



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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April 18, 2023

Ref: 8ORA-N

Nicole Alt, Field Supervisor
Colorado Ecological Services Field Office
U.S. Fish and Wildlife Service
134 Union Boulevard, Suite 670
Lakewood, Colorado 80228

Dear Field Supervisor Alt:

The U.S. Environmental Protection Agency has reviewed the Department of the Interior U.S. Fish and Wildlife Service (Service) Draft Environmental Impact Statement (EIS) for the Colorado Gray Wolf 10(j) Rulemaking (CEQ No. 20230028). The U.S. Environmental Protection Agency has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA). The CAA Section 309 role is unique to EPA. It requires EPA to review and comment publicly on any proposed federal action subject to NEPA's environmental impact statement requirement.

Colorado voters approved Proposition 114 requiring Colorado Parks and Wildlife (CPW) to take the steps necessary to begin reintroductions of gray wolves to a portion of the species' historical range in Colorado by December 31, 2023. As part of the reintroduction process, CPW requested the Service designate the reintroduced gray wolf population as "experimental" under section 10(j) of the Endangered Species Act (ESA). According to the Draft EIS, designating the population as experimental "would allow the Service to tailor ESA protections for the population to provide management flexibility and better address stakeholder concerns" (p. i). The Draft EIS includes a no action alternative, and two action alternatives. Alternative 1 approves a section 10(j) rule for the gray wolf population in Colorado, including any gray wolf living in, dispersing into, or reintroduced to the state (p. ii). Alternative 2 approves a section 10(j) rule for the gray wolf population that would be reintroduced in a limited territory and the issuing of a permit under section 10(a)(1)(A) for an existing gray wolf population, should one become established, outside the designated experimental population boundary in the state (p. ii). This Draft EIS analyzes the environmental impacts of these alternatives.

Based upon our review of the information in the Draft EIS, EPA has identified environmental concerns and deficiencies in the analysis that should be addressed in the Final EIS. The attached Detailed Comments include recommendations for additional analysis to strengthen the assessment of impacts and are related to the following topics: (1) range of alternatives; (2) affected environment; (3) environmental consequences; (4) climate change; and (5) environmental justice.

We appreciate the opportunity to participate in the review of this project and are committed to working with you as you prepare the Final EIS. If we may provide further explanation of our comments, please

contact me at (303) 312-6155 or mccoy.melissa@epa.gov, or Shannon Snyder of my staff at (303) 312-6335 or snyder.shannon@epa.gov.

Sincerely,

Melissa W. McCoy, Ph.D., J.D.
Manager, NEPA Branch
Office of the Regional Administrator

Enclosure

Enclosure – EPA Detailed Comments on the USFWS Draft Environmental Impact Statement (EIS) for the Colorado Gray Wolf 10(j) Rulemaking

Range of Alternatives

Currently, the gray wolf in Colorado is listed as “endangered” under the ESA. The Draft EIS states the purpose and need of this proposed action is to respond to Colorado’s request to designate the gray wolf population that would be reintroduced to Colorado as an “experimental population” under section 10(j) of the ESA to facilitate reintroduction efforts and to further the conservation of the species. It also states the designation under section 10(j) is necessary to provide management flexibility to the Service and its designated agents. On page 2-2, the Draft EIS includes a section that discusses alternatives that were raised by the public during scoping but were not further evaluated by the Service. It notes that during public scoping, commenters suggested developing a section 10(a)(1)(A) permit for the entire state or a section 10(j) rule with no lethal take allowed. The Service discussed its rationale for not evaluating these suggestions further, stating the use of a section 10(a)(1)(A) permit would not provide for *full management flexibility* because the permit would not allow for lethal take statewide, and a section 10(j) rule with no lethal take permitted would best be accomplished through a Safe Harbor Agreement (SHA).

It is not clear why the Service could not respond to these stakeholders’ concerns and include in its range of alternatives an alternative that evaluated a 10(j) rule that does not allow lethal take, an alternative that allows lethal take in limited circumstances after non-lethal management tools have been exhausted, or a statewide 10(a)(1)(A) permit, as these alternatives or components of alternatives would meet the purpose and need and potentially result in less adverse impact to the gray wolf. The stated need does not indicate *full management flexibility* is needed; rather, it states “management flexibility.” In addition, even if a SHA would be the “best” way to accomplish the goals of a 10(j) rule that does not allow lethal take, such a 10(j) rule still appears to be a useful component of a range of reasonable alternatives that could reduce environmental impacts. To accommodate the public’s scoping comments and all stakeholder concerns, and to achieve evaluation of a fuller range of potentially less environmentally damaging alternatives, we recommend the Service analyze a range of alternatives that includes a 10(j) rule that does not allow for non-incidentally lethal take except in cases of defense of human life, and an alternative that allows non-incidentally lethal take in limited circumstances after non-lethal management tools have been exhausted. During our independent research for our review of this project, we discovered scientific literature on non-lethal deterrents, such as low-stress livestock handling,¹ fladry,² and fox lights³ that could be utilized in an alternative that did not allow non-incidentally lethal take or an alternative that exhausted non-lethal deterrents before authorizing non-incidentally lethal take.

It is also unclear how a SHA would be a more appropriate mechanism than a 10(j) rule with no lethal take, since this mechanism seems more focused on limiting the liability of private landowners who undertake habitat and species conservation. If an SHA continues to represent a superior mechanism to a

¹ Louchouart NX, Treves A. 2023. Low-stress livestock handling protects cattle in a five-predator habitat. PeerJ 11:e14788 <http://doi.org/10.7717/peerj.14788>

² Fergus, Abigail R. 2020. Building Carnivore Coexistence on Anishinaabe Land: Golf Standard Non-Lethal Deterrent Research and Relationship Building Between Livestock Farmers and The Bad River Band Of The Lake Superior Tribe of Chippewa Indians. [Master’s Thesis, University of Wisconsin-Madison]. <https://faculty.nelson.wisc.edu/treves/pubs/Fergus%20Masters%20Thesis.PDF>

³ Ohrens, O., Bonacic, C., Treves, A. 2019. Non-lethal defense of livestock against predators: Flashing lights deter puma attacks in Chile. *Frontiers in Ecology and the Environment* 17(1):1-7. <http://faculty.nelson.wisc.edu/treves/pubs/Ohrens%20etal%202019a.pdf>

10(j) rule with no lethal take permitted, then we recommend including an SHA as an alternative.

Affected Environment

It is commonly understood that the absence of apex predators, such as the wolf, has caused imbalances to those ecosystems that evolved with them.⁴ To better understand the baseline environmental conditions and to measure the impacts of each of the alternatives, we recommend discussing in Chapter 3, *Affected Environment*, how the environment in Colorado has been impacted by the absence of wolves. Providing this baseline will help the reader understand the impacts of the alternatives to Colorado's ecosystems and environment.

The Chapter 3 discussion, *Wolf Recovery and Potential Ecosystem Response*, addresses some potential impacts of wolf reintroduction and natural colonization, including some positive changes, but notes there is scientific debate regarding how much wolves improve or change ecosystem structure and the role that wolves played in contributing to the positive changes in the Yellowstone ecosystem (p. 3-11). We suggest that this discussion may be more appropriate for the *Environmental Consequences* chapter because it is related to impacts. Other than this section of the Draft EIS, there is little discussion and analysis of the expected benefits of wolves to Colorado ecosystems; it appears the Service has focused its discussion on the potential costs or risks of wolf reintroduction. Based on our research, as an apex predator at the top of the food chain, wolves have a positive effect on prey species, such as elk, by removing weak and diseased prey and slowing the spread of disease. Their leftovers create food for scavenger species such as ravens, magpies, bald eagles, golden eagles, weasels, mink, lynx, cougar, and grizzly bear. These leftovers also benefit soil by returning nutrients to it. Wolves, in combination with other keystone species, such as beavers, have the potential to protect plant life, restore wetlands, promote biodiversity, increase aquatic habitat, and increase water quality and quantity. In the Final EIS, we recommend the Service summarize the best available scientific literature on the impacts of wolves, discuss what the majority of studies indicate about the positive impacts of wolves, and evaluate this science to ensure understanding of the potential beneficial impacts reintroduction of wolves would provide to Colorado's ecosystems. We recommend this analysis is included in Chapter 4, *Environmental Consequences*, in order to foster an understanding of the impacts of the alternatives.

Page 3-9 of Chapter 3 states "three separate wolf depredation incidents on cattle were confirmed on a ranch in Jackson County, Colorado, between December 2021 and January 2022 (CPW 2021c, 2022d), and an investigation is ongoing (as of December 2022) of a potential depredation on White River National Forest lands near Meeker in October 2022 (CPW 2022e). See section 3.5 for a more detailed discussion of the socioeconomic impacts of depredation." According to available information two of the confirmed Jackson County depredations were on dogs,⁵ and one on livestock.⁶ Additionally, in February 2023 CPW concluded the investigation into the October 2022 incident in Meeker that it could not determine the exact cause of the death of the calves and found no evidence wolves were in the area at the time of the incident.⁷ Further, Carter Niemeyer, a former U.S. Department of Agriculture-Wildlife Services district supervisor and a retired U.S. Fish and Wildlife Service wolf-livestock conflict specialist, as well as a current member of CPW's Technical Working Group on wolf restoration, issued a report in February

⁴ See, e.g., <https://www.theguardian.com/environment/2009/jan/29/endangered-habitats-washington-state>

⁵ <https://kdvr.com/news/local/2-dogs-die-after-wolf-attacks-in-jackson-county/>

⁶ <https://cpw.state.co.us/aboutus/Pages/News-Release-Details.aspx?NewsID=3325>

⁷ <https://kdvr.com/news/local/cpw-no-proof-that-wolves-killed-calves-in-meeker/>

2023 concluding that the evidence in Meeker is inconsistent with wolf attacks.⁸ We recommend the Service revise the Final EIS to correct the errors in the case of the Jackson County depredations, and include the current CPW position on the incident in Meeker. We also recommend the Service correct the reference to Section 3.5 for the depredation impact analysis. The correct citation is Section 4.7.

Environmental Consequences

To determine whether a § 10(j) rule will further the conservation of the gray wolf, the Service must “utilize the best scientific and commercial data available to consider:

1. Any possible adverse effects on extant populations of a species as a result of removal of individuals, eggs, or propagules for introduction elsewhere;
2. The likelihood that any such experimental population will become established and survive in the foreseeable future;
3. The relative effects that establishment of an experimental population will have on the recovery of the species; and
4. The extent to which the introduced population may be affected by existing or anticipated Federal or State actions or private activities within or adjacent to the experimental population area.”⁹

These provisions of the ESA regulations are related to assessing impacts to the species and are relevant to the proposed action and analysis of impacts in the Draft EIS. We recommend the Service incorporate their evaluation and analysis of these considerations into the Final EIS.

The Draft EIS states the no action alternative “is expected to be the most beneficial for wolves from a purely biological standpoint because it would limit any take on wolves that are reintroduced or that disperse naturally into the state. However, illegal human-caused mortality may be highest under this alternative (Olson et al. 2015)” (p. 4-4). Then for Alternative 1 it states, “In the long term, it is not expected that allowable take under alternative 1 would have a measurable impact on the population” (p. 4-5). These two statements appear to be at odds with one another and, therefore, it is unclear if Alternative 1 is more beneficial to the wolf and would further conservation of the species compared to the no action alternative. It appears in its analysis of impacts the Service concluded that illegal take is expected to be higher under the no action alternative and that lethal take is necessary for management of the wolves by preventing illegal take and decreasing livestock depredation. The Draft EIS includes numerous citations to scientific literature supporting this position.

During EPA’s independent research for this project, we found another body of recent scientific literature that has concluded the opposite – that allowance of lethal take can have unintended consequences and has the potential to increase illegal take, increase livestock depredation, and negatively impact wolf populations.^{10,11,12} The referenced studies are three of several studies we found during our research that conflicts with the science and conclusions in the impact analysis. This information is relevant to the

⁸ <https://mountainjournal.org/in-colorado-wolves-blamed-for-cattle-losses-they-did-not-cause>

⁹ 50 C.F.R. § 17.81(b).

¹⁰ Santiago-Ávila FJ, Agan S, Hinton JW, Treves A. 2022. Evaluating how management policies affect red wolf mortality and disappearance. *R.Soc.OpenSci.*9:210400. <https://doi.org/10.1098/rsos.210400>

¹¹ Naomi X. Louchouart, Francisco J. Santiago-Ávila, David R. Parsons and Adrian Treves. 2021. Evaluating how lethal management affects poaching of Mexican wolves. <https://doi.org/10.1098/rsos.200330>

¹² Treves A, Santiago-Ávila FJ, Putrevu K. 2021. Quantifying the effects of delisting wolves after the first state began lethal management. *PeerJ* 9:e11666 <https://doi.org/10.7717/peerj.11666>

analysis because under Section 10 of the ESA, a Section 10(j) rule must further the conservation of the species and this other body of science appears to be at odds with the analysis and conclusions in the Draft EIS. We recommend the Service summarize and evaluate both bodies of scientific literature and based on this evaluation, evaluate in the Final EIS whether the preferred alternative furthers the conservation of the species compared to the no action alternative.

The Draft EIS states, “Under the section 10(j) rule, the population of gray wolves that would be reintroduced to Colorado, wolves living in the state, or wolves that naturally disperse into the state, would be managed under special regulations inside the proposed experimental population boundary” (p. 2-9). ESA Section 10(j), *Experimental Populations*, states:

- (1) For purposes of this subsection, the term “experimental population” means any population (including any offspring arising solely therefrom) authorized by the Secretary for release under paragraph,
- (2) but only when, and at such times as, the population is wholly separate geographically from nonexperimental populations of the same species.

We recommend the Service address how it can apply Section 10(j) to existing populations living in the state or populations naturally dispersing into the state when this section appears to only apply to reintroduced populations. This is relevant to the impact analysis as it will determine whether these wolves are subject to relaxed restrictions otherwise imposed by Section 9 of the ESA and whether this alternative will further the conservation of the species.

The analysis for Alternative 1 discusses wolf numbers and distribution, stating “in the long term, the allowable take provisions under alternative 1 would be unlikely to reduce the number of wolves in Colorado because wolf populations are able to sustain relatively high rates of human-caused mortality (see section 3.2.1 for discussion on mortality).” EPA reviewed Section 3.2.1 of the Draft EIS, which includes the following:

“Wolf populations have demonstrated strong resilience to mortality because of the compensatory nature (see definition in Appendix A, Glossary) of natural and human-caused mortality factors and because of wolves’ high reproductive potential (Fuller et al. 2003). The range of sustainable human-caused mortality rates varies due to biological and ecological conditions of specific habitats and wolf populations. Previous research in Minnesota and Alaska indicated that wolves could withstand human-caused mortality rates up to 28 percent before a population decline is detected (Fuller 1989; Adams et al. 2008), while modeling the effects of human-caused mortality on northern Rocky Mountain wolf population growth estimated a sustainable rate of 45 percent (Gude et al. 2012)” (pp. 3-9 – 3-10).

The Alaskan and Northern Rocky Mountain populations are more established with a much greater number of wolves than Colorado. Therefore, for Colorado, there is a question as to what rate of human-caused mortality would have the potential to have a significant impact on the ability of the rule to further the conservation of the species and to achieve the population targets in the Draft CPW Wolf Reintroduction Plan. We recommend evaluating in the Final EIS the extent to which data on the effects of human-caused mortality on wolf populations in Alaska and the Northern Rockies are relevant to future introduced Colorado populations, and what that evaluation indicates regarding the ability of introduced Colorado populations to withstand human caused mortality.

Climate Change

The Draft EIS states “under all alternatives, the provision of a regulatory framework to provide management flexibility to the Service and its designated agents would not affect climate change” (p. 4-46). Other than a response to public comments discussing some of the benefits wolves provide to the ecosystem that have the potential to mitigate the cause and impacts of climate change (see Appendix C, p. 27), there is no other discussion of these benefits in the Draft EIS and it is unclear if these benefits were considered and utilized in the analysis. We recommend the Final EIS include in its analysis the best available science regarding the benefits wolves provide to the ecosystem that have the potential to mitigate the cause and impacts of climate change.

Climate change has the potential to impact the affected environment and the environmental consequences of each of the alternatives; therefore, we recommend analyzing this in the Final EIS. Climate change has the potential to impact the resources, issues and environmental consequences discussed in the Draft EIS, including but not limited to wolf health, distribution, population numbers, habitat, predator-prey dynamics, environmental justice, and tribal issues. It might exacerbate the impacts of lethal take and impact the ability of the rule to further the conservation of the wolf. EPA recommends the EIS include a discussion of reasonably foreseeable climate change impacts in the planning area and the potential effects those impacts will have on the affected environment, direct, indirect, and cumulative effects of the alternatives, and resiliency and adaptation. In February 2023, the Council on Environmental Quality issued the *Interim Climate Guidance for NEPA* and recommended agencies should consider applying the guidance to on-going NEPA processes if doing so would inform the consideration of alternatives or help address comments raised through the public comment process. EPA recommends the Service utilize this guidance in the EIS, specifically Section V, *Considering the Effects of Climate Change on the Proposed Action*, which may be the most useful for a project such as this.

Climate change is already having detectable impacts on the ecosystems of the West, and future changes (warmer temperatures, more frequent and severe drought, and reductions in snowpack, stream flows and water availability) could affect wolves or their prey, and to the degree that these changes limit prey abundance, decreased wolf densities may be expected. We note that future climate projections for Colorado include historically unprecedented warming during this century, increased drought intensity, and highly uncertain summer monsoon rainfall. It is with these things in mind we recommend the Service utilize the National Fish, Wildlife, and Plants Climate Adaptation Strategy¹³ in its climate change analysis, development of the range of alternatives, and resiliency and adaptation measures to minimize the adverse impacts of any 10(j) rule that may be adopted.

Environmental Justice

The Draft EIS contains an environmental justice analysis of the proposed action in Chapters 3 and 4 (pp. 3-27 – 3-37 and 4-24 – 4-28). We appreciate the information that the Service has provided in its analysis of the baseline conditions and potential impacts to communities that experience environmental justice concerns. The Draft EIS states that “minority environmental justice communities within the agricultural population group of concern were identified using the “meaningfully greater” analysis. If the percentage of minority producers or producers of Hispanic, Latino, or Spanish origin exceeds the percentage at the state level by more than 5 percent, these communities are considered environmental justice communities. Six counties in the state, including two focal counties, are home to producers of Hispanic, Latino, or

¹³ <https://toolkit.climate.gov/tool/national-fish-wildlife-and-plants-climate-adaptation-strategy>

Spanish origin that meet the threshold for environmental justice communities” (p. 3-35). It is not clear whether outreach to these specific ranching operations has occurred and whether any Spanish-language materials were developed to provide information to these smaller ranching operators that might have limited English proficiency. We recommend that education and outreach will include Spanish-language materials to ensure communication is sufficient in communities with significant portions of Spanish-speaking residents. It is also unclear whether these Spanish-language materials will include assistance navigating the administrative process to receive depredation compensation, which can be cumbersome for these impacted communities. Finally, we recommend a rancher-predator awareness training, which includes training on non-lethal methods for avoiding depredations, which may be useful to reduce depredations for disproportionately impacted operators, among others.