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89 FR 18963

[Docket No, [BLM_HQ_FRN_MO4500174493](#)]

Re: The Pew Charitable Trusts' Comments on the Draft Environmental Impact Statement to Amend 77 Resource Management Plans for the Conservation of the Greater Sage-Grouse

Dear Greater Sage-Grouse Planning Team:

The Pew Charitable Trusts (Pew) appreciates the opportunity to provide input on the Bureau of Land Management's (BLM) Greater sage-grouse (GRSG) Draft Environmental Impact Statement (DEIS) and Draft Resource Management Plan Amendments (RMPA) across the Interior West, including 77 Resource Management Plans (RMPs). We appreciate BLM's commitment to conserving the GRSG across this expansive habitat. Pew has been engaged in GRSG planning issues for more than a decade, including BLM's earlier planning effort in 2015.

Pew's U.S. Conservation program advances common sense solutions that address the impacts of a changing climate on nature and people, in collaboration with policy makers, Tribes and stakeholders. Our engagement in BLM planning processes is an important component of this work.

Overview

As the largest land manager of the Sagebrush Sea, overseeing 43 percent of its territory spanning roughly 69 million acres, the BLM needs to adhere to scientifically-based management. However, the urgency of the situation cannot be overstated. GRSG populations are in a distressing state of decline, with recent research revealing an 80 percent decline since 1965, including a 41 percent drop since 2002. Regrettably, 87 percent of the range has witnessed declining populations over the past two decades, primarily due to habitat loss, degradation, and fragmentation.¹

¹ Coates, P.S., Prochazka, B.G., Aldridge, C.L., O'Donnell, M.S., Edmunds, D.R., Monroe, A.P., Hanser, S.E., Wiechman, L.A., and Chenaille, M.P., 2023, Range-wide population trend analysis for greater sage-grouse (*Centrocercus urophasianus*)—Updated 1960–2022: U.S. Geological Survey Data Report 1175, 17 p., <https://doi.org/10.3133/dr1175>.

Rather than embracing a specific alternative in the Draft Plan, Pew recommends that the BLM adopt a variety of management approaches from across the alternatives analyzed, as well as additional changes and improvements to ensure that the BLM’s GRSG management reflects the best available science. Fortunately, the BLM is not required to select a specific alternative as it develops RMPA and Record of Decisions (RODs). As our comments on individual land allocations and management actions will make clear, Pew supports elements from a variety of the proposed alternatives.

The preferred alternative within the current DEIS is particularly concerning because it appears to dilute the protections established under the 2015 plans, even though GRSG populations have declined precipitously during this timeframe. Despite the absence of evidence indicating the sufficiency of the 2015 plans in reversing long-term population declines, the preferred alternative proposes measures that weaken crucial safeguards. These include reduced protections around leks, opening Priority Habitats to oil and gas leasing, and designating Priority Habitats as areas for renewable energy development without exclusion. Moreover, the shift in mitigation objectives from ‘net gain’ to ‘no net loss’, coupled with reliance on unproven state mitigation programs, is a cause for concern. The removal of Sagebrush Focal Areas and dismissal of the mineral withdrawal recommendation, alongside the failure to designate Areas of Critical Environmental Concern (ACECs), further exacerbate the situation. It is imperative that BLM adopts plan amendments that prioritize the biological needs of the GRSG and address the ongoing population declines and habitat loss in a more comprehensive manner.

Recommendations

Specifically, we urge the BLM to:

1. **Manage GRSG to reverse ongoing population declines.** Management plans should be achievable, consistent, and durable. Management should conserve intact landscapes and functioning sagebrush ecosystems and help avoid any listing of GRSG under the Endangered Species Act of 1973 (ESA).

GRSG, as well as approximately 350 other species that utilize the unique sagebrush ecosystem of the American West, depend on large, intact, and connected habitats. While individual GRSG populations and management actions are important, the BLM needs to better address threats facing the entire sagebrush ecosystem and the species the rely on it, including GRSG and humans. The primary goal of this planning process should be to manage BLM lands for intactness to support GRSG populations across the range. The loss of intact landscapes can initiate a cycle of ecosystem degradation. For example, landscape fragmentation—caused primarily by development—allows for the spread of invasive annual grasses, which in turn alter fire cycles, and have led to staggering loss of GRSG habitat across the range. The importance of intact landscapes is not limited to priority habitat management areas (PHMAs) but includes general habitat management areas (GHMAs) as well.²

² See D. R. Edmunds, C. L. Aldridge, M. S. O’Donnell, and A. P. Monroe, “Greater sage-grouse population trends across Wyoming,” *Journal of Wildlife Management* 82(2) (2018): 397-412, DOI:10.1002/jwmg.21386; A. W. Green, C. L. Aldridge, and M. S. O’Donnell, “Investigating impacts of oil and gas development on Greater Sage-grouse,” *Journal of Wildlife Management* 81(1) (2016): 46-57; Emma Suzuki Spence, Jeffrey L. Beck, and Andrew

Maintaining intact landscapes represents a simple and cost-effective approach to ameliorating these threats and preserving GRSG populations.³ Given the greater challenges and expense involved in restoring native sage habitat, protecting the most valuable intact remaining areas is common sense. The differences in habitat management areas between Alternatives 4 and 5 are significant, as Alternative 5 would designate 5 percent fewer PHMAs and 8.5 percent fewer GHMAs. Therefore, Pew urges the BLM to adopt the mapping of PHMA and GHMA proposed in Alternative 4.

We also urge the BLM to adopt state-specific variations for GRSG management only when necessary, only after attempting to find other solutions to conflicts and variations across the range, and when the altered management approach(es) will provide equal or greater protection to the species. Doing so will best allow this planning process to achieve the goals of consistency, efficiency, and transparency.

- 2. Use the best available science to identify and protect important GRSG habitat as PHMA, and the “best of the best” as ACECs.** This approach, including a limited number of targeted, high-value ACECs, will best allow the BLM to fulfill its multiple-use and sustained yield mandate, locating GRSG conservation actions where they will be most effective and authorizing other land allocations where they least conflict with GRSG conservation.

ACEC designations can provide necessary special management to sage-grouse populations and habitat and help reverse long-term sage-grouse declines. Beyond conferring management measures specifically designed to maintain and enhance ACEC resources, ACECs are helpful for increasing funding and partnership opportunities and communicating the importance of the designated lands. Further, there is precedent for using ACECs at the landscape scale to provide protections to imperiled species and drive resources to restorative and protective activities.

J. Gregory, “Probability of lek collapse is lower inside sage-grouse core areas—Effectiveness of conservation policy for a landscape species,” *PLoS ONE* 12(11) (2017):e0185885, <https://doi.org/10.1371/journal.pone.0185885>; Peter S. Coates, Brian G. Prochazka, Mark A. Ricca, Brian J. Halstead, Michael L. Casazza, Erik J. Blomberg, Brianne E. Brussee, Lief Wiechman, Joel Tebbenkamp, Scott C. Gardner, and Kerry P. Reese, “The relative importance of intrinsic and extrinsic drivers to population growth vary among local populations of Greater Sage-Grouse: An integrated population modeling approach,” *The Auk* 135(2) (2018): 240–61, <https://academic.oup.com/auk/article/135/2/240/5148801>; S.E. Hanser, P.A. Deibert, J.C. Tull, N.B. Carr, C.L. Aldridge, T.C. Bargsten, T.J. Christiansen, P.S. Coates, M.R. Crist, K.E. Doherty, et al, Greater sage-grouse science (2015–17)—Synthesis and potential management implications: U.S. Geological Survey Open-File Report 2018–1017, <https://pubs.usgs.gov/publication/ofr20181017>.

³ See J. W. Connelly, S. T. Knick, M. A. Schroeder, and S. J. Stiver, Conservation assessment of greater sage-grouse and sagebrush habitats (unpublished report) (Cheyenne, WY: Western Association of Fish and Wildlife Agencies, 2004); T. B. Cross, M. K. Schwartz, D. E. Naugle, B. C. Fedy, J. R. Row, and S. J. Oyler-McCance, “The genetic network of greater sage-grouse: Range-wide identification of keystone hubs of connectivity,” *Ecology and Evolution* 8(11) (2018): 5394–5412; S. J. Oyler-McCance, T. B. Cross, J. R. Row, M. K. Schwartz, D. E. Naugle, J. A. Fike, K. Winiarski, and B. C. Fedy, “New strategies for characterizing genetic structure in wide-ranging, continuously distributed species: A Greater Sage-grouse case study,” *PLoS ONE* 17(9) (2022): e0274189, <https://doi.org/10.1371/journal.pone.0274189>; Shawna J. Zimmerman, Cameron L. Aldridge, Michael S. O'Donnell, David R. Edmunds, Peter S. Coates, Brian G. Prochazka, Jennifer A. Fike, Todd B. Cross, Bradley C. Fedy, and Sara J. Oyler-McCance, “A genetic warning system for a hierarchically structured wildlife monitoring framework,” *Ecological Applications* 33(3) (2023): e2787, <https://doi.org/10.1002/eap.2787>.

If a small number of areas that represent the “best of the best” GRSG habitat were designated as ACECs and provided the strongest protections (outlined below), it would enable the BLM to adopt a more flexible approach to management of other areas of PHMA. These areas should be identified based on peer-reviewed scientific literature that accounts for landscape intactness, range-wide population modeling, sage-grouse genetic flow/population connectivity, energy development potential, climate scenarios, and spatially explicit models such as the Sagebrush Conservation Design, a model developed by an interdisciplinary group of experts that leveraged new sagebrush rangeland conditions and threats.

In particular, Pew supports several key ACEC nominations including portions of the Owyhee Jarbridge (NV/ID border) and the High Divide (ID/MT border) areas, the South Valley Phillips/Hi-Line (MT), and the Golden Triangle/Little Sandy area (WY). We want to especially highlight the Little Sandy ACEC in Wyoming, for which Pew commissioned an analysis by Conservation Science Partners.⁴ The analysis found that the Little Sandy ACEC nomination meets multiple relevance and importance criteria, including containing high quality habitat for the GRSG. The report further analyzed indicators that relate to GRSG habitat, including sagebrush cover. Relative to other lands across the West, BLM lands within the West, Wyoming, and BLM lands within Wyoming, the proposed ACEC scores within the 99th, 97th, 97th, and 96th percentiles, respectively, of sagebrush cover. The report finds that special management attention is warranted to continue to safeguard this intact ecosystem. Pew strongly recommends that the Little Sandy and these other key ACECs are designated as part of the final RMPA.

It is notable that BLM has proposed designating more than 11 million acres of new ACECs in Alternatives 3 and 6, but none within Oregon. Oregon is the only state in the planning area where BLM did not propose new ACECs, despite the state containing a significant amount of GRSG’s habitat in the westernmost portion of its range. Furthermore, BLM analyzed and recognized the relevance and importance values of 17 new ACECs for the GRSG in Oregon in the 2015 National Greater Sage-grouse Planning Strategy. By not including any ACECs in Oregon in the 2024 RMPA, it is not only inadequate for protecting the species within this part of the range, but it is inconsistent with BLM’s approach in other states. We recommend that BLM revisit its 2015 analysis and reconsider designating ACECs in Oregon in the final plan.

In order to protect the relevant and important values of these highly targeted areas, special management prescriptions are needed, which should include the following:

- Designate as Right of Way (ROW) exclusion areas, including prohibiting renewable energy generation sites and transmission lines;
- Recommend withdrawal from mineral entry;
- Close to leasing or allow leasing only with no surface occupancy with no exceptions, waivers, or modifications;
- Allow leases to expire when the primary term for existing leases end;
- Condition approval on both lease terms and ACEC management direction when reviewing new Applications for Permit to Drill, or APD extensions;

⁴ Conservation Science Partners. 2022. A landscape-level assessment of Area of Critical Environmental Concern (ACEC) criteria in the proposed Little Sandy Landscape ACEC. Technical Report. Truckee, CA, USA.

- Close to construction of new roads;
- Designate as closed to motor vehicle use, as limited to motor vehicle use on designated routes, or as limited to mechanized use on designated routes;
- Close to mineral material sales;
- Designate as Visual Resource Management Class I or II;
- Restrict construction of new structures and facilities unrelated to the preservation of GRSG and not necessary for the management of uses allowed under the land use plan; and
- Retain public lands in federal ownership.

Adopting a three-tiered approach of GHMA, PHMA, and ACECs will enable the BLM to meaningfully protect the most important areas for GRSG conservation while allowing other important uses of BLM-managed lands in less sensitive areas, and to meet the agency's multiple-use obligations.

3. **Apply the full mitigation hierarchy to all GRSG-impacting activities.** While compensatory mitigation can be used to offset impacts to GRSG, it must be used after impacts have been avoided and minimized to the maximum extent practicable. It should also be used in a manner that addresses all direct, indirect, and cumulative impacts.

Applied in a balanced way, mitigation can result in positive outcomes for all – the public, communities, businesses, and the environment. Sound mitigation policy provides agencies such as the BLM with a structured, rational, and transparent framework for reviewing use requests and meeting multiple-use and sustained yield mandates. Pew urges the BLM to incorporate strong criteria for mitigation in the final EIS and RMPAs/RODs.

Because the BLM has the authority under the Federal Land Policy and Management Act to require compensatory mitigation,⁵ Pew supports the approach taken in Alternatives 4 and 5, under which the BLM itself will require mitigation to a 'no net loss' standard if the relevant state either does not require mitigation, or the state's mitigation program is determined by the BLM to be inconsistent with BLM or Department of the Interior policy.⁶ We also support the approach in Alternative 4 under which the BLM would consider requiring mitigation *above* state requirements, in areas where adaptive management triggers have been met.⁷

We urge the BLM to adopt a stronger approach than the preferred alternative and prohibit the use of compensatory mitigation to authorize Waivers, Exceptions and Modifications (WEMs) in No Surface Occupancy (NSO) areas, including within all PHMA outside of Wyoming and within lek buffers subject to NSO stipulations in Wyoming. Compensatory mitigation must meet very high standards to be effective, as its use invariably introduces risk to protected resources such as GRSG. In the case of oil and gas development—an activity which has significant adverse impacts on GRSG population—the BLM should not introduce this risk. The reason for NSO stipulations on most PHMA and Wyoming lek buffers is that they represent the core areas most

⁵ See U.S. Department of the Interior Office of the Solicitor, M-37075, Withdrawal of M-37046 and Reinstatement of M-37039, "The Bureau of Land Management's Authority to Address Impacts of its Land Use Authorizations Through Mitigation."

⁶ Draft EIS, 2-24 through 2-25.

⁷ Draft EIS, 2-24 through 2-25.

essential to GRSG reproduction, population sustainment over time, and ultimately recovery of the species' population. NSO stipulations are among the most important protections that can be afforded and represent a linchpin for any GRSG conservation strategy that focuses on core areas. For this reason, Pew urges the BLM not to allow compensatory mitigation to facilitate WEMs in NSO areas.

4. **Use the best available science to establish lek buffers.** Significant research into GRSG behavior, revealing that older approaches to lek buffers, many of which persist in the DEIS, are inadequate to effectively protect GRSG.

Lek buffers are an important tool to protect active GRSG leks from a variety of habitat-disturbing anthropogenic activities, including construction of oil and gas wells, roads, pipelines, transmission lines, and other tall structures. Research has demonstrated that if the nesting habitat around the lek is degraded or removed, lek attendance will decline and the lek will eventually become inactive.⁸ As this planning process continues, we urge the BLM to reconsider the proposed lek buffers in the DEIS and bring them into alignment with the best available science, which includes applying a minimum 4-mile buffers to protect breeding, nesting and brood-rearing habitat in PHMA⁹ and a minimum 3.1-mile¹⁰ lek buffers in GHMA.

5. **Manage mineral development to avoid and minimize impacts to GRSG.** The most prevalent land allocations on BLM-managed lands that are incompatible with GRSG persistency are mineral development, including oil and gas, other fluids, and solid minerals. Areas of lesser importance for GRSG should be prioritized for these uses, and important GRSG habitat should be subject to closures, stipulations, and withdrawals, as appropriate.

Disturbance from oil and gas development is a primary threat to GRSG. The 2015 RMPA included provisions and stipulations designed to minimize the impacts of oil and gas development on GRSG and its habitat, but these measures have not been implemented with consistency or, in some cases, at all. The enjoined 2019 RMPA would have weakened the BLM's ability to manage oil and gas development for GRSG conservation. Therefore, it is imperative that this planning process result in a durable approach to oil and gas (and other energy and mineral) development that reflects the best science and conserves GRSG populations and habitat.

Nonrenewable energy development has also emerged as a major issue in GRSG conservation because areas currently under development contain some of the highest densities of GRSG and other sagebrush-obligate species in western North America.¹¹ A key component of the 2015

⁸ Walker et al., "Greater Sage-Grouse Population Response to Energy Development and Habitat Loss"; S. M. Harju, M. R. Dzialak, R. C. Taylor, L. D. Hayden-Wing, and J. B. Winstead, 2010. "Thresholds and Time Lags in Effects of Energy Development on Greater Sage-Grouse Populations," *Journal of Wildlife Management* 74 (2010):437–448, <http://www.bioone.org/doi/abs/10.2193/2008-289>; Knick et al., "Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, U.S.A."

⁹ A 4-mile lek buffer may include an average of 80 percent of nesting females (SGNTT 2011: 21); larger buffers may be recommended to conserve the species (6.2 miles, Aldridge & Boyce 2007; 6.2 miles, Doherty et al. 2010; 5.3 miles, Holloran and Anderson 2005; 4.6 miles, Coates et al. 2013).

¹⁰ See Manier et al., Conservation buffer distance estimates for Greater Sage-Grouse—A review.

¹¹ Naugle et al., "Sage-Grouse and Cumulative Impacts of Energy Development."

RMPA required the BLM to prioritize new oil and gas leasing outside of PHMA and GHMA to protect that habitat from future disturbance. In the current planning process, protection of GRSG habitat from oil and gas development should be maintained; this can be done with little impact on oil and gas development opportunities.

The BLM should adopt a coherent prioritization that will apply universally across field offices within identified GRSG PHMA and GHMA. In addition, appropriate prioritization guidance would be consistent with the BLM's newly-issued rule on onshore oil and gas development, which specifies that when offering lands for lease, the BLM must consider "[t]he presence of important fish and wildlife habitats or connectivity areas, giving preference to lands that would not impair the proper functioning of such habitats or corridors."¹² Prioritizing appropriate lands outside of GRSG habitat for oil and gas development is a balanced approach that enables the BLM to uphold its multiple-use mandate, by achieving the goal of conserving GRSG and maintaining production of oil and gas (and other essential minerals and energy resources).

Pew supports the BLM's management approach to geothermal energy development, especially NSO stipulations for all PHMAs. However, we recommend that geothermal energy development occur outside of high-value seasonal habitats and connectivity corridors.

6. Apply disturbance caps consistently. Disturbance caps are an effective backstop for identifying and responding to direct, indirect, and cumulative impacts to GRSG habitat that otherwise might go unaddressed. They should be applied in a manner consistent with the best science, and with a minimum of exceptions.

The best available science supports disturbance caps of 3 percent, with the exception of one study, where brood-rearing GRSG established home ranges in areas that had 3.5 percent anthropogenic surface disturbance on average, including both active disturbance and reclamation, but this was because it was conducted in an area with so much disturbance that there were little to no areas that hadn't been disturbed – in this case females picked the least disturbed areas.¹³ BLM includes disturbance caps in the DEIS, but also includes exceptions, which could undermine their effectiveness. As the BLM develops its Final EIS and ROD, we recommend that the disturbance cap exceptions in the DEIS be either eliminated or qualified with language directing that they be used exceedingly cautiously.

The BLM should limit the availability of WEMs for oil and gas stipulations, as intended in the 2015 RMPA, to ensure that these provisions do not undercut the purpose of the plans. In general, the requirements laid out in the DEIS for projects to secure WEMs are appropriate and rigorous, including scientific analysis of the area by a biologist and requirements for the complete mitigation of any impacts on adjacent habitat, including indirect and cumulative impacts, clear documentation, and public review.¹⁴ Pew urges the BLM to retain both of these requirements in

¹² Fluid Mineral Leases and Leasing Process, 89 Fed. Reg. 30916, 30986 (April 23, 2024).

¹³ C. P. Kirol, "Patterns of nest survival, movement and habitat use of sagebrush-obligate birds in an energy development landscape" (PhD dissertation, University of Waterloo, Waterloo, Canada, 2021). Although this study found the cut-off at 3.5% rather than 3%, this was because it included reclamation areas and was in an area in northwestern Wyoming that has so much disturbance that little to no areas are available that haven't been disturbed – females instead pick the least disturbed areas.

¹⁴ See draft EIS, 2-47 through 2-91.

the final EIS and rigorously enforce them. Additionally, BLM must consider the cumulative impacts of WEMs across a state when considering additional requests.

To further address the threat imposed by infrastructure associated with development, the 2015 RMPA included caps for anthropogenic disturbances within PHMAs. Once a disturbance cap is reached, additional development will not be permitted on federal lands within the relevant PHMA. Caps were set at 3 percent or 5 percent, depending on the state.¹⁵ Pew applauds the BLM for revisiting these disturbance caps in the DEIS, and for making improvements from the 2015 RMPA. Pew recommends that the BLM incorporate further improvements, as outlined above.

7. **Exclude renewable energy infrastructure from important GRSG habitat.** The impacts of renewable energy on GRSG are not yet fully understood. Compared to most mineral development, renewables such as wind and solar energy are flexible in their locations, and current projections indicate that there is more than sufficient land available for renewable energy development outside of high-quality GRSG habitat.

Renewable energy development is one of the most challenging issues for GRSG conservation, due to the vast potential for renewable energy across the range, including from wind and solar and increasingly geothermal sources, and the associated need for new transmission lines. We urge the BLM to adopt Alternative 4 of the DEIS for wind energy development and support the exclusion of solar energy facilities from GRSG habitat to the greatest extent possible. In particular, PHMAs should be closed to solar, as prescribed in Alternative 4 of the DEIS.

The BLM should use the existing and planned transmission lines recently identified in the Solar PEIS process to identify those corridors where transmission lines can be collocated to minimize habitat fragmentation and associated impacts. New transmission lines should not be authorized outside of utility corridors, nor should new corridors be placed within PHMAs. For those locations where transmission lines already exist, or where valid existing rights necessitate construction of new generation interconnect lines in GRSG habitat, the BLM should apply the avoidance criteria and afford additional protections for breeding, nesting, and other high value/limiting seasonal habitat proposed under Alternative 4.

8. **Manage livestock grazing to conserve GRSG.** Unlike most other competing land allocations, livestock grazing can be consistent with GRSG population health, and can even improve habitat conditions for GRSG. However, grazing can also have adverse impacts on GRSG health. To achieve this, grazing must be managed to meet land health standards (LHS) and must consider specific circumstances unique to each location.

Achieving positive outcomes for GRSG from grazing depends on careful consideration of numerous factors. For example, researchers from the U.S. Geological Survey, Colorado State University, and Utah State University found that higher levels of grazing early in the growing season (before peak plant productivity) was associated with GRSG population declines, but

¹⁵ Draft EIS, 2-29.

similar high grazing levels later in the season corresponded with GRSG population increases.¹⁶ In moister areas with greater plant productivity, in contrast, GRSG benefitted from intermediate grazing levels *early* in the season, and *not* from higher levels of grazing, even later in the season.¹⁷

We support responsible grazing within both PHMAs and GHMAs and taking into account spatial and temporal impacts listed above, provided that appropriate management actions are required. As such, Pew supports the approaches taken in Alternatives 4 and 5, rather than Alternative 3.

9. **Implement climate-ready management principles to manage GRSG habitat for present and future impacts of climate change.** Climate-based adaptation in natural resource management has been presented in published literature, government agency policies and white papers,¹⁸ and online resources and tools for at least a decade. From these resources, Pew has identified a set of five interrelated principles that are important in determining whether planning processes and implementation approaches are climate-ready, or capable of dealing with the present and future impacts of climate change. strengthening and implementing links between them all.

- **Climate Impact Evaluations:** Rather than trying to recover or sustain historical conditions, climate impact evaluations assess present and future climate change impacts on natural and cultural resources and the communities they support. This may involve climate scenario planning, predictive modelling, or vulnerability assessments. Climate impact evaluations help communities, natural resource managers, and decision makers plan for multiple uncertain future outcomes.
- **Climate Responsive Goals and Strategies:** Goals and strategies should be explicitly linked to the findings of principle 1 and include clear, tangible, and desired outcomes with specific actions to achieve these outcomes and metrics to evaluate success. They should be designed to resist or adapt to different climate threats and other stressors identified through the climate impact evaluation.
- **Systematic Monitoring:** Includes protocols and methods of what to measure, when and how to do it, followed by implementation and data collection. Systematic monitoring is critical for evaluating the effectiveness of management actions as well as for understanding how climate change is impacting resources over time. It requires regular schedules and standardized methods, as well as dedicated funding and staff time.
- **Adaptive Management:** A process of iteratively planning, implementing, evaluating, and modifying management strategies in the face of uncertainty and change. Adaptive management reflects the need to adjust when new information from systematic monitoring (e.g., research/data analysis) local knowledge, and other variables, shows that the original goal is no longer feasible.

¹⁶ See U.S. Geological Survey, “Livestock grazing effects on sage-grouse,” press release, March 21, 2017, <https://www.usgs.gov/news/national-news-release/livestock-grazing-effects-sage-grouse-study-identifies-options-sustain-0>.

¹⁷ U.S. Geological Survey, “Livestock grazing effects on sage-grouse.”

¹⁸ Stein, B.A., P. Glick, N. Edelson, and A. Staudt (eds.). 2014. *Climate-Smart Conservation: Putting Adaptation Principles into Practice*. National Wildlife Federation, Washington, D.C.

- **Collaborative Planning with Indigenous Nations and Climate Vulnerable Communities:** The planning process should engage, and potentially share decision-making, with sovereign Indigenous nations and climate vulnerable communities, as well as other local communities, and consider Traditional Knowledge as well as lived experience and expertise.

Related to the Climate Impact Evaluation principle, we applaud the BLM for evaluating climate scenario research in the RMPA, shown in Maps 3.11 and 3.12, that projects sagebrush habitat responses to a changing climate in the next twenty to forty years, and helps identify areas where climate change poses the greatest future threat to GRSG habitat. We further recognize that this research was reviewed as layers in the rangewide preliminary evaluation of ACECs. We urge the BLM to enhance its research by explicitly linking these projections to management prescriptions in PHMAs and ACEC designations, to ensure management decisions will positively contribute to the ecological intactness values on GRSG habitat. Doing so would be in line with the BLM Instruction Memorandum 2023-013, ACEC evaluations should consider “whether relevant values contribute to landscape intactness, climate resiliency, habitat connectivity, or opportunities for conservation or restoration”¹⁹ and would be consistent with the recently finalized Public Lands Rule, wherein the BLM “emphasizes the role of ACECs in contributing to ecosystem resilience by clarifying that ACEC designation can be used to protect landscape intactness and habitat connectivity.”²⁰ Finally, we highlight the BLM’s approach within the 2015 Oregon GRSG plan, which analyzed “climate change consideration areas” for the GRSG.²¹ These areas were identified by BLM as “likely to provide the best habitat for GRSG over the long term, according to recent climate change modeling.”²² We recommend that BLM apply this approach across the GRSG range.

Pew also acknowledges BLM’s work on the environmental justice analysis, which demonstrates the Collaborative Planning with Indigenous Nations and Climate Vulnerable Communities principle. This report clearly shows how minority and low-income populations will be affected for several key issues including “impacts on environmental justice populations from potential changes in water quality, air quality, and climate change from potential mineral development under alternatives with less restrictions” (13-5-6). We urge the BLM to identify and discuss tradeoffs with environmental justice communities and to co-create durable solutions (i.e. program establishments) to negative climate change impacts. Moreover, we strongly suggest the BLM establish a process for early and regular outreach, engagement, and notification to these communities. As stated above, it is important to also examine and directly link how projected actions under different climate scenarios would impact communities.

Pew supports the BLM’s forward-thinking goals and monitoring strategies to steward GRSG habitat, through adaptive management tools like the Habitat Assessment Framework (HAF), the

¹⁹ Bureau of Land Management, IM 2023-013: *Clarification and Interim Guidance for Consideration of Areas of Critical Environmental Concern Designations in Resource Management Plans and Amendments*.
<https://www.blm.gov/policy/im-2023-013>

²⁰ Conservation and Landscape Health 2024, 89 Fed. Reg. 40308 (to be codified in the at 43 C.F.R. Part 6100).

²¹ Oregon Greater Sage-Grouse Proposed RMPA/Final EIS, June 2015, page 2-48:

https://eplanning.blm.gov/public_projects/lup/60100/72059/79059/ORGRSG_Ch2_508.pdf

²² Ibid.

GRSG Monitoring Framework, and the Targeted Annual Warning System (TAWS), all of which relate to the Systemic Monitoring and Adaptive Management principles. As the BLM rightfully notes: "...a site may not meet the suitable rating if many indicators are impacted by annual climate variability (e.g., drought conditions), which is independent of management" (8-1). Therefore, we recommend the BLM adopt a timeline to incorporate new information such as emerging research and evaluate management actions. We are pleased to see "invasive annual grass cover" as an indicator in the HAF, as this connects to the impact of climate change on GRSG habitat. We suggest similar climate indicators to track ecosystem health. Doing so will provide critical understanding of how climate change is impacting the sagebrush over time and will evaluate the effectiveness of management actions. Finally, we recommend that the TAWS, which is embraced by most western fish and wildlife agencies, have greater emphasis in the BLM's plan. TAWS has proven effective in monitoring population trends and prompting necessary management actions, and represents a critical mechanism for objective, data-driven, responsive conservation strategies that adapt to changing conditions.

Conclusion

Pew appreciates the opportunity to provide this input on the GRSG DEIS. We strongly urge the BLM to make significant improvements in management designations and prescriptions to ensure the enduring viability of GRSG populations across BLM-managed habitat. We look forward to continuing to engage with you as the Final EIS and ROD are developed and ultimately issued. Please do not hesitate to reach out to Laurel Williams, lwilliams3@pewtrusts.org, should you have any questions.

Sincerely,



Marcia Argust
Director, U.S. Conservation
The Pew Charitable Trusts

CC: Tracy Stone-Manning, Director, Bureau of Land Management
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