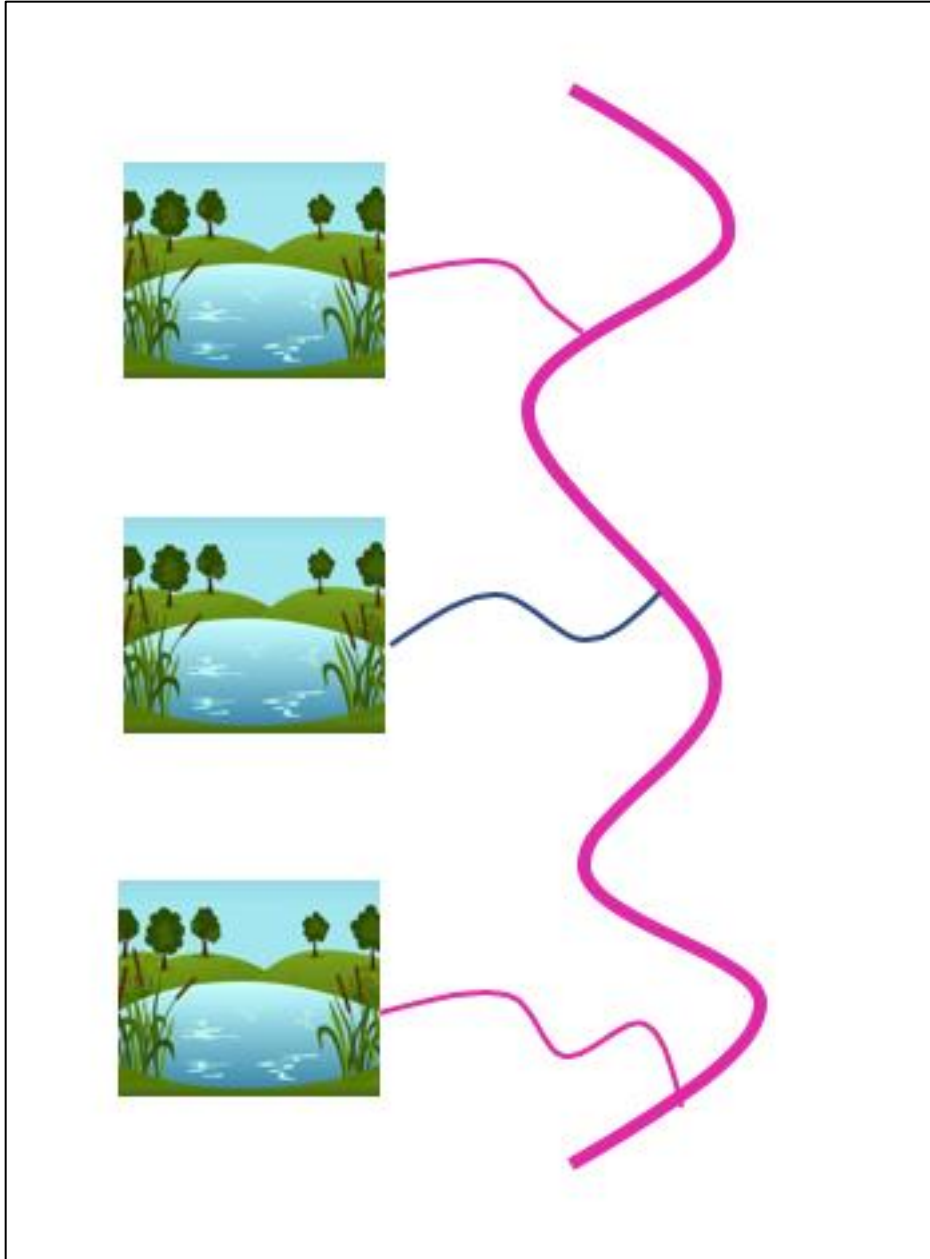


Image 5 is a conceptual diagram of an alternative to Trails 7 and 8 that shows a single Continental Divide Trail that better meets the needs of lower maintenance, lower wildlife impact, and reduced user conflict.

In summary, Keep Rout Wild opposes any redundant trails to the CDT that create loops. We would be open to a new single-path CDT as described above, once it has been shown that there is a serious user conflict with the existing route.

LONG LAKE BYPASS

Trail 6 is the Long Lake bypass. While we question the need for the bypass, the trail is sufficiently close to Long Lake that the habitat island formed is small, and we do not object to the trail.

FISH CREEK BYPASS

Trail 5 is the Fish Creek Bypass that connects the Fish Creek trail to the ski area. We believe that this trail is unnecessary, and presents a serious threat to summer wildlife.

The stated purpose of the trail is to reduce biker/hiker conflict on the lower Fish Creek Trail. This conflict is minimal, as biking the lower Fish Creek Trail is rare. It is possible to have numerous outings on the Fish Creek Trail without viewing a single biker. Many of us have never viewed a biker on lower Fish Creek Trail at all, through many years of hiking the trail. At the present time, lower Fish Creek Trail does not present a serious or even significant user conflict.

However, the addition of Trail 5 does pose serious issues by connecting to the ski area. It extends summer recreation through an area that is currently not impacted by human disturbance, thus disturbing and fragmenting habitat. The ski area operates under summer recreation restrictions, and this would dramatically increase the amount of summer recreationalists on the mountain. It creates a new trail that, due to its topography and location, may become a source of illegal trail construction.

Trail 5, the Fish Creek Bypass, should be eliminated.

TRAILS TO THE WEST OF RABBIT EARS WEST SUMMIT

The pre-proposed trails to the west of Rabbit Ears West Summit are shown below.

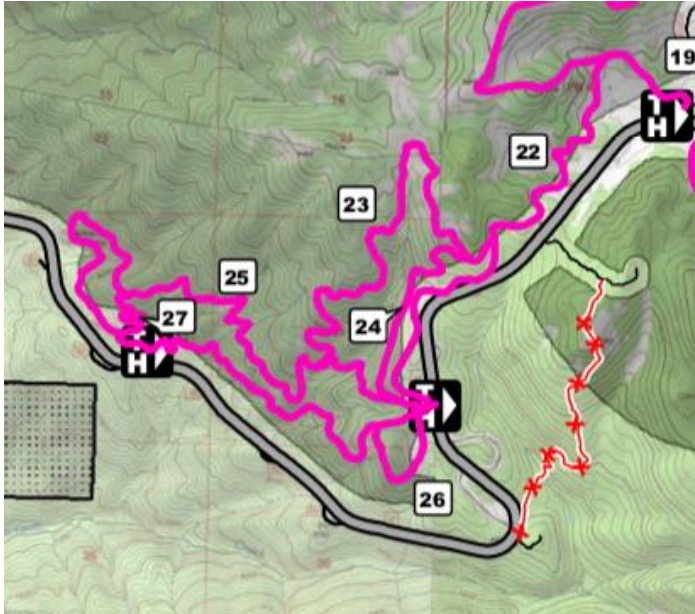


Image 6 shows trails west of Rabbit Ears West Summit, in an area commonly referred to as Ferndale.

We support the elimination of the illegal trail shown in the lower right of the figure.

However, we have serious issues with many of the other trails shown due to their extension deep into the Long Park CRA and impact on the biodiversity of the area. We note that there are serious parking constraints for these trails as well. A new trailhead and parking area would have to be constructed between the Ferndale and Rabbit Ears summit areas, and there is limited parking at the existing Ferndale trailhead.

Regarding the Ferndale area, aspen forests and the interface between aspen and evergreen are widely considered hotspots for biodiversity. A high level of plant diversity supports diverse and abundant insect, bird (especially neotropical migrant songbirds) and small mammal populations which in turn supports predator populations (both, mammalian and avian). They are also important spots for larger animals such as deer, elk, and their predators due to plant diversity. Much of the Ferndale area is designated by CPW as an elk calving area.

First, we'd like to dispel the notion that since US40 is nearby, additional human paths would not add to the disturbance. Research has shown that wildlife reacts more negatively to the human form and activities than to continuous automobile traffic. In Attachment C we have linked to the study performed in the Mud Springs Gulch area close to Vail that showed the addition to a cycling/pedestrian path alongside I-70 dramatically reduced mule deer migration in the area, and the mule deer migration resumed to its previous levels once a visual barrier had been placed on both sides of the pedestrian/cycling path. This is in spite of the mule deer being able to observe all four lanes of I-70 traffic even after the visual barrier was installed. This is

consistent to the very first radio-collared studies of elk (Ward et al., also linked in Attachment C) near Pole Mountain, just north of I-80 in Wyoming. They found that humans on foot or vehicles coming to a stop produced more reaction than continuously moving automobiles.

Elk Production Areas

Many of the proposed trails in the Ferndale area venture well into elk production (calving) areas, as shown by the image below. (Green represents CPW-designated elk production areas). This includes Trails 23, 25, and 27. One of those trails (#23) is a directional mountain bike trail for advanced riders that also unnecessarily extends into the CRA. Loop #25 also extends well into the CRA to the north and to the west. Trails 22, 24, and 26 appear to skirt the designated elk calving area, but due to the imprecise boundary fundamental in defining a calving area, may still present an impact.

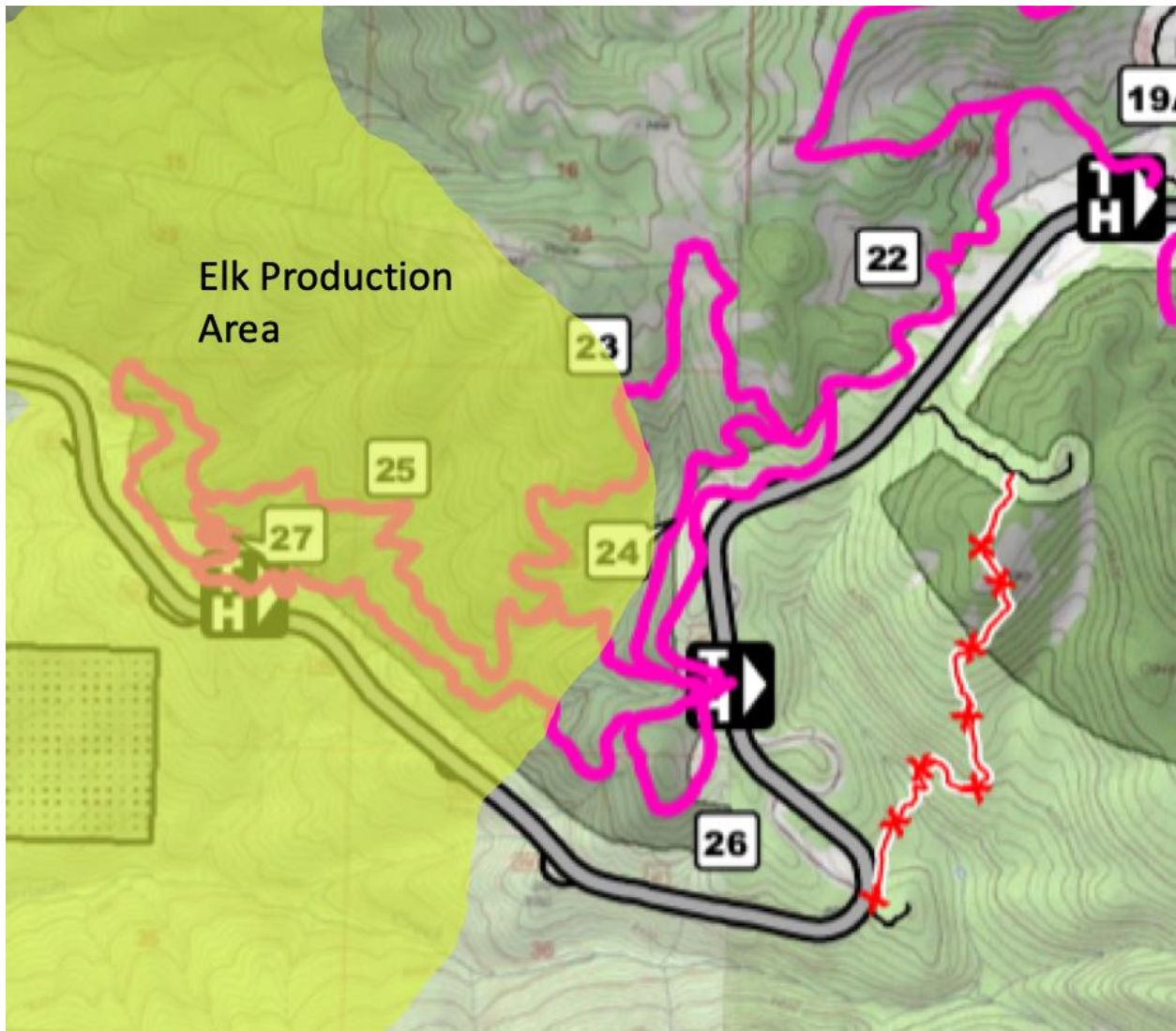


Image 7 shows CPW-designated elk production areas in the Ferndale region.

In Attachment B we outlined the scientific studies showing the large impact human disturbance in elk calving areas has on calf mortality. We also showed that a large portion of calves, perhaps a majority, are impacted by a 15 June opening date. The research suggests a 1 July opening date or later for all trails through elk production areas. However, our local track record of trail closure enforcement is not good. Enforcement is further complicated in this case by the layout of these trails as an interconnected mesh network, allowing multiple ways to access the closed area. With the current layout, it is simply not possible to enforce a trail closure from the trailheads. Even if the two trailheads west of Rabbit Ears West Summit are marked “Closed”, the closed trails are accessible from the West Summit Trail #22.

Trail Density

Trails 23, 24, 25, 26, and 27 exist in an area approximately 1.5 miles square, or about 2.25 square miles, and total 10.13 miles in length. That area also includes a portion of trail 22, bringing the total trail mileage in that small area to approximately 11 miles, resulting in a density of 4.9 miles of trails per square mile. This is a very high trail density to be considered within a CRA. The concentrated use in this area is problematic due to USFS zoning, retaining the undeveloped character of the CRA, and wildlife concerns. Furthermore, the existing parking at the Ferndale trailhead is limited, and many of the trails require the proposed new trailhead on US40 between the Ferndale trailhead and Rabbit Eras West Summit.

For all of the above reasons, we believe the trails west of the West Rabbit Ears Summit should be eliminated.

SEASONAL AND DAILY CLOSURES

In Attachment B we’ve outlined the research that shows that the opening date after an elk calving season closure should be no sooner than 1 July. Even then, this form of mitigation lowers, but does not eliminate, the impacts due to human disturbance. A study of 190 elk calves born in northwest Colorado (Byrne 1990) showed that 37 of them were born between 15 June and 4 July, leading to 19% of elk calves potentially impacted even with a closure date through 1 July. In addition to setting the actual date, there needs to be a credible enforcement plan with identified methods and resources for any new trails that intrude into productivity areas.

We also note that wildlife takes respite in darkness. Activities that include night hiking, running, biking, or ATV use intrude on this time that wildlife is normally undisturbed. The evening hours are particularly important, as this is the time of most human nighttime trail activities and also the time that wildlife may emerge to feed again. We suggest that the USFS look at placing restrictions on nighttime use. We note that hunting is restricted to 30 minutes before sunrise to 30 minutes after sunset. This may serve as a guideline for restrictions of all mechanized use. These restrictions should not be meant to impede lawful activities such as search and rescue missions or the mandated retrieval of harvested game.

PHASING

We believe a phased approach to the trail construction is a prudent policy. This allows land and resource managers to assess the success and challenges of trails in these new areas, along with their associated policies and impacts. Our recommended phasing follows:

Phase 1:

- The elimination of the unauthorized trails
- A singular connected trail along the US40 corridor from the West Rabbit Ears Summit to Dumont Lake as outlined in our comments above
- All OHV trails except for #10
- Trails in the vicinity of the Meadows CG and Dumont Lake

Phase 2:

- A re-designed single-path Continental Divide Trail as outlined in the comments above

Keep Routt Wild has documented that this trail should only go forward once it has been shown that there is a serious user conflict with the existing route. We also ask that the CPW-sponsored studies on the impact of recreation on elk be completed before Phase 2 or Phase 3 begins.

Phase 3:

Keep Routt Wild has raised serious concerns about Trails #5, #10, and trails west of the Rabbit Ears Summit known as the Ferndale area. We've asked that the USFS not proceed with these. However, if the USFS does proceed with any of these trails, it is important that they do so using a pre-approved, mandatory protocol that requires:

- A. Use of science-based quantitative criteria for measuring physical habitat, soils, visual quality, wildlife, and/or other resource values;
- B. Baseline monitoring of criteria for those parameters;
- C. Post-trails monitoring under Phase 1 and Phase 2 for measurable changes to those criteria; and
- D. Satisfaction of identified performance indicators supporting non-significance findings from Phase 1 and Phase 2 as a prerequisite to "on-ramps" for additional trails development.

We believe Colorado Parks and Wildlife expertise should be utilized by the Forest Service in determining how best to define the resource performance criteria, both in terms of establishing a monitoring baseline and the subsequent performance evaluation, to ensure that such criteria are satisfied.

CONCLUSION

In this Attachment, Keep Routt Wild has outlined a trail network that increases recreational opportunities while protecting habitat and wildlife. It also keeps the integrity of the CRA roadless characteristics. We believe that Mad Rabbit trails may meet the requirements for a Finding of No Significant Impact if the trails configuration is refined in the manner outlined in this attachment, and by following the associated phasing.

ATTACHMENT B - Trail Closures and Enforcement

There are a number of proposed trails within CPW-designated Elk Production Areas in the preliminary proposed action for the Mad Rabbit Trails Project. This addendum uses wildlife research studies to conclude:

- Human disturbance has a very large impact on elk calf mortality during calving periods
- The largest proximate cause of elk calf mortality, when disturbed, is predation
- There are two sensitive times for disturbance- up to the time of birth, and post-birth when elk calves use a “hiding” strategy as a tactic against predation
- The distribution of birth dates is determined by the date an elk cow is bred, combined with the distribution of gestation time. Most cows are bred during the first estrus, but a significant minority are bred during the second estrous period.
- If bred during the first estrus, the birth date distribution is roughly 1 June +/- 14 days.
- If bred during the second estrus, the birth date distribution is delayed 19-25 days, resulting in 20 June +/- 14 days
- Elk calves employ the hiding strategy for approximately 14 days before joining nursery herds.
- The critical disturbance window is the sum of the hiding period plus the birth date.
- In order to effectively protect elk calves, trail and area closures in elk production areas must be extended to or past 1 July.

This addendum will also look at alternatives to trail closures, the need for enforcement, and techniques for higher compliance to trail closures.

The impact of human disturbance during elk calving seasons

Elk production areas are problematic due to the high impact human disturbance has on elk calf mortality as demonstrated by CSU researchers Gregory Phillips and William Alldredge in a paper in the Journal of Wildlife Management in 2000. This study, performed in Eagle County, showed that calf/cow ratios declined by approximately 40% (from 64.6 calves per 100 cows to 39.8 calves per 100 cows) as a result of human disturbance during the calving season. Reproduction levels during the treatment period were determined insufficient to maintain a stable elk population. The second half of the study involved removing the human disturbance component. With the human disturbance removed the calf/cow ratios rebounded to their pre-treatment levels.

Reproductive Success of Elk Following Disturbance by Humans During Calving Season

(Phillips and Alldredge 2000)

<https://www.emwh.org/pdf/elk/Reproductive%20success%20of%20elk%20following%20disturbance%20by%20humans%20during%20calving%20season%202000.pdf>

Elk Reproduction Response to Removal of Calving Season Disturbance by Humans

(Shivaley et al 2005)

https://www.jstor.org/stable/pdf/3803346.pdf?seq=1#page_scan_tab_contents

Predation as the primary proximate cause of elk calf mortality

With just over 8 disturbances per cow elk resulting in nearly 40% fewer surviving calves, each disturbance averaged nearly 5% probability of the death of a calf. The researchers added, “We speculate that predation may have been the primary proximate factor in reducing calf/cow proportions on Beaver Creek during treatment years.” This is consistent with previous research that showed that disturbed calves move greater distances than undisturbed calves (Kuck et al. 1985). It is also consistent with studies reporting predation as the primary proximate factor of mortality of radiocollared neonatal elk calves (Bear 1989, Schlegel 1976, Singer et al. 1997).

Elk calf hiding strategy

To combat predation, elk calves exhibit a survival trait called the “hiding” or “hider” strategy after birth. They are scentless and remain stationary while the mother forages for food. This is their primary defense against predation. According to the US Forest Service FEIS summary of elk (*cervus elaphus*), “Pregnant cows leave the herd in spring several days prior to parturition. After giving birth, the cow and calf remain in proximity of, but secluded from, the main herd for several days to several weeks (the “hiding period”). “

The Journal of Wildlife Management published a research article titled Annual Elk Calf Survival in a Multiple Carnivore System (Eacker et al. 2016) that further delineated the key periods of a calf’s life. “For summer analysis, we divided the time period into 3 intervals that coincided with different calf development phases: early hiding phase (0-14 days) when calves are most vulnerable, when they join nursery herds (15-18 days) and are less vulnerable to mortality, and when they continue to grow larger (>28 days; White et al. 2010)”

US Forest Service FEIS summary of *cervus elaphus*

<https://www.fs.fed.us/database/feis/animals/mammal/ceel/all.html>

Annual Elk Calf Survival in a Multiple Carnivore System

(Eacker et al. 2016)

<http://bit.ly/2Gx3wOw>

The critical disturbance window is the sum of the birth date plus the hiding period.

The term “calving season” is used in two different ways when discussing elk and human disturbance. It is often used as the actual period when most calves are born. It is also used as the time period that elk cows and calves are most prone to human disturbance, and must be protected. It is important not to confuse the two uses, as these periods are different. We will refer to these as the “birthing” period and the “disturbance” period. When looking at trail

closures as a mitigation technique, it is the latter that is important, and extends the former by the length of the hiding period, approximately two weeks.

The distribution of elk calf birth dates

Phillips and Alldredge in their 2000 study stated, "Based on estimated parturition and conception dates for elk in Colorado (Bear 1989, Freddy 1989, Byrne 1990), and a median gestation period of 255 days (Bubenik 1982:171), we expected that 80-90% of the calves would be born from 26 May to 19 June. These dates bounded our treatment period in 1996, but to increase treatment efficacy, we expanded the treatment period by 7 days in 1997 to 19 May through 19 June." This centers the birthing period at 5 June with a window of 14 days on either side. This is similar to the CPW definition of an Elk Production Area as the range occupied by cow elk between May 15 and June 15. Presumably the 10-20% of the calves born outside of the primary birthing window are either tails on the distribution or cows that were bred during their second estrus. The US Forest Service states, "The interval between estrous periods ranges from 19 to 25 days." This creates a smaller distribution of birth dates centered 19-25 days after the center of birth dates created from the first estrous period, approximately late June.

We have attached an appendix of figures and tables from Byrne 1990 that show the distribution of birth dates of NW Colorado elk over three consecutive years. We also analyzed, using that date, the percentage of elk calves that *would not be adequately protected* for each of those years using a 15 June trail opening date and either a 10-day or 14-day hiding period:

1988: $\geq 23\%$

1989: $\geq 74\%$

1990: $\geq 64\%$

Spring Calving Season Closure Summary

Altogether, the above research bounds the first estrus birthing window for elk from approximately 15 May to 15-19 June. The addition of the two-week hiding strategy window brings the disturbance window to 29 June – 3 July. Any consideration of cows bred in their second estrus brings the dates even further out into July. In summary, the bulk of the scientific research would point to a disturbance period that extends to or beyond 1 July. **When looking at trail closures to mitigate impacts due to human disturbance the opening date should be set no sooner than 1 July.**

The above analysis relies on studies to determine the birth date distribution. We observe that part of the ongoing CPW research studies in the area employ radiocollared cow elk with VITs (Vaginal Implant Transmitters) that indicate the date and location of a calf's birth. Once the number of births tracked by the study are large enough to provide a statistically accurate estimate of the date of peak parturition and the distribution, these data may be used to fine tune the locally-relevant birth date distribution. The hiding period would be added to the distribution to determine closure dates.



Image 8 Elk calf born to Elk R190 on 13 June, 2019. Image courtesy of Colorado Parks and Wildlife – Steamboat Springs.

An example of this is the recent calf born to Elk R190, tagged near Maybell, and giving birth near the Continental Divide on 13 June, 2019. It is pictured to the left. The newborn is largely sedentary for two weeks after birth, allowing researchers to approach and collar it. The mother will forage for food, often for hours, before returning to nurse the calf. The mother is at peak calorie expenditure during lactation. Disturbing the mother causes it to expend, rather than consume, needed calories. Disturbing the calf causes it to move locations, making it more susceptible to predators.

The hiding period for this elk calf is approximately through 27 June.

Alternatives to Closures

The above closure dates can be avoided by not building trails in Elk Production Areas. The Colorado State Parks Trails and Wildlife Task Force described a number of best practices when designing trails near wildlife calving areas. Indeed, Routt County Riders has published Rules of Thumb for Protecting Wildlife During Trail Development, derived from the task force's recommended practices. These Rules of Thumb may be found at <https://routtcountryriders.org/2019/03/01/rules-of-thumb-for-protecting-wildlife-during-trail-development/>

Three of the points published by Routt County Riders are very pertinent:

- Either avoid wildlife breeding areas or close trails through them at the times such wildlife are most sensitive to human disturbance.
- If there won't be sufficient resources to enforce a trail closure during wildlife-sensitive seasons, consider rerouting the trail through another area.
- Don't depend on management to resolve wildlife conflicts that can be avoided by careful alignment in the first place.

The trails in the lower area of Ferndale (#23, 25, 27) are in a CPW-designated Elk Production Area, and should be viewed through this prism. Locally, we have a poor track record of trail closure enforcement. Points 2 and 3 would indicate that we should not be constructing trails in that area unless there is a new and credible enforcement mechanism. However, this is made

more difficult due to the interconnected mesh trail network being proposed in that area. This leads to multiple points of entry away from trailheads. As it stands, it is not practical to enforce trail closures in this area. **These trails should either be redesigned so they are accessible from a single trailhead, re-routed to be outside of an Elk Production Area, or eliminated.**

Enforcement

Winter and spring wildlife closures only help if the closures are rigorously enforced. Due to the wide areas needing to be addressed, enforcement is logistically difficult. The significant number of tracks observed near trailheads during winter and spring closures are evidence that the closures are routinely violated. We believe that no new trails should be constructed that require closures, unless there is a credible new enforcement mechanism with funding and other resources dedicated to their enforcement.

Techniques for higher compliance to trail and area closures

The best enforcement mechanism would be to have dedicated enforcement officers monitoring trail use during winter and spring closures. Additionally, the construction and signage at a trailhead could be used to help enforcement by informing and deterring potential violators. Below is a photo of a trailhead on USFS land in Eagle County showing a gate, a clear sign, and a volunteer trail ambassador at the trailhead. **We recommend that all access points be gated, signed, with staffing to turn away potential violators.**



Image 9 shows a trailhead at a US Forest location in Eagle County.

Trail closures are not the only enforcement issue. Keeping motorized vehicles out of trails dedicated to non-motorized use is another. E-bikes (electronic bikes that include an electric motor) have the potential to create a wider disturbance area than that of either a hiker or mountain biker. This is due to e-bikes having a disturbance window width from the trail at least that of mountain bikes, but with the potential of higher speeds and distance from each use. Multiplied together, this creates a larger disturbance area than a non-motorized vehicle. E-bikes are widely available for sale or rent in Steamboat Springs. Their growing popularity leads to the need of specific enforcement and signage. Below is a sign from Mt. Hood National Forest announcing the prohibition of e-bikes. **We recommend that similar signs be posted at each trailhead at non-motorized trails.**



Image 10 shows a sign at Mt. Hood National Forest indicating the prohibition of e-bikes

Appendix to Attachment B

The following Figures and Table comes from Byrne 1990 study of parturition dates of elk in NW Colorado over three years, 1988 to 1990.

Table 3. Parturition dates from elk in NW Colorado - 1988
1990.

| Date | 1988 | | 1989 | | 1990 | | Total | |
|----------------|------|------|------|------|------|------|-------|------|
| | No. | % | No. | % | No. | % | No. | % |
| May 1-5 | | | | | | | | |
| May 6-9 | | | | | | | | |
| May 11-15 | 1 | 3% | | | 1 | 1% | 2 | 1% |
| May 16-20 | 2 | 6% | | | 1 | 1% | 3 | 2% |
| May 21-25 | 3 | 8% | | | 3 | 3% | 6 | 3% |
| May 26-30 | 9 | 25% | 6 | 18% | 4 | 3% | 19 | 10% |
| May 31 - Jun 4 | 13 | 36% | 3 | 9% | 21 | 18% | 37 | 19% |
| Jun 5-9 | 5 | 14% | 12 | 35% | 25 | 21% | 42 | 22% |
| Jun 10-14 | | | 7 | 21% | 29 | 24% | 36 | 19% |
| Jun 15-19 | 1 | 3% | 1 | 3% | 16 | 13% | 18 | 9% |
| Jun 20-24 | 2 | 6% | | | 5 | 4% | 7 | 4% |
| Jun 25-29 | | | 1 | 3% | 6 | 5% | 7 | 4% |
| Jun 30 - Jul 4 | | | 2 | 6% | 3 | 3% | 5 | 3% |
| Jul 5-9 | | | | | 2 | 2% | 2 | 1% |
| Jul 10-14 | | | 1 | 3% | | | 1 | 1% |
| Jul 15-19 | | | 1 | 3% | | | 1 | 1% |
| Jul 20-24 | | | | | | | | |
| Jul 25-29 | | | | | | | | |
| Jul 30 - Aug 3 | | | | | | | | |
| Aug 4-8 | | | | | | | | |
| Aug 9-13 | | | | | | | | |
| Aug 14-18 | | | | | | | | |
| Aug 19-23 | | | | | | | | |
| Aug 24-28 | | | | | 2 | 2% | 2 | 1% |
| Aug 29-Sep 2 | | | | | 2 | 2% | 2 | 1% |
| Sep 3-7 | | | | | | | | |
| Sep 8-12 | | | | | | | | |
| | 36 | 100% | 34 | 100% | 120 | 100% | 190 | 100% |

The above table is represented graphically below. It should be noted that different years can have a different distribution. The median date of parturition for the three years are:

1988: May 31-June 4

1989: June 5-9

1990: June 10-14

Percentage of elk calves not adequately protected assuming a 14-day hiding period and a June 15 trail opening date:

1988: $\geq 23\%$

1989: $\geq 74\%$

1990: $\geq 64\%$

Note that even if the hiding period is reduced from 14 days to 10 days, the above percentages remain the same since they do not include any calves born between 31 May and 4 June.

Also note that of the 190 elk calf birthdates recorded, 37 of them were born between 15 June and 4 July. This leads to 19% of elk calves potentially impacted even when the area closure is extended to 1 July. This fact shows that mitigation through area closures does not eliminate the impact of human disturbance, and that the preferred solution is to avoid the area altogether.

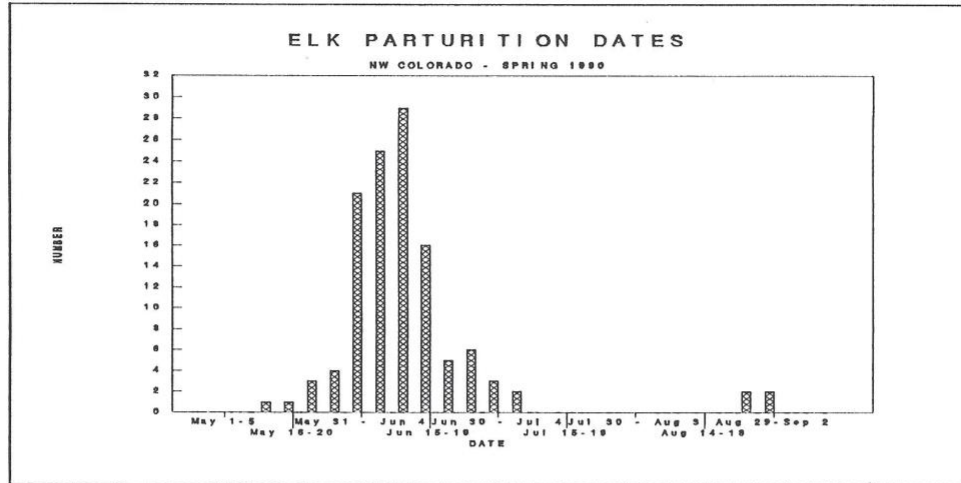


Figure 4. Estimated elk parturition dates for elk harvested in NW Colorado during the winter of 1989-90.

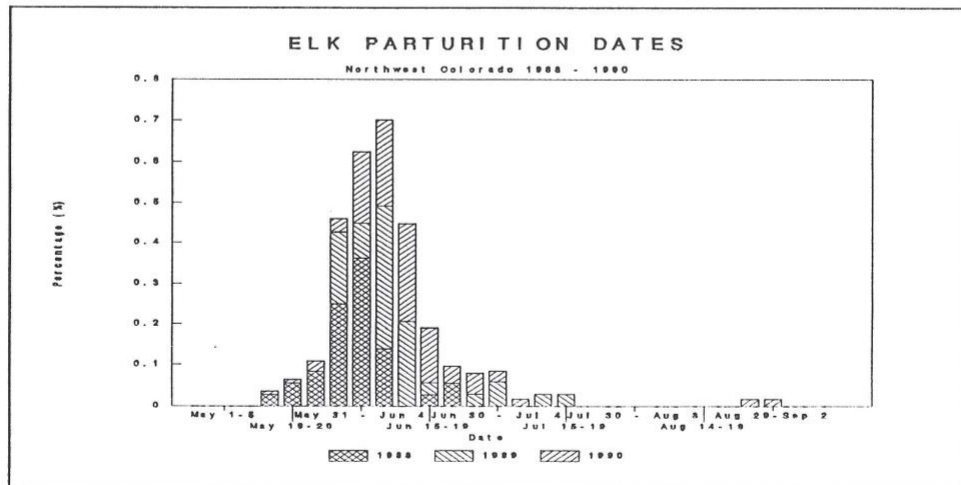


Figure 5. Estimated elk parturition dates for elk harvested in NW Colorado during the previous 3 winters - 1987-88, 1988-89 & 1989-90.

ATTACHMENT C – Relevant Studies and Articles

References to relevant studies and literature addressing impacts associated with the development and use of trails.

ELK PRODUCTION AREAS AND IMPACTS DUE TO HUMAN DISTURBANCE

Reproductive Success of Elk Following Disturbance by Humans During Calving Season

(Phillips and Alldredge 2000)

<https://www.emwh.org/pdf/elk/Reproductive%20success%20of%20elk%20following%20disturbance%20by%20humans%20during%20calving%20season%202000.pdf>

Elk Reproduction Response to Removal of Calving Season Disturbance by Humans

Shivaley et al. 2005

https://www.jstor.org/stable/pdf/3803346.pdf?seq=1#page_scan_tab_contents

US Forest Service FEIS summary of cervus elaphus (elk)

<https://www.fs.fed.us/database/feis/animals/mammal/ceel/all.html>

Annual Elk Calf Survival in a Multiple Carnivore System

Eacker et al. 2016

<http://bit.ly/2Gx3wOw>

Estimated Parturition and Conceptions Dates of Elk

-Bear 1989

-Freddy 1989

-Byrne 1990

Gestation Periods of Elk

-Bubenik 1982:171

Rules of Thumb for Protecting Wildlife During Trail Development

Routt County Riders

<https://routtcountyriders.org/2019/03/01/rules-of-thumb-for-protecting-wildlife-during-trail-development/>

Planning Trails With Wildlife in Mind – A Handbook For Trail Planners

Trails and Wildlife Task Force, Colorado State Parks, September 1998

<https://cpw.state.co.us/Documents/Trails/TrailsPlanningPrimer.pdf>

WILDLIFE IMPACT DUE TO RECREATIONAL USERS

These studies look at the “zone of influence” (ZOI) of differing recreational activities on wildlife. The ZOI may extend for some distance beyond the actual activity and will vary depending on habitat composition, topography, and a species’ tolerance of human disturbance. The immediate disturbance causes an animal to expend calories instead of consuming calories, either by fleeing or an elevated heartrate. The impacted area leads to habitat loss and fragmentation.

Effects of Off-road Recreation on Mule Deer and Elk

Wisdom et al. 2004

https://www.fs.fed.us/pnw/pubs/journals/pnw_2004_wisdom001.pdf?fbclid=IwAR323w8YN5MH1LTG35QL_eqPEXqBgy06Q3XbKlvehV_Tn8SB7T0j5DQJm8w

Elk responses to trail-based recreation on public forests

Wisdom et al. 2018

https://www.fs.fed.us/pnw/pubs/journals/pnw_2018_wisdom001.pdf

Behavioral Responses of North American Elk to Recreational Activity

Naylor et al. 2008

<https://pubag.nal.usda.gov/pubag/downloadPDF.xhtml?id=28480&content=PDF>

Naturalist Says Outdoor Recreation Can Have Huge Impacts on Wildlife

Todd Wilkinson, Mountain Journal March 2019

<https://mountainjournal.org/mountain-biking-and-hiking-with-dogs-impacts-wildlife>

Effects of recreation on Rocky Mountain wildlife: A Review for Montana

Montana Chapter of The Wildlife Society. Joslin and Youmans, coordinators, 1999

https://www.researchgate.net/publication/242715856_G_Joslin_and_H_Youmans_coordinator_s_1999_Effects_of_recreation_on_Rocky_Mountain_wildlife_A_Review_for_Montana_Committee_on_Effects_of_Recreation_on_Wildlife_Montana_Chapter_of_Wildlife_Society_307_pp

Other:

-Goldstein et al. 2010

-Keller and Bender 2007

-Taylor and Knight 2003

-Papouchis 2001

-Joslin and Youmans 1999

Comparison of Human Disturbance Due to Highways vs. Trails

There is a common bias for humans to project their own tolerance for disturbance to be the same as for wildlife. Most common of these is to perceive a highway as causing more disturbance to wildlife than a pedestrian or bike trail. However, studies have shown that deer and elk perceive disturbances differently. Elk and deer are more likely to tolerate a continuous disturbance from a highway than they are from human activity. Cars act as a mobile blind, hiding the human form, scent, behavior, and pets. A key study below is the construction of a bike/pedestrian path alongside I-70 west of Vail. The location included an underpass previously constructed for migrating mule deer under I-70. The pedestrian path paralleled I-70, and went over the migration tunnel as did the four lanes of the interstate highway. However, mule deer were reluctant to use the tunnel if cyclists were present on the path. The solution to bring the migration back to the previous levels was to build an opaque screen to shield the path users from the vision of the mule deer. Note that only the path was shielded- the mule deer still saw all four lanes of I-70 traffic.

Mud Springs Gulch Deer Underpass Study, Conducted for Town of Vail

Allredge and Phillips 2000

https://www.eaglecounty.us/uploadedFiles/ECG_Website/ECO_Trails/Mud%20Springs%20Gulch%20Deer%20Study_red.pdf

Mitigating Disturbance of migrating mule deer caused by cyclists and pedestrians at a highway underpass near Vail, Colorado

Phillips et al. 2001

<https://escholarship.org/uc/item/2p6340b0>

This is not unique to mule deer. In one of the very first telemetered elk experiments, researchers Ward and Cupal placed heart rate monitors on elk who grazed near Pole Mountain, just north of I-80 in Wyoming. They found that close-range gunshots, vehicles coming to a stop, and humans on foot produced more reaction than moving automobiles, motorbikes, and low flying aircraft.

Telemetered Heart Rate of Three Elk as Affected by Activity and Human Disturbance

Ward and Cupal 1979

<http://ctva-ohv.com/docs/Issues/Articles/Measured%20Elk%20Heart%20Rate%20for%20Motorized%20vs%20NonMotorized.pdf>

Impact of Recreation on Wildlife across Colorado and the West

Are Trails in Colorado Harming Wildlife?

Kelly Bastone, 5280 Magazine

<https://www.5280.com/2019/07/are-trails-in-colorado-harming-wildlife/>

Impact of Off-Road Recreation on Public Lands Habitat

Colorado Backcountry Hunters and Anglers 2019

https://www.backcountryhunters.org/colorado_bha_report_impacts_of_off_road_recreation_on_public_lands_habitat

Can Greater Yellowstone's Wildlife Survive Industrial Strength Recreation?

Todd Wilkinson, Mountain Journal March 2019

<https://mountainjournal.org/can-wildlife-survive-industrial-strength-recreation>

Eagle County officials concerned by wildlife population declines

Vail Daily 2018

<https://www.vaildaily.com/news/eagle-county-officials-concerned-by-wildlife-population-declines/>

Where has all the wildlife gone: CPW officials cite 50 percent drop in Eagle Valley's elk population

Vail Daily 2018

<https://www.vaildaily.com/news/where-has-all-the-wildlife-gone-cpw-officials-cite-50-percent-drop-in-eagle-valleys-elk-population/>

Avon photographer explores why the wildlife seem to be vanishing in Eagle County

9News 2019

<https://www.9news.com/article/life/style/colorado-guide/avon-photographer-explores-why-the-wildlife-seem-to-be-vanishing-in-eagle-county/73-0afe78c7-39c9-4c29-a9dd-2fd7677862e3>

Matt Holloran: Collaboration, thoughtfulness needed for sustainability

Matt Holloran, PhD 2019

<https://www.steamboatpilot.com/opinion/matt-holloran-collaboration-thoughtfulness-needed-for-sustainability/>

Human Perceptions of Their Impact on Wildlife

Many recreational users state that they have a low impact on wildlife. A study by Taylor and Knight compared visitor perceptions to the actual disturbance data.

“We surveyed 640 backcountry trail users on Antelope Island to investigate their perceptions of the effects of recreation on wildlife. Approximately 50% of recreationists felt that recreation was not having a negative effect on wildlife. In general, survey respondents perceived that it was acceptable to approach wildlife more closely than our empirical data indicated wildlife would allow. Recreationists also tended to blame other user groups for stress to wildlife rather than holding themselves responsible.”

“The results of both the biological and human-dimensions aspects of our research have implications for the management of public lands where the continued coexistence of wildlife and recreation is a primary goal. Understanding wildlife responses to recreation and the “area of influence” of human activities may help managers judge whether wildlife populations are experiencing stress due to interactions with humans, and may aid in tailoring recreation plans to minimize long-term effects to wildlife from disturbance. Knowledge of recreationists’ perceptions and beliefs regarding their effects on wildlife may also assist public lands managers in encouraging positive visitor behaviors around wildlife.”

Wildlife Responses to Recreation and Associated Visitor Perceptions

Taylor and Knight 2003

http://staff.washington.edu/kwolf/Archive/Classes/ESRM304_SocSci/304%20Soc%20Sci%20Lab%20Articles/Taylor_2003.pdf



August 14, 2019

Hahns Peak-Bears Ears Ranger District
Attn: Mad Rabbit Trails Project
925 Weiss Drive
Steamboat Springs, CO 80477

Sent via email: comments-rm-medicine- bow-routt-
hahns-peak-bears-ears@fs.fed.us

Re: Mad Rabbit Trails Project

Dear Ms. Umphries,

Keep Routt Wild would like to submit a second set of comments regarding the preliminary proposed action for the Mad Rabbit Trails Project dated July 16, 2019. We are submitting these comments in light of new information and these comments are in addition to, not in place of, our initial comments dated August 9, 2019.

The new information is a need analysis and evaluation performed by IMBA (International Mountain Bicycling Association) in September 2017, titled IMBA Ride Center Report, Steamboat Bike Town Ride Center. The report is attached in its entirety. IMBA assesses a location's trail systems and services and gives a rating to the locality. Equally important, IMBA identifies the major unmet needs of a location, and calls out specific improvements to improve the rating. This report was generated for the local IMBA chapter, Routt County Riders, and shared with the Steamboat Springs 2A Committee, where it became public.

This is important to the Mad Rabbit Trails Project because it provides an independent and professionally generated assessment of needs from this particular user perspective, in this case mountain bikers. By itself, the professed needs of any one user group cannot determine developments in our US Forests. However, when the US Forest Service balances various tradeoffs in its evaluation, this report can be used as an independent analysis of need.

Steamboat Springs is designated as a Silver Level IMBA Ride Center in the report. This in itself is quite an achievement, and indicates the current set of trails and services in the area are very good. IMBA identified eight specific needs where Steamboat Springs could improve. We analyzed those needs against the proposed Mad Rabbit Trails, and generated a chart below showing where the proposed trails would meet the identified need. The column to the left contains a representative quote from the report, while the rightmost column is our assessment. The needs are listed in the order that they appeared in the report, and not by priority.

Mad Rabbit trails did not satisfy a single need identified by IMBA.

KEY IMBA SUGGESTED IMPROVEMENT

SOLVED BY MAD RABBIT?


| | |
|---|------------|
| 1. "No lodging that caters specifically to bicyclists" | No. |
| 2. "No Mountain Bike shuttle service" | No. |
| 3. "Emerald Mountain Trails can feel repetitive... Make an effort to augment and enhance some of the older trails..." | No. |
| 4. "Steamboat Resort Bike Park trails are too long for beginners" | No. |
| 5. "Beginner Trails around town push riders comfort level" | No. |
| 6. "Very few truly Beginner to Intermediate Rides... Develop new beginner trails close to town and optimize loop opportunities" | No. |
| 7. "Lower NPR Green is not as easy as it should be" | No. |
| 8. "The Continental Divide Trail doesn't connect to town with singletrack via Buffalo Pass" | No. |

The IMBA report clearly identifies the major trail needs as more beginner trails close to town. It also identifies key missing services in the Steamboat Springs area. While Need #2 identifies the need for a shuttle service, and the US Forest Service has proposed authorizing a shuttle service through a special use permit, no trails need to be constructed to meet this need. Need #8 is the only identified need in the entire list outside of town. We would note that, in fact, the CDT does connect to town through the ski area, and is accessible from both Dumont Lake and Buffalo Pass.

This report clearly shows some unmet needs for the mountain biking community in Steamboat Springs. But it also shows that the preponderance of needs cannot be met by Mad Rabbit, or even a modified Mad Rabbit. These must be met elsewhere. In all eight cases, the need may be met without any excursion into Colorado Roadless Areas. We ask the US Forest Service to take the IMBA report into account when balancing need with impact.

Yours sincerely,
Keep Routt Wild

Larry Desjardin
President of the Board

From: Larry Desjardin larrydesjardin@yahoo.com 
Subject: Mad Rabbit Trails Project – Urgent New information
Date: February 22, 2022 at 7:30 AM
To: Woodbridge, Michael -FS michael.woodbridge@usda.gov
Cc: Brendan Kelly brendan.kelly@usda.gov, russell.bacon@usda.gov



February 22, 2022

Michael Woodbridge, District Ranger
Hahns Peak/Bears Ears Ranger District
U.S. Forest Service
925 Weiss Drive
Steamboat Springs, CO 80487-9315

Re: Mad Rabbit Trails Project – Urgent New information

Dear District Ranger Woodbridge:

We would like to make you aware of significant new information relevant to the impacts of and alternatives to the Mad Rabbit Trails Project. It is attached.

Rocky Mountain Wild and Keep Routt Wild have jointly completed a study on the impact to elk habitat from trail-based recreational activities in the Medicine Bow-Routt National Forests. Specifically, this study focused on current impacts in or around the Middle Yampa Geographical Area (MYGA) of Routt National Forest.

The study uses best available science regarding disturbance to elk, elk habitat, and elk habitat effectiveness based on disturbance band models. The results of the study raise serious concerns about the cumulative impact of recreational development in the area and compliance with the Forest Plan. As you are aware, US Forest Service planning regulations compel the responsible official to use the best available science in its decision making and implementation of actions under the Forest Plan. Furthermore, much of the impacted area is in Colorado Roadless Areas. Roadless Area Characteristic (4) includes Habitat for threatened, endangered, and sensitive species *and for those species dependent on large, undisturbed areas of land* (emphasis ours). The study shows significant compression and fragmentation of elk habitat on Colorado Roadless Areas.

While this study appraises the current state of lands in the MYGA, and not specifically the impact of the proposed Mad Rabbit Trails Project, MRTP will likely add incremental impacts beyond these. We request that the Forest Service include this letter, and the referenced study and documents in its bibliography, in the administrative record for MRTP, and address these issues in any upcoming environmental assessment. In particular, we request the EA address alternatives that may allow the Forest Service to mitigate or eliminate the impacts highlighted and that assure compliance with the Forest Plan and Colorado Roadless Rule.

Thank you for your attention to this issue.

Sincerely,

Larry Desjardin
President, Keep Routt Wild

Study:





Recreational
Disturb...sts.pdf

Press Release related to study:



Press Release -
Study...est.pdf

Keep Routt Wild
Comments on Mad Rabbit Trails Project #50917
November 23, 2022

Exhibit B:

USFS Documents Showing Mad Rabbit is Phase 2 of Larger Trails Project

From: [Slezak - DNR, Elissa](#)
To: [Kelly, Brendan T -FS](#)
Cc: kris.middledorf@state.co.us; [Bond - DNR, Kyle](#); [Dressen, Melissa A -FS](#); [Grant, Alex B -FS](#)
Subject: Re: Madrabbitt Timeline
Date: Tuesday, October 20, 2020 9:53:15 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[HPH Final Table 12-31-19.pdf](#)

Thanks everyone, it was extremely helpful to hear the background and how the proposal got to where it is today. As mentioned, attached is CPW's current HPH (High Priority Habitat) document for reference. We'll notify everyone once our updated elk SAM maps are available.

Elissa

Elissa Slezak

Northwest Region Land Use Specialist
Colorado Parks and Wildlife



P 970-509-9621 | F 970-725-6217 |
346 County Road 362, PO Box 216, Hot Sulphur Springs, CO 80451
elissa.slezak@state.co.us | cpw.state.co.us

On Mon, Oct 19, 2020 at 4:25 PM Kelly, Brendan T -FS <brendan.kelly@usda.gov> wrote:

Thanks everyone for meeting. Below is the timeline of this project as requested and most recent map.

- Madrabbitt history
 - 2013 2A lodging tax funds committed for 10 years to Steamboat Trails Alliance proposal (vote by steamboat residence)
 - 2014 FS public trails charrette to identify potential trail locations
 - 2016 Buffalo Pass trail EA completed (Phase 1)
 - Construction fall 2017-2020 completion (roughly 40 miles new trail)
 - CPW Grant for construction
 - 2017 IMBA trail assessment identifying need for more green and black trails
 - January 12, 2018 Public scoped on proposal A and B to develop a proposed action for Madrabbitt (Phase 2)
 - Total emails / letters / online comments – 420
 - <https://usfs.maps.arcgis.com/apps/MapSeries/index.html?appid=1a609dea352d49e888d497423e8714ed>
 - November 27, 2018 Keystone Policy Center hired to facilitate newly formed Routt Recreation Roundtable to talk about Madrabbitt proposal and recreation around Steamboat

- 21 diverse user groups elected by executive committee
 - 6 land management agencies
- July 16, 2019 Second Round of public scoping on a modified Proposal A to develop a proposed action
 - 277 comments
- January 2021 earliest a draft EA for public scoping would be released for updated proposal



Brendan Kelly
Recreation Staff
Forest Service

**Medicine Bow - Routt National Forests & Thunder Basin National Grassland, Hahns Peak
- Bears Ears Ranger District**

p: 970-870-2187

c: 970-210-0869

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Brendan.kelly@usda.gov

925 Weiss Drive
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Caring for the land and serving people

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Medicine Bow-Routt National Forests &
Thunder Basin National Grassland

Hahns Peak/Bears Ears Ranger District
925 Weiss Drive
Steamboat Springs, CO 80487
970-870-2299
www.fs.usda.gov/mbr



News Release

Media Contact: Aaron Voos
307-745-2323
atvoos@fs.fed.us

Forest Service Seeking Public Input on Mad Rabbit Trails Project

(STEAMBOAT SPRINGS, Colo.) Jan. 9, 2018 – Multiple platforms, including an online mapping tool, are being utilized by local Routt National Forest staff to gather public input on the projected Mad Rabbit Trails Project. The project aims to provide additional, sustainable, trail-based recreation opportunities in the Mad Creek, Rocky Peak, and Rabbit Ears Pass areas.

The District is seeking feedback on the project. Two options were derived from the Steamboat Trails Alliance proposal accepted in concept in 2013 by the Hahns Peak/Bears Ears Ranger District. The first option is designed by Forest Service staff, taking into account preliminary resource concerns and input from the 2014 trails charrette, while the second option more closely reflects the original Steamboat Trail Alliance proposal. Both ideas aim to meet the project's intent, but differ in the miles of trail proposed, proposed trail locations and uses, proposed infrastructure changes, and proposed project-specific Forest Plan amendments.

An interactive web site has been developed to provide information and to accept public feedback for this project. The site provides detailed maps which show preliminary options for trail development. Feedback can be added by clicking on a specific map location and adding input as prompted.

Interactive web site for Mad Rabbit Trails Project: <http://arcg.is/2E1gKzI>

Input will inform the development of alternatives to be analyzed for environmental effects. Feedback is most useful if concisely stated, directly related to the project, and includes supporting reasons for suggestions. Input would be most helpful in development of the project if received by Feb. 12, 2018.

The interactive web site is just one of three ways to submit feedback on the Mad Rabbit Trails Project. Input can be emailed to comments-rm-medicine-bow-routt-hahns-peak-bears-ears@fs.fed.us with "Mad Rabbit Trails Project" in the subject line. Feedback can also be mailed to: Hahns Peak-Bears Ears Ranger District, Attn: Mad Rabbit Trails Project, 925 Weiss Drive, Steamboat Springs, CO, 80487.

This project is part of a larger comprehensive trail planning effort by the Hahns Peak/Bears Ears Ranger District, the City of Steamboat Springs, and multiple partners. It is funded in part by the local 2A accommodation tax.

This request for public input comes early in the project process and is not required as part of the upcoming National Environmental Policy Act (NEPA) analysis. Rather, it is an opportunity for the U.S. Forest Service to obtain additional public input regarding the project options before developing a proposed action. No decisions have been made yet by the Hahns Peak/Bears Ears Ranger District on this project.

It is anticipated that during early 2018 a proposed action will be developed, with a subsequent draft environmental analysis on that proposal and possibly other alternatives. A formal public comment period could take place as early as summer 2018. The analysis process is anticipated to be completed in late 2018, with project implementation starting in the spring of 2019.

For additional information contact Kent Foster, kfoster@fs.fed.us or (970) 870-2142.

-USDA-

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Medicine Bow-Routt
National Forests
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National Grassland

Hahns Peak-Bears Ears
Ranger District

925 Weiss Drive
Steamboat Springs, CO
80487

970-870-2299

www.fs.usda.gov/mbr

Information in this newsletter includes:

- An overview of previous trails planning and projects (pages 1-2)
- Information on the Mad Rabbit Trails Project and its two current proposals (pages 2-5)
- Maps of Proposal A (page 4) and Proposal B (page 5)
- Information on how to provide input on the Mad Rabbit Trails Project (page 6)

Mad Rabbit Trails Project

Outdoor recreation in Steamboat Springs and the beautiful surrounding Routt National Forest is highly valued by residents and visitors alike. The desire for recreational opportunities in the area continues to grow, and while this growth is generally beneficial, it also requires some guidance and planning. The local USDA Forest Service office, Hahns Peak-Bears Ears Ranger District, along with the public and formal partners, have had ongoing dialogue about how to best plan additional trail-based recreation opportunities. As background information for understanding the proposed Mad Rabbit Trails Project, this newsletter includes an overview of associated trails planning, funding, partnerships, and the in-progress Buffalo Pass Trails Project, followed by information on the current Mad Rabbit Trails Project, which would provide additional, sustainable Forest Service trails in the Mad Creek, Rocky Peak, and Rabbit Ears Pass areas, and how to provide input on the project. An interactive web map with details on the project proposals is also available online at <http://arcg.is/2E1gKzl>.

Information on Previous Trails Planning

Steamboat Springs Amendment 2A: In November 2013, the voters of Steamboat Springs approved Amendment 2A, which reauthorized the City's accommodations tax for an additional 10 years. A majority of the funds were earmarked for trail development per the concepts presented in a proposal from the Steamboat Trails Alliance, which primarily focused on non-motorized mountain bike trails within close proximity to Steamboat Springs. Around the same time, Timberline Trail Riders, a local motorized use club, was awarded state grants for motorized trails planning. With the 2A tax funds and motorized trails grants, the need for a comprehensive trails planning effort on the District became apparent.

Trails Charrette: The District started the trails planning effort by asking for trails ideas from the public in a 2014 open house trails charrette ("gathering of ideas"). The result was an extensive list of proposals. Some of the ideas came from formally identified user groups, such as the Steamboat Trails Alliance, while other ideas were from individual members of the public. The District then ranked the ideas by 1) ability to implement, and 2) priority for implementation.

Trails Master Plan: With information gathered during the trails charrette and information from Forest Service staff, the District developed a Trails Master Plan in 2015 to guide summer motorized and non-motorized trails planning the District. The goals of the plan included 1) development of a trail system which improves the trail recreation opportunities on the District, while protecting resources; 2) to follow sustainable trail design to minimize future maintenance; 3) to accommodate the Forest Service multiple-use mission; and 4) to enhance local economic/social qualities. The trail system's future desired condition was also identified in the plan: to be within natural resource and management capacity; to provide for a full range of experiences, opportunities, and accessibility levels; and to not require additional direct maintenance or infrastructure costs to the District.

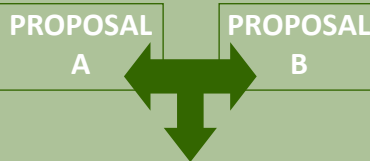
Partnerships: The District has various formal partners to assist with the trails planning effort, including Routt County Riders, Timberline Trail Riders, and the City of Steamboat Springs. These partnerships assist the District in many ways, such as by acquiring funding, contributing volunteer time, and facilitating dialogue with stakeholders and Forest visitors. Additionally, a partnership with the Yampa Valley Community Foundation has resulted in the creation of the Trail Maintenance Endowment Fund, which helps to fund local non-motorized trail maintenance.

Anticipated Project Timeline

(Current as of January 9, 2018.
Subject to change)

January/February 2018

Public input on Proposal A and Proposal B.



PROPOSED ACTION
(and possibly other Alternatives)

Summer 2018

Draft environmental analysis on proposed action and possibly other alternatives available for 30-day formal public comment period.

Fall 2018

Final environmental analysis and draft decision available. 45-day objection period.

Spring 2019

Project implementation, if approved.



Information on the In-Progress Buffalo Pass Trails Project

Buffalo Pass was selected as the first area to implement a 2A tax funded project on the District. The area, as one of the closest for access to the Forest from town, is an increasingly popular dispersed recreation hub. However, it was lacking Forest Service trails for people to enjoy the area and many illegal user-created trails, which can have negative environmental impacts, had been created instead.

After completing the environmental analysis process in 2016, as required by the National Environmental Policy Act (NEPA), the District Ranger approved adding approximately 40 miles of Forest Service trail in the Buffalo Pass area.

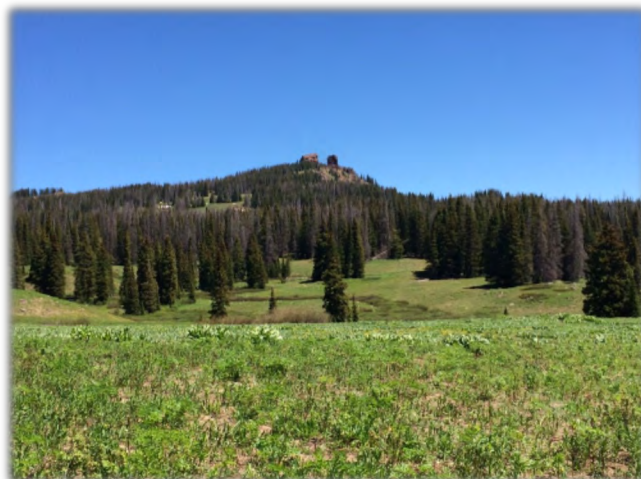
Implementation of the project began in the fall of 2016. By the end of the fall of 2017, approximately 20 miles of trail were completed by groups working in partnership with the District, including Routt County Riders, Rocky Mountain Youth Corps, and Volunteers for Outdoor Colorado. The remainder of the approved trails are anticipated to be completed in 2018.

Information on the Proposed Mad Rabbit Trails Project

With implementation of the Buffalo Pass Trails Project underway, the District is looking at the next phase of trail development with the Mad Rabbit Trails Project. The goal of the project is to provide additional trail-based recreation opportunities in an environmentally and economically sustainable manner in the Mad Creek, Rocky Peak, and Rabbit Ears Pass areas.

There are currently two proposals at this stage of project development: Proposal A and Proposal B. Both proposals were derived from the Steamboat Trails Alliance proposal accepted in concept in 2013 by the District. Proposal B more closely reflects the original Steamboat Trail Alliance proposal, while Proposal A is takes into account preliminary resource concerns and input from the 2014 trails charrette.

Both proposals aim to meet the project's goal, but differ in how this would be accomplished, as shown in the tables on page 3 and the maps on pages 4 and 5. Detailed information on the proposals is available on the project's interactive web map at <http://arcg.is/2E1qKzI>.



PLEASE NOTE

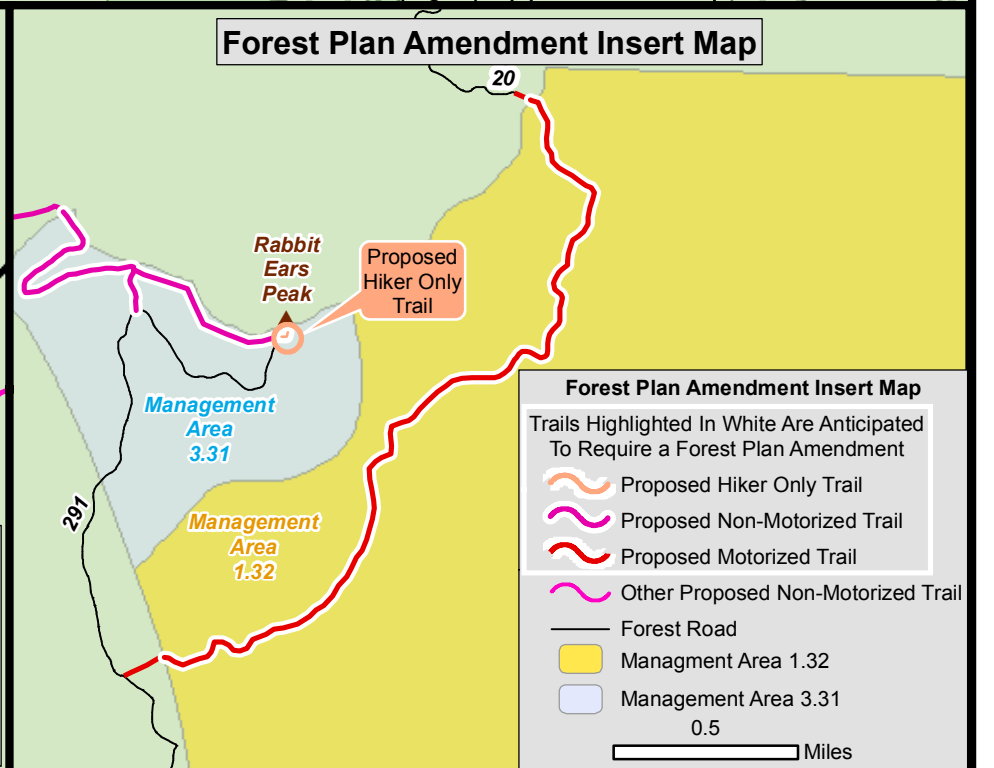
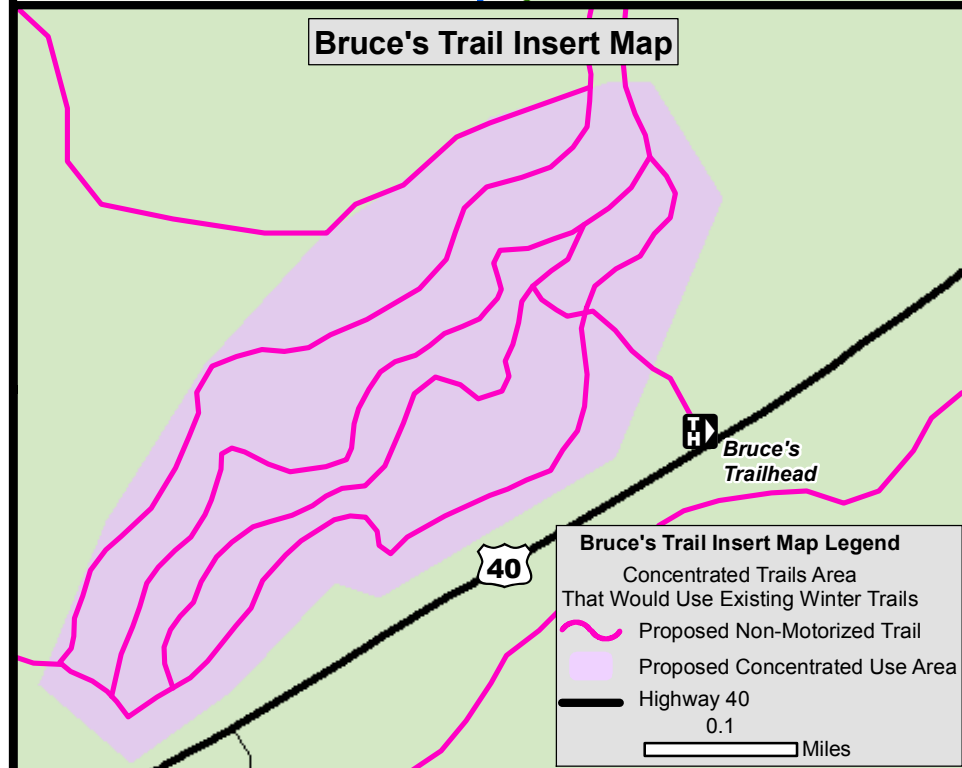
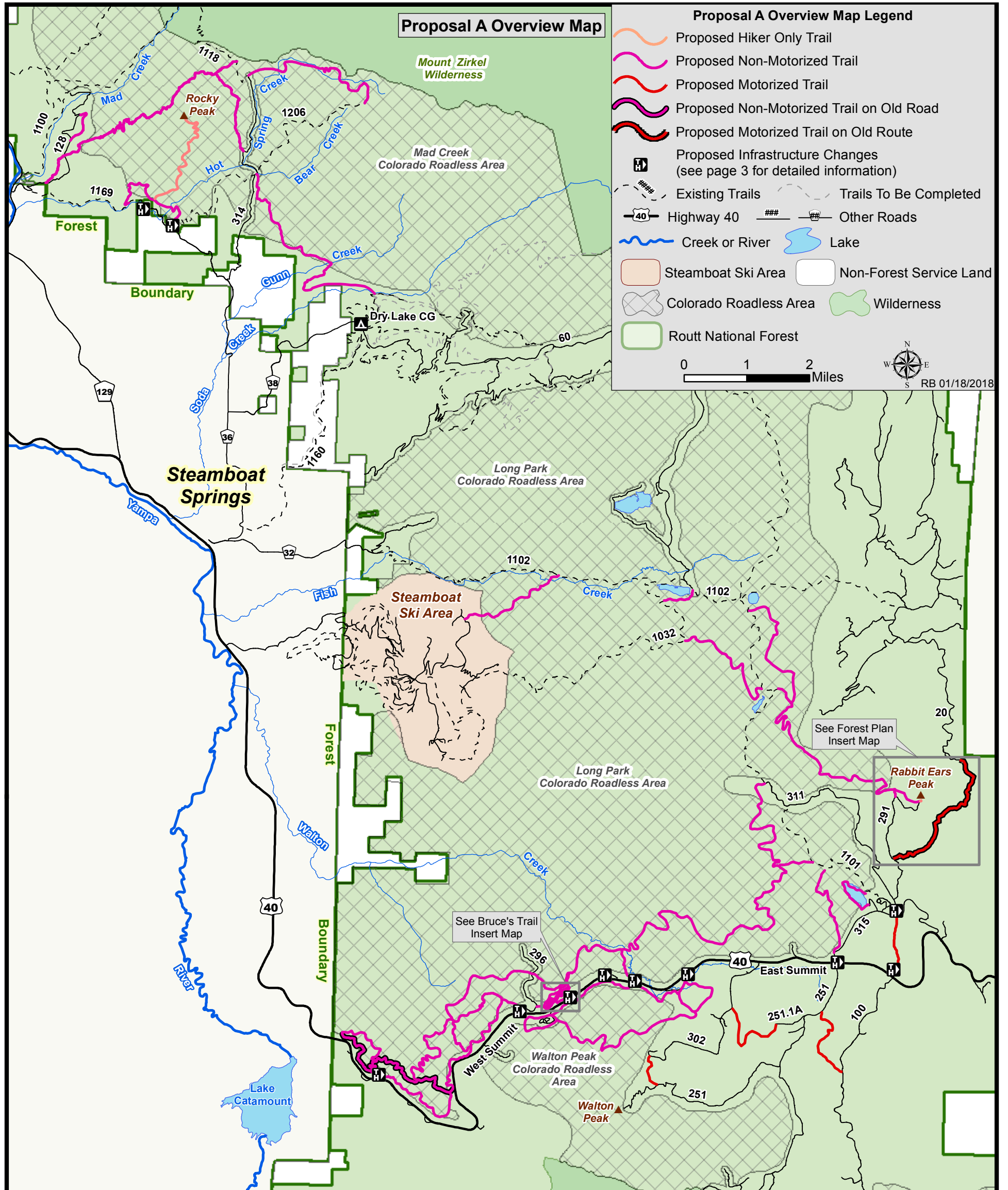
- All proposed mileages, acreages, and trail locations are approximate and subject to change during project development.
- More detailed information on the proposals is available by using the project’s interactive web map at <http://arcg.is/2E1qKzl>.
- To view the original Steamboat Trails Alliance proposal, please refer to www.steamboatspringstrails.com.
- Project-specific Forest Plan amendments are necessary when a Forest Plan guideline would be deviated from in order to accomplish the project.

| Comparison of Miles and Acres in Proposal A and Proposal B | | |
|--|-----------|--------------|
| | A | B |
| Total Miles of Trail Added to the Trail System | 79 | 68 |
| Hiker Only | 3 | 2 |
| Non-Motorized | 69 | 66 |
| Motorized | 7 | 0 |
| Miles of New Trail Construction | 63 | 64 |
| Miles of Trail on Old Road/Route | 6 | 4 |
| Miles of User-Created Trail Added to the System | 10 | 0 |
| Miles of User-Created Trail Closed | 7 | 0 |
| Acres of Concentrated Trails Area | 60 | 1,875 |
| Acres of Bike Skills Area | 0 | 25 |

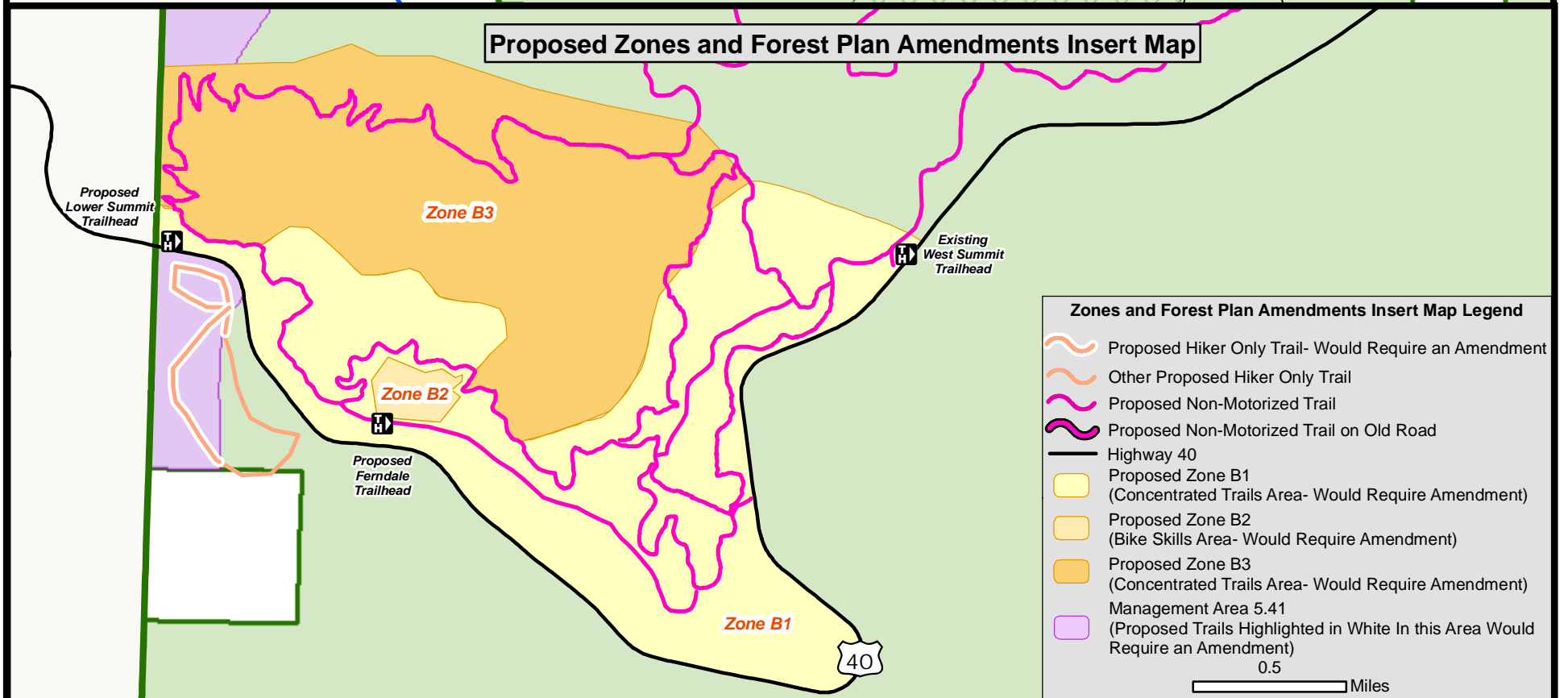
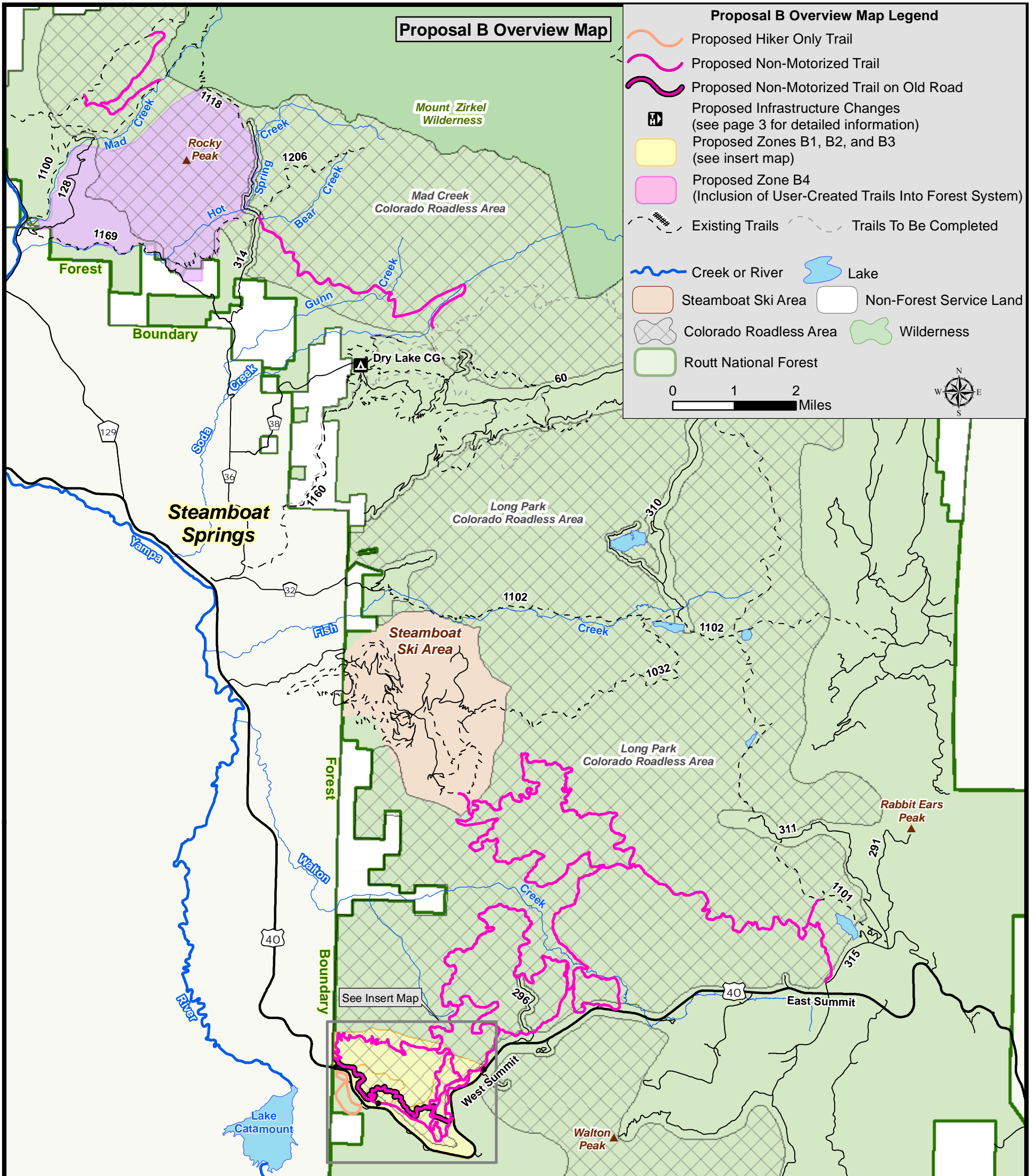
| Infrastructure Changes in Proposal A and Proposal B | |
|---|--|
| A | B |
| Existing Bear Trailhead: Construct a restroom. | Existing West Summit Winter Trailhead: Add a restroom and information kiosk and designate as a year-round trailhead. |
| Existing Hot Spring Trailhead at Strawberry Park Hot Springs: Remove from the system. | |
| Ferndale Picnic Area (currently closed) Re-open, change designation to a summer trailhead, and construct a restroom and information kiosk. | Proposed Lower West Summit Trailhead: Add a summer trailhead, restroom, and information kiosk at an existing pull-out near the Forest Boundary alongside Highway 40. |
| Existing Rabbit Ears Parking Area: Designate as a summer trailhead and construct a restroom and information kiosk. | |
| Existing Forest Road 291.1 Parking Area and Walton Peak Winter Trailhead: Construct a restroom and information kiosk and designate as a year-round trailhead. | Ferndale Picnic Area (currently closed): Re-open, change designation to a summer trailhead, and construct a restroom and information kiosk. |
| Existing Bruce’s, Dumont, Fox Curve, and Muddy Creek Winter Trailheads: Designate as year-round trailheads. | |

| Project-Specific Forest Plan Amendments That Would Be Needed for Proposal A and Proposal B | |
|---|---|
| A | B |
| 1.5 miles of trail would require a Forest Plan Amendment because they would be constructed in Management Area 3.31 (Backcountry Recreation), which does not allow new road/trail construction in this area. | 1.25 miles of trail would require a Forest Plan Amendment because they would be constructed in Management Area 5.41 (Deer/Elk Winter Range), which does not allow construction of new recreation facilities in this area. |
| 2.5 miles of motorized trail would require a Forest Plan Amendment because they would be constructed in Management Area 1.32 (Backcountry Recreation Non-Motorized), which prohibits summer motorized use in this area. | The concentrated use areas and bike skills area would require a Forest Plan Amendment because proposed engineered features would exceed what is allowed per the Forest Service Trails Handbook. The Forest Plan requires following Forest Service handbook direction. |

Mad Rabbit Trails Project: Proposal A



Mad Rabbit Trails Project: Proposal B



Request for Public Input on the Mad Rabbit Trails Project

The District is requesting public input on the proposed Mad Rabbit Trails Project. This request comes early on in project development and is not required as part of the future National Environmental Policy Act (NEPA) environmental effects analysis. Rather, it is an opportunity for the U.S. Forest Service to obtain additional public input regarding the project options before developing a proposed action. Input will inform the development of alternatives to be analyzed for environmental effects.

✦ **Input provided at this point in the project will be critical for future project design.** ✦

The formal comment period in the summer of 2018 will provide another opportunity to comment on the proposed action and possibly other alternatives, as well as be the opportunity to gain standing to object later in the NEPA process.

Input would be most informative when it is concisely stated and includes supporting reasons for suggestions. The District encourages your input be submitted by **February 12, 2018**.

There are multiple platforms for providing input, including:

1. Post input on our interactive web map at: <http://arcg.is/2E1gKzl>.
2. Email input to: comments-rm-medicine-bow-routt-hahns-peak-bears-ears@fs.fed.us with "Mad Rabbit Trails Project" in the subject line.
3. Mail input to:

Hahns Peak-Bears Ears Ranger District
Attn: Mad Rabbit Trails Project
925 Weiss Drive
Steamboat Springs, CO 80487

If you would like to stay involved in the development of the project, be sure to provide your contact information with your input (name and email address or mailing address). If you do not wish to provide input at this time, but would like to be notified of project developments, please provide your contact information to Kent Foster, project leader, at kfoster@fs.fed.us or 970-870-2142. Mr. Foster can also be contacted if you have questions about the proposed project.

Thank you for your interest in the Mad Rabbit Trails Project and management of the Routt National Forest!



Three ways to submit input:

1. ONLINE

2. EMAIL

3. MAIL



Keep Routt Wild
Comments on Mad Rabbit Trails Project #50917
November 23, 2022

Exhibit C:

Keep Routt Wild Comments on Buffalo Pass Road Reconstruction EA



October 17, 2019

Hahns Peak-Bears Ears Ranger District
Attn: Buffalo Pass Road Reconstruction EA
925 Weiss Drive
Steamboat Springs, CO 80477

Sent via email: comments-rm-medicine-bow-routt-hahns-peak-bears-ears@fs.fed.us

Re: Buffalo Pass Road Reconstruction EA

Dear Ms. Umphries,

Keep Routt Wild has reviewed the Hahns Peak-Bears Ears Ranger District's Notice of Proposed Action for the Buffalo Pass Road Reconstruction published September 12, 2019. Keep Routt Wild remains committed to working with the Forest Service and other interested parties in finding common ground on this and other related proposals moving forward.

This letter addresses two key points that we believe are critical to the success of this and other related proposals. We also attach more detailed comments on trail closure dates and enforcement considerations (Attachment A). We thank you in advance for considering our input on these items.

1. Trail Closure Dates and Enforcement. The proposed road reconstruction improves a road that serves as a major recreation corridor in Routt and Jackson Counties. This is recognized on Page 3 of the NOPA, "Recreational use has increased along the Buffalo Pass Road corridor over the past decade and further increases are expected." The road improvement itself will encourage increased use, as many sections of the road are currently challenging to passage by a standard passenger car. This will enable increased use of the existing multi-use trails in the Buffalo Pass area. Unfortunately, many of these trails traverse CPW-designated elk production areas. The cumulative impact of use on these trails during elk calving season will have a deleterious impact on the survival rate of elk calves in the area. Because of the very high mortality rate documented by human disturbance during calving season, Keep Routt Wild is requesting that the seasonal closures be extended until at least June 30.

A July 1 opening date, extending the current closures by approximately two weeks, is backed by the best available science. In Attachment A we document the science behind closure dates, and the very high mortality rate (nearly 5%) of a single disturbance. We also note that the disturbance zone from a trail can be very wide, with observed disturbance widths up to 1500 meters from a trail for mountain bikes (Wisdom et al. 2004). Finally, we use the estimated birth dates of 190 northwest Colorado elk calves (Byrne 1990) to

calculate the percentage of elk calves impacted by different trail opening dates. That data clearly shows a June 15 opening date exposes a majority of elk calves to human disturbance. Using the same data, a July 1 opening date decreases the number of exposed elk calves to approximately 19%. This is still a high number, and demonstrates that trail closures mitigate, but do not eliminate, the impact from human disturbance. We note that even without the Byrne data, a high-level analysis using first and second estrus birth distributions and a 14-day hiding period leads to similar results. We also note that elsewhere in Routt County elk calving closures extend until June 30. Having a single opening date across Routt County, based on the best available science, will lead to higher user compliance. For all these reasons, we request that any trails accessible from Buffalo Pass Road that traverse an elk calving area have a seasonal spring closure that extends through June 30. This is a reasonable condition directed toward lessening the significant cumulative impacts associated with the Buff Pass Road Reconstruction.

2. NEPA Compliance on the Buffalo Pass Road Reconstruction project. There have been a number of related projects in the Hahns Peak-Bears Ears Ranger District, each being advanced or proposed to be advanced by an EA/FONSI process. Keep Routt Wild has deep concerns about the appropriateness and legality of such an approach. Four projects include
 - Trails Master Plan (no NEPA analysis)
 - Buffalo Pass Trails Project (2016, EA)
 - Mad Rabbit Trails Project (2019, pre-proposal)
 - Buffalo Pass Road Reconstruction (2019, pre-proposal)

An updated Trails Master Plan was developed in 2015 to guide development of trails in the Hahns Peak/Bears Ears Ranger District. To our knowledge, no NEPA compliance was done on that Master Plan. The Buffalo Pass Trails Project proceeded as a “subset” of that Plan pursuant to a project-specific limited Environmental Assessment in 2016 (Buffalo Pass Trails Project EA, p. 4). The Mad Rabbit Trails Project, currently at the pre-proposal stage, is now recognized as the “next phase” of this trails development (Mad Rabbit Newsletter Jan. 2018). The Buffalo Pass Road Reconstruction proposal, also at the pre-proposal stage, would serve as an access corridor for many of the trails in these other projects. There has yet to be a comprehensive review under a single NEPA document of the impact of the overall plan of trails development, of the impacts of connected actions that are closely related and interdependent, of the cumulative impacts associated with these and other reasonably foreseeable actions affecting habitat and uses on NFS lands, and of a reasonable range of alternatives that are available. To date, the process appears on track to unfold in a piecemeal fashion under a series of sequential EAs and Findings of No Significant Impact. We believe this to be inconsistent with the procedural mandates of NEPA and to warrant a more comprehensive review pursuant to an EIS.

With the Mad Rabbit Trails Project in pre-proposal stage, there is a clear opportunity to combine the Buffalo Pass Road Reconstruction proposal with Mad Rabbit under a single NEPA analysis. Keep Routt Wild requests that these two projects be combined for analysis. We also request that an updated comprehensive District-wide trail plan be developed through full NEPA review. Once vetted through that process, the plan could afford a defensible basis for subsequent projects to proceed through a streamlined, tiered NEPA process.

Again, Keep Routt Wild appreciates the role that the Forest Service plays in our community and for their ongoing stewardship of our natural resources. We remain committed to being collaborative partners to the Forest Service in balancing recreational development with the conservation needs of wildlife.

Yours sincerely,
Keep Routt Wild

Larry Desjardin,
President of the Board

Keep Routt Wild
1815 Central Park Drive
Suite 110 PMB 156
Steamboat Springs, CO 80487

ATTACHMENT A - Trail Closures and Enforcement

There are a number of trails within CPW-designated Elk Production Areas that are accessible from Buffalo Pass Road. This addendum uses wildlife research studies to conclude:

- Human disturbance has a very large impact on elk calf mortality during calving periods
- The largest proximate cause of elk calf mortality, when disturbed, is predation
- There are two sensitive times for disturbance- up to the time of birth, and post-birth when elk calves use a “hiding” strategy as a tactic against predation
- The distribution of birth dates is determined by the date an elk cow is bred, combined with the distribution of gestation time. Most cows are bred during the first estrus, but a significant minority are bred during the second estrous period.
- If bred during the first estrus, the birth date distribution is roughly 1 June +/- 14 days.
- If bred during the second estrus, the birth date distribution is delayed 19-25 days, resulting in 20 June +/- 14 days
- Elk calves employ the hiding strategy for approximately 14 days before joining nursery herds.
- The critical disturbance window is the sum of the hiding period plus the birth date.
- In order to effectively protect elk calves, trail and area closures in elk production areas must be extended to or past 1 July.

This addendum will also look at alternatives to trail closures, the need for enforcement, and techniques for higher compliance to trail closures.

The impact of human disturbance during elk calving seasons

Elk production areas are problematic due to the high impact human disturbance has on elk calf mortality as demonstrated by CSU researchers Gregory Phillips and William Alldredge in a paper in the Journal of Wildlife Management in 2000. This study, performed in Eagle County, showed that calf/cow ratios declined by approximately 40% (from 64.6 calves per 100 cows to 39.8 calves per 100 cows) as a result of human disturbance during the calving season. Reproduction levels during the treatment period were determined insufficient to maintain a stable elk population. The second half of the study involved removing the human disturbance component. With the human disturbance removed the calf/cow ratios rebounded to their pre-treatment levels.

Reproductive Success of Elk Following Disturbance by Humans During Calving Season

(Phillips and Alldredge 2000)

<https://www.emwh.org/pdf/elk/Reproductive%20success%20of%20elk%20following%20disturbance%20by%20humans%20during%20calving%20season%202000.pdf>

Elk Reproduction Response to Removal of Calving Season Disturbance by Humans

(Shivaley et al 2005)

https://www.jstor.org/stable/pdf/3803346.pdf?seq=1#page_scan_tab_contents

Predation as the primary proximate cause of elk calf mortality

With just over 8 disturbances per cow elk resulting in nearly 40% fewer surviving calves, each disturbance averaged nearly 5% probability of the death of a calf. The researchers added, “We speculate that predation may have been the primary proximate factor in reducing calf/cow proportions on Beaver Creek during treatment years.” This is consistent with previous research that showed that disturbed calves move greater distances than undisturbed calves (Kuck et al. 1985). It is also consistent with studies reporting predation as the primary proximate factor of mortality of radiocollared neonatal elk calves (Bear 1989, Schlegel 1976, Singer et al. 1997).

Elk calf hiding strategy

To combat predation, elk calves exhibit a survival trait called the “hiding” or “hider” strategy after birth. They are scentless and remain stationary while the mother forages for food. This is their primary defense against predation. According to the US Forest Service FEIS summary of elk (*cervus elaphus*), “Pregnant cows leave the herd in spring several days prior to parturition. After giving birth, the cow and calf remain in proximity of, but secluded from, the main herd for several days to several weeks (the “hiding period”). “

The Journal of Wildlife Management published a research article titled Annual Elk Calf Survival in a Multiple Carnivore System (Eacker et al. 2016) that further delineated the key periods of a calf’s life. “For summer analysis, we divided the time period into 3 intervals that coincided with different calf development phases: early hiding phase (0-14 days) when calves are most vulnerable, when they join nursery herds (15-18 days) and are less vulnerable to mortality, and when they continue to grow larger (>28 days; White et al. 2010)”

US Forest Service FEIS summary of cervus elaphus

<https://www.fs.fed.us/database/feis/animals/mammal/ceel/all.html>

Annual Elk Calf Survival in a Multiple Carnivore System

(Eacker et al. 2016)

<http://bit.ly/2Gx3wOw>

The critical disturbance window is the sum of the birth date plus the hiding period.

The term “calving season” is used in two different ways when discussing elk and human disturbance. It is often used as the actual period when most calves are born. It is also used as the time period that elk cows and calves are most prone to human disturbance, and must be protected. It is important not to confuse the two uses, as these periods are different. We will refer to these as the “birthing” period and the “disturbance” period. When looking at trail

closures as a mitigation technique, it is the latter that is important, and extends the former by the length of the hiding period, approximately two weeks.

The distribution of elk calf birth dates

Phillips and Alldredge in their 2000 study stated, "Based on estimated parturition and conception dates for elk in Colorado (Bear 1989, Freddy 1989, Byrne 1990), and a median gestation period of 255 days (Bubenik 1982:171), we expected that 80-90% of the calves would be born from 26 May to 19 June. These dates bounded our treatment period in 1996, but to increase treatment efficacy, we expanded the treatment period by 7 days in 1997 to 19 May through 19 June." This centers the birthing period at 5 June with a window of 14 days on either side. This is similar to the CPW definition of an Elk Production Area as the range occupied by cow elk between May 15 and June 15. Presumably the 10-20% of the calves born outside of the primary birthing window are either tails on the distribution or cows that were bred during their second estrus. The US Forest Service states, "The interval between estrous periods ranges from 19 to 25 days." This creates a smaller distribution of birth dates centered 19-25 days after the center of birth dates created from the first estrous period, approximately late June.

We have attached an appendix of figures and tables from Byrne 1990 that show the distribution of birth dates of NW Colorado elk over three consecutive years. We also analyzed, using that date, the percentage of elk calves that *would not be adequately protected* for each of those years using a 15 June trail opening date and either a 10-day or 14-day hiding period:

1988: $\geq 23\%$

1989: $\geq 74\%$

1990: $\geq 64\%$

Spring Calving Season Closure Summary

Altogether, the above research bounds the first estrus birthing window for elk from approximately 15 May to 15-19 June. The addition of the two-week hiding strategy window brings the disturbance window to 29 June – 3 July. Any consideration of cows bred in their second estrus brings the dates even further out into July. In summary, the bulk of the scientific research would point to a disturbance period that extends to or beyond 1 July. **When looking at trail closures to mitigate impacts due to human disturbance the opening date should be set no sooner than 1 July.**

The above analysis relies on studies to determine the birth date distribution. We observe that part of the ongoing CPW research studies in the area employ radiocollared cow elk with VITs (Vaginal Implant Transmitters) that indicate the date and location of a calf's birth. Once the number of births tracked by the study are large enough to provide a statistically accurate estimate of the date of peak parturition and the distribution, these data may be used to fine tune the locally-relevant birth date distribution. The hiding period would be added to the distribution to determine closure dates.



Image 1 Elk calf born to Elk R190 on 13 June, 2019. Image courtesy of Colorado Parks and Wildlife – Steamboat Springs.

An example of this is the recent calf born to Elk R190, tagged near Maybell, and giving birth near the Continental Divide on 13 June, 2019. It is pictured to the left. The newborn is largely sedentary for two weeks after birth, allowing researchers to approach and collar it. The mother will forage for food, often for hours, before returning to nurse the calf. The mother is at peak calorie expenditure during lactation. Disturbing the mother causes it to expend, rather than consume, needed calories. Disturbing the calf causes it to move locations, making it more susceptible to predators.

The hiding period for this elk calf is approximately through 27 June.

Disturbance Distance from Trails

The Phillips and Alldredge study above showed the high mortality rate of elk calves due to human disturbance, with a disturbance defined as inducing an elk cow to move. A subsequent study, Wisdom et al. 2004, measured the disturbance width from a trail due to different recreational activities. A disturbance was defined similarly, as causing a radiocollared elk to flee. There, the researchers found that mountain biking could cause a disturbance as far as 1500 meters from the trail. It stated, “Probability of a flight response declined most rapidly during hiking, with little effect when hikers were beyond 550 yards (500 m) from an elk. By contrast, higher probabilities of elk flight continued beyond 820 yards (750 m) from horseback riders and 1,640yards (1,500 m) from mountain bike and ATV riders (Figure 3).”

Effects of Off-road Recreation on Mule Deer and Elk

(Wisdom et al. 2004)

https://www.fs.fed.us/pnw/pubs/journals/pnw_2004_wisdom001.pdf

Since the preponderance of trails in the Buffalo Pass area are multi-use trails that include mountain biking, recreational users can disturb elk up to 1500 meters from the trail, and induce the mortality documented in the Phillips and Alldredge study.

Alternatives to Closures

The above closure dates can be avoided by not building trails in Elk Production Areas. The Colorado State Parks Trails and Wildlife Task Force described a number of best practices when designing trails near wildlife calving areas. Indeed, Routt County Riders has published Rules of Thumb for Protecting Wildlife During Trail Development, derived from the task force's recommended practices. These Rules of Thumb may be found at <https://routtcountyriders.org/2019/03/01/rules-of-thumb-for-protecting-wildlife-during-trail-development/>

Three of the points published by Routt County Riders are very pertinent:

- Either avoid wildlife breeding areas or close trails through them at the times such wildlife are most sensitive to human disturbance.
- If there won't be sufficient resources to enforce a trail closure during wildlife-sensitive seasons, consider rerouting the trail through another area.
- Don't depend on management to resolve wildlife conflicts that can be avoided by careful alignment in the first place.

Techniques for higher compliance to trail and area closures

The best enforcement mechanism would be to have dedicated enforcement officers monitoring trail use during winter and spring closures. Additionally, the construction and signage at a trailhead could be used to help enforcement by informing and deterring potential violators. Below is a photo of a trailhead on USFS land in Eagle County showing a gate, a clear sign, and a volunteer trail ambassador at the trailhead. **We recommend that all access points be gated, signed, with staffing to turn away potential violators.**



Image 2 shows a trailhead at a US Forest location in Eagle County.

Trail closures are not the only enforcement issue. Keeping motorized vehicles out of trails dedicated to non-motorized use is another. E-bikes (electronic bikes that include an electric motor) have the potential to create a wider disturbance area than that of either a hiker or mountain biker. This is due to e-bikes having a disturbance window width from the trail at least that of mountain bikes, but with the potential of higher speeds and distance from each use. Multiplied together, this creates a larger disturbance area than a non-motorized vehicle. E-bikes are widely available for sale or rent in Steamboat Springs. Their growing popularity leads to the need of specific enforcement and signage. Below is a sign from Mt. Hood National Forest announcing the prohibition of e-bikes. **We recommend that similar signs be posted at each trailhead at non-motorized trails.**



Image 3 shows a sign at Mt. Hood National Forest indicating the prohibition of e-bikes

Appendix to Attachment B

The following Figures and Table comes from Byrne 1990 study of parturition dates of elk in NW Colorado over three years, 1988 to 1990.

Table 3. Parturition dates from elk in NW Colorado - 1988
1990.

| Date | 1988 | | 1989 | | 1990 | | Total | |
|----------------|------|------|------|------|------|------|-------|------|
| | No. | % | No. | % | No. | % | No. | % |
| May 1-5 | | | | | | | | |
| May 6-9 | | | | | | | | |
| May 11-15 | 1 | 3% | | | 1 | 1% | 2 | 1% |
| May 16-20 | 2 | 6% | | | 1 | 1% | 3 | 2% |
| May 21-25 | 3 | 8% | | | 3 | 3% | 6 | 3% |
| May 26-30 | 9 | 25% | 6 | 18% | 4 | 3% | 19 | 10% |
| May 31 - Jun 4 | 13 | 36% | 3 | 9% | 21 | 18% | 37 | 19% |
| Jun 5-9 | 5 | 14% | 12 | 35% | 25 | 21% | 42 | 22% |
| Jun 10-14 | | | 7 | 21% | 29 | 24% | 36 | 19% |
| Jun 15-19 | 1 | 3% | 1 | 3% | 16 | 13% | 18 | 9% |
| Jun 20-24 | 2 | 6% | | | 5 | 4% | 7 | 4% |
| Jun 25-29 | | | 1 | 3% | 6 | 5% | 7 | 4% |
| Jun 30 - Jul 4 | | | 2 | 6% | 3 | 3% | 5 | 3% |
| Jul 5-9 | | | | | 2 | 2% | 2 | 1% |
| Jul 10-14 | | | 1 | 3% | | | 1 | 1% |
| Jul 15-19 | | | 1 | 3% | | | 1 | 1% |
| Jul 20-24 | | | | | | | | |
| Jul 25-29 | | | | | | | | |
| Jul 30 - Aug 3 | | | | | | | | |
| Aug 4-8 | | | | | | | | |
| Aug 9-13 | | | | | | | | |
| Aug 14-18 | | | | | | | | |
| Aug 19-23 | | | | | | | | |
| Aug 24-28 | | | | | 2 | 2% | 2 | 1% |
| Aug 29-Sep 2 | | | | | 2 | 2% | 2 | 1% |
| Sep 3-7 | | | | | | | | |
| Sep 8-12 | | | | | | | | |
| | 36 | 100% | 34 | 100% | 120 | 100% | 190 | 100% |

The above table is represented graphically below. It should be noted that different years can have a different distribution. The median date of parturition for the three years are:

1988: May 31-June 4

1989: June 5-9

1990: June 10-14

Percentage of elk calves not adequately protected assuming a 14-day hiding period and a June 15 trail opening date:

1988: $\geq 23\%$

1989: $\geq 74\%$

1990: $\geq 64\%$

Note that even if the hiding period is reduced from 14 days to 10 days, the above percentages remain the same since they do not include any calves born between 31 May and 4 June.

Also note that of the 190 elk calf birthdates recorded, 37 of them were born between 15 June and 4 July. This leads to 19% of elk calves potentially impacted even when the area closure is extended to 1 July. This fact shows that mitigation through area closures does not eliminate the impact of human disturbance, and that the preferred solution is to avoid the area altogether.

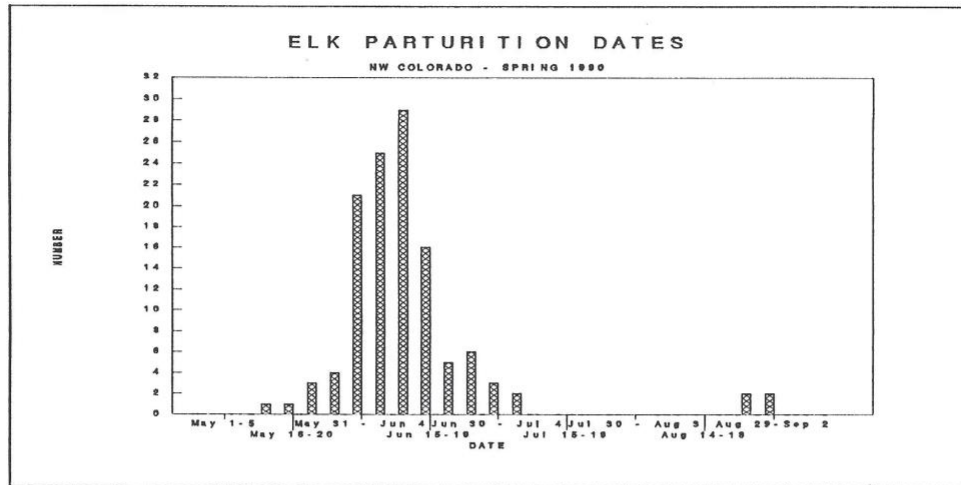


Figure 4. Estimated elk parturition dates for elk harvested in NW Colorado during the winter of 1989-90.

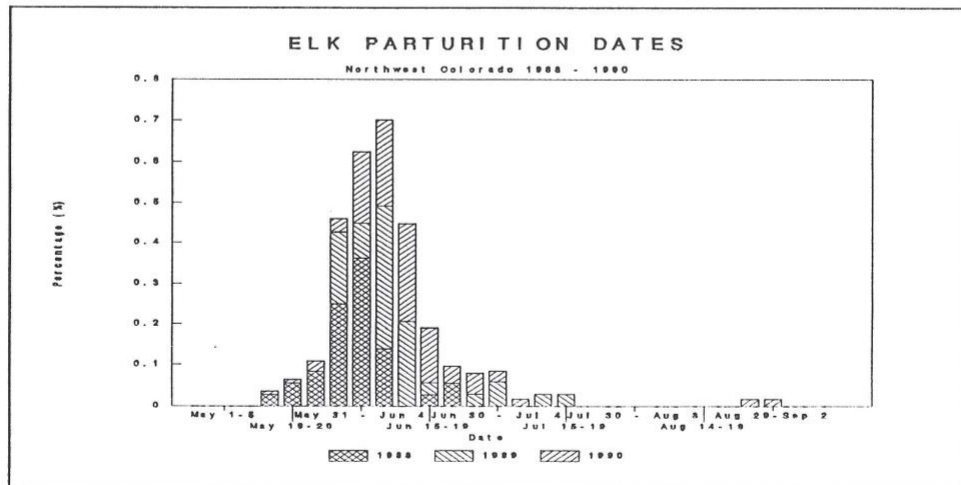


Figure 5. Estimated elk parturition dates for elk harvested in NW Colorado during the previous 3 winters - 1987-88, 1988-89 & 1989-90.

Keep Routt Wild
Comments on Mad Rabbit Trails Project #50917
November 23, 2022

Exhibit D:

Keep Routt Wild Mad Rabbit Compromise Proposal 2022



Keep Routt Wild Mad Rabbit Compromise Proposal 2022

Keep Routt Wild has created a compromise proposal for Mad Rabbit Trails Project that offers significantly new recreational opportunities while minimizing the impact to wildlife and wild places.

It is described below:

- **Include:** Motorized Trails 15, 16, 17 These are outside of any roadless area and elk calving areas.
- **Include:** Dumont and Meadows Campground Trails 11 and 18. These offer campground amenities and ADA access.
- **Move:** Trails 14, 19, 20, 21, from north of US40 to south of US40. This moves trails in elk production areas and Long Park Roadless Area to the south, outside of CPW-identified elk calving areas and largely avoids Colorado Roadless Areas.
- **Include:** Trails 32, 33, and 34, These are the Uranium Mine Trail and a trail near Mad Creek. These offer new recreational opportunities with minimal incremental impact to wildlife.
- **Eliminate:** Trails in Ferndale and that connect to Ferndale. This eliminates Trails 22, 23, 24, 25, 27, and 30. The functionality of these trails would be relocated to the ski resort, Emerald Mountain, or onto other public lands in a separate action. Elimination of these trails avoids elk production areas and impacts to the Long Park Roadless Area.
- **Eliminate:** Trails 7 and 31. This alternate CDT loop is redundant, creates smaller loops that will increase user conflict, and creates an island of habitat loss in elk summer range. There is a potential foreseeable action as the Continental Divide Coalition is proposing trails to connect to the CDT in this general area.
- **Decommission:** Non-sanctioned trails, restrict non-motorized wheeled vehicle usage, and add areas of wildlife area closures for all CPW-indicated elk production areas in the project area. Elk production areas would have a seasonal closure May 15 through June 30th.
- **Include:** Pre-decisional Adaptive Management protocol with specified criteria and enforcement measures.
- **Phased Development:** Initial trail development should include only a small select set of trails. Monitoring of those trails should inform above adaptive management and enforcement needs. Once the specified criteria have been met for initial development of trails subsequent development may occur, but not prior to.

This proposal increases motorized trail opportunities, including e-bike opportunities, and adds significant new mountain bike and hiking opportunities, including ADA opportunities, while simultaneously avoiding critical wildlife areas and roadless areas.

Keep Routt Wild
Comments on Mad Rabbit Trails Project #50917
November 23, 2022

Exhibit E:

Bibliography

References to relevant studies and literature addressing impacts associated with the development and use of trails.

WILDLIFE IMPACT DUE TO RECREATIONAL USERS

These studies look at the “zone of influence” (ZOI) of differing recreational activities on wildlife. The ZOI may extend for some distance beyond the actual activity and will vary depending on habitat composition, topography, and a species’ tolerance of human disturbance. The immediate disturbance causes an animal to expend calories instead of consuming calories, either by fleeing or an elevated heartrate. The impacted area leads to habitat loss and fragmentation.

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Human Perceptions of Their Impact on Wildlife

Many recreational users state that they have a low impact on wildlife. A study by Taylor and Knight compared visitor perceptions to the actual disturbance data.

“We surveyed 640 backcountry trail users on Antelope Island to investigate their perceptions of the effects of recreation on wildlife. Approximately 50% of recreationists felt that recreation was not having a negative effect on wildlife. In general, survey respondents perceived that it was acceptable to approach wildlife more closely than our empirical data indicated wildlife would allow. Recreationists also tended to blame other user groups for stress to wildlife rather than holding themselves responsible.”

“The results of both the biological and human-dimensions aspects of our research have implications for the management of public lands where the continued coexistence of wildlife and recreation is a primary goal. Understanding wildlife responses to recreation and the “area of influence” of human activities may help managers judge whether wildlife populations are experiencing stress due to interactions with humans, and may aid in tailoring recreation plans to minimize long-term effects to wildlife from disturbance. Knowledge of recreationists’ perceptions and beliefs regarding their effects on wildlife may also assist public lands managers in encouraging positive visitor behaviors around wildlife.”

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