August 22, 2022

Leah Waldner
Sage Grouse Coordinator, BLM Colorado
BLM Grand Junction Field Office
2815 H Rd
Grand Junction, CO 81506

Re: Notice of Intent to Amend Multiple Resource Management Plans Regarding Gunnison
Sage-Grouse Conservation and Prepare an Associated Environmental Impact Statement,
Colorado and Utah, Docket No. 2022-14361

Dear Ms. Waldner:

The Resource Management Plan Amendments (RMPA) BLM is embarking upon regarding
Gunnison Sage-Grouse (GuSG) conservation will have significant impacts on the activities that
drive local economies in western Colorado and eastern Utah, including oil, natural gas, and
renewable energy development, grazing, ranching, agriculture, and mining. The RMPAs should
not unnecessarily restrict oil and natural gas development and other multiple uses on public
lands that overlap GuSG habitat but rather strike a reasonable balance between sustained
multiple uses and sensible protections that are supported by the best and most recent
scientific information. BLM should defer to state and local GuSG efforts rather than imposing a
one-size-fits-all federal approach. There are many local efforts, state plans and regulatory
mechanisms, and other actions to conserve and protect GUSG and its habitat, which should
drive BLM's management of the species.

Western Energy Alliance represents 200 member companies involved in all aspects of
environmentally responsible exploration and production of oil and natural gas in Colorado,
Utah, and across the West. The Alliance represents independents, the majority of which are
small businesses with an average of fifteen employees. Alliance members have valid existing
leases, current oil and natural gas production, and plans for future leasing, exploration, and
production activities in the planning areas and therefore a direct interest in BLM's effort.

Buffers, Timing Restrictions, and Disturbance Caps

Additional limits on density and disturbance from development, including facility and route
density limitations will do nothing to aid GuSG conservation. "One-size fits all" buffers, timing
restrictions, and disturbance caps for oil and natural gas operations have been a central part
of strategy behind BLM's land management strategy for both sage grouse species.
Regrettably, these do nothing to address the major causal mechanisms that drive Gunnison
and Greater sage-grouse population declines as demonstrated by numerous papers in the
recent scientific literature showing that the primary causes are drought, predation (especially
raven predation), and habitat degradation due to wildfire, pinion juniper encroachment into

sagebrush habitat, invasive species, and wild horses.[1] Therefore, BLM should include solutions to each of these problems in its alternatives analyzed. Furthermore, it would be more productive to GuSG conservation to work in partnership with the oil and natural gas industry and other agencies to mitigate these problems rather than "consider additional limits on density and disturbance from development, including facility and route density limitations," as indicated in the notice of intent.

Instead of additional limitations, BLM should build in flexibility into buffers, disturbance caps, and timing restrictions to incentivize conservation-minded innovation. We suggest that BLM build flexibility into existing regulations that takes into account the following factors: physical (topography, elevation, viewshed, and acoustics); biological (nearby habitat type, quantity, quality, and vegetation type); and technological factors (use of newer, more efficient, and less impactful technology for oil and natural gas development; retirement of older technology; consolidation of infrastructure; and incorporation of best practices). Buffers, disturbance caps, and timing restrictions need to be adaptive to local circumstances in order for them to be both effective and efficient for species conservation while enabling development and production. Such a "smart buffer" concept needs to be incorporated into the alternatives considered by BLM and would further incentivize conservation-minded innovation in the oil and natural gas industry.

Best Available Science

The best available science used in predictive models needs to be transparent and fully reproducible. An ongoing issue with scientific models used to predict climate scenarios and animal population trends is that predictions of these models are rarely, if ever, tested against field data on an ongoing basis and validated periodically against real-world observational data. We encourage BLM to include as part of its adaptive management approach a requirement to periodically revalidate the results of best available scientific models on regional climate change, vegetation change, and population trends that are used in decision making. This is easily achieved if BLM only relies on science that is fully transparent and reproducible, as required by the Information Quality Act. More specifically, this would include scientific reports and papers that have archived computer code, input parameters, and data in a publicly accessible data archive such as Dryad. By doing so, model predictions can be easily tested and BLM adaptive management adjusted accordingly. BLM should not rely on the assumption that peer review is an adequate guarantee of information quality.

BLM should update its understanding of GuSG population dynamics and incorporate this knowledge into its adaptive management. GuSG, like its sister species the Greater sage-grouse (GrSG) and other Tetronids, have cyclic population dynamics that are driven by climatic variation and density dependence, which subsequently influence clutch size, nesting success, survival, and ultimately lek counts and population number.[2] Therefore, BLM needs to account

[1] References
[2] Moran, 1952, 1954; Ranta et al. 1995; Lindström et al., 1996; Cattadori, Haydon & Hudson, 2005; Ludwig et al., 2006; Kvasnes et al., 2010; Selås et al., 2011, Viterbi et al., 2015; Ross et al., 2016;

for these fluctuations in its adaptive management of GuSG and not rely on simplistic population "triggers" or three-year running averages, as illustrated in BLM's July 2022 scoping presentation. The best available science that BLM should consider incorporating is that which incorporates data on cyclic population trends that is fully reproducible, i.e. the *Targeted Early Warning System* developed by USGS population biologists for GrSG.[3] That methodological approach provides information at the appropriate spatial and temporal scale for sage-grouse population trends and according to the authors, "is readily usable on an annual basis and can be modified to evaluate effectiveness of conservation efforts. Findings are also intended to provide timely scientific information for state and federal land use plans and conservation credit systems."

Currently, much of the scientific literature on Gunnison and Greater sage-grouse is produced or influenced by USGS scientists. As both USGS and BLM fall under the Department of the Interior, to minimize the potential for conflicts of interest by agency staff producing the science that the same agency will rely upon it in decision making, it would be worthwhile for BLM to diversify its interdisciplinary team involved in this planning effort. That would allow fresh perspectives and new ways of looking at problems, which in turn would more likely produce innovative solutions than a team of closely linked agency staff and individuals. Essentially, we propose that BLM consider emulating how the U.S. National Academies of Science, Engineering, and Medicine set up their independent, interdisciplinary teams to, "provide independent, objective advice to inform policy with evidence, spark progress and innovation, and confront challenging issues for the benefit of society." In our view, this is precisely the approach needed to produce scientifically sound and informed public policies aimed at conservation of GuSG.

Best Available Data

BLM needs to provide verifiable data that areas it has mapped in the Habitat Area Overview map provided at the July 2022 public scoping meetings as "unoccupied" GuSG habitat were indeed formerly occupied by GuSG**.** Verifiable data should include specimen collection data, documented observations, VHF radio-tracking, and GPS-tracking data. These data need to be publicly accessible for inspection and verification. We further suggest that areas suspected to be unoccupied habitat but for which supporting data are lacking be referred to accurately as "potential habitat."

BLM needs to acknowledge how oil and natural gas extraction and production technology has substantially evolved over the past 15 years to become more efficient, thereby reducing overall impacts to GuSG and other species. Ongoing technological improvements, adoption of best management practices, improvements in habitat restoration and mitigation, and state and federal regulations are continually reducing the footprint and impacts of oil and natural gas operations. Continued use of outdated data, research, and perceptions on oil and natural gas operations continues to embed itself into regulatory documents. We request that BLM

Blomberg et al., 2012, 2014, 2017; Coates et al., 2016; Gibson et al., 2017; Ramey et al. 2018; Coates et al. 2020b.
[3] Coates et al. 2020.

WESTERN ENERGY ALLIANCE

and its interdisciplinary team familiarize themselves with these changes and the research based on recent technologies before embarking on preparation of an EIS.[4]

The Notice of Intent included use of a new term "BLM-approved spatial data," but provided no definition. BLM needs to precisely define the criteria and process for spatial data to be BLM-approved.

Predation

If BLM is to be effective at aiding the recovery of GuSG, it will have to take a more active role in research and management efforts to limit raven numbers and predation on eggs and chicks. We concur with the notice of intent that, "The BLM has found that existing BLM land use plans in Colorado and Utah may not fully take into account new data and science related to the management of Gunnison sage-grouse and sagebrush habitat." This is especially true of science on raven population densities and raven predation that was not included or too recent to be included in the *Final Recovery Plan for Gunnison sage-grouse* (USFWS 2020) and the *Recovery Implementation Strategy for Gunnison sage-grouse (Centrocercus minimus)* (USFWS 2020). That body of research indicates that a passive approach to managing raven number and predation on sage grouse eggs and chicks through habitat management alone has proven wholly inadequate to addressing this problem across the western United States.[5] Therefore in developing "reasonable alternative approaches to its management strategies" we strongly encourage BLM to incorporate cooperative, interagency strategies for directly and indirectly reducing raven densities in order to effectively mitigate predation on GuSG eggs and chicks.

Cumulative Impacts

BLM policy concerning cumulative effects analyses needs clarification. From the transcripts of the GrSG scoping meeting (2022 Greater Sage-grouse Planning, Virtual Public Scoping Meeting Transcript, January 24, 2022), it appears BLM may be planning to add indirect, climate-level impacts from the sale of oil and natural gas leases to its cumulative effects analyses on sage grouse. This raises the question as to whether BLM considers it within the scope of its regulatory reach to include potential greenhouse gas emissions from oil and natural gas lease sales in the NEPA analyses for Gunnison and Greater sage-grouse. Although this would seem doubtful given the recent Supreme Court Decision in *West Virginia vs. EPA*, we hope that BLM will clarify if the statements below reflect current agency policy.

BLM was asked, "Will the BLM consideration of climate change impacts involve the burning of fossil fuels and the sale of oil and gas leases by the BLM for extracting those fossil fuels?" The reply from Quincy Bahr, Utah project lead for sage grouse, "…short answer yes, we will be analyzing effects from the management actions that we're proposing. If one of those management actions is considering leasing of potential fossil fuels, we would analyze the

---

[4] Applegate and Owens (2014). ARE THERE OTHERS?
[5] BLM should incorporate the following studies at a minimum regarding raven predation: Peebles et al. (2016, 2017); Coates et al. (2020a); Harju et al. (2018, 2021a,b); Peebles and Spencer (2020); USDA - Wildlife Services (2008, 2020); and Rivera-Milán et al. 2021.

WESTERN ENERGY ALLIANCE

effects from that, both direct impacts from the development itself and the footprint and loss of habitat, as well as indirect effects, as well as those broader indirect effects as far as impact and contribution to climate, climate change, and that is something that is part of the NEPA, National Environmental Policy Act, impact analysis process, is looking at both direct, indirect, as well as those cumulative effects from a proposed action."

Thank you for the opportunity to engage in the scoping process. We look forward to a constructive dialogue and engaging in the public planning process going forward.

Sincerely,

Kathleen M. Sgamma
President

Literature Cited

Applegate, D.H. and Owens, N.L. (2014) Oil and Gas Impacts on Wyoming's Sagegrouse: Summarizing the Past and Predicting the Foreseeable Future. *Human-Wildlife Interactions:* Vol 8. https://digitalcommons.usu.edu/hwi/vol8/iss2/15/

Blomberg, E.J., J.S. Sedinger, M.T. Atamian, and D.V. Nonne (2012) Characteristics of climate and landscape disturbance influence the dynamics of greater sage-grouse populations. *Ecosphere* 3(6):art55. DOI 10.1890/es11-00304.1.

Blomberg, E.J., D. Gibson, M.T. Atamian, and J.S. Sedinger (2014) Individual and environmental effects on egg allocations of female greater sage-grouse. *Auk* 131(4):507–523. DOI 10.1642/auk-14-32.1.

Blomberg, E.J., D. Gibson, M.T. Atamian, and J.S. Sedinger (2017) Variable drivers of primary versus secondary nesting; density-dependence and drought effects on greater sage-grouse. *Journal of Avian Biology* 48(6):827–836. DOI 10.1111/jav.00988.

Cattadori, I.M., D.T. Haydon, and P.J. Hudson (2005) Parasites and climate synchronize red grouse populations. *Nature* 433(7027):737–741. DOI 10.1038/nature03276.

Coates, P.S., M.A. Ricca, B.G. Prochazka, M.L. Brooks, K.E. Doherty, T. Kroger, E.J. Blomberg, C.A. Hagen, and M.L. Casazza (2016) Wildfire, climate, and invasive grass interactions negatively impact an indicator species by reshaping sagebrush ecosystems. *Proceedings of the National Academy of Sciences of the United States of America* 113(45):12745–12750. DOI 10.1073/pnas.1606898113.

Coates, P.S., S.T. O'Neil, B.E. Brussee, M.A. Ricca, P.J. Jackson, J.B. Dinkins, K.B. Howe, A.M. Moser, L.J. Foster, D.J. Delehanty (2020a) Broad-scale impacts of an invasive native predator on a sensitive native prey species within the shifting avian community of the North American Great Basin. *Biological Conservation* 243 (2020) 108409.

Coates, P.S., B.G. Prochazka, M.S. O'Donnell, C.L. Aldridge, D.R. Edmunds, A.P. Monroe, M.A. Ricca, G.T. Wann, S.E. Hanser, L.A. Wiechman, and M.P. Chenaille (2020b) Range-wide Greater Sage-Grouse Hierarchical Monitoring Framework: Implications for Defining Population Boundaries, Trend Estimation, and a Targeted Annual Warning System. U.S. Geological Survey Open-File Report 2020–1154. https://doi.org/10.3133/ofr20201154.

Gibson, D., E.J. Blomberg, M.T. Atamian, J.S. Sedinger (2017) Weather, habitat composition, and female behavior interact to modify offspring survival in greater sage-grouse. *Ecological Applications* 27(1):168–181. DOI 10.1002/eap.1427.

Harju, S.M., C.V. Olson, J.E. Hess, and B. Bedrosian (2018) Common raven movement and space use: influence of anthropogenic subsidies within greater sage-grouse nesting habitat: *Ecosphere* 9(7) article e02348. https://doi.org/10.1002/ecs2.2348

WESTERN ENERGY ALLIANCE

Harju, S.M., P.S. Coates, S.J. Dettenmainer, J.B. Dinkins, P.J. Jackson, and M.P. Chenaille (2021a) Estimating Trends of Common Raven Populations in North America, 1966–2018. *Human–Wildlife Interactions* 15(3):Early Online, Winter 2021. digitalcommons.usu.edu/hwi.

Harju, S.M., C.V. Olson, J. Hess, and S.L. Webb (2021b) Isotopic analysis reveals landscape patterns in the diet of a subsidized predator, the common raven. *Ecological Solutions and Evidence* 2021;2:e12100. DOI: 10.1002/2688-8319.12100.

Kvasnes, M.A.J., T. Storaas, H.C. Pedersen, S. Bjørk, and E.B. Nilsen (2010) Spatial dynamics of Norwegian tetraonid populations. *Ecological Research* 25(2):367–374. DOI 10.1007/s11284-009-0665-7.

Lindström, J., E. Ranta, H. Lindén, J. Lindstrom, and H. Linden (1996) Large-scale synchrony in the dynamics of capercaillie, black grouse and hazel grouse populations in Finland. Oikos 76(2):221. DOI 10.2307/3546193.

Ludwig, G.X., R.V. Alatalo, P. Helle, H. Linden, J. Lindstrom, and H. Siitari (2006) Short-and long-term population dynamical consequences of asymmetric climate change in black grouse. *Proceedings of the Royal Society B: Biological Sciences* 273(1597):2009–2016. DOI 10.1098/rspb.2006.3538.

Moran, P.A.P. (1952) The statistical analysis of game-bird records. *Journal of Animal* Ecology 21(1):154. DOI 10.2307/1915.

Moran P.A.P. (1954) The statistical analysis of game-bird records. II. *Journal of Animal Ecology* 23(1):35. DOI 10.2307/1659.

Peebles, L.W. and M.R. Conover (2016) Effectiveness of the toxicant DRC-1339 in reducing populations of common ravens in Wyoming. *Wildlife Society Bulletin* 40(2):281– 287.

Peebles, L.W., M.R. Conover, and J.B. Dinkins (2017) Effectiveness of the toxicant DRC-1339 in reducing populations of common ravens in Wyoming. *Wildlife Society Bulletin* 40(2):281– 287. Peebles, L.W. and J.O. Spencer Jr. (2020) Common Ravens. Wildlife Damage Management Technical Series. 24. https://digitalcommons.unl.edu/nwrcwdmts/24

Ramey, R.R., L.M. Brown, and F. Blackgoat (2011) Oil and gas development and greater sage grouse (*Centrocercus urophasianus*): a review of threats and mitigation measures. *Journal of Energy and Development* 35(1):49–78.

Ranta, E. J. Lindstrom, and H. Linden (1995) Synchrony in tetraonid population dynamics. *Journal of Animal Ecology* 64(6):767–776 DOI 10.2307/5855.

Ross, B.E., D. Haukos, C. Hagen, and J. Pitman (2016) The relative contribution of climate to changes in lesser prairie-chicken abundance. *Ecosphere* 7(6):e01323 DOI 10.1002/ecs2.1323.

Rivera-Milán, F.F., P.F. Coates, J.B. Cupples, M. Green, and P.K. Devers (2021) Evaluating common raven take for greater sage-grouse in Oregon's Baker County Priority Conservation Area and Great Basin Region. *Human–Wildlife Interactions* 15(3):Early Online, Winter 2021. digitalcommons.usu.edu/hwi

Selås, V., G.A. Sonerud, E. Framstad, J.A. Kålås, S. Kobro, H.B. Pedersen, T.K. Spidsø, O. Wiig (2011) Climate change in Norway: warm summers limit grouse reproduction. *Population Ecology* 53(2):361–371 DOI 10.1007/s10144-010-0255-0.

USDA - Wildlife Services (2008) Environmental Assessment: Bird Damage Management in the Wyoming Wildlife Services Region. Prepared by U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS). March 2008.

USDA - Wildlife Services (2020) Final Environmental Assessment: Predator Damage Management and Conflict Management in Wyoming. Prepared by U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS). December 2020.

U.S. Fish and Wildlife Service (2020a) Final Recovery Plan for the Gunnison Sage-Grouse (*Centrocercus Minimus*). Upper Colorado Basin Region, Lakewood, Colorado, 2020.

U.S. Fish and Wildlife Service (2020b) Recovery implementation strategy for Gunnison sage-grouse (*Centrocercus minimus*). September 2020. U.S. Fish and Wildlife Service, Upper Colorado Basin Region, Lakewood, Colorado. 75 pages.

Viterbi, R., S. Imperio, D. Alpe, V. Bosser-peverelli, and A. Provenzale (2015) Climatic control and population dynamics of black grouse (*Tetrao tetrix*) in the Western Italian Alps: population dynamics of alpine black grouse. *Journal of Wildlife Management* 79(1):156–166. DOI 10.1002/jwmg.810.

Young, J.R., C.C Braun, S.J. Oyler-McCance, C.L. Aldridge, P.A. Magee, and M.A. Schroeder. 2015. Gunnison Sage-Grouse *Centrocercus minimus*. *The Birds of North America*, No. 721.