## Comment on Revised Rico Trails Project Environmental Assessment.

I am writing this comment as a Rico resident and homeowner, a passionate backcountry hunter, a longtime mountain biker, a hiker, and as a scientist. I am writing this comment as an individual and the content is my own and not that of the Rico Trails Alliance, of which I am President of the Board.

Outdoor recreation provides extensive benefits to small mountain communities, and many of us who live here do so because of our passion for the outdoors, wildlife, and the environment. Throughout the Scoping and Environmental Analysis comment periods, some of the comments in opposition to the Rico Trails Project have centered on impacts to wildlife. With a declining elk population in the western San Juan Mountains, the source of these concerns is valid. As a hunter I am similarly concerned about wildlife management and elk populations, but as a scientist I am strongly opposed to misrepresentations of data and baseless extrapolations or cherry-picking from narrowly-focused experiments.

Alternative 3 represents a logical and effective balance between mitigating impacts to wildlife and meeting recreation needs in the area. The seasonal closure to all users presented in the revised draft Environmental Assessment (EA) recognizes that all users of non-motorized trails impact wildlife. While there may be challenges enforcing such a closure, there are also challenges enforcing/combatting misuse in the absence of the Project. ATV/UTV use of the RGS railroad grade from Montelores bridge is an example.

Some comments in opposition to the Rico Trails Project have highlighted mountain bikers in particular as negatively impacting wildlife and have cited research conducted at the Starkey Experimental Forest. In many cases the assertions presented are not corroborated by the data from these studies, and pay no regard to basic scientific analysis (e.g., consideration of the impacts of study setting and study design limitations on data applicability, statistical significance of results, and consideration of data that does not support their biases). In some cases, the extrapolations made are wholly inaccurate and in contrast to the data.

In its review of the comments for this project and for any other projects where such arguments are presented, I encourage the USFS (and CPW) to check and verify the content of the citations before acting on any such assertions.

For example, the Starkey studies were conducted in an area that had been partially subject to forest clearing, which increases the sight distance of elk, and thereby exaggerates the likelihood and extent of quiet non-motorized impacts in the measurements. At close distances, the probabilities of a flight response caused by mountain bikers, hikers, and equestrians presented in "Wisdom, 2004" are similar. The probability of a flight response caused by mountain bikes is increased compared to that of hikers/horses at longer sight distances, but these line-of-sight distances (i.e., 500+ yards) are unlikely in the Ryman Creek drainage and uncommon in most of the project area due to terrain and vegetation. The authors also state that "Most likely the response depends on local topography, cover and other factors...". "Wisdom 2018", especially Figure 5, shows no statistically-significant difference between non-motorized user groups for the avoidance of recreationalists by elk. In other measurements, the different users impacted wildlife to varying degrees but overall the impacts were similar. The Starkey studies also did not account for habituation by elk to non-lethal disturbances.

As another example, the USFS should consider that CPW's comment on this revised EA contained a statement that was oddly specific to mountain bikers, asserting that elk do not habituate to mountain biking. I was surprised by this assertion and checked the sources. Two of the three sources (both Wisdom studies) cited in CPW's statement did not evaluate habituation. "Wisdom, 2004" specifically states that the study did not account for habituation. "Wisdom, 2018" does not contain the word habituate anywhere

in the document. The third citation (Taylor and Knight, 2003), discusses how some species habituate to on-trail recreation and others do not. Contrary to CPW's statement that elk do not habituate to mountain bikes, the species described in "Taylor and Knight, 2003" as not habituating were pronghorn, mountain sheep, and white-tailed deer and the disturbances described for the latter two were hiking and snowmobiling. Therefore, the statement is unfounded and should not be acted upon.

I find the Draft Revised EA to be sufficient as written for the scope of this project. As described above, I encourage the USFS to verify the validity of assertions in the public comments, and to check sources for corroboration, accuracy, and applicability to the project setting before acting on them. Going forward, when evaluating requests for additional trail closures (especially if the USFS chooses to consider excluding particular trail user groups) the USFS should take into account the wildlife impacts in the full context of recreational disturbances in the Rico area. Specifically, the USFS should directly compare the extent and magnitude of wildlife impacts by recreational on-trail users to the extent and magnitude of direct disturbances permitted in the San Juan National Forest caused by hunters (e.g., Spitz et al, 2019).

Literature Cited:

Wisdom, M. J., A. A. Ager, H. K. Preisler, N. J. Cimon, and B. K. Johnson. 2004. Effects of off-road recreation on mule deer and elk. Transactions of the North American Wildlife and Natural Resources Conference 69:67-80.

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Taylor A. R., and R. L Knight. 2003. Wildlife response to recreational and associated visitor perceptions. Ecological Applications 13:951-963.

Spitz, D. B., M. M. Rowland, D. A. Clark, M. J. Wisdom, J. B. Smith, C. L. Brown, and T. Levi. 2019. Behavioral changes and nutritional consequences to elk (Cervus canadensis) avoiding perceived risk from human hunters. Ecosphere10(9):e02864. 10.1002/ecs2.2864