November 26, 2021

Grand Mesa, Uncompahgre, and Gunnison National Forests
Attn: Plan Revision Team
2250 Highway 50
Delta, CO 81416

Submitted via Grand Mesa, Uncompahgre and Gunnison Forest Plan Revision Portal at:
https://cara.ecosystem-management.org/Public//CommentInput?Project=51806

Dear GMUG Planning Team,

Please accept the following comments on the GMUG's Draft Plan and Draft Environmental Impact Statement on behalf of WildEarth Guardians, Western Environmental Law Center, Western Watersheds Project, Northern San Juan Chapter of Great Old Broads for Wilderness, and Robin Nicholoff. We appreciate the tremendous amount of effort and resources this process has required of the Forest Service to date. However, there is a significant problem with the Draft Plan and DEIS: they fail to address the state mandate, under Colorado Proposition 114, to reintroduce gray wolves to the Western Slope by the end of 2023.

Gray wolves are native to Colorado and were once found throughout the state—including on the GMUG National Forests—but government-sanctioned shooting, trapping and poisoning caused the species to be extirpated from the state by the mid-1940s. Similar predator control efforts eliminated wolves across most of the western United States before the species was reintroduced to central Idaho and Yellowstone National Park in the mid-1990s.

The role of wolves in the greater Yellowstone ecosystem has been studied by scientists for the past twenty-five years. Over that time, a scientific consensus has emerged that wolves influence the dynamics of wildlife species across an entire ecosystem, with wolf reintroduction improving overall ecosystem health. In fact, scientific studies make clear that wolves play a critically important ecological role in the ecosystems they inhabit and demonstrate the cascade of unintended environmental consequences and wide-ranging adverse effects that resulted when these top predators were removed from native ecosystems.[1] As apex predators, wolves create a "trophic cascade" of effects that flow

[1] *See e.g.*, Halofsky, J.S., Ripple, W.J. (2008). Fine-scale predation risk on elk after wolf reintroduction in Yellowstone National Park, USA. *Oecologia* **155,** 869–877 (2008). https://doi.org/10.1007/s00442-007-0956-z, Exhibit A_Halofsky & Ripple 2008; Joshua Halofsky, William Ripple (2008b), Linkages between wolf presence and aspen recruitment in the Gallatin elk winter range of southwestern Montana, USA, *Forestry: An International Journal of Forest Research*, Volume 81, Issue 2, April 2008, Pages 195-

207, https://doi.org/10.1093/forestry/cpm044, Exhibit B_Halofsky & Ripple 2008b; Adrian D. Manning, Iain J. Gordon, William J. Ripple (2009), Restoring landscapes of fear with wolves in the Scottish Highlands, Biological Conservation, Volume 142, Issue 10, 2009, Pages 2314-2321, ISSN 0006-3207, https://doi.org/10.1016/j.biocon.2009.05.007, Exhibit C_Manning et al 2009; Beschta, R.L. and Ripple, W.J. (2006), River channel dynamics following extirpation of wolves in northwestern Yellowstone National Park, USA. Earth Surf. Process. Landforms, 31: 1525-1539. https://doi.org/10.1002/esp.1362, Exhibit D_Beschta & Ripple 2006; Robert L. Beschta, William J. Ripple (2009), Large predators and trophic cascades in terrestrial ecosystems of the western United States, Biological Conservation, Volume 142, Issue 11, 2009, Pages 2401-2414, ISSN 0006-3207, https://doi.org/10.1016/j.biocon.2009.06.015, Exhibit E_Beschta & Ripple 2009; Beschta, R.L. and Ripple, W.J. 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Beschta (2003), Wolf reintroduction, predation risk, and cottonwood recovery in Yellowstone National Park, Forest Ecology and Management, Volume 184, Issues 1–3, 2003, Pages 299-313, ISSN 0378-1127, https://doi.org/10.1016/S0378-1127(03)00154-3, Exhibit L_Ripple & Beschta 2003; William J. Ripple, Robert L. Beschta (2004), Wolves and the Ecology of Fear: Can Predation Risk Structure Ecosystems?, *BioScience*, Volume 54, Issue 8, August 2004, Pages 755-766, https://doi.org/10.1641/0006-3568(2004)054[0755:WATEOF]2.0.CO;2, Exhibit M_Ripple & Beschta 2004; William J. Ripple, Robert L. Beschta (2005), Linking Wolves and Plants: Aldo Leopold on Trophic Cascades, BioScience, Volume 55, Issue 7, July 2005, Pages 613–621, https://doi.org/10.1641/0006-3568(2005)055[0613:LWAPAL]2.0.CO;2, Exhibit N_Ripple & Beschta 2005; William J. Ripple, Robert L. 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through and sustain ecosystems and the web of life.[2] In general, the presence of carnivores can affect everything from vegetation structure to river morphology to availability of carrion and insect communities in an ecosystem.[3]

Studies have found that wolves in Yellowstone and Grand Teton national parks benefit a host of species, including aspen, songbirds, beavers, fish, pronghorn, and foxes.[4] By reducing elk numbers and inducing elk to move, wolves have reduced browsing on aspen and other streamside vegetation, which has benefitted beavers, songbirds and fish populations. Other studies have shown how wolves and coyotes interact, and how wolves can aid pronghorn populations because "wolves suppress coyotes and consequently fawn depredation."[5]

Downgrading of Planet Earth, 2011, J Science, Pages 301-306, Volume 333, doi:10.1126/science.1205106 https://www.science.org/doi/abs/10.1126/science.1205106, Exhibit U_Estes et al 2011; Luke E. Painter, William J. Ripple (2012), Effects of bison on willow and cottonwood in northern Yellowstone National Park, Forest Ecology and Management, Volume 264, 2012, Pages 150-158, ISSN 0378-1127, https://doi.org/10.1016/j.foreco.2011.10.010, Exhibit V_Painter & Ripple 2012; Painter, L.E., Beschta, R.L., Larsen, E.J. and Ripple, W.J. (2015), Recovering aspen follow changing elk dynamics in Yellowstone: evidence of a trophic cascade?. Ecology, 96: 252-263. https://doi.org/10.1890/14-0712.1, Exhibit W_Painter et al 2015; Levi, T. and Wilmers, C.C. (2012), Wolves–coyotes–foxes: a cascade among carnivores. Ecology, 93: 921-929. https://doi.org/10.1890/11-0165.1, Exhibit X_Levi & Wilmers 2012; Bergstrom, B.J., Arias, L.C., Davidson, A.D., Ferguson, A.W., Randa, L.A. and Sheffield, S.R. (2014), License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function. Conservation Letters, 7: 131-142. https://doi.org/10.1111/conl.12045, Exhibit Y_Bergstrom et al 2014; Andrés Ordiz, Richard Bischof, Jon E. Swenson (2013), Saving large carnivores, but losing the apex predator?, Biological Conservation, Volume 168, 2013, Pages 128-133, ISSN 0006-3207, https://doi.org/10.1016/j.biocon.2013.09.024, Exhibit Z_Ordiz Bischof & Swenson 2013; Bouchard, K., Wiedenhoeft, J. E., Wydeven, A. P., & Rooney, T. P. (2013). Wolves Facilitate the Recovery of Browse-Sensitive Understory Herbs in Wisconsin Forests. *Boreal Environmental Research, 18 Supplement A*, 43-49. https://corescholar.libraries.wright.edu/biology/211, Exhibit AA_Bouchard et al 2013; Wilmers, C. C., and Schmitz, O. J. (2016). Effects of gray wolf-induced trophic cascades on ecosystem carbon cycling. Ecosphere 7(10):e01501. 10.1002/ecs2.1501, Exhibit BB_Wilmers & Schmitz 2016; Bradley J. Bergstrom (2017), Carnivore conservation: shifting the paradigm from control to coexistence, Journal of Mammalogy, Volume 98, Issue 1, 8 February 2017, Pages 1–6, https://doi.org/10.1093/jmammal/gyw185, Exhibit CC_Bergstrom 2017; William J. Ripple, Aaron J. Wirsing, Christopher C. Wilmers, Mike Letnic (2013), Widespread mesopredator effects after wolf extirpation, Biological Conservation, Volume 160, 2013, Pages 70-79, ISSN 0006-3207, https://doi.org/10.1016/j.biocon.2012.12.033, Exhibit DD_Ripple et al 2013;

[2] Robert L. Beschta, William J. Ripple (2012), Exhibit G_Beschta & Ripple 2012; James A. Estes et al. (2011), Exhibit U_Estes et al 2011 ; William J. Ripple, Aaron J. Wirsing, Christopher C. Wilmers, Mike Letnic (2013), Exhibit DD_Ripple et al 2013.

[3] Beschta, R.L. and Ripple, W.J. (2006), Exhibit D_Beschta & Ripple 2006; Beschta, R.L. and Ripple, W.J. (2012), Exhibit G_Beschta & Ripple 2012; Naiman, Robert J., and Kevin H. Rogers. "Large Animals and System-Level Characteristics in River Corridors." *BioScience*, vol. 47, no. 8, [American Institute of Biological Sciences, Oxford University Press], 1997, pp. 521–29, https://doi.org/10.2307/1313120, Exhibit EE_Naiman & Rogers 1997.

[4] Ripple, W.J., Beschta, R.L. (2012), Exhibit Q_Ripple & Beschta 2012; Bergstrom, B.J., Arias, L.C., Davidson, A.D., Ferguson, A.W., Randa, L.A. and Sheffield, S.R. (2014), Exhibit Y_Bergstrom et al 2014; James A. Estes, et al (2011), Exhibit U_Estes et al 2011.

[5] BERGER, K.M. and GESE, E.M. (2007), Does interference competition with wolves limit the distribution and abundance of coyotes?. Journal of Animal Ecology, 76: 1075-1085. https://doi.org/10.1111/j.1365-

Wolves also benefit scavengers by leaving carrion derived from predation; hence, wolf removal leads to reduced abundance of carrion for scavengers in specific areas.[6] For instance, the extirpation of wolves works to the detriment of bears and eagles that scavenge carrion left by wolves. And a 2013 study shows that wolves benefit grizzly bears in Yellowstone through another trophic mechanism—wolf predation on elk has led to less elk browsing of berry-producing shrubs, providing bears with access to larger quantities of fruit.[7]

1. The state mandate to reintroduce gray wolves to western Colorado

On November 3, 2020, Colorado residents passed Proposition 114, a ballot initiative directing the Colorado Parks and Wildlife Commission ("Commission") to reintroduce gray wolves to the state. Proposition 114 orders the Commission to develop a plan to reintroduce and manage gray wolves in Colorado no later than December 31, 2023 on lands west of the Continental Divide; hold statewide hearings about scientific, economic, and social considerations; periodically obtain public input to update the plan; and use state funds to assist livestock owners in preventing conflicts with gray wolves and pay fair compensation for livestock losses. The Commission is currently developing its plan for wolf reintroduction. During its January 2021 meeting, Colorado Parks and Wildlife staff presented the Commission with a draft proposal for the plan. The Commission approved the proposal and directed staff to begin creating a comprehensive, adaptive management plan to reintroduce wolves in Colorado by December 31, 2023.

a. Gray wolf occupancy of the GMUG during the life of the revised plan

The Commission has not yet identified release sites for wolf reintroduction but will very likely consider the greater GMUG area as a potential location, given the results of prior feasibility analyses of wolf reintroduction to Colorado. Under proposed alternative B, the GMUG includes 553,000 acres of designated wilderness and up to 740,000 acres of forest proposed for wildlife management area

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2656.2007.01287.x, Exhibit FF_Berger & Gese 2007; Smith, D.W., D.R. Stahler, D.S. Guernsey, M. Metz, E. Albers, L. Williamson, N. Legere, E. Almberg, and R. McIntyre. 2007. Yellowstone Wolf Project: Annual Report, 2006. National Park Service, Yellowstone Center for Resources, Yellowstone National Park, Wyoming, YCR-2007-01, Exhibit GG_Smith et al 2007. Bergstrom, B.J., Arias, L.C., Davidson, A.D., Ferguson, A.W., Randa, L.A. and Sheffield, S.R. (2014), Exhibit Y_Bergstrom et al 2014; Laura R. Prugh, Chantal J. Stoner, Clinton W. Epps, William T. Bean, William J. Ripple, Andrea S. Laliberte, Justin S. Brashares (2009), The Rise of the Mesopredator, BioScience, Volume 59, Issue 9, October 2009, Pages 779–791, https://doi.org/10.1525/bio.2009.59.9.9, Exhibit HH_Prugh et al 2009.

[6] Ripple, W.J., Beschta, R.L. (2012), Exhibit Q_Ripple & Beschta 2012; Wilmers, C.C., Crabtree, R.L., Smith, D.W., Murphy, K.M. and Getz, W.M. (2003), Trophic facilitation by introduced top predators: grey wolf subsidies to scavengers in Yellowstone National Park. Journal of Animal Ecology, 72: 909-916. https://doi.org/10.1046/j.1365-2656.2003.00766.x, Exhibit II_Wilmers et al 2003; Wilmers, C.C., Stahler, D.R., Crabtree, R.L., Smith, D.W. and Getz, W.M. (2003b), Resource dispersion and consumer dominance: scavenging at wolf- and hunter-killed carcasses in Greater Yellowstone, USA. Ecology Letters, 6: 996-1003. https://doi.org/10.1046/j.1461-0248.2003.00522.x, Exhibit JJ_Wilmers et al 2003b.

[7] William J. Ripple, Aaron J. Wirsing, Christopher C. Wilmers, Mike Letnic (2013), Exhibit DD_Ripple et al 2013.

designation.[8] Mule deer and elk, wolves' primary prey when available, are abundant on the GMUG. A 1994 study on the feasibility of reintroducing wolves to Colorado estimated that the GMUG planning area was home to 188,000 mule deer and almost 45,000 elk.[9] The Forest Service itself states that the GMUG hosts "populations of approximately 55,000 elk [and] 145,000 deer."[10] The 1994 feasibility study estimated that the GMUG can support 95-190 wolves, assuming wolf pack sizes of 5-10 animals, with each pack occupying a territory of about 220 square miles.[11] The same study found that the GMUG had the greatest potential of any potential wolf recovery area in the state.[12] If the Commission reintroduces wolves within the GMUG planning area, the wolves will have the necessary habitat and prey to survive and maintain a presence on the Forests.

Further, independent of the upcoming wolf reintroduction by the state, there is good reason to believe the species will inhabit the GMUG in the near future. As the population of gray wolves in Wyoming has grown in recent years, wolves have begun dispersing into Colorado in search of unoccupied territory. According to Colorado Parks and Wildlife, confirmed or probable wolf dispersals into Colorado have occurred in 2004, 2007, 2009, 2015, 2019, 2020 and 2021.[13] In January of 2020, Colorado Parks and Wildlife (CPW) confirmed the presence of at least six wolves in northern Moffat County, less than 150 miles from the GMUG's northern boundary.[14] In January of 2021, CPW confirmed the presence of two known wolves, F1084 and M2101, traveling together (F1084 was originally thought to be a male and thus identified as M1084).[15] In June 2021, CPW confirmed that F1084 and M2101 had produced a litter of pups at an unspecified location in Jackson County, Colorado. At least three pups have been observed by CPW staff, who continue to monitor these adult wolves and pups.[16] Given the strong protection wolves receive as a State Endangered Species under the laws of Colorado, it is very likely that wolves will continue to disperse into northwest Colorado from Wyoming and that a pack will eventually claim a territory within the GMUG's boundaries*, even if the CPW Commission does not designate a location within the GMUG planning area as a release site for wolf reintroduction*.

b. Compliance with Law, Regulation, and Policy

[8] DEIS, 352.
[9] Bennett, L. E. (1994). *Colorado Gray Wolf Recovery: Biological Feasibility Study*. US Fish and Wildlife Service, Exhibit KK_Bennett 1994.
[10] https://www.fs.usda.gov/detail/gmug/landmanagement/resourcemanagement/?cid=stelprdb5199668
[11] Bennett, L. E. (1994). *Colorado Gray Wolf Recovery: Biological Feasibility Study*. US Fish and Wildlife Service, Exhibit KK_Bennett 1994; *See also* L. David Mech (2017), Where can wolves live and how can we live with them?, Biological Conservation, Volume 210, Part A, 2017, Pages 310-317, ISSN 0006-3207, https://doi.org/10.1016/j.biocon.2017.04.029 Exhibit LL_Mech 2017.
[12] Ibid.
[13] https://cpw.state.co.us/learn/Pages/Wolves-in-Colorado-FAQ.aspx
[14] Id.
[15] Id.
[16] Id.

i. Compliance with National Forest Management Act and 2012 Planning Rule

The draft revised land management fails to plan for managing the wolves that will likely re-inhabit the GMUG over the life of the revised plan. In fact, the draft plan is completely silent on the subject of gray wolves, despite it being reasonably foreseeable that wolves will soon inhabit the Forest, as discussed above. To comply with NFMA and the 2012 Planning Rule, the Forest Service must plan to manage for wolves re-inhabiting the GMUG.

Under the 21012 Planning Rule, a revised forest plan must address both ecosystem integrity and ecosystem diversity. A revised forest plan "must include plan components, including standards or guidelines, to maintain or *restore the ecological integrity* of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity."[17] A revised plan must also "include plan components, including standards or guidelines, to maintain or *restore the diversity of ecosystems and habitat types* throughout the plan area."[18] In planning to restore the diversity of ecosystems, the plan must include components to maintain or restore "[k]ey characteristics associated with terrestrial . . . ecosystem types."[19] The purpose of these requirements is to "support the persistence of most native species in the plan area."[20]

The GMUG planning area's ecosystems and habitat types historically supported and included gray wolves.[21] By failing to plan to manage the impending return of wolves to the GMUG, the Forest Service has neglected to include plan components that would restore the ecological integrity of GMUG ecosystems and habitats. Applying the past two decades of studies on the return of wolves to the greater Yellowstone ecosystem, it is very likely that prior to wolves' extirpation, the GMUG's ecosystems' structure, function, and composition were significantly influenced by the species. Once present on the Forests again, wolves will likely help restore vegetation structure and river morphology, as elk and mule deer will react to wolves' presence by changing their feeding behavior.

By ignoring the return of wolves, the Forest Service has also failed to plan for restoring the variety and relative extent of ecosystems on the GMUG. The extent and variety of riparian ecosystems will increase with the return of wolves to the GMUG—after wolves returned to the greater Yellowstone ecosystem ungulates reduced their browsing on aspen and other streamside vegetation, which benefitted beavers, which in turn created additional riparian habitat. Similar positive impacts should be expected as wolves return to the GMUG and impact the behavior of its abundant ungulate populations.

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[17] 36 C.F.R. § 219.9(a)(1) (emphasis added).
[18] Id. at 219.9(a)(2) (emphasis added).
[19] Id. at 219.9(a)(2)(i).
[20] 36 C.F.R. § 219.9.
[21] *Mal*., the Historic Gray Wolf Distribution section from Bennett, L. E. (1994). *Colorado Gray Wolf Recovery: Biological Feasibility Study*. US Fish and Wildlife Service, Exhibit KK_Bennett 1994.

- Recommendation: The Forest Service must supplement the draft revised land management plan to include plan components, including standards or guidelines, to promote the persistence of wolves once they re-inhabit the GMUG planning area. These plan components must manage for reducing conflicts between wolves and permitted livestock grazing. The DEIS must be supplemented to analyze the impacts of applying plan components to provide for wolves and the impacts of other activities on wolf persistence and viability. This is discussed further below.

It is a critical deficiency that the Forest Service considered none of the extensive science regarding the effects of the renewed presence of wolves in the greater Yellowstone ecosystem when it drafted the revised land management plan. If the Forest Service is to fulfill the 2012 Planning Rule's purpose of supporting the persistence of most native species in the GMUG planning area, there are few measures the agency can take that will have as sizable an impact as including standards and guidelines to support the reintroduction and persistence of wolves. Standards and guidelines to support wolves will also support the persistence of most native species, because the presence of wolves will create a trophic cascade of effects that will flow throughout the GMUG.

Over the past twenty years, the renewed presence of gray wolves on National Forest System lands outside Colorado has resulted in conflict between the species and livestock permitted to graze National Forest lands.[22] There is significant potential for these types of conflict once wolves re-inhabit the GMUG, unless the Forest Service adopts measures, through standards and guidelines, to reduce such conflicts. Reducing such conflicts is vital to wolves persisting on the GMUG, as the primary threat to wolf populations is high rates of human-caused mortality.[23]

The Forest Service should therefore include plan components that address carnivore-livestock coexistence in the GMUG Revised Land Management Plan and consider adopting an express management directive that prohibits the use of lethal predator/animal damage control in response to depredations of federally permitted livestock in the following specially designated areas on the GMUG: Wilderness areas; proposed Wilderness areas; Research Natural Areas; eligible Wild & Scenic River

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[22] *See, e.g.*, "One ranch, 26 wolves killed: Fight over endangered predators divides ranchers and conservationists," https://www.latimes.com/world-nation/story/2019-12-18/endangered-wolf-killings-ranch; "Wolves, livestock clash all around Wyoming," https://www.jhnewsandguide.com/news/environmental/wolves-livestock-clash-all-around-wyoming/article_10d8b66b-a143-5a94-80ba-c0171eafff95.html; Mexican Wolf Experimental Population Area Statistics: Causes of Mexican wolf management removals from the Mexican Wolf Experimental Population Area, Arizona and New Mexico, 1998-2018.

[23] Gude, J.A., Mitchell, M.S., Russell, R.E., Sime, C.A., Bangs, E.E., Mech, L.D. and Ream, R.R. (2012), Wolf population dynamics in the U.S. Northern Rocky Mountains are affected by recruitment and human-caused mortality. The Journal of Wildlife Management, 76: 108-118. https://doi.org/10.1002/jwmg.201, Exhibit MM_Gude et al 2012; Jennifer L. Stenglein, Jonathan H. Gilbert, Adrian P. Wydeven, Timothy R. Van Deelen (2015), An individual-based model for southern Lake Superior wolves: A tool to explore the effect of human-caused mortality on a landscape of risk, Ecological Modelling, Volume 302, 2015, Pages 13-24, ISSN 0304-3800, https://doi.org/10.1016/j.ecolmodel.2015.01.022, Exhibit NN_Stenglein et al 2015.

corridors; Colorado Roadless Areas; delineated wildlife corridors and any other special management area where the protection of native wildlife is emphasized.

The Forest Service must also carefully evaluate grazing management options for avoiding and mitigating wildlife-livestock conflicts so as to reduce the likelihood that native carnivores like wolves will be killed in response to depredations of federally permitted livestock grazing on these public lands. For example, the U.S. Fish & Wildlife Service, state wildlife agencies, and conservation NGOs have recommended the following science-backed measures for reducing wolf-livestock conflicts that the Forest Service can incorporate into forest-wide grazing management directives for Allotment Management Plans and annual grazing plans/instructions:[24]

- When an active wolf den or rendezvous site is discovered on an allotment during the grazing season, moving livestock to another pasture or creating a one-mile buffer between grazing and those sites;

- Removing livestock carcasses on the allotments if they would attract wolves to a potential conflict situation with other grazing livestock;

- Removing sick or injured livestock from the allotments, so they are not targeted by wolves;

- Delaying livestock turnout until after early to mid-June, so native ungulates will be birthing young and can provide an abundant and easy prey source for wolves;

- Delaying turnout of calves in the area until after they average 200 pounds in weight to minimize depredation potential;

- Prohibiting allotment management activities--other than moving livestock to another pasture to create a buffer, or removing sick or injured livestock and carcasses—near active wolf den sites during the denning period, to avoid human disturbance of the site;

- Prohibiting the placement of salt or other livestock attractants near wolf dens or rendezvous sites, to minimize cattle use of these sites;

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[24] See Defenders of Wildlife, *Livestock and Wolves: A Guide To Nonlethal Tools and Methods to Reduce Conflicts* (2016), Exhibit OO_Defenders of Wildlife - Livestock and Wolves A Guide; Wolf Awareness, *Coexistence Among Livestock, People & Wolves: A Ranchers Guide*, Exhibit PP_Wolf Awareness - Coexistence Among Livestock, People & Wolves; Western Wildlife Outreach, Wolf-Livestock Nonlethal Conflict Avoidance: A Review of the Literature (2014), Exhibit QQ_ Western Wildlife Outreach - Wolf Livestock Nonlethal Conflict Avoidance_ A Review of the Literature; USFWS, email: "Potential conservation measures to reduce effects of the grazing allotments to gray wolves (2014), Exhibit RR_USFWS email potential conservation measures re grazing allotments and wolves in WA and OR; Washington Department of Fish and Wildlife, Staff Guidelines: Livestock-Wolf Mitigation Measures, Exhibit SS_WDFW Staff Guidelines_ Livestock-Wolf Mitigation Measures; USFS Draft Revised Wallowa-Whitman National Forest Lands Management Plan at 135-36, Exhibit TT_USFS Draft Revised Wallowa-Whitman National Forest Lands Management Plan.

- In the event of depredation, moving livestock to another unit or another allotment;

- During times that livestock are in a unit with an active wolf den site or rendezvous site, require the permittee to inspect that unit at least 2 days/week;

- Managing grazing livestock near the core areas (dens, rendezvous sites) of wolf territories to minimize wolf-livestock interactions, such as by placing watering sites, mineral blocks, and supplemental feed away from wolf core areas;

- Temporarily switch grazing sites and move livestock to another location away from core areas;

- Limiting grazing to open defensible spaces and prohibiting livestock from grazing unattended by human range riders in remote, heavily treed areas;

- Increasing the frequency of human presence by using range riders and guard animals and frequently checking livestock in areas with wolves or when wolves are in the vicinity of livestock pastures.

The Forest Service, acting in pursuit of the agency's obligation under NFMA to maintain diverse and viable populations of native wildlife on our national forests, has already demonstrated its ability to adopt measures that reduce the unnecessary risk livestock grazing poses to native carnivores like wolves at the Forest Planning level. We urge the Forest Service to consider following the precedent set by the planning team for the Blue Mountains Forest Plan revision for the three Region 6 forests in eastern Oregon (Wallowa-Whitman, Umatilla, and Malheur National Forests), which proposed incorporating the following management directives into those forest's revised plans:[25]

- Management activities within one mile of a known active (during same calendar year that use is documented) wolf den and rendezvous sites should be subject to appropriate seasonal restrictions based on site specific consideration and potential activity effects, to reduce disturbance to denning wolves.

- Do not authorize turnout of sick or injured livestock to reduce risk of attracting wolves.

- Remove or otherwise dispose of livestock carcasses such that the carcass will not attract wolves. If, due to location of the carcass, this is not possible, develop other remedies.

[25] *See e.g.,* USFS Draft Revised Wallowa-Whitman National Forest Lands Management Plan at 136, Exhibit TT_USFS Draft Revised Wallowa-Whitman National Forest Lands Management Plan.

- Do not authorize salt or other livestock attractants near known active (during same calendar year that use is documented) wolf dens or rendezvous sites to minimize livestock use of these sites.

The draft plan also fails to identify voluntary grazing permit retirement as a means of providing adequate management flexibility for grazing allotments. It fails to provide guidance for allotment retirement, [which may condemn grazing permittees to uncertain economic futures if certain allotments experience a high level of conflict between livestock and wolves after wolves have come to re-inhabit the GMUG.] Lack of plan direction by the Forest Service might permit these conflicts to continue for the life of the plan.

The revised land management plan should include the following language as a guideline (this language is taken from an amendment to six National Forest plans to support the Forest Service's obligation to recover grizzly bear, as part of the grazing guidelines):

> When resource conflicts due to managing for . . . multiple uses arise, and the permittee is willing, retiring and/or permanently closing grazing allotments is a viable and permissible range management tool.

ii. Compliance with National Environmental Policy Act

The DEIS fails to consider wolves as part of the environment that would be affected by the revised plan and fails to analyze the impacts of wolves soon re-inhabiting the GMUG. Like the draft plan, the DEIS does not address wolves at all, despite the evidence that wolves will soon re-inhabit the Forests, either via mandated state reintroduction or natural dispersal. To comply with the National Environmental Policy Act, the Forest Service must supplement the draft EIS to include wolves as part of the affected environment and analyze the impacts of the revised plan on wolves.

Under NEPA, a federal agency, prior to undertaking a major federal action significantly affecting the quality of the human environment, must prepare an environmental impact statement (EIS) that describes in detail the environmental impacts of the proposed federal action.[26] Regulations promulgated under NEPA provide that the EIS "shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration."[27]

Here, though purporting to follow 2012 Planning Rule requirements to provide for ecosystem integrity and diversity, the Forest Service fails to include wolves as a species of interest that is part of the affected environment.[28] While there is no evidence a wolf population inhabits the GMUG currently, it is likely

[26] 42 USC § 4332(C).
[27] 40 C.F.R. § 1502.15.
[28] See DEIS at 131.

that wolves will come to re-inhabit the Forests during the time the revised plan is in effect, as is explained above.

The DEIS's discussion of affected environment does not consider only the current condition of the environment. Rather, it

> describes the conditions and trends of select wildlife and plant species in the GMUG National Forests in the context of 1) ecosystem integrity and diversity; and 2) potential risk factors to species. Specifically, the ecological integrity of ecosystems and landscape features that provide habitat for groups of wildlife and plant species is considered.[29]

In describing those trends and conditions the Forest Service is guided by the assumption that "ecosystem integrity and diversity provide the ecological conditions necessary to maintain the persistence or contribute to the recovery of native species within the plan area."[30] Given the state initiative to reintroduce wolves to the Western Slope and the natural dispersal of wolves into northwest Colorado, the Forest Service should describe the trend of wolves to inhabit the GMUG over the minimum 15-year lifespan of the revised plan, especially in the context of the large role that wolves play in enhancing ecosystem integrity and diversity. The agency should also describe the potential risk factors that wolves will face upon their re-inhabiting the Forests. A rational, informed discussion of the ecological integrity and diversity of GMUG ecosystems and landscape features should include a description of the condition and trends relating to wolves returning to the Forests. If nothing else, given the evidence that wolves will be returning to the GMUG, the Forest Service must include a brief discussion of why it didn't believe wolves should be included in its description of the affected environment.

The Forest Service was obligated to include the gray wolf as a "species of interest-general wildlife," which the DEIS defines as including those species with "importance to ecosystem function in terms of key ecosystem conditions."[31] There is no serious scientific controversy that wolves are important to the ecosystems they live in and that those ecosystems were negatively disrupted when wolves were extirpated. Therefore, given the agency's own definition, the gray wolf is a species of interest-general wildlife that should be included in the description of the affected environment.

- Recommendation: The Forest Service must supplement the DEIS to include wolves in its description of the affected environment for the revised land management plan. The DEIS should be supplemented to analyze whether the impending return of wolves to the GMUG will enhance the characteristics of specially protected areas like congressionally designated wilderness,

[29] DEIS at 128.
[30] Id.
[31] DEIS at 131. Apparently, the removal of the species from the federal endangered species list, as well as the lack of evidence that wolves currently inhabit the GMUG, led the Forest Service to determine that wolves did not meet the definition of at-risk species. See DEIS at 128-131.

wilderness study areas, and research natural areas, as well as key ecosystem conditions such as the health of ungulate populations and the extent of riparian habitat. The DEIS should also be supplemented to include an analysis of the impacts that conflicts between wolves and the permitted grazing system may have on wolves' ability to persist on the GMUG.

We appreciate all the hard work that the staff on the GMUG National Forest is putting into the plan revision process. Thank you for considering these comments. Please contact us with any questions you have.

Sincerely,

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