U.S. Department of the Interior
Bureau of Land Management

March 2019

Northwest Colorado Greater Sage-Grouse

Record of Decision and Approved Resource Management Plan Amendment

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United States Department of the Interior

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In Reply Refer To:
1793 (CO-930)

MAR 14 2019

Dear Reader:

Enclosed is the *Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendment and Record of Decision* (Approved RMPA and ROD). The Bureau of Land Management (BLM) prepared this plan amendment with valuable input from cooperating agencies and in accordance with the National Environmental Policy Act of 1969, as amended, the Federal Land Policy and Management Act of 1976, as amended, implementing regulations, the BLM's Land Use Planning Handbook (H-1601-1), and other applicable laws and policies.

The planning area includes the BLM Colorado Grand Junction, Kremmling, Little Snake, White River and Colorado River Valley field offices and encompasses approximately 4.2 million acres in ten counties. Within this area, approximately 1.7 million acres are mapped as containing Greater Sage-Grouse habitat administered by the BLM, along with approximately 2.8 million acres of BLM-administered subsurface federal mineral estate.

On October 11, 2017, following direction in Secretarial Order 3353, the BLM issued a Notice of Intent to amend the Resource Management Plans (as amended in 2015) pertaining to Greater Sage-Grouse habitat management to bring the plans into alignment with the State of Colorado's Greater Sage-Grouse Conservation Plan and other Colorado conservation strategies. On May 4, 2018, the BLM released a Draft Resource Management Plan Amendment and Environmental Impact Statement (Draft RMPA/EIS), which considered the potential impacts of the No Action Alternative and the Management Alignment Alternative (the Preferred Alternative). The Draft RMPA/EIS was available for a 90-day public comment period from May 4 to August 2, 2018. BLM Colorado received 34,650 unique comment letters, forms, and emails, resulting in 595 substantive comments.

On December 7, 2018 the BLM Colorado released the Proposed Resource Management Plan Amendment and Final Environmental Impact Statement (Proposed RMPA/Final EIS) for a 30-day Protest Period and 60-day Governor's Consistency Review. The BLM received 17 protest submissions, of which 12 were determined to have standing. The BLM Director concluded that the BLM had followed applicable laws, regulations, and policies and considered relevant information and public input during plan development, and resolved the protests without making significant changes to the Proposed RMPA/Final EIS.

Issuance of this ROD completes the process of finalizing the Approved RMPA, which will guide management of Greater Sage-Grouse habitat on BLM-administered public lands in Colorado. The 2019 Approved RMPA and ROD are available electronically on BLM's ePlanning website at: **https://goo.gl/kmLtwT**

The BLM appreciates the involvement of groups, organizations, cooperating agencies, and federal, state, and local agencies who contributed to the development of this Approved RMPA. This participation informed and improved the process and outcome.

Thank you for your continued interest in managing habitat for the Greater Sage-Grouse. Your ongoing involvement is encouraged during plan implementation and monitoring, as we move forward in managing our public lands together.

Sincerely,

Jamie E. Connell
State Director
Bureau of Land Management

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Record of Decision

Approving the Northwest Colorado Greater Sage-Grouse Resource Management Plan Amendment

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RECORD OF DECISION

1. INTRODUCTION

This Record of Decision (ROD) and Approved Resource Management Plan Amendment (Approved RMPA) supports Bureau of Land Management (BLM) resource management plans (RMP) in the Northwest District of Colorado. The Approved RMPA refines some of the decisions from the 2015 planning effort related to Greater Sage-Grouse habitat management and leaves in place the majority of decisions from 2015. This amendment builds on the work that was completed in 2015 to respond to the deteriorating health of sagebrush landscapes of the American West and the declining population of the Greater Sage-Grouse, a ground-dwelling bird that was under consideration by the United States (U.S.) Fish and Wildlife Service (FWS) for protection under the Endangered Species Act (ESA).

The BLM has amended its resource management plans for Greater Sage-Grouse habitat management in order to provide additional consistency and alignment with the State of Colorado's Greater Sage-Grouse Executive Order. On March 29, 2017, the Secretary of the Interior (Secretary) issued Secretarial Order (SO) 3349, *American Energy Independence*, which ordered agencies to reexamine practices "to better balance conservation strategies and policies with the equally legitimate need of creating jobs for hard-working American families." On June 7, 2017, the Secretary issued SO 3353, with the purpose of enhancing cooperation among 11 western states and the BLM in managing and conserving Greater Sage-Grouse. The agencies were also directed to review the 2015 Greater Sage-Grouse plans and associated policies to identify provisions that may require modification to make the plans more consistent with the individual state plans, and to better balance the BLM's multiple use mandate. On August 4, 2017, the Interior Review Team submitted its report in response to SO 3353, and recommended modifying the BLM Greater Sage-Grouse plans and associated policies to better align with individual state plans and conservation strategies. This ROD adopts the Approved RMPA, which implements the recommendations from the SO 3353 report and addresses other planning issues raised during this land use plan amendment process.

The BLM manages Greater Sage-Grouse habitat as part of the agency's multiple use mandate. In 2015, resource management plans that guide conservation of sagebrush steppe habitat on BLM-administered public lands in 9 western states were amended to include specific management allocations, resource objectives, and management actions for designated Greater Sage-Grouse Habitat Management Areas (HMAs) to help ensure conservation, enhancement, and restoration of Greater Sage-Grouse habitat. Five resource management plans covering BLM-managed public lands in Colorado were amended to reach this objective. The BLM has used these initial resource management plans as a platform for its ongoing commitment to on-the-ground activities that promote conservation through close coordination with state, local, and private partners. Most notably, the BLM has treated increased numbers of acres of sagebrush steppe habitat in every fiscal year since 2015 in coordination with the contributions of partners, accomplishing important goals for sage-grouse conservation, as well as for other programs and activities, including fuels, riparian, and range management.

These habitat projects show that successful conservation of Greater Sage-Grouse requires a shared stewardship vision among states, private citizens, landowners, and federal land management agencies. While current laws and regulations put state and local agencies at the forefront of efforts to maintain healthy fish and wildlife populations and conserve at-risk species, state-led efforts to conserve Greater Sage-Grouse and its habitat date back to the 1950s. For the past two decades, state wildlife agencies, local agencies, federal agencies, and many others interested in the health of the species have been collaborating to conserve Greater Sage-Grouse and its habitat.

With the publication of the RODs and Approved RMPAs, the BLM is concluding this planning effort focused on furthering cooperation with western states by ensuring greater consistency between individual state plans for managing the Greater Sage-Grouse as a wildlife species and the BLM's multiple use mission for managing public land resources, including wildlife habitat. The planning process has given the BLM an opportunity to work with the states and other partners to promote shared conservation, strike a regulatory balance, and build trust as the agency identifies ways to sustainably develop public land resources for multiple uses. This effort focused on ways to increase management flexibility, maintain access to public resources, promote positive conservation outcomes for Greater Sage-Grouse, and incorporate new information that is considered the best available science and is rooted in on-the-ground experience.

On October 11, 2017, following direction in SO 3353 to enhance cooperation among 11 western states and the BLM in managing and conserving Greater Sage-Grouse, the BLM issued a Notice of Intent (NOI) to amend the 2015 resource management plans guiding Greater Sage-Grouse habitat management. SO 3353 provided the direction to bring the 2015 plans into closer alignment with the species management plans and conservation strategies of individual states. Reflecting the commitment by the Department of the Interior (DOI), the NOI indicated that states would play a central role in the planning process, and all partners have declared their desire to avoid the need to list the Greater Sage-Grouse under the Endangered Species Act (ESA).

On May 4, 2018, the BLM released Draft Resource Management Plan Amendments and Environmental Impact Statements (Draft RMPA/EISs) for Colorado and six other western states, which considered and analyzed the potential impacts of a No Action Alternative and a Management Alignment Alternative. While all changes proposed in the Alignment alternatives were meant to enhance coordination with respective state plans, variations reflected the different approaches states are taking within their jurisdictions to conserve Greater Sage-Grouse and the BLM's determination that greater flexibility was needed to ensure that each state can manage the habitat within its borders for the particular needs of its landscapes and communities.

On December 7, 2018 the BLM released the Proposed Resource Management Plan Amendments and Final Environmental Impact Statements (Proposed RMPA/FEISs) for a 30-day protest period (extended during the temporary lapse in Federal government funding) and a 60-day Governor's Consistency Review. The Proposed RMPAs built on the 2015 revisions and amendments to BLM resource management plans, as well as three years of on-the-ground experience with what is working to conserve Greater Sage-Grouse habitat on public lands in support of healthy populations managed and conserved by the states.

BLM Colorado's amended plan makes additional acres available for public access, while providing a Colorado-specific strategy and balancing the BLM multiple use mandate. The amended Colorado plans also provide clarification on the use of lek buffers and modification of HMAs.

Together, the amended plans across the Greater Sage-Grouse's range retain the priority habitat management area (PHMA) designation for 29 million acres of BLM-administered sagebrush-steppe across the western states. Within PHMA, the management priority is to exclude or avoid disturbance to Greater Sage-Grouse and their habitat and minimize impacts to PHMA where they cannot be avoided. Another 23 million acres retain identification as general habitat management areas (GHMA), where avoidance and minimization are applied flexibly, consistent with both local conditions and the state's science-based objectives for species management.

Including habitat in Montana, North Dakota, and South Dakota, a total of approximately 32 million surface acres will be managed as priority habitat across the Greater Sage-Grouse's range, while approximately 25 million additional acres are designated general habitat. The plans will also implement a shift in objectives specific to the needs of each state.

Finally, the amended plans formalize coordination between the BLM and respective states in applying compensatory mitigation measures to approved actions. These plans reflect the BLM's determination that the Federal Land Policy and Management Act of 1976 (FLPMA) does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of BLM-administered lands. The plans clarify that the BLM will consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, or authority; other federal law; or when offered voluntarily by a project proponent.

The amended plans reinvigorate DOI's commitment to collaborate with our neighbors in conserving sagebrush habitats and sage-grouse populations. Further, the amended plans reflect the BLM's determination that greater flexibility for each state to manage Greater Sage-Grouse and sagebrush habitat will also lead to improved outcomes for the species.

2. PLANNING AREA

The Northwest Colorado planning area is part of the larger Rocky Mountain Region and encompasses approximately 15 million acres, including 8.5 million acres of public lands managed by five BLM field offices in the 10 northwest Colorado counties of Eagle, Garfield, Grand, Jackson, Larimer, Mesa, Moffat, Rio Blanco, Routt, and Summit. The planning area encompasses National Park Service, U.S. Department of Defense, U.S. Forest Service, U.S. Fish and Wildlife Service, State of Colorado, county, city, and private lands. Decisions in this Approved RMPA apply solely to BLM-administered surface (totaling approximately 1.7 million acres) and BLM-administered Federal mineral estate (approximately 2.1 million acres) within Greater Sage-Grouse habitat. Surface management decisions made in the Approved RMPA apply only to lands administered by the BLM in the decision area.

3. DECISION

The decision is hereby made to approve the attached Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendment. This ROD and the Approved RMPA are effective on the date this ROD is signed.

The BLM prepared the Approved RMPA under authority of the FLPMA (43 United States Code [U.S.C.] 1701 et seq.) and other applicable laws. The BLM prepared an EIS in compliance with the National Environmental Policy Act (42 U.S.C. 4321-4347) as amended (NEPA), and BLM planning regulations (43 Code of Federal Regulations [CFR] Part 1601 et seq.).

This plan will amend various decisions contained in the 2015 Northwest Colorado Greater Sage-Grouse Approved RMPA as well as the following resource management plans (RMP):

Colorado River Valley RMP (2015)

Grand Junction RMP (2015)

Kremmling RMP (2015)

Little Snake RMP (2011)

White River RMP (1997)

White River Field Office RMP Amendment For Oil and Gas Development (2015)

This RMPA retains the majority of the allocations, objectives, and management decisions in the above mentioned plans, including the changes made in 2015. The decisions affected are described in Section 3.1 below. Targeted changes are made in response to specific issues raised by the state and local governments to bring the Northwest Colorado Greater Sage-Grouse RMPA more in line with the State of Colorado Sage-grouse Management Plan.

3.1 Summary of Approved Management Decisions

Listed below are the key management decisions in the Approved RMPA:

Fluid Minerals

- Allocation decision:

  Within one mile of active leks: Changed decision from "closed to leasing" to "open to leasing subject to major stipulations **(NSO-1**). Waiver, exception, and modification criteria are defined in **Appendix G** "*Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations*"

- Changed criteria for waivers, exceptions, and modifications:

  From one mile of active leks to the remainder of PHMA: Changed criteria to allow waivers exceptions or modifications with criteria **(NSO-2)** as described in **Appendix G** "*Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations"*

These changes allow greater flexibility for the BLM to work with the State of Colorado on issues related to fluid minerals management and mitigation.

Clarification of Planning Decisions

The following issues required clarification to language in the 2015 Approved RMPA/ROD (2015 ARMPA). The clarifying language was included in the Approved RMPA to communicate how these issues are being addressed through plan maintenance, policy, or implementation.

Modifying Lek Buffers

- Provided clarification regarding the consideration of lek buffer-distances. See p. 2-3 of the Approved RMPA, **MD SSS-2** for details. Additionally, background information for lek buffer analysis has been integrated into **Appendix H**, *"Guidelines for Implementation and Adaptive Management"* and **Appendix B** from the 2015 ARMPA will not be carried forward.

Modification of Habitat Management Area Boundaries

The definition of PHMA, GHMA and LCHMA remain as follows:

> **PHMA** - BLM-administered lands identified as having the highest value to maintaining sustainable Greater Sage-Grouse populations. These are areas that have been identified as having the highest conservation value to maintaining sustainable Greater Sage-Grouse populations; they include breeding, late brood-rearing, and winter concentration areas.
>
> **GHMA** - BLM-administered lands where some special management would apply to sustain Greater Sage-Grouse populations. These are areas of seasonal or year-round habitat outside of priority habitat.
>
> **LCHMA** - Areas that have been identified as broader regions of connectivity important to facilitate the movement of Greater Sage-Grouse and maintain ecological processes.

The process for modification of habitat management area boundaries was clarified. During plan evaluation, areas designated as PHMA and GHMA can be modified based on an adaptive management process, including an evaluation of data by Colorado Parks and Wildlife (CPW) in consultation with BLM management as described in **Appendix H**.

Mitigation

Clarification on the application of the mitigation hierarchy, including conditions under which compensatory mitigation is appropriate:

The BLM has determined that FLPMA does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of BLM-administered lands (BLM Instruction Memorandum [IM] No. 2019-018, *Compensatory Mitigation*, December 6, 2018). Consistent with that determination, compensatory mitigation must be voluntary unless required by other applicable laws. The BLM recognizes that state authorities may also require compensatory mitigation.

To align this planning effort with BLM compensatory mitigation policy IM 2019-018, the amended plans clarify that the BLM will consider compensatory mitigation only as a component of compliance with a state mitigation plan, program, authority or recommendation; when required by a law other than FLPMA; or when offered voluntarily by a project proponent. In accordance with the state's goals for managing Greater Sage-Grouse, the plans modify the net conservation gain standard for

compensatory mitigation to clarify that the BLM would pursue conservation benefits as a broader planning goal and objective. This means that the BLM would continue to require avoidance, minimization, and other onsite mitigation to adequately conserve Greater Sage-Grouse and its habitat, while remaining committed to implementing beneficial habitat management actions to reduce the threats of fire and invasive species. In fiscal year 2018, the BLM funded approximately $29 million in sage-grouse management actions resulting in approximately 500,000 acres of treated sage-grouse habitat and expects to invest another $17 million toward habitat management projects in fiscal year 2019.

The BLM would continue to apply the mitigation hierarchy as described in Council on Environmental Quality (CEQ) regulations at 40 CFR 1508.20; however, the BLM would focus on avoiding, minimizing, rectifying, and reducing impacts over time. Compensation, which involves replacing or providing substitute resources for the impacts (including through payments to fund such work), would be considered only when voluntarily offered by a proponent, required by a law other than FLPMA, or to meet a state recommendation or requirement. The BLM commits to cooperating with the state to analyze applicant-proposed, state-recommended, or state-imposed compensatory mitigation to offset residual impacts. The BLM remains committed to achieving the planning-level management goals and objectives identified in this ROD and the 2015 ARMPA by ensuring that Greater Sage-Grouse habitat impacts are addressed through implementing mitigating actions consistent with the governing resource management plan.

See the Approved RMPA p. 2-4, **MD SSS-3** for further details regarding mitigation strategy.

3.2 What the ROD and Approved RMPA Provide

The decisions provided in this ROD and Approved RMPA build upon the decisions contained in the 2015 plans. This Approved RMPA provides clarification and consistency with the State of Colorado's Greater Sage-Grouse Conservation Plan and conservation strategies from the State of Colorado, including the Colorado Department of Natural Resources and CPW for the management decisions summarized in **Section 3.1**. Additionally, **Appendix G** and **Appendix H** were amended and are included as appendices to the Approved RMPA. **Appendix B** was not carried forward.

The decisions in this Approved RMPA affect only those decisions described in Section 3.1 above. The remainder of the decisions from the 2015 ARMPA remain in effect.

3.3 What the ROD and Approved RMPA Do Not Provide

The Approved RMPA does not contain decisions for public lands outside of Greater Sage-Grouse HMAs.

The Approved RMPA does not violate or diminish existing valid rights nor contain decisions for mineral estates that are not administered by the BLM. The Approved RMPA decisions for surface estate apply only to BLM-administered lands. In addition, many decisions are not appropriate at this level of planning and are not included in this ROD. For example:

- Statutory requirements: The decision does not change the BLM's responsibility to comply with applicable laws, rules, and regulations;

- National policy: The decision does not change the BLM's obligation, consistent with applicable laws and regulations, to implement current or future national policy;
- Funding levels and budget allocations: These are determined annually at the national level and are beyond the control of BLM State, District, or Field Offices.

Implementation decisions authorize on-the-ground activities, typically at a specific location. They generally constitute the BLM's final approval and require appropriate site-specific consideration and NEPA analysis. Such decisions may be incorporated into broader implementation plans (activity or project plans) or may be stand-alone decisions. This Approved RMPA does not contain any implementation decisions.

4. ALTERNATIVES CONSIDERED IN PROPOSED RMPA AND FINAL EIS

The BLM evaluated two alternatives in detail in the Draft RMPA/EIS: the No Action Alternative and the Management Alignment Alternative.[1] In developing the Proposed RMPA/FEIS, the BLM modified the Management Alignment Alternative based on external and internal review of the Draft RMPA/EIS. Summaries of these alternatives are provided below.

4.1 No Action Alternative

Under the No Action Alternative, management of Greater Sage-Grouse habitat in Colorado would have remained the same as identified in the 2015 ARMPA. The BLM would not have amended the existing ARMPA regarding Greater Sage-Grouse habitat management, and no changes or clarifications regarding Greater Sage-Grouse habitat management in Colorado would have occurred.

4.2 Management Alignment Alternative

The Management Alignment Alternative was derived through coordination with the State of Colorado, including the Colorado Department of Natural Resources, CPW, the Colorado Governor's office, and cooperating agencies to better align with the State of Colorado's Greater Sage-Grouse Conservation Plan and CPW's conservation strategies to support conservation outcomes for Greater Sage-Grouse. The BLM continued to build upon the 2015 planning effort as envisioned in SO 3353 by collaborating with states and stakeholders to improve compatibility between federal management plans and other plans and programs at the state level, while ensuring consistency with the BLM's multiple use mandate.

4.3 Proposed Resource Management Plan Amendment

The Proposed RMPA in the Final EIS refined the Management Alignment Alternative and was developed based on internal review and comments received on the Draft RMPA/EIS. Changes between the Management Alignment Alternative and the Proposed RMPA focused on a Colorado-specific strategy for balancing the BLM multiple use mandate. Specifically, minor language changes were made to criteria applicable to achieve exceptions or modifications to stipulations applied to fluid minerals in the Approved RMPA. These minor changes are designed to provide protections for Greater Sage-Grouse while allowing flexibility where possible.

[1] The BLM's DEIS and FEIS also incorporated by reference the range of alternatives evaluated by the EISs for the 2015 land use plan amendments and revisions addressing the conservation of Greater Sage-Grouse and its habitat.

4.4 Environmentally Preferred Alternative

The Environmentally Preferred Alternative builds upon the BLM's 2015 resource management plan revisions and amendments for the conservation of the Greater Sage-Grouse and its habitat and the 2018 NWCO Approved RMPA. This alternative retains many of the management actions contained in the 2015 decisions, while adding some management flexibility and aligning the BLM's conservation plan with the conservation measures of the expert state agency. As reflected in the analysis in the FEIS, the limited management flexibility offered by the Management Alignment Alternative and alignment with the state's approach resulted in effects that are well understood and disclosed by BLM's analysis of impacts on Greater Sage-Grouse and other resources in the planning area.

As described in more detail below, the Approved RMPA will enhance cooperation and coordination with the state while reducing inconsistencies between BLM land use plans and the state's approach to protecting and conserving Greater Sage-Grouse. Harmonizing these efforts will improve the ability of the BLM and the state to marshal resources to conserve, enhance, and restore Greater Sage-Grouse habitat in an efficient and coordinated manner. Accordingly, neither alternative is "environmentally preferable" to the other as that term is defined in Question 6A of CEQ's 40 most-asked questions regarding NEPA. Moreover, even if the No-Action Alternative were "environmentally preferable", neither FLPMA nor NEPA requires the BLM in this context to maximize the conservation of biological and other natural resources, and selection of the No Action Alternative would not achieve the BLM's Purpose and Need for Action to enhance cooperation and coordination with the state while reducing inconsistencies between BLM land use plans and the state's approach.

5. MANAGEMENT CONSIDERATIONS AND RATIONALE FOR DECISION

Furthering the Administration's goals of restoring trust with local communities and responsibly developing our natural resources while easing regulatory burdens, the BLM is issuing this ROD amending the land use plans for Greater Sage-Grouse habitat management on BLM-administered public lands in seven western states. The decisions described herein affect resource management plans that guide conservation of sagebrush steppe habitat on BLM lands across the planning area. The changes were developed during months of close coordination with state governments in Wyoming, Nevada, California, Idaho, Oregon, Utah, and Colorado to better align BLM plans for managing habitat with state plans for conserving the species.

These changes conform to DOI's commitment to collaborate with our neighbors in conserving sagebrush habitats and Greater Sage-Grouse populations. The planning effort began in 2017 when governors of most of the affected states asked the BLM to revisit existing plans for managing Greater Sage-Grouse habitat and adapt them to better meet their individual needs. In response, the BLM proposed changes developed in consideration of input from governors and state wildlife agency professionals in the seven affected states, as well as other concerned organizations and individuals, largely through the Western Governors Association's Sage-Grouse Task Force. These decisions reflect the BLM's determination that greater flexibility was needed to ensure that habitat in each state is managed for the particular needs of its landscapes and communities.

This Approved RMPA builds on the measures identified and incorporated into the 2015 ARMPA to conserve, enhance, and restore Greater Sage-Grouse habitat by addressing threats to Greater Sage-

Grouse and its habitat and providing for consistent management of Greater Sage-Grouse between the BLM and State of Colorado. The 2015 ARMPA provided a comprehensive, coordinated, and effective conservation strategy for addressing the threats to Greater Sage-Grouse. This more focused Approved RMPA improves the management coordination between the BLM and the State of Colorado for Greater Sage-Grouse. The actions taken on BLM-managed lands will now more clearly complement the State of Colorado's management strategy (including the Colorado Department of Natural Resources and CPW) to conserve the species and its habitat.

Over 350 species of plants and wildlife that coexist with Greater Sage-Grouse rely on sagebrush steppe ecosystems and may be similarly affected by development or disturbance threats that pose a risk to Greater Sage-Grouse habitats. Nothing in the Approved RMPA lessens the BLM's authority or responsibility to provide for the needs of special status species, including BLM Manual 6840, Special Status Species Management.

This 2019 planning process builds on the 2015 planning process and the BLM identified special status species as an issue for further consideration and analysis. The Approved RMPA will continue to ensure that the BLM complies with its special status species policy, including the commitment to "implement measures to conserve species and their habitats…and promote their conservation and reduce the likelihood and need for such species to be listed pursuant to the ESA." (BLM Manual 6840, Special Status Species Management). In accordance with the Manual, the BLM will continue to undertake planning decisions, actions, and authorizations "to minimize or eliminate threats affecting the status of [Greater Sage-Grouse] or to improve the condition of [Greater Sage-Grouse] habitat" across the planning area.

6. MITIGATION MEASURES

In addition to the mitigation strategy clarified in **Section 3**, above, all practicable means to avoid or minimize environmental harm are encompassed in the Approved RMPA and its appendices. Fluid mineral lease stipulations and required design features are included to help avoid and minimize impacts to Greater Sage-Grouse.

7. PLAN MONITORING

BLM planning regulations (43 CFR Part 1610.4-9) call for the monitoring of resource management plans on a continual basis with a formal evaluation done at periodic intervals. As the Approved RMPA is implemented, the BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques and scientific principles. To the extent that such new information or actions address issues covered in the Approved RMPA, the BLM will integrate the data through a process called plan maintenance. This process includes the use of monitoring, which is the repeated measurement of activities and conditions over time with the implied purpose to use this information to adjust management, if necessary, to achieve or maintain resource objectives. BLM planning regulations (43 CFR Part 1610.4-9) call for monitoring resource management plans on a continual basis and establishing intervals and standards based on the sensitivity of the resource to the decisions involved. CEQ regulations implementing NEPA state that agencies may provide for

monitoring to assure that their decisions are carried out and should do so in important cases (40 CFR Part 1505.2[c]).

8. PUBLIC INVOLVEMENT, CONSULTATION, AND COORDINATION

8.1 Public Involvement

The public involvement process, consultation, and coordination conducted for the Approved RMPA are described in Chapter 5 of the Proposed RMPA and Final EIS. As required by regulation, public scoping meetings were conducted following the publication of the NOI to prepare an EIS in the *Federal Register* on October 11, 2017.

A Notice of Availability (NOA) for the Draft RMPA/EIS was published in the *Federal Register* on May 4, 2018. The NOA initiated a 90-day public comment period. The BLM held public comment open houses for the Draft RMPA/EIS on June 26 in Silt, Colorado and June 27 in Craig, Colorado. Both meetings were from 5:00 to 7:00 PM. The comments received on the Draft RMPA/EIS and BLM's responses were summarized in Appendix G of the Proposed RMPA and Final EIS.

The NOA for the Proposed RMPA and Final EIS was published on December 7, 2018, initiating a 30-day public protest period and a 60-day Governors Consistency review period. The protest period was extended beyond 30 days due to the temporary lapse in Federal government funding.

8.2 Protest Resolution

The BLM's planning regulations at 43 CFR 1610.5-2 allow any person who participated in the planning process and has an interest that may be adversely affected by the BLM's planning decisions to protest proposed planning decisions within 30 days from the date the NOA for the Proposed RMPA/Final EIS was published in the Federal Register (December 7, 2018). The Office of the BLM Director received 17 timely protest submissions. Twelve of the protesting parties were determined to have standing, while five submissions were dismissed as they did not contain any valid protest points, pursuant to 43 CFR 1610.5- 2. The Office of the BLM Director concluded that the BLM had followed all applicable laws, regulations, and policies and had considered all relevant resource information and public input in developing the Proposed RMPA/Final EIS. Each protesting party has been notified in writing of the Office of the Director's findings and the disposition of their protest. The Director resolved the protests without making significant changes to the Proposed RMPA/Final EIS.

The Office of the Director's decisions on the protests are summarized in the Proposed RMPAs/Final EISs Protest Resolution Reports, which are available on the BLM website at: https://www.blm.gov/programs/planning-and-nepa/public-participation/protest-resolution-reports

8.3 Consultation and Coordination

Cooperating Agency Status

The BLM collaborated with numerous agencies, municipalities, and tribes throughout the preparation of this Approved RMPA/FEIS. The BLM formally invited the cooperating agencies to participate in developing the alternatives for this planning effort and to provide data and other information related to their respective agency responsibilities, goals, mandates, and expertise. The

BLM's outreach efforts and collaboration with cooperating agencies are described in **Section 5** of the Proposed RMPA/FEIS.

Governor's Consistency Review

On December 7, 2018, BLM Colorado sent the Proposed RMPA/FEIS to the Colorado Governor's office and notified the Governor of the 30-day consistency review period. BLM Colorado received the consistency review on January 4, 2019. With some minor changes, the Governor's office has agreed that the Proposed RMPA is consistent with State of Colorado plans, policies, and programs.

Native American Consultation

BLM Colorado notified local tribes during scoping to determine interest in participating in the planning process and received no responses.

9. AVAILABILITY OF THE APPROVED RMPA

Copies of the ROD and Approved RMPA/FEIS may be obtained by viewing or downloading the document from the BLM website located at **https://goo.gl/kmLtwT**.

10. APPROVAL

The Colorado Greater Sage-Grouse Resource Management Plan Amendment is hereby approved.

Jamie Connell, BLM Colorado State Director

March 14, 2019
Date

Northwest Colorado Greater Sage-Grouse Approved Resource Management Plan Amendment

CHAPTER 2 -
APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT

2.1 INTRODUCTION

This Approved Resource Management Plan Amendment (ARMPA) is now the baseline plan for managing GRSG in northwest Colorado in the following field offices: Colorado River Valley, Grand Junction, Kremmling, Little Snake, and White River. The ARMPA adopts the management described in the Northwest Colorado Greater Sage-Grouse Proposed Resource Management Plan Amendment and Final EIS (BLM and Forest Service 2015), with modifications and clarifications as described in the Modifications and Clarifications section of the Record of Decision (ROD). Areas highlighted in grey depict the decisions/clarifications from the 2015 ARMPA that have been amended and modified by this 2019 ARMPA and approved through the ROD.

In the event there are inconsistencies or discrepancies between previously approved RMPs and this ARMPA, the decisions contained in this ARMPA will be followed, unless there are more restrictive decisions in the existing plans. The BLM will continue to tier to statewide, national, and programmatic EISs and other NEPA and planning documents. It will consider and apply RDFs or other management protocols contained in other planning documents after appropriate site-specific analysis.

All future resource authorizations and actions in GRSG habitat will conform to or be consistent with the decisions contained in this ARMPA. All existing operations and activities authorized under permits, contracts, cooperative agreements, or other authorizations will be modified, as necessary and appropriate, to conform to this plan amendment within a reasonable time frame. However, this ARMPA does not repeal valid existing rights on public lands. These are claims or authorizations that take precedence over the decisions developed in this plan. If such authorizations come up for review and can be modified, they will also be brought into conformance with this plan amendment, as appropriate.

While the Final EIS for the Northwest Colorado Proposed GRSG RMP Amendment constitutes compliance with NEPA for the broad-scale decisions made in this ARMPA, the BLM will continue to prepare environmental assessments and EISs where appropriate as part of implementation-level planning and decision-making.

2.2 GOALS, OBJECTIVES, AND MANAGEMENT DECISIONS

This section of the ARMPA presents the goals, objectives, land use allocations, and management actions established for protecting and preserving GRSG and its habitat on BLM-administered lands in Northwest Colorado. These management decisions are presented by program area. Not all types of decisions were identified for each program. A Monitoring Framework is also included (in Appendix D) to describe how the implemented program decisions will be monitored.

This section is organized by program area beginning with the special status species program, which identifies specific goals, objectives, and management actions for GRSG and its habitat. For ease of identification into the future, each program area has identified abbreviations (see below) for these program areas and each decision in that program is numbered in coordination with the abbreviation:

- Special Status Species (SSS)
- Vegetation (VEG)
  - Sagebrush Steppe
  - Conifer Encroachment
  - Invasive Species
  - Riparian and Wetlands
- Fire and Fuels Management (FIRE)
  - Pre-Suppression Suppression
  - Fuels Management
  - Post-Fire Post Management
- Range Management (RM)
- Wild Horses and Burros (WHB)
- Minerals (MR)
  - Leasable Minerals Locatable Minerals Salable Minerals
  - Nonenergy Leasable Minerals Coal
- Renewable Energy (Wind and Solar) (RE)
- Lands and Realty (LR)
- Utility Corridors and Communication Sites Land Use Authorizations
  - Land Tenure
  - Recommended Withdrawals Recreation (REC)
- Travel and Transportation (TTM)

Table 2-1 provides a summary of the allocation decisions presented for each GRSG habitat management area.

Table 2-1 - Allocation Decisions by GRSG Habitat Management Area

Resource	PHMA	GHMA	LCHMA
Land Tenure	Retain		
Solar	Exclusion	Avoidance	Open
Wind	Exclusion	Avoidance	Open
Major ROWs	Avoidance	Avoidance	Open
Minor ROWs	Avoidance	Avoidance	Open
Oil and Gas	~~Closed within 1 mile of active leks~~ Within 1 mile of active leks – open to leasing subject to **NSO-1** ~~Remainder of PHMA Open with Major Stipulations~~ Remainder of PHMA Open to leasing subject to **NSO-2** with WEMs available	~~Closed within 1 mile of active leks~~ Within 1 mile of active leks – open to leasing subject to **NSO-1** Open with Major Stipulations within 2 miles of active leks Remainder of GHMA Open with Standard Stipulations	Open with Standard Stipulations
Nonenergy Leasables	Closed	Open	Open
Salable Minerals	Closed	Open	Open
Locatable Minerals	Open	Open	Open
Travel Management	Limited	Limited	Limited
Livestock Grazing	Open	Open	Open

2.2.1 Special Status Species (SSS)

Objective SSS-1: Maintain and enhance populations and distribution of GRSG by protecting and improving sagebrush habitats and ecosystems that sustain GRSG populations.

Management Decisions (MD)

MD SSS-1: Adaptive Management: Implement Adaptive Management Plan including soft and hard triggers as described in Appendix H (Guidelines for Implementation and Adaptive Management). The hard and soft trigger data will be analyzed as soon as it becomes available after the signing of the ROD and then at a minimum, analyzed annually thereafter.

~~**MD SSS-2:** In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer distances identified in the U.S. Geological Survey *Conservation Buffer Distance Estimates for Greater Sage Grouse – A Review* (Open File Report 2014-1239) in accordance with Appendix B.~~

MD SSS-2: In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will evaluate the lek buffer distances during project-specific NEPA analyses, in accordance with Appendix H (Guidelines for Implementation and Adaptive Management). Appendix B of the 2015 ROD/ARMPA will

not be carried forward.

~~**MD SSS-3:** In all sage-grouse habitat, in undertaking BLM management actions, and, consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation, the BLM will require and ensure mitigation that provides a net conservation gain to the species including accounting for any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.~~

MD SSS-3: In all Greater Sage-Grouse habitat, before authorizing third-party actions that result in habitat loss and degradation, the BLM will complete the following steps, in alignment with the Governor of Colorado's Executive Orders 2015-004 (May 15, 2015) and 2018-036 (December 2018), including avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.

1. If the proponent has not already done so pursuant to Colorado Executive Order 2015-004 and 2018-036, and 2 CCR 404-1:1200 *et seq*. or other applicable law, policy or regulation, BLM will notify Colorado Parks and Wildlife to determine if the State requires or recommends any additional mitigation – including compensatory mitigation – under State regulations, policies, or programs related to the conservation of Greater Sage-Grouse.
2. Incorporate state required or recommended mitigation into the BLM's NEPA and decision-making process, if the CPW determines that there are unacceptable residual impacts on Greater Sage-Grouse or its habitat and compensatory mitigation is required as a part of a State policy or authorization, or if a proponent voluntarily offers mitigation.
3. Analyze whether the compensatory mitigation:
   - achieves measurable outcomes for Greater Sage-Grouse habitat function that are at least equal to the lost or degraded values
   - provides benefits that are in place for at least the duration of the impacts
   - accounts for a level of risk that the mitigation action may fail or not persist for the full duration of the impact
4. Verify that the project proponent has coordinated with the State of Colorado to ensure it complies with Executive Orders 2015-004 and 2018-036 and, when necessary, complies with 2 CCR 404-1:1200 *et seq*. or other applicable state law, policy or regulation relating to its proposal.
5. Through coordination with CPW, ensure mitigation outcomes are consistent with the State of Colorado's mitigation strategy and principles outlined in **Appendix H** (Guidelines for Implementation and Adaptive Management).

2.2.2 Vegetation (VEG)

Sagebrush Steppe (Habitat Restoration)

Objective VEG-1: (1) Use habitat restoration as a tool to create and/or maintain landscapes that benefit GRSG; (2) Use Integrated Vegetation Management to control, suppress, and

that benefit GRSG; (2) Use Integrated Vegetation Management to control, suppress, and eradicate, where possible, noxious and invasive species per BLM Handbook H-1740-2; and (3) In PHMA, the desired condition is to maintain all lands ecologically capable of producing sagebrush (but no less than 70 percent) with a minimum of 15 percent sagebrush cover or as consistent with specific ecological site conditions. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Technical Reference 1734-6).

Management Decisions (MD)

MD VEG-1: (ADH) when planning restoration treatments in GRSG habitat, identify seasonal habitat availability, and prioritize treatments in areas that are thought to be limiting GRSG distribution and/or abundance.

The habitat objectives for GRSG (Table 2-2) are a list of indicators and values that describe GRSG seasonal habitat conditions. The values for the indicators were derived using a synthesis of current local and regional GRSG habitat research and data and reflect variability of ecological sites. The habitat cover indicators are consistent with existing indicators used by the BLM.

Table 2-2 - Seasonal Habitat Desired Conditions for GRSG

Attribute	Indicators	Desired Condition
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1-June 15) Apply 4 miles from active leks. [15]		
Lek Security	Proximity of trees [4]	Trees or other tall structures are none to uncommon within 1.86 miles of leks [5, 6]
	Proximity of sagebrush to leks [5]	Adjacent protective sagebrush cover within 328 feet of lek [5]
Cover	Seasonal habitat extent [6]	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [5, 6, 7, 17] Arid sites Mesic sites	 15 to 30% 20 to 30% [17]
	Sagebrush height [6, 17] Arid sites [5, 6, 9] Mesic sites [5, 6, 10]	 11.8 to 31.5 inches (30-80 cm) 15.7 to 31.5 inches (40-80 cm)
	Predominant sagebrush shape [5]	>50% in spreading [11]
	Perennial grass canopy cover (such as native bunchgrasses) [5, 6, 17] Arid sites [6, 9] Mesic sites [6, 10, 17]	 ≥10% ≥20% [17]
	Perennial grass and forb height (includes residual grasses) [5, 6, 7]	>6 inches [6, 16, 17]
	Perennial forb canopy cover [5, 6, 7] Arid sites [9] Mesic sites [10]	≥5% [5, 6, 17] ≥15% [5, 6, 17]

Attribute	Indicators	Desired Condition
BROOD-REARING/SUMMER[1] (Seasonal Use Period June 16-October 31)		
Cover	Seasonal habitat extent [6]	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [5, 6, 7, 17] Arid sites Mesic sites	 10 to 25% 10 to 25%
	Sagebrush height [6, 7, 17] Arid sites Mesic sites	 11.8 to 31.5 inches (30 to 80 cm) 13.8 to 31.5 inches (35 to 80 cm)
	Perennial grass canopy cover and forbs [6, 7, 17] Arid sites Mesic sites	 >15% [17] >25% [17]
	Riparian areas (both lentic and lotic systems)	Proper Functioning Condition [13]
	Upland and riparian perennial forb availability [5, 6]	Preferred forbs are common with several preferred species present [12]
WINTER[1] (Seasonal Use Period November 1-February 28)		
Cover and Food	Seasonal habitat extent [5, 6, 7]	>80% of the winter habitat
	Sagebrush canopy cover above snow [5, 6, 7, 17]	>20% Arid, 25% Mesic [17]
	Sagebrush height above snow [5, 6, 7]	>10 inches [14]

[1] Seasonal dates can be adjusted; that is, start and end dates may be shifted either earlier or later, but the amount of days cannot be shortened or lengthened by the local unit.

[2] Doherty 2008

[3] Holloran and Anderson 2005.

[4] Baruch-Mordo et al. 2013

[5] Stiver et. al. 2014

[6] Connelly et al. 2000

[7] Connelly et al. 2003

[9] 10 to 12 inch precipitation zone; Artemisia tridentata wyomingensis is a common big sagebrush sub-species for this type site (Stiver et. al. 2014).

[10] ≥12 inch precipitation zone; Artemisia tridentata vaseyana is a common big sagebrush sub-species for this type site (Stiver et. al. 2014).

[11] Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree or columnar shaped (Stiver et. al. 2014).

[12] Preferred forbs are listed in Habitat Assessment Framework Table III-2 (Stiver et. al. 2014). Overall, total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2.

[13] Existing land management plan desired conditions for riparian areas/wet meadows (spring seeps) may be used in place of properly functioning conditions, if appropriate for meeting GRSG habitat requirements.

[14] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands.

[15] Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 4 miles is not appropriate.

[16] Measured as "droop height"; the highest naturally growing portion of the plant.

[17] Colorado Greater Sage-grouse Steering Committee 2008

When determining if a site is meeting habitat objectives, the measurements from that particular site would be assessed based on the range of values for the indicators in Table 2-2. Table 2-2 is one component of GRSG multi-scale habitat assessment (see Appendix D, Greater Sage-Grouse Monitoring Framework). The results of the habitat assessment would be used during the land health evaluation to ascertain if the land health standard applicable to GRSG habitat (e.g., special status species habitat standard) is being met.

When authorizing activities in GRSG habitat, the BLM would consider if habitat objectives are being achieved. If the habitat objectives are not being achieved, and the site has the potential for achieving these objectives, the BLM would determine the causal factor(s) and make the necessary management adjustments to address the causal factor(s), following current BLM regulations and policy.

MD VEG-2: (PHMA) Include GRSG habitat parameters as defined by Connelly et al. (2000), Hagen et al. (2007), or, if available, state GRSG conservation plans and appropriate local information in habitat restoration objectives. Make meeting these objectives within GRSG PHMA areas a high restoration priority.

MD VEG-3: (ADH) Require use of native plant seeds that are beneficial for GRSG for vegetation treatments based on availability, adaptation (site potential), probability for success (Richards et al. 1998), and the vegetation management objectives for the area covered by the treatment. Where probability of success or native seed availability is low, use species that meet soil stability and hydrologic function objectives as well as vegetation and GRSG habitat objectives (Pyke 2011).

MD VEG-4: (PHMA) Design post restoration management to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse management, travel management, and other uses, to achieve and maintain the desired condition of emergency stabilization and rehabilitation (ESR) projects to benefit GRSG (Eiswerth and Shonkwiler 2006).

MD VEG-5: (ADH) Manage for a habitat objective that is primarily sagebrush with a mosaic of seral stages and sagebrush in all age classes. On a site-by-site basis, do not allow treatments that would adversely affect GRSG populations.

MD VEG-6: (ADH) Make reestablishment of sagebrush and desirable understory plant cover (relative to ecological site potential) the highest priority for restoration efforts. Consider GRSG habitat requirements in conjunction with all resource values managed by the BLM, and give preference to GRSG habitat unless site-specific circumstances warrant an exemption.

MD VEG-7: (ADH) Authorize local sagebrush seed collection to support local restoration efforts.

MD VEG-8: (ADH) Treat areas that contain Bromus tectorum and other invasive or noxious species to minimize competition and favor establishment of desired species.

Conifer Encroachment

MD VEG-8: Remove conifers encroaching into sagebrush habitats, in a manner that considers

tribal cultural values. Prioritize treatments closest to occupied GRSG habitats and near occupied leks, and where juniper encroachment is phase 1 or phase 2. Use of site-specific analysis and principles like those included in the Fire and Invasives Assessment Team report (Chambers et. al., 2014) and other ongoing modeling efforts to address conifer encroachment will help refine the location for specific priority areas to be treated. See Appendix H, Guidelines for Implementation and Adaptive Management.

2.2.3 Fire and Fuels Management (FIRE)

Suppression (Fire Operations)

Objective FIRE-1: Manage fire to maintain and enhance large blocks of contiguous sagebrush.

Management Decisions (MD)

MD FIRE-1: (PHMA) The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be done based on the values to be protected, human health and safety, and the costs of protection. Consider GRSG habitat requirements commensurate with all resource values at risk managed by the BLM.

MD FIRE-2: (GHMA) The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be done based on the values to be protected, human health and safety, and the costs of protection. Consider GRSG habitat requirements commensurate with all resource values at risk managed by the BLM.

MD FIRE-3: (PHMA/GHMA) Temporary closures would be considered in accordance with 43 CFR subparts 8364, 8351, 6302 and 8341. Temporary closure or restriction orders under these authorities a r e enacted at the discretion of the authorized officer to resolve management conflicts and protect persons, property, and public lands and resources. Where an authorized officer determines that off- highway vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence (43 CFR, Part 8341.2). A closure or restriction order should be considered only after other management strategies and alternatives have been explored. The duration of temporary closure or restriction orders should be limited to 24 months or less; however, certain situations may require longer closures and/or iterative temporary closures. This may include closure of routes or areas.

Fuels Management

Objective FIRE-2: Manage the fuels program to avoid GRSG habitat loss and restore damaged habitat.

MD FIRE-4: (PHMA) Do not reduce sagebrush canopy cover to less than 15 percent (Connelly et al. 2000; Hagen et al. 2007) in a project area unless a vegetation management

objective requires additional reduction in sagebrush cover to meet strategic protection of GRSG PHMA and conserve habitat quality for the species, in consultation with the State of Colorado.

MD FIRE-5: (PHMA) Apply appropriate seasonal restrictions for implementing vegetation management treatments according to the type of seasonal habitats present in a Colorado management zone (MZ).

MD FIRE-6: (PHMA) Allow no treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality, unless in consultation with the State of Colorado it is deemed necessary to reduce risk to life and property.

MD FIRE-7: (ADH) Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species) (Connelly et al. 2000; Hagen et al. 2007; Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored, and site-specific variables allow, the use of prescribed fire or natural ignition fire for fuels breaks that would disrupt fuel continuity or enhance land health could be considered where cheatgrass is deemed a minor threat.

If prescribed fire is used in GRSG habitat, the NEPA analysis for the burn plan will address:

- Why alternative techniques were not selected as viable options,
- How GRSG goals and objectives would be met by its use,
- How the COT report objectives would be addressed and met and;
- A risk assessment to address how potential threats to GRSG habitat would be minimized.

Prescribed fire as a vegetation or fuels treatment shall only be considered after the NEPA analysis for the burn plan has addressed the four bullets outlined above. Prescribed fire could be used to meet specific fuels objectives that would protect GRSG habitat in PHMA (e.g., creating fuel designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality breaks that would disrupt the fuel continuity across the landscape in stands where annual invasive grasses are a minor component in the understory, burning slash piles from conifer-reduction treatments, or being used as a component with other treatment methods to combat annual grasses and restore native plant communities).

Prescribed fire in known winter range shall only be considered after the NEPA analysis for the burn plan has addressed the four bullets outlined above. Any prescribed fire in winter habitat would need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality.

MD FIRE-8: (ADH) Monitor and control invasive vegetation post treatment.

MD FIRE-9: (ADH) Require use of native plant seeds for vegetation treatments based on availability, adaptation (site potential), probability for success (Richards et al. 1998), and the vegetation management objectives for the area covered by the treatment. Where probability of success or native seed availability is low, use species that meet soil stability and hydrologic

function objectives as well as vegetation and GRSG habitat objectives (Pyke 2011).

MD FIRE-10: (PHMA) Design post fuels management to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse management, travel management, and other uses, to achieve and maintain the desired condition of ESR projects to benefit GRSG (Eiswerth and Shonkwiler 2006).

MD FIRE-11: (ADH) Design vegetation treatments in GRSG habitats to strategically facilitate firefighter safety, reduce wildfire threats, and extreme fire behavior. This may involve spatially arranging new vegetation treatments with past treatments, vegetation with fire-resistant serial stages, natural barriers, and roads in order to constrain fire spread and growth. This may require vegetation treatments to be implemented in a more linear versus block design (Launchbaugh et al. 2007).

MD FIRE-12: (PHMA) during fuels management project design, consider the utility of using livestock to strategically reduce fine fuels (Diamond at al. 2009), and implement grazing management that will accomplish this objective (Davies et al. 2011; Launchbaugh et al. 2007). Consult with ecologists to minimize impacts to native perennial grasses consistent with the objectives and conservation measures of the grazing section.

Post-Fire Management (Emergency Stabilization and Rehabilitation)

Objective FIRE-3: Use ESR to address post-wildfire threats to GRSG habitat.

Management Decisions (MD)

MD FIRE-13: (ADH) Require use of native plant seeds that are beneficial for GRSG for vegetation treatments based on availability, adaptation (site potential), probability for success (Richards et al. 1998), and the vegetation management objectives for the area covered by the treatment. Where attempts to use native seeds have failed, or native seed availability is low, use species that meet soil stability and hydrologic function objectives, as well as vegetation and GRSG habitat objectives (Pyke 2011).

MD FIRE-14: (ADH) Design post-fire ESR and Burn Area Emergency Rehabilitation management to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long- term changes in livestock grazing, wild horse management, travel management, and other uses to achieve and maintain the desired condition of ESR and Burn Area Emergency Rehabilitation projects to benefit GRSG (Eiswerth and Shonkwiler 2006).

MD FIRE-15: (ADH) Rest burned areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (Wyoming Game and Fish Department 2011).

2.2.4 Range Management (RM)

Objective RM-1: GRSG objectives and well-managed livestock operations are compatible because forage availability for livestock and hiding cover for GRSG are both dependent on healthy plant communities. Agreements with partners that promote sustainable GRSG populations concurrent with sustainable ranch operations offer long-term stability. In the

context of sustainable range operations, manage the range program to:

- Maintain or enhance vigorous and productive plant communities,
- Maintain residual herbaceous cover to reduce predation during GRSG nesting and early brood-rearing,
- Avoid direct adverse impacts to GRSG-associated range project infrastructure; and
- Employ grazing management strategies that avoid concentrating animals on key GRSG habitats during key seasons.

Management Decisions (MD)

MD RM-1: (ADH) Within ADH, incorporate GRSG habitat objectives and management considerations into all BLM grazing allotments through Allotment Management Plans.

MD RM-2: (ADH) Work cooperatively on integrated ranch planning within GRSG habitat. Develop management strategies that are seamless with respect to actions on public and private lands within BLM grazing allotments.

MD RM-3: (PHMA) The BLM will prioritize:

- The review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and
- The processing of grazing permits/leases in PHMA.

In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.

MD RM-4: (ADH) Conduct land health assessments that include (at a minimum) indicators and measurements of vegetation structure/condition/composition specific to achieving GRSG habitat objectives (Doherty et al. 2011). If local/state seasonal habitat objectives are not available, use GRSG habitat recommendations from Connelly et al. 2000 and Hagen et al. 2007.

Implementing Management Actions after Land Health and Habitat Evaluations

MD RM-5: (ADH) Develop specific objectives through NEPA analysis conducted in accordance with the permit/lease renewal process to conserve, enhance, or restore GRSG habitat. Base benchmarks on Ecological Site/Range Site Descriptions. When existing on Ecological Site/Range Site Descriptions have not been developed, or are too general to serve adequately as benchmarks, identify and document local reference sites for areas of similar potential that exemplify achievement of GRSG habitat objectives and use these sites as the benchmark reference. Establish measurable objectives related to GRSG habitat from baseline monitoring data, ecological site descriptions, or land health assessments/evaluations, or other habitat and successional stage objectives.

MD RM-6: (ADH) Manage for vegetation composition and structure consistent with ecological site potential and within the reference state subject to habitat objectives, including successional

stages.

MD RM-7: (ADH) Include terms and conditions on grazing permits and leases that address disruptive activities that affect GRSG and assure plant growth requirements are met and residual forage remains available for GRSG hiding cover.

Specify as necessary:

- Season or timing of use
- Numbers of livestock (include temporary non-use or livestock removal)
- Distributions of livestock use
- Intensity of use (utilization or stubble height objectives)
- Kind of livestock (e.g., cattle, sheep, horse, llama, alpaca, and goat)
- Class of livestock (e.g., yearlings versus cow/calf pairs)
- Locations of bed grounds, sheep camps, trail routes, and the like

MD RM-8: (ADH) Develop drought contingency plans at the appropriate landscape unit that provide for a consistent/appropriate BLM response. Plans shall establish policy for addressing ongoing drought and post-drought recovery for GRSG habitat objectives.

MD RM-9: The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within PHMA would include specific management thresholds based on Table 2.3 in the Proposed Plan, Land Health Standards (43 CFR, Part 4180.2), ecological site potential, and one or more defined responses that would allow the authorizing officer to make adjustments to livestock grazing that have already been subject to NEPA analysis.

MD RM-10: Allotments within PHMA, focusing on those containing riparian areas, including wet meadows, would be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks could include monitoring for actual use, utilization, and use supervision.

Riparian Areas and Wet Meadows

MD RM-11: (ADH) Manage riparian areas and wet meadows for proper functioning condition within ADH.

MD RM-12: (ADH) Within ADH, manage wet meadows to maintain diverse species richness, including a component of perennial forbs, relative to site potential (i.e., reference state).

MD RM-13: (ADH) Establish permit/lease terms and conditions in conjunction with grazing strategies to ensure that the timing and level of utilization results in wet meadows with diverse species richness, including a component of perennial forbs, relative to site potential (i.e., reference state).

MD RM-14: (ADH) Authorize new water development only after determining that the project will not adversely impact GRSG from habitat loss. Ensure that adequate long-term grazing management is in effect before authorizing water developments that may increase levels of use

or change season of use. Give specific consideration to adjacent or downstream wetland habitat when a project entails a diversion from a spring or seep.

MD RM-15: (ADH) Analyze springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area. If necessary to maintain GRSG populations or reverse a downward population trend caused by habitat loss, modify the project as necessary to restore the applicable wetland habitat.

Treatments to Increase Forage for Livestock/Wild Ungulates

MD RM-16: (ADH) Manage for a habitat objective that is primarily sagebrush with a mosaic of seral stages and sagebrush in all age classes. On a site-by-site basis, do not allow treatments that would adversely affect GRSG populations. See Appendix H, Guidelines for Implementation and Adaptive Management.

MD RM-17: (PHMA) Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to GRSG PHMA to determine if they should be restored to sagebrush or habitat of higher quality for GRSG. If these seedings are part of an Allotment Management Plan/Conservation Plan or if they provide value in conserving or enhancing the rest of PHMA, then no restoration would be necessary. Assess the compatibility of these seedings for GRSG habitat or as a component of a grazing system during the land health assessments (Davies et al. 2011).

For example: Some introduced grass seedings are an integral part of a livestock management plan and reduce grazing pressure in important sagebrush habitats or serve as a strategic fuels management area.

Structural Range Improvements and Livestock Management Tools

MD RM-18: (ADH) Design new range improvement projects to enhance livestock distribution and to control the timing and intensity of utilization. Examples of structural range improvement projects are cattle guards, fences, corrals, pipelines, troughs, storage tanks, windmills, ponds/reservoirs, solar panels, and spring developments.

Include a plan to monitor and control invasive plant species following any related ground disturbance. Place mineral or salt supplements away from water sources and leks in locations that enhance livestock distribution.

MD RM-19: (PHMA) Where conditions create the potential for impacts from West Nile virus from developments or modification of water developments, use preferred design features (PDFs)/RDFs to mitigate the potential impacts. See Appendix C (Required Design Features, Preferred Design Features, and Suggested Design Features).

MD RM-20: (PHMA) Evaluate existing structural range improvements to determine if modifications are necessary to maintain GRSG populations or reverse a downward population trend caused by habitat loss. Modify, relocate, or remove projects as necessary.

Place mineral and salt supplements away from water sources and leks in locations that enhance livestock distribution.

MD RM-21: (ADH) Mark fences in high risk areas (Christiansen 2009; Stevens 2011).

(PHMA) Where marking fences does not reduce fence-related GRSG mortality, modify fences. Where modification does not reduce GRSG mortality and the fence-related mortality is sufficient to adversely affect GRSG populations, remove fences.

MD RM-22: (ADH) Monitor for and treat invasive species associated with existing range improvements (Gelbard and Belnap 2003; Bergquist et al. 2007).

Retirement of Grazing Privileges

MD RM-23: (ADH) At the time a permittee or lessee voluntarily relinquishes a permit or lease, the BLM will consider whether the public lands where that permitted use was authorized shall remain available for livestock grazing or be used for other resource management objectives, such as reserve common allotments or fire breaks. This does not apply to or impact grazing preference transfers, which are addressed in 43 CFR, Part 4110.2-3.

When a permittee or lessee voluntarily relinquishes grazing preference, consider conversion of the allotment to a reserve common allotment that will remain available for use on a temporary, nonrenewable basis for the benefit of GRSG habitat. Authorize temporary nonrenewal permits in Reserve Common Allotments to meet resource objectives elsewhere such as rest or deferment due to fire or vegetation treatments. Temporary use of reserve common allotments would not be allowed due to drought or overuse of customary allotments.

2.2.5 Wild Horses and Burros (WHB)

Objective WHB-1: Manage wild horses in a manner designed to 1) avoid reductions in grass, forb, and shrub cover, and 2) avoid increasing unpalatable forbs and invasive plants such as Bromus tectorum.

Management Decisions (MD)

MD WHB-1: (ADH) Manage wild horse population levels within established appropriate management levels.

MD WHB-2: (ADH) Prioritize gathers in GRSG PHMA, unless removals are necessary in other areas to prevent catastrophic environmental issues, including herd health impacts. Consider GRSG habitat requirements in conjunction with all resource values managed by the BLM, and give preference to GRSG habitat unless site-specific circumstances warrant an exemption.

MD WHB-3: (PHMA) Within PHMA, develop or amend BLM HMA plans to incorporate GRSG habitat objectives and management considerations for all BLM HMAs. When developing HMA plans, apply all appropriate conservation measures from the range program, including, but not limited to, utilization of forage and structural range improvements.

MD WHB-4: (PHMA) For all BLM HMAs within PHMA, prioritize the evaluation of all appropriate management levels based on indicators that address vegetation structure/condition/composition and measurements specific to achieving GRSG habitat objectives. Consider GRSG habitat requirements in conjunction with all resource values

managed by the BLM, and give preference to GRSG habitat unless site-specific circumstances warrant an exemption.

MD WHB-5: (ADH) Coordinate with other resources (range, wildlife, and riparian) to conduct land health assessments to determine existing vegetation structure/condition/composition within all BLM HMAs.

MD WHB-6: (PHMA) When conducting NEPA analysis for wild horse management activities, water developments, or other rangeland improvements for wild horses in PHMA, address the direct and indirect effects to GRSG populations and habitat. Implement any water developments or rangeland improvements using the criteria identified for domestic livestock identified above in PHMA.

2.2.6 Minerals (MR)

Leasable Fluid Minerals[1]

Objective MR-1: Manage fluid minerals to avoid, minimize, and compensate for: 1) direct disturbance, displacement, or mortality of GRSG; 2) direct loss of habitat or loss of effective habitat through fragmentation; and 3) cumulative landscape-level impacts. Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside PHMA and GHMA. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in PHMA and GHMA, and subject to applicable stipulations for the conservation of GRSG, priority will be given to development in non-habitat areas first and then in the least suitable habitat for GRSG. The implementation of these priorities will be subject to valid existing rights and any applicable law or regulation, including, but not limited to, 30 US Code 226(p) and 43 CFR, Part 3162.3-1(h).

Management Decisions (MD)

Unleased Fluid Minerals

~~**MD MR-1:** No new leasing 1 mile from active leks in ADH.~~

MD MR-1: One mile from active leks: Open to leasing subject to **NSO-1.**

NSO-1: ****Exceptions or modifications** may be considered if, in consultation with the State of Colorado, it can be demonstrated that there is no impact on Greater Sage-Grouse based on one of the following:

- Topography/areas of non-habitat create an effective barrier to impacts
- No additional impacts would be realized above those created by existing major infrastructure (for example, State Highway 13)
- The exception or modification precludes or offsets greater potential impacts if the action were proposed on adjacent parcels (for example, due to landownership patterns)

[1] The Oil Shale and Tar Sands Programmatic EIS (March 2013) excludes from oil shale leasing all core/priority GRSG habitat (PHMA in Colorado). Note that in GHMA, the management actions for fluid minerals also pertain to oil shale resources through all alternatives. Decisions for leasable fluid minerals also apply to uranium.

**In order to approve exceptions or modifications to this lease stipulation, the Authorized Officer must obtain: agreement, including written justification, between the BLM District Managers and CPW that the proposed action satisfies at least one of the criteria listed above.

Waiver:

No waivers are authorized unless the area or resource mapped as possessing the attributes protected by the stipulation is determined during collaboration with the State of Colorado to lack those attributes or potential attributes. A 30-day public notice and comment period is required before waiver of a stipulation. Waivers would require BLM State Director approval.

~~**MD MR-2:** No Surface Occupancy (NSO) without waiver or modification in PHMA. See Appendix G (Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations) for exceptions. The following stipulation would apply:~~

~~**GRSG NSO-46e:** See Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations, for waiver, modification, and exception criteria.~~

MD MR-2 (one mile from active leks to the remainder of PHMA): Open to leasing subject to No Surface Occupancy (**NSO-2**) with waivers, exceptions, or modifications in PHMA. Surface occupancy can occur in PHMA with approved waivers, exceptions, or modifications. The following stipulation would apply:

NSO-2: See Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations for waiver, modification and exception criteria.

MD MR-3: In GHMA, any new leases would include TL stipulations to protect GRSG and its habitat. The following stipulation would apply:

GRSG TL-46e: No activity associated with construction, drilling, or completions within 4 miles from active leks during lekking, nesting, and early brood-rearing (March 1 to July 15). Authorized Officer could grant an exception, modification, or waiver in consultation with the State of Colorado (Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations).

MD MR-4: No Surface Occupancy (NSO) within 2 miles of active leks in GHMA. Waivers, exceptions, and modification could be obtained under conditions described in Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations.

MD MR-5: Disturbance on new leases would be limited to 3 percent in PHMA (biologically significant unit) (see Appendix E, Methodology for Calculating Disturbance Caps) and would limited to 1 disturbance per 640 acres calculated by Colorado MZ[2]. The following Lease Notice (LN) would apply:

GRSG LN-46e: Any lands leased in PHMA are subject to the restrictions of 1 disturbance per 640 acres calculated by biologically significant unit (Colorado populations) and proposed project analysis area.

[2] (Colorado MZ) to allow clustered development (Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations).

MD MR-6: No new leasing in PHMA if disturbance cap exceeds 3 percent calculated by biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) or 1 disturbance per 640 acres density is exceeded (see Appendix E, Methodology for Calculating Disturbance Caps).

MD MR-7: (PHMA) Allow geophysical exploration within PHMA to obtain information for existing federal fluid mineral leases or areas adjacent to state or fee lands within PHMA. Allow geophysical operations only using helicopter portable drilling, wheeled or tracked vehicles on existing roads, or other approved methods conducted in accordance with seasonal TLs and other restrictions that may apply. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood-rearing, and winter habitats during their season of use by GRSG.

Leased Fluid Minerals

Objective MR-2: Where a proposed fluid mineral development project on an existing lease could adversely affect GRSG populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, reduce, and mitigate adverse impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator or project proponent in developing an Application for Permit to Drill for the lease to avoid, minimize, and compensate for impacts to GRSG or its habitat and will ensure that the best information about GRSG and its habitat informs and helps guide development of such federal leases.

MD MR-8: Within 1 mile of active leks, disturbance, disruptive activities, and occupancy are precluded.

If it is determined that this restriction would render the recovery of fluid minerals infeasible or uneconomic, considering the lease as a whole, or where development of existing leases requires that disturbance density exceeds 1 disturbance per 640 acres and/or the 3 percent disturbance cap (see Appendix E, Methodology for Calculating Disturbance Caps), use the criteria* below to site proposed lease activities to meet GRSG habitat objectives and require mitigation as described in Appendix F (Greater Sage-Grouse Mitigation Strategy).

MD MR-9: In PHMA and within 4 miles of an active lek, the criteria* below would be applied to guide development of the lease or unit that would result in the fewest impacts possible to GRSG.

MD MR-10: Based on site-specific conditions, prohibit construction, drilling, and completion within PHMA within 4 miles of a lek during lekking, nesting, and early brood-rearing (March 1 to July 15). In consultation with the State of Colorado, this TL may be adjusted based on application of the criteria below.

Criteria*:

- Location of proposed lease activities in relation to critical GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat.
- An evaluation of the potential threats from proposed lease activities that may affect the

local population as compared to benefits that could be accomplished through compensatory or off-site mitigation.

- An evaluation of the proposed lease activities, including design features, in relation to the site-specific terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors. This is particularly likely in Colorado MZ 17, which has an atypical GRSG habitat featuring benches with GRSG habitat interspersed with steep ravines.

To authorize an activity based on the criteria above, the environmental record of review must show no significant direct disturbance, displacement, or mortality of GRSG.

MD MR-11: Within PHMA, operators would be encouraged to complete Master Development Plans in consultation with the State of Colorado, instead of single-well Applications for Permit to Drill for all but exploratory wells. (Notice to Lessees-54e: see Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations.)

MD MR-12: When necessary, conduct effective mitigation in 1) GRSG PHMA or less preferably 2) GHMA (dependent upon the area-specific ability to increase GRSG populations and in consultation with the State of Colorado).

MD MR-13: Conduct effective compensatory mitigation first within PHMA in the same Colorado MZ where the impact is realized; if not possible, then conduct mitigation within the same population as the impact, or in other Colorado GRSG populations, in consultation with the State of Colorado.

MD MR-14: For future actions in ADH, require a full reclamation bond specific to the site in accordance with 43 CFR, Parts 3104.2, 3104.3, and 3104.5. Ensure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000; Hagen et al. 2007) that would result in full restoration of the lands to the condition it was found prior to disturbance. Base the reclamation costs on the assumption that contractors for the BLM will perform the work.

Locatable Minerals

Objective MR-3: Manage solid mineral programs to avoid, minimize, and compensate for adverse impacts to GRSG habitat to the extent practical under the law and BLM jurisdiction.

MD MR-15: (PHMA) In plans of operations required prior to any proposed surface-disturbing activities include as appropriate effective mitigation for conservation in accordance with existing policy (BLM Washington Office Instruction Memorandum 2013-142).

MD MR-16: (PHMA) Where applicable to prevent unnecessary or undue degradation, apply seasonal restrictions if deemed necessary.

Saleable Minerals

Objective MR-4: Manage solid mineral programs to avoid, minimize, and compensate for adverse impacts to GRSG habitat to the extent practical under the law and BLM jurisdiction.

MD MR-17: (PHMA) Close PHMA to new mineral material sales. However, these areas would remain open to free use permits and the expansion of existing active pits, only if the following criteria are met:

- The activity is within the biologically significant unit and the project area disturbance cap.
- The activity is subject to the provisions set forth in the mitigation strategy (Appendix F).
- All applicable required/preferred design features are applied; and [if applicable] the activity is permissible under the regional screening criteria (Appendix H, Guidelines for Implementation and Adaptive Management).

MD MR-18: (ADH) Restore salable mineral pits no longer in use to meet GRSG habitat conservation objectives. Require reclamation/restoration of GRSG habitat as a viable long-term goal to improve the GRSG habitat (Appendix H, Guidelines for Implementation and Adaptive Management)

Nonenergy Leasable Minerals

Objective MR-5: Manage solid mineral programs to avoid, minimize, and compensate for adverse impacts to GRSG habitat to the extent practical under the law and BLM jurisdiction.

MD MR-19: No new non-energy mineral leasing in PHMA.

MD MR-20: Existing non-energy mineral leases: Apply the following conservation measures as conditions of approval (COAs) where applicable and feasible:

- Preclude new surface occupancy on existing leases within 1 mile of active leks (Blickley et al. 2012; Harju et al. 2012).
- If the lease is entirely within 1 mile of an active lek, require any development to be placed in the area of the lease least harmful to GRSG based on vegetation, topography, or other habitat features (Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations).
- Preclude new surface disturbance on existing leases within 2 miles of active leks within PHMA. If the lease is entirely within 2 miles of an active lek, require any development to be placed in the area of the lease least harmful to GRSG based on vegetation, topography, or other habitat features (Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations).
- Limit permitted disturbances to 1 disturbance per 640 acres average across the landscape in PHMA. Disturbances may not exceed 3 percent in PHMA (see Appendix E, Methodology for Calculating Disturbance Caps) in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ).

GRSG TL-47-51: Based on site-specific conditions, prohibit surface occupancy or disturbance within PHMA within 4 miles of a lek during lekking, nesting, and early brood-rearing (March 1 to July 15).

Mineral Split Estate

Objective MR-6: Utilize federal authority to protect GRSG habitat on split-estate lands to the extent provided by law.

MD MR-21: (PHMA/GHMA) Where the federal government owns the mineral estate in PHMA and GHMA, and the surface is in nonfederal ownership, apply the same stipulations, COAs, and/or conservation measures and RDFs/PDFs applied if the mineral estate is developed on BLM-administered lands in that management area, to the maximum extent permissible under existing authorities, and in coordination with the landowner.

MD MR-22: (PHMA/GHMA) Where the federal government owns the surface and the mineral estate is in nonfederal ownership in PHMA and GHMA, apply appropriate surface use COAs, stipulations, and mineral RDFs/PDFs through ROW grants or other surface management instruments, to the maximum extent permissible under existing authorities, in coordination with the mineral estate owner/lessee.

Solid Minerals - Coal

Objective MR-7: Manage solid mineral programs to avoid, minimize, and compensate for adverse impacts to GRSG habitat to the extent practical under the law and BLM jurisdiction.

MD MR-23: (ADH) Existing Coal Leases: During the term of the lease, encourage the lessee to voluntarily follow PDFs (Appendix C, Required Design Features, Preferred Design Features, and Suggested Design Features) to reduce and mitigate any adverse impacts to GRSG. At the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM will determine whether the lease application area is "unsuitable" for all or certain coal mining methods pursuant to 43 CFR Part 3461.5. PHMA is essential habitat for maintaining GRSG for purposes of the suitability criteria set forth at 43 CFR, Part 3461.5(o)(1).

To authorize expansion of existing leases, the environmental record of review must show no significant direct disturbance, displacement, or mortality of GRSG based on these criteria:

- Important GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat.
- An evaluation of the threats affecting the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation.
- An evaluation of terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.

MD MR-24: No new surface coal mine leases would be allowed in PHMA. At the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM would determine whether the lease application area is "unsuitable for all or certain coal mining methods pursuant to 43 CFR, Part 3461.5. PHMA is essential habitat for maintaining GRSG for purposes of the suitability criteria set forth at 43 CFR, Part 3461.5(o)(1).

MD MR-25: New Underground Coal Mine Leases would be subject to special stipulations.

Special Stipulations:

- All surfaces disturbances will be placed more than 2 miles from active leks.
- No surface disturbance on remainder of PHMA subject to the following conditions:
  - If, after consultation with the State of Colorado, and in consideration of the following criteria, there is no significant direct disturbance, displacement, or mortality of GRSG or impact to GRSG habitat.
  - Percent disturbance cap in PHMA with disturbances limited to 1 disturbance per 640 acres density calculated by Colorado MZ and proposed project analysis area would apply to new lease activities.
  - No new leasing in PHMA if disturbance cap exceeds 3 percent (see Appendix E, Methodology for Calculating Disturbance Caps) for the biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) or 1 disturbance per 640 acres is exceeded.

MD MR-26: (ADH) Underground mining exemption criteria for new leases:

- Federal lands with coal deposits that would be mined by underground mining methods shall not be assessed as unsuitable where there would be no surface coal mining operations, as defined in 43 CFR, Part 3400.0-5(mm) of this title, on any lease, if issued.
- Where underground mining will include surface operations and surface impacts on federal lands to which a criterion applies, the lands shall be assessed as unsuitable unless the surface management agency find that a relevant exception or exemption applies. See 43 CFR, Part 3461.1(b). Where practicable, limit permitted disturbances as defined in Appendix H, Guidelines for Implementation and Adaptive Management, to 3 percent in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ). Where disturbance exceeds 3 percent in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ), make additional, effective mitigation necessary to offset the resulting loss of GRSG habitat.

MD MR-27: (PHMA) See 43 CFR, Part 3461.4 (a) and (b), Exploration. Authorized exploration activities may be conducted only if the Authorized Officer reviews any application for an exploration license on such lands to ensure that any exploration does not harm any value for which the area has been assessed as unsuitable and determines that the exploration will not adversely affect GRSG populations due to habitat loss or disruptive activities or that the impact can be fully mitigated. Where practicable, limit permitted disturbances as defined in Appendix H, Guidelines for Implementation and Adaptive Management, to 3 percent in PHMA any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ). Where disturbance exceeds 3 percent in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ), make additional, effective mitigation necessary to offset the resulting loss of GRSG habitat.

MD MR-28: (PHMA) Underground m~~i~~ning lease renewals:

- Require that all surface mining appurtenant facilities for underground mining be located outside of PHMA (unless the lessee establishes that that such location is not technically

feasible).

- If surface mining facilities must be located in PHMA, require the facilities be located in areas of existing disturbance and to have the smallest footprint possible utilizing design strategies to minimize disturbance, such as those identified in the PDF section of this table.
- Apply as conditions of lease renewal all appropriate conservation measures, PDFs, and mitigation designed to avoid or minimize impacts to GRSG.

(ADH) Surface mining lease renewals/readjustments: Apply as conditions of lease renewal all appropriate conservation measures, PDFs, and mitigation designed to avoid or minimize impacts to GRSG.

MD MR-29: (ADH) Recommend or require as appropriate during all relevant points of the coal leasing and authorization process, minimization of surface-disturbing or disrupting activities (including operations and maintenance) where needed to reduce the impacts of human activities on important seasonal GRSG habitats. Apply these measures during activity-level planning (jurisdiction is managed by the State). The Office of Surface Mining or a delegated State Regulatory authority under the Surface Mining Control and Reclamation Act of 1977 authorizes surface-disturbing activities of active coal mining operations on federal mineral estate. The BLM coordinates with the Surface Mining Control and Reclamation Act of 1977 in overseeing coal leasing and permitting on federal lands. The resource recovery and protection plan for which BLM recommends approval to the Secretary integrates the reclamation plan recommended by the Surface Mining Control and Reclamation Act of 1977 for active coal mines on federal mineral estate. Approval of coal mining plans on lands containing leased federal coal is reserved to the Secretary of the Interior (30 CFR, Part 740.4). BLM issues coal leases and exploration licenses for right of entry to promote development of minerals on federal lands. See the following in regards to BLM exploration: 43 CFR, Part 3461.4, and Exploration. States with delegated authority on federal lands from the Office of Surface Mining may have their own GRSG guidance in association with state wildlife agencies and such guidance may differ from state to state.

MD MR-30: (ADH) (a) Assessment of any area as unsuitable for all or certain stipulated methods of c o a l mining operations pursuant to Section 522 of the Surface Mining Control and Reclamation Act of 1977 (30 US Code 1272) and the regulations of this subpart does not prohibit exploration of such area under 43 CFR, Parts 3410 and 3480, and 43 CFR, Part 3461.4(a)

MD MR-31: (ADH) (b) An application for an exploration license on any lands assessed as unsuitable for all or certain stipulated methods of coal mining shall be reviewed by the BLM to ensure that exploration does not harm any value for which the area has been assessed as unsuitable (43 CFR, Part 3461.4(b))

2.2.7 Renewable Energy (Wind and Solar) (RE)

Objective RE-1: Manage the Lands and Realty program to avoid, minimize, and compensate for the loss of habitat and habitat connectivity through the authorizations of ROWs, land tenure adjustments, proposed land withdrawals, agreements with partners, and incentive

programs.

Wind Energy Development

MD RE-1: (PHMA) Manage PHMA as exclusion areas for wind energy development.

MD RE-2: (GHMA) Manage GHMA as avoidance areas for wind energy development.

Industrial Solar Development

MD RE-3: (PHMA) Manage PHMA as exclusion areas for industrial solar projects.

MD RE-4: (GHMA) Manage GHMA as avoidance areas for industrial solar projects.

2.2.8 Lands and Realty (LR)

Objective LR-1: Manage the Lands and Realty program to avoid, minimize, and compensate for the loss of habitat and habitat connectivity through the authorizations of ROWs, land tenure adjustments, proposed land withdrawals, agreements with partners, and incentive programs.

Objective LR-2: Effects of infrastructure projects, including siting, will be minimized using the best available science, updated as monitoring information on current infrastructure projects becomes available.

Land Use Authorizations

MD LR-1: Manage areas within PHMA as avoidance areas* for BLM ROW permits. (See Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations.)

MD LR-2: Manage areas within GHMA as avoidance areas* for major (transmission lines greater than 100 kilovolts and pipelines greater than 24 inches) and minor BLM ROW permits. (See Appendix G, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations.)

MD LR-3: No new roads or above-ground structures would be authorized within 1 mile of an active lek.

Above-ground structures are defined as structures that are located on or above the surface of the ground, including but not limited to: roads, fences, communication towers, and/or any structure that would provide perches.

Above-ground structures would only be authorized if:

- It is consistent with the overall objective of the RMP Amendment.
- The effect on GRSG populations or habitat is nominal or incidental.
- Allowing the exception prevents implementation of an alternative more detrimental to GRSG or similar environmental concern, and;
- Rigid adherence to the restriction would be the only reason for denying the action.

MD LR-4: PHMA and GHMA are designated as avoidance areas for high-voltage transmission

line ROWs, except for the transmission projects specifically identified below. All authorizations in these areas, other than the following identified projects, must comply with the conservation measures outlined in this ARMPA, including the RDFs and avoidance criteria presented in this document. The BLM is currently processing applications for TransWest and Energy Gateway South Transmission Line projects, and the NEPA review for these projects is well underway. Conservation measures for GRSG are being analyzed through the projects' NEPA review process, which should achieve a net conservation benefit for the GRSG.

***GRSG PHMA ROW Avoidance.** ROWs may be issued after documenting that the ROWs would not adversely affect GRSG populations based on the following criteria:

- Location of proposed activities in relation to critical GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat.
- An evaluation of the potential threats from proposed activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation.
- An evaluation of the proposed activities in relation to the site-specific terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.

MD LR-5: Any new projects within PHMA would be subject to the 3 percent disturbance cap as described in Appendix E, Methodology for Calculating Disturbance Caps. If the 3 percent disturbance cap is exceeded in PHMA in any Colorado MZ, no new ROW would be authorized in PHMA within that biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ), unless site-specific analysis documents no impact to GRSG. Within existing designated utility corridors, the 3 percent disturbance cap may be exceeded at the project scale if the site specific NEPA analysis indicates that a net conservation gain to the species will be achieved. This exception is limited to p r o j e c t s which fulfill the use for which the corridors were designated (ex., transmission lines, pipelines) and the designated width of a corridor will not be exceeded as a result of any project co-location.

MD LR-6: Prohibit surface occupancy and surface-disturbing activities associated with BLM ROW within 4 miles from active leks during lekking, nesting, and early brood-rearing (March 1 to July 15). (See special stipulations applicable to GRSG PHMA ROW TL.)

MD LR-7: Construct new roads to the appropriate Gold Book standard and add the surface disturbance to the total disturbance in the PHMA.

MD LR-8: (PHMA) In PHMA, or within 4 miles of an active lek, for ROW renewals, where existing facilities cannot be removed, buried, or modified, require perch deterrents.

MD LR-9: (PHMA) Reclaim and restore ROWs considering GRSG habitat requirements.

MD LR-10: (PHMA) Designate new ROW corridors in GRSG PHMA only where there is a compelling reason to do so and location of the corridor within PHMA will not adversely affect GRSG populations due to habitat loss or disruptive activities.

MD LR-11: (PHMA) Consider the likelihood of development of not-yet-constructed surface-disturbing activities as defined in Table D.2 of the Monitoring Framework (Appendix D) under valid existing rights prior to authorizing new projects in PHMA.

Land Tenure Adjustment

MD LR-11: Retain public ownership of GRSG PHMA. Consider exceptions where:

- It can be demonstrated that:
  - Disposal of the lands, including land exchanges, will provide a net conservation gain to the GRSG; or
  - The disposal of the lands, including land exchanges, will have no direct or indirect adverse impact on GRSG conservation.
- There is mixed ownership, and land exchanges would allow for additional or more contiguous federal ownership patterns within the GRSG PHMA.

MD LR-12: (PHMA) In isolated federal parcels, only allow tract disposals that are beneficial or neutral to long-term management of GRSG populations.

MD LR-13: (GHMA) For lands in GHMA that are identified for disposal, the BLM would only dispose of such lands consistent with the goals and objectives of this ARMPA, including, but not limited to, the ARMPA objective to maintain or increase GRSG abundance and distribution.

MD LR-14: (ADH) Consider GRSG habitat values in acquisitions. For example: Identify key GRSG habitats on private or state land, adjacent to existing BLM land, where acquisition and protection by BLM could substantially benefit the local GRSG population. This could be accomplished via purchase, exchange, or donation to satisfy mitigation requirements.

2.2.9 Recreation (REC)

Objective REC-1: Manage recreation to avoid activities that 1) disrupt GRSG, 2) fragment GRSG habitat, or 3) spread noxious weeds.

MD REC-1: (PHMA) Do not allow special recreation permits with the potential to adversely affect GRSG or GRSG habitat.

2.2.10 Travel and Transportation (TTM)

Objective TTM-1: Manage travel and transportation to 1) reduce mortality from vehicle collisions, 2) limit change in GRSG behavior, 3) avoid, minimize, and compensate for habitat fragmentation, 4) limit the spread of noxious weeds, and 5) limit disruptive activity associated with human access.

MD TTM-1: (PHMA) Limit off-highway vehicle (OHV) travel to existing roads, primitive roads, and trails at a minimum. Special Zone Provision: Colorado MZ 13 Manage the Wolford Mountain open OHV area.

MD TTM-2: (PHMA) Evaluate and consider permanent or seasonal road or area closures as needed to address a current threat.

MD TTM-3: (PHMA) Complete activity level travel plans as soon as possible, subject to funding. During activity level planning, where appropriate, designate routes with current administrative/agency purpose or need to administrative access only.

MD TTM-4: (PHMA) Complete activity level travel plans as soon as possible, subject to funding. Limit route construction to routes that will not adversely affect GRSG populations due to habitat loss or disruptive activities.

MD TTM-5: (PHMA) Use existing roads or realignments whenever possible. If it is necessary to build a new road, and the use of existing roads would cause adverse impacts to GRSG, construct new roads to the appropriate minimum Gold Book standard and add the surface disturbance to the total disturbance in the PHMA if it meets the criteria in Appendix H, Guidelines for Implementation and Adaptive Management.

Construct no new roads if the biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) is over the 3 percent disturbance cap (see Appendix E, Methodology for Calculating Disturbance Caps), unless there is an immediate health and safety need, or to support valid existing rights that cannot be avoided. Evaluate and implement additional, effective mitigation necessary to offset the resulting loss of GRSG habitat.

MD TTM-6: (PHMA) Allow upgrades to existing routes after documenting that the upgrade will not adversely affect GRSG populations due to habitat loss or disruptive activities.

MD TTM-7: (PHMA) Conduct restoration of roads, primitive roads and trails not designated in travel management plans. This also includes primitive route/roads that were not designated in wilderness study areas and within lands with wilderness characteristics that have been selected for protection in previous LUPs.

MD TTM-8: (PHMA) When reseeding roads, primitive roads, and trails, use appropriate seed mixes and consider the use of transplanted sagebrush.

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Appendix G

Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations

APPENDIX G - STIPULATIONS APPLICABLE TO FLUID MINERAL LEASING AND LAND USE AUTHORIZATIONS

This appendix lists the stipulations for fluid mineral leasing (e.g., oil, gas, and geothermal) referred to throughout this ARMPA. Stipulations outlined in this appendix also apply to fluid mineral leasing on lands overlying federal mineral estate, which includes federal mineral estate underlying BLM lands, privately owned lands, and state-owned lands.

Upon completion of the EIS and ARMPA, the list of stipulations that are included in the decision would supersede the relevant stipulations attached to the existing LUPs. Those program areas/stipulations not considered in this ARMPA (not relevant to GRSG and GRSG habitat) would continue in full force and effect where they apply (within individual BLM field offices or the Routt National Forest). The stipulations would not apply to activities and uses where they are contrary to laws, regulations, or specific program guidance.

G.1 DESCRIPTION OF STIPULATIONS

Three types of stipulations could be applied to leasing authorizations and would also be applied as terms and conditions for land use authorizations: 1) No Surface Occupancy (NSO); 2) Controlled Surface Use (CSU); and 3) Timing Limitations (TL). Notices to Lessees (NTLs), Lease Notices (LNs), and Conditions of Approval (COAs), which are applied to existing leases, are also described below.

G.1.1 No Surface Occupancy (NSO)

Use or occupancy of the land surface for fluid mineral exploration or development is prohibited to protect GRSG and GRSG habitat. In areas open to fluid mineral leasing with NSO stipulations, fluid mineral leasing activities are permitted, but surface-disturbing activities cannot be conducted on the surface of the land unless an exception, modification, or waiver is granted. Access to fluid mineral deposits would require drilling from outside the boundaries of the NSO stipulation.

G.1.2 Controlled Surface Use (CSU)

A CSU stipulation is a category of moderate constraint that allows some use and occupancy of public land while protecting identified resources or values. A CSU stipulation allows the BLM to require additional conditions be met to protect a specified resource or value in addition to standard lease terms and conditions.

G.1.3 Timing Limitations (TL)

Areas identified for TLs, a moderate constraint, are closed to fluid mineral exploration and development during identified time frames. Construction, drilling, completions, and other operations considered to be intensive in nature are not allowed. Intensive maintenance, such as work overs on wells, is not permitted. Administrative activities are allowed at the discretion of the BLM Authorized Officer.

G.1.4 Notice to Lessees (NTL)

A notice to lessee is a written notice issued by the BLM Authorized Officer. Notices to lessees implement regulations and operating orders, and serve as instructions on specific item(s) of importance within a state, district, or area.

G.1.5 Lease Notice (LN)

A Lease Notice provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. An LN also addresses special items that the lessee should consider when planning operations.

G.1.6 Condition of Approval (COA)

Conditions of Approval are enforceable conditions or provisions under which an Application for Permit to Drill (APD) is approved.

G.2 EXCEPTIONS, MODIFICATIONS, AND WAIVERS

An exception exempts the holder of the lease from the stipulation on a one-time basis. A modification changes the language or provisions of a stipulation due to changed conditions or new information either temporarily or for the term of the lease. A modification may or may not apply to all other sites within the leasehold. A waiver permanently exempts the surface stipulation for a specific lease, planning area, or resource based on absence of need, such as a determination that protection of winter use is unnecessary for maintenance or recovery of a species.

G.2.1 Exception, Modification, or Waiver Process

An exception, modification, or waiver may be granted at the discretion of the BLM Authorized Officer if the specific criteria described below are met. In order to implement an action that would not normally be allowed because of a stipulation, the proponent must submit a written request for an exception, modification, or waiver and provide the data necessary to demonstrate that specific criteria have been met. Prior to any modification or waiver of a lease stipulation, a 30-day public notice and comment period may be required.

G.3 STIPULATIONS APPLICABLE TO LAND USE AUTHORIZATIONS

Restrictions on land use authorizations (e.g., rights-of-way [ROWs]) are administered through the identification of exclusion and avoidance areas. Exclusion areas are unavailable for location of ROWs under any conditions. Avoidance areas are to be avoided when practicable due to identified resource values, but may be available with special stipulations.

ROW terms and conditions that would be attached to authorizations sited in areas identified as avoidance areas are described in the table below.

Table G-1 - ROW Terms and Conditions for Avoidance Areas

Management Action	Stipulation Type: No Surface Occupancy (NSO)
Objective: Manage fluid minerals to avoid, minimize, and compensate for: 1) direct disturbance, displacement, or mortality of GRSG; 2) direct loss of habitat, or loss of effective habitat through fragmentation; and 3) cumulative landscape-level impacts.	
Management Action	**MD MR-1** (One mile from active leks): Open to Leasing Subject to **NSO-1**
Stipulation Description	**NSO-1**: **Exceptions or modifications may be considered if, in consultation with the State of Colorado, it can be demonstrated that there is no impact on Greater Sage-Grouse based on one of the following: • Topography/areas of non-habitat create an effective barrier to impacts. • No additional impacts would be realized above those created by existing major infrastructure (for example, State Highway 13). • The exception or modification precludes or offsets greater potential impacts if the action were proposed on adjacent parcels (for example, due to landownership patterns). **In order to approve exceptions or modifications to this lease stipulation, the Authorized Officer must obtain: agreement, including written justification, between the BLM District Managers and CPW that the proposed action satisfies at least one of the criteria listed above. **Waiver:** No waivers are authorized unless the area or resource mapped as possessing the attributes protected by the stipulation is determined during collaboration with the State of Colorado to lack those attributes or potential attributes. A 30-day public notice and comment period is required before waiver of a stipulation. Waivers would require BLM State Director approval. *This lease is subject to NSO and does not guarantee the lessee the right to occupy the surface of the lease for the purpose of producing oil and natural gas. In areas open to fluid mineral leasing with NSO stipulations, fluid mineral leasing activities are permitted, but surface-disturbing activities cannot be conducted on the surface of the land unless an exception, modification, or waiver is granted.*
Management Action	**MD MR-2** (one mile from active leks to the remainder of PHMA): Open to Leasing subject to **NSO-2.**
	NSO-2: No Surface Occupancy with waivers, exceptions, or modifications in PHMA. Surface occupancy can occur in PHMA with approved waivers, exceptions, or modifications. ****Exception:** The BLM will grant an exception (any occupancy must be removed

	within 1 year of approval) to **NSO-2** after consulting with the State of Colorado, consistent with **MD-SSS-3** and based on the following factors: • It is determined by evaluating the proposed lease activities that adverse or undesirable impacts to Greater Sage-Grouse can be avoided based on site-specific terrain, topography and habitat type, or offset consistent with criterion #2 below. For example, in the vicinity of leks, local terrain features such as ridges and ravines may shield potential disruptive impacts from affecting nearby Greater Sage-Grouse habitat **or** • It is determined, based on site-specific information (using tools such as the Habitat Assessment Framework, the Colorado Habitat Exchange Habitat Quantification Tool, or others), that the impacts anticipated by the proposed activity would be offset through compensatory mitigation developed in coordination with the State of Colorado (as a requirement of State policy or authorization or as offered voluntarily by leaseholder) that meets accepted principles of compensatory mitigation including: – Achieving measurable outcomes for Greater Sage-Grouse habitat function that are at least equal to the lost or degraded values. ****Modification:** The BLM will grant modifications (changes to the stipulation either temporarily or for the term of either part of the entire lease) to **NSO-2** after consultation with the State of Colorado, consistent with **MD-SSS-3** and based on the following factors: • It is determined by evaluating the proposed lease activities that adverse or undesirable impacts to Greater Sage-Grouse can be avoided based on site-specific terrain, topography and habitat type, or offset consistent with criterion #2 below. For example, in the vicinity of leks, local terrain features such as ridges and ravines may shield potential disruptive impacts from affecting nearby Greater Sage-Grouse habitat. **or** • It is determined, based on site-specific information (using tools such as the Habitat Assessment Framework, the Colorado Habitat Exchange Habitat Quantification Tool, or others), that the impacts anticipated by the proposed activity would be offset through compensatory mitigation developed in coordination with the State of Colorado (as a requirement of State policy or authorization or as offered voluntarily by leaseholder) that meets accepted principles of compensatory mitigation including: – Achieving measurable outcomes for Greater Sage-Grouse habitat function that are at least equal to the lost or degraded values; – Accounting for a level of risk that the mitigation action may fail or not persist for the full duration of the impact.

	If, prior to development, the county in which the tract is located provides information indicating that an NSO stipulation can be excepted or modified based on a reasonable understanding of likely development because either of the criterion above would apply, the BLM would manage that lease accordingly unless the BLM determines, at the APD stage and in consultation with the State of Colorado, that neither of the criteria identified above is met. *In order to approve exceptions or modifications to this lease stipulation, the Authorized Officer must obtain agreement, including written justification, between the BLM District Manager and CPW that the proposed action satisfies at least one of the criteria listed above.* **Waiver: No waivers are authorized unless the area or resource mapped as possessing the attributes protected by the stipulation is determined during collaboration with the State of Colorado to lack those attributes or potential attributes. A 30-day public notice and comment period is required before waiver of a stipulation. Waivers would require BLM State Director approval.
Management Action	**NSO-46e(2) (**within 2 miles of active leks in GHMA): Open to leasing subject to **NSO-46e(2).**
Stipulation Description	**NSO-46e(2) –** with waivers, exceptions, or modifications. Criteria for waivers, exceptions or modifications to NSO-46e(2): **Waiver:** No waivers are authorized unless the area or resource mapped as possessing the attributes protected by the stipulation is determined during collaboration with the State of Colorado to lack those attributes or potential attributes. A 30-day public notice and comment period is required before waiver of a stipulation. Waivers would require BLM State Director approval. **Exception:** In consultation with the State of Colorado, an exception to occupancy of the surface associated with **GRSG NSO-46e(2) in GHMA** could be granted on a one-time basis (any occupancy must be removed within 1 year of approval) based on an analysis of the following factors: • Location of proposed lease activities in relation to critical GRSG habitat areas as identified by factors including, but not limited to, average male lek attendance and/or important seasonal habitat. • An evaluation of the potential threats from proposed lease activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see **Chapter 2**, **Section 2.6.3 of the Proposed LUPA/Final EIS**, Regional Mitigation). • An evaluation of the proposed lease activities in relation to the site-specific terrain and habitat features. For example, in the vicinity of leks, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.

	Modification: In consultation with the State of Colorado, a modification (changes to the stipulation either temporarily or for the term of either part of or the entire lease) to **GRSG NSO-46e(2)** could be granted based on an analysis of the following factors: • Location of proposed lease activities in relation to critical GRSG habitat areas as identified by factors including, but not limited to, average male lek attendance and/or important seasonal habitat. • An evaluation of the potential threats from proposed lease activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see **Chapter 2**, **Section 2.6.3 of the Proposed LUPA/Final EIS**, Regional Mitigation). • An evaluation of the proposed lease activities in relation to the site-specific terrain and habitat features. For example, in the vicinity of leks, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.
Management Action	**Apply Lease Notice (GRSG LN-46e) for leases in PHMA:** • Limit surface disturbance to 3 percent of PHMA. • Limit density of infrastructure to 1 per 640 acres.
Stipulation Description	**GRSG LN-46e:** Include the following notification for limits on surface disturbance and disruption: *This lease is subject to NSO and does not guarantee the lessee the right to occupy the surface of the lease for the purpose of producing oil and natural gas. In areas open to fluid mineral leasing with NSO stipulations, fluid mineral leasing activities are permitted, but surface-disturbing activities cannot be conducted on the surface of the land unless an exception, modification, or waiver is granted.* *Surface occupancy or use will be restricted to no more than 1 disruptive facility per 640 acres, and the cumulative value of all applicable surface disturbances, existing or future, must not result in greater than 3 percent loss of the sagebrush habitat within PHMA (as measured by Colorado Management Zone).*
Management Action #46	**Stipulation Type: Timing Limitation**
Management Action	**GRSG TL-46e:** No activity associated with construction, drilling, or completions within 4 miles from active leks during lekking, nesting, and early brood-rearing (March 1 to July 15). Authorized Officer could grant an exception, modification, or waiver in consultation with the State of Colorado.
Purpose	Manage fluid minerals to avoid, minimize, and compensate for direct disturbance, displacement, or mortality of GRSG during lekking, nesting, and early brood-rearing.
Stipulation Description	**GRSG TL-46e** (within 4 miles of active leks) No activity associated with construction, drilling, or completions within 4 miles from active

	leks during lekking, nesting, and early brood-rearing (March 1 to July 15). **Waiver:** No waivers are authorized unless the area or resource mapped as possessing the attributes protected by the stipulation are determined during collaboration with Colorado Parks and Wildlife to lack those attributes or potential attributes. A 30-day public notice and comment period is required before waiver of a stipulation. Waivers would require BLM State Director approval. **Exception/Modification:** In consultation with the State of Colorado, a modification or an exception to **GRSG TL-46e** could be granted based on an analysis of the following factors: • Location of proposed lease activities in relation to critical GRSG habitat areas as identified by factors including, but not • limited to, average male lek attendance and/or important seasonal habitat • An evaluation of the potential threats from proposed lease activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see **Chapter 2**, **Section 2.6.3 of the Proposed LUPA/Final EIS**, Regional Mitigation) • An evaluation of the proposed lease activities in relation to the site-specific terrain and habitat features. For example, within 4 miles of a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.
Management Action	**Stipulation Type: Condition of Approval**
Management Action	**MD MR-8:** On existing leases within 1 mile of active leks, disturbance, disruptive activities, and occupancy are precluded. If it is determined that this restriction would render the recovery of fluid minerals infeasible or uneconomic, considering the lease as a whole, or where development of existing leases requires that disturbance density exceeds 1 disruptive facility per 640 acres, and/or 3 percent disturbance cap, use the criteria below to site proposed lease activities to meet GRSG habitat objectives and require mitigation as described in **Appendix F** (Greater Sage-Grouse Mitigation Strategy). In PHMAs and within 4 miles of an active lek, the criteria below would be applied to guide development of the lease or unit that would result in the fewest impacts possible to GRSG. Based on site-specific conditions, prohibit construction, drilling, and completion within PHMA within 4 miles of a lek during lekking, nesting, and early brood-rearing (March 1 to July 15). In consultation with the State of Colorado, this timing limitation may be adjusted based on application of the criteria below. *****Criteria** (see **Chapter 2 of the Proposed LUPA/Final EIS**

	for additional detail on these criteria): • Location of proposed lease activities in relation to critical GRSG habitat areas as identified by factors including, but not limited to, average male lek attendance and/or important seasonal habitat • An evaluation of the potential threats from proposed lease activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see **Chapter 2**, **Section 2.6.3 of the Proposed LUPA/Final EIS**, Regional Mitigation) • An evaluation of the proposed lease activities, including design features, in relation to the site-specific terrain and habitat features. For example, within 4 miles of a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors. This is particularly likely in Colorado Management Zone 17, which has an atypical GRSG habitat featuring benches with GRSG habitat interspersed with steep ravines. ***To authorize an activity based on the criteria above, the environmental record of review must show no significant direct disturbance, displacement, or mortality of GRSG.
Management Action #10	**Avoidance criteria**
GRSG PHMA ROW Avoidance	**MD MR-1**: Manage areas within PHMA and GHMA as avoidance areas for ROWs. ROWs/Special Use Authorizations may be issued after documenting that the ROWs/Special Use Authorizations would not adversely affect GRSG populations based on the following criteria: • Location of proposed activities in relation to critical GRSG habitat areas as identified by factors including, but not limited to, average male lek attendance and/or important seasonal habitat • An evaluation of the potential threats from proposed activities that may affect the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see **Chapter 2, Section 2.6.3 of the Proposed LUPA/Final EIS**, Regional Mitigation) • An evaluation of the proposed activities in relation to the site-specific terrain and habitat features. For example, within 4 of from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors. Any new projects within PHMA would be subject to the 3 percent disturbance cap as described in **Appendix H**, Guidelines for Implementation. If the 3 percent disturbance cap is exceeded in PHMA in any Colorado Management Zone, no new ROW would be authorized in PHMA within that Colorado Management Zone, unless site-specific analysis documents no impact on GRSG.

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Appendix H

Guidelines for Implementation and Adaptive Management

APPENDIX H - GUIDELINES FOR IMPLEMENTATION LEASING AND LAND USE AUTHORIZATIONS

H.1 INTRODUCTION

This appendix provides guidelines for the implementation of the Northwest Colorado ARMPA, including Adaptive Management. The goals and objectives of the ARMPA address threats to Greater Sage-Grouse and Greater Sage-Grouse habitat and include management actions designed to maintain and enhance populations and distribution of Greater Sage-Grouse. The specific management actions provide details by resource program. BLM programs include objectives designed to avoid direct disturbance of Greater Sage-Grouse habitat or displacement of Greater Sage-Grouse, and conditions under which it is necessary to minimize and mitigate the loss of habitat and habitat connectivity. To implement the ARMPA, the BLM would assess all proposed land uses or activities in PHMA and GHMA that potentially could result in direct habitat disturbance.

The following steps identify the screening process by which the BLM will review proposed activities or projects in PHMA and GHMA. This process will provide a consistent approach and ensure that authorization of these projects, if granted, will appropriately mitigate impacts and be consistent with the ARMPA goals and objectives for Greater Sage-Grouse. The following steps provide for a sequential screening of proposals. However, Steps 2 through 6 can be done concurrently.

The screening process is meant to apply to externally generated projects that would cause discrete anthropogenic disturbances. See **Section H.3**, Restoration/Reclamation of Landscape-Scale Disturbances – Objectives for Greater Sage-Grouse Habitat, for guidelines regarding landscape-scale disturbances such as wildfire and habitat restoration.

H.2 SCREENING PROCESS

H.2.1 Step 1 – Determine Proposal Adequacy

This screening process is initiated upon formal submittal of a proposal for authorization for use of BLM-administered lands to the field office. The actual documentation of the proposal would include, at a minimum, a description of the location, scale of the project, and timing of the disturbance. The acceptance of the proposal(s) for review would be consistent with existing protocol and procedures for each type of use. Upon a determination that the proposed project would affect Greater Sage-Grouse or Greater Sage-Grouse habitat, the project lead would initiate a land use plan conformance worksheet.

H.2.2 Step 2 – Evaluate Proposal Consistency with LUPA

The Sage-Grouse Coordinator and the field office interdisciplinary team would evaluate whether the proposal would be allowed as prescribed in the ARMPA. For example, some activities or types of development are prohibited in PHMA or GHMA. Evaluation of projects will also include an assessment of the current state of the adaptive management hard and soft triggers (see Adaptive Management, below). If the proposal is for an activity that is specifically prohibited, the applicant

should be informed that the application is being rejected since it would not be an allowable use, regardless of the design of the project.

H.2.3 Step 3 – Determine if Greater Sage-Grouse Habitat Can Be Avoided

If the project can be relocated so that it would not have an impact on Greater Sage-Grouse and Greater Sage-Grouse habitat and still achieve objectives of the proposal, relocate the proposed activity and proceed with the appropriate process for review, decision, and implementation (NEPA and decision record). If the project includes a request for an exception or modification to **NSO-1** or **NSO-2**, the NEPA process will include details regarding how the criteria described in **Appendix G**, *Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations* were met.

H.2.4 Step 4 – Determine Proposal Consistency with Density and Disturbance Limitations

If the proposed activity occurs within PHMA **and is subject to the disturbance cap (see Disturbance Cap Guidance)**, the Sage-Grouse Coordinator would evaluate whether the disturbance from the activity would exceed 3 percent in the Colorado Management Zone using the Disturbance Analysis and Reclamation Tracking Tool (SDARTT) or a local disturbance database. If current disturbance within the activity area or the anticipated disturbance from the proposed activity exceeds this threshold, the project would be deferred until such time as the amount of disturbance within the area has been reduced below the threshold (see **Section H.3**), redesigned so as to not result in any additional surface disturbance (collocation), or redesigned to move it outside of PHMA.

Colorado BLM has completed an inventory of all PHMA by Colorado MZ and would track actual disturbance using a local data management system and/or SDARTT. The data management system would be used to inventory, prioritize, and track disturbance data within the decision area, including those projects that cross field office boundaries. The data would be used to determine the actual disturbance by Colorado Management Zone.

Disturbance Cap Guidance

The disturbance cap would apply to anthropogenic disturbances in PHMA on new leases and land use authorizations (such as ROWs). Anthropogenic disturbance refers to physical removal of habitat, including, but not limited to, paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells, pipelines, and mines. The disturbance cap is limited to 3 percent and would be calculated for each Colorado Greater Sage-Grouse MZ. Only physical disturbance would counted for the 3 percent disturbance cap. Disruptive impacts, such as wildfire, would be considered in the site-specific analysis when surface-disturbing proposals are being considered.

Types of anthropogenic disturbance that *would be* counted toward the disturbance cap under the ARMPA include the following:

- Any anthropogenic disturbance on BLM surface lands
- Projects on private land in the public record because they entail a federal nexus due to funding or authorizations. Specifically included would be energy development, rights-of-way, or range projects approved by the BLM because they have components on both public and private land.

Also included would be anthropogenic disturbance on private surface attributable to the authorized recovery of federal minerals

- Industrial operations on any surface ownership with a readily apparent impact on Greater Sage-Grouse habitat
- Any disturbance data volunteered by private landowners

Types of projects that *would not be* counted toward the disturbance cap under the ARMPA include the following:

- Disturbance on individual sites such as stands of pinyon/juniper determined lacking in Greater Sage-Grouse habitat potential
- Disturbance on private lands other than what has been described above. The BLM would not inventory or evaluate private property not linked to a specific project with a federal nexus. Private residences would not be inventoried or evaluated. Infrastructure on private land associated with family farm or ranch operations would not constitute "an industrial operation with a readily apparent impact on Greater Sage-Grouse habitat." Base property associated with grazing permits would not be considered a federal nexus in this context. Conservation easements would not trigger a federal nexus, and be cause for inventory of private lands. Conservation-oriented activities associated with the US Department of Agriculture, Natural Resources Conservation Service would also not be counted.

Reclamation Criteria for Anthropogenic Disturbances

In order for disturbance to be considered reclaimed and no longer counted against the Northwest Colorado disturbance cap, the following requirements would be insisted upon:

- Reclamation requirements would be consistent with the existing Northwest Colorado land use decisions and regulations.
- Reclamation success criteria in Greater Sage-Grouse habitat would be contingent on evidence of successful establishment of desired forbs and sagebrush. Reclaimed acreage would be expected to progress without further intervention to a state that meets Greater Sage-Grouse cover and forage needs (see **Table H-1**) based on site capability and seasonal habitat, as described in the Colorado Greater Sage-Grouse Conservation Plan (Colorado Greater Sage-Grouse Steering Committee 2008).
- Depending on site condition, the BLM may require a specific seed component and/or sagebrush (i.e., material collected on-site or seed propagated from "local" collections) where appropriate to accelerate the redevelopment of sagebrush.

H.2.5 Step 5 – Determine Projected Sage-Grouse Population and Habitat Impacts

If it is determined that the proposed project may move forward, based on Steps 1 through 3, above, then the BLM would analyze whether the project would have a direct or indirect impact on Greater Sage-Grouse populations or habitat within PHMA or GHMA. The analysis would include an evaluation of the following:

- Review of Greater Sage-Grouse Habitat delineation maps
- Use of the USGS report *Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review* (Manier et al. 2014) to assess potential project impacts based upon the distance to the nearest

lek, using the most recent active lek (as defined by CPW; see Glossary) data available from the state wildlife agency. This assessment would be based upon the buffers identified below for the following types of projects:

  - Linear features within 3.1 miles of leks
  - Infrastructure related to energy development within 3.1 miles of leks
  - Tall structures (e.g., communication or transmission towers and transmission lines) within 2 miles of leks
  - Low structures (e.g., rangeland improvements) within 1.2 miles of leks
  - All other surface disturbance not associated with linear features, energy development, tall structures, or low structures within 3.1 miles of leks
- Noise and related disruption activities (including those that do not result in habitat loss) at least 0.25 miles from leks
- Review and application of current science recommendations
- Consultation with state wildlife agency biologist
- Evaluating consistency with (at a minimum) state Greater Sage-Grouse regulations
- Other methods needed to provide an accurate assessment of impacts
- If the proposal will not have a direct or indirect impact on either the habitat or population, document the findings in the NEPA analysis and proceed with the appropriate process for review, decision, and implementation of the project.

H.2.6 Step 6 – Determine Minimization Measures

If impacts on Greater Sage-Grouse or Greater Sage-Grouse habitat cannot be avoided by relocating the project, then consider the tools above to apply appropriate minimization measures. Minimization measures could include timing limitations, noise restrictions, and design modifications.

H.2.7 Step 7 – Apply Compensatory Mitigation or Reject/Defer Proposal

If it is determined after screening of the proposal (Steps 1 through 6) that there are unacceptable residual impacts, the BLM can approve of the project if CPW's recommendation for compensatory mitigation is followed, which achieves the following:

- Achieves measurable outcomes for habitat function that can be documented
- Results in conservation actions that remove or ameliorate a potential threat to Greater Sage-Grouse, have a positive influence on and lead to improvement of habitat function and the overall conservation status of the species, are scientifically sound, and are conservation actions above what would have occurred absent the mitigation action
- Provides habitat/conservation values, services, and functions that are at least equal to the lost or degraded values, services, and functions caused by the impact
- Incorporates measures to account for a level of risk that a particular mitigation action may fail or not achieve its stated objectives, and uncertainty about the level and duration of the estimated impacts
- Provides benefits that are durable and in place for at least the duration of the residual impacts

- Encourages the application of offsets prior to the impact occurring to ensure no lag time occurs between impacts and offsets
- Offers transparency and certainty to developers and regulators

H.3 RESTORATION/RECLAMATION OF LANDSCAPE-SCALE DISTURBANCES: OBJECTIVES FOR GREATER SAGE-GROUSE HABITAT

For landscape-scale disturbances, including wildfire, livestock grazing, and habitat treatments, the objective is to maintain a minimum of 70 percent of lands capable of producing sagebrush with a minimum of 15 percent sagebrush canopy cover, or a similar standard consistent with specific ecological site conditions in PHMA. See **Table H-1**.

Table H-1 - Seasonal Habitat Desired Conditions for Greater Sage-Grouse

ATTRIBUTE	INDICATORS	DESIRED CONDTION
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1–June 15) Apply 4 miles from active leks. [15]		
Lek Security	Proximity of trees [4]	Trees or other tall structures are none to uncommon within 1.86 miles of leks [5,6]
	Proximity of sagebrush to leks [5]	Adjacent protective sagebrush cover within 328 feet of lek[5]
Cover	Seasonal habitat extent [6]	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [5,6,7,17] Arid sites Mesic sites	 15 to 30% 20 to 30%[17]
	Sagebrush height [6, 17] Arid sites [5,6,9] Mesic sites [5,6,10]	 11.8 to 31.5 inches (30 to 80 cm) 15.7 to 31.5 inches (40 to 80 cm)
	Predominant sagebrush shape [5]	>50% in spreading [11]
	Perennial grass canopy cover [5,6, 17] Arid sites [6,9] Mesic sites [6,10,17]	 ≥10% ≥20%[17]
	Perennial grass and forb height [5,6,7]	>6 inches[6, 16, 17]
	Perennial forb canopy cover [5,6,7] Arid sites [9] Mesic sites [10]	 ≥5%[5,6,17] ≥15%[5,6,17]
BROOD-REARING/SUMMER[1] (Seasonal Use Period June 16–October 31)		
Cover	Seasonal habitat extent [6]	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [5, 6,7, 17] Arid sites Mesic sites	 10 to 25% 10 to 25%
	Sagebrush height [6,7, 17] Arid sites Mesic sites	 11.8 to 31.5 inches (30 to 80 cm) 13.8 to 31.5 inches (35 to 80 cm)
	Perennial grass canopy cover and forbs [6,7,17] Arid sites Mesic sites	 >15%[17] >25%[17]

ATTRIBUTE	INDICATORS	DESIRED CONDTION
	Riparian areas (both lentic and lotic systems)	Proper Functioning Condition [13]
	Upland and riparian perennial forb availability [5,6]	Preferred forbs are common with several preferred species present [12]
WINTER[1] (Seasonal Use Period November 1–February 28)		
Cover and Food	Seasonal habitat extent [5,6,7]	>80% of the winter habitat
	Sagebrush canopy cover above snow [5,6,7,17]	>20% Arid, 25% Mesic[17]
	Sagebrush height above snow [5,6,7]	>10 inches [14]

[1] Seasonal dates can be adjusted; that is, start and end dates may be shifted either earlier or later, but the amount of days cannot be shortened or lengthened by the local unit.
[2] Doherty 2008
[3] Holloran and Anderson 2005
[4] Baruch-Mordo et al. 2013
[5] Stiver et. al. 2014
[6] Connelly et al. 2000
[7] Connelly et al. 2003
[9] 10–12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (Stiver et. al. 2014).
[10] ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (Stiver et. al. 2014).
[11] Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (Stiver et. al. 2014).
[12] Preferred forbs are listed in Habitat Assessment Framework Table III-2 (Stiver et. al. 2014). Overall, total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2.
[13] Existing land management plan desired conditions for riparian areas/wet meadows (spring seeps) may be used in place of properly functioning conditions, if appropriate for meeting Greater Sage-Grouse habitat requirements.
[14] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands.
[15] Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 4 miles is not appropriate.
[16]Measured as "droop height"; the highest naturally growing portion of the plant.
[17] Colorado Greater Sage-Grouse Steering Committee 2008

These habitat objectives in **Table H-1** summarize the characteristics that research has found represent the seasonal habitat needs for Greater Sage-Grouse. The specific seasonal components identified in the table were adjusted based on local science and monitoring data to define the range of characteristics used in this sub-region. Thus, the habitat objectives provide the broad vegetative conditions the BLM strives to obtain across the landscape that indicate the seasonal habitats used by Greater Sage-Grouse. These habitat indicators are consistent with the rangeland health indicators used by the BLM.

The habitat objectives will be part of the Greater Sage-Grouse habitat assessment to be used during land health evaluations. These habitat objectives are not obtainable on every acre within the designated Greater Sage-Grouse habitat management areas. Therefore, the determination of whether the objectives have been met will be based on the specific site's ecological ability to meet the desired condition identified in **Table H-1**.

H.4 ADAPTIVE MANAGEMENT

Adaptive management is a decision process that promotes flexible resource management decision-making that can be adjusted in the face of uncertainties as outcomes from management actions and

other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps with adjusting resource management directions as part of an iterative learning process. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a "trial and error" process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits.

In relation to the BLM's National Greater Sage-Grouse Planning Strategy, adaptive management would help identify if Greater Sage-Grouse conservation measures presented in this RMPA/EIS contain the needed level of certainty for effectiveness. Principles of adaptive management are incorporated into the conservation measures in the LUPA to ameliorate threats to a species, thereby increasing the likelihood that the conservation measure and LUPA would be effective in reducing threats to that species. The following provides the BLM's adaptive management strategy for the Northwest Colorado Greater Sage-Grouse LUPA. In making amendments to this LUP, the BLM will coordinate with partners as the BLM continues to meet their objective of conserving, enhancing, and restoring Greater Sage-Grouse habitat by reducing, minimizing, or eliminating threats to that habitat.

H.4.1 Adaptive Management – Monitoring

This RMPA/EIS contains a monitoring framework (**Appendix D**, Greater Sage-Grouse Monitoring Framework) that includes an effectiveness monitoring component. The agencies intend to use the data collected from the effectiveness monitoring to identify any changes in habitat conditions related to the goals and objectives of the LUPA and other range-wide conservation strategies (US DOI 2004; Stiver et al. 2006; USFWS 2013). In addition to local knowledge and CPW data, the information collected through the monitoring framework can provide information to assist in determining when adaptive management triggers (discussed below) are met.

H.4.2 Northwest Colorado Adaptive Management Plan – Triggers

The Northwest Colorado Adaptive Management Plan includes an overarching adaptive management strategy consistent with national policy that includes soft and hard triggers for specific populations and an approach for developing responses. These triggers may not be specific to any particular project, but identify habitat and population thresholds. The BLM, in cooperation with the USFWS and the State of Colorado, has identified appropriate triggers. Triggers would be based on the two key metrics that would be monitored: habitat loss and/or population declines.

Soft Triggers

Soft triggers represent an intermediate threshold indicating that management changes are needed at the LUPA implementation level to address habitat or population losses. The following are examples of soft triggers and responses:

- *Soft trigger:* Based on local knowledge, a population is determined to have limited brood-rearing habitat, which is resulting in low recruitment.

  Response: Prioritize funding for habitat improvement projects in mesic areas designed to improve brood-rearing.

- *Soft trigger:* Monitoring crews find several Greater Sage-Grouse mortalities along fence line.

  Response: Evaluate utility of existing fences, mark necessary fences, and prohibit new fences in the vicinity of leks.

In the examples above, a soft trigger is tripped, and consequently the BLM would change management to be more restrictive or identify habitat improvement projects identified to address a specific causal or limiting factor based on local knowledge and conditions. These adjustments should be made to preclude tripping a "hard" trigger (which signals more severe habitat loss or population declines).

During implementation of this LUPA, population trends would be monitored by the Northwest Colorado Sage-Grouse Statewide Implementation Team, which would consist of technical experts including BLM, CPW, Natural Resource Conservation Service, and USGS biologists. This group would meet annually and would evaluate the health of each population and make recommendations to the BLM on any changes to fine site management. This statewide implementation team would also evaluate the effects to Greater Sage-Grouse habitat and populations due to BLM-permitted activities throughout the previous year(s) and make recommendations for changes in management or locations that should be avoided, for example. The group would also work with existing local population Greater Sage-Grouse working groups (e.g., Northwest Colorado, Parachute-Piceance-Roan, Middle Park, and North Park) to gather local knowledge that could inform adaptive management. This group would also evaluate the effectiveness of mitigation and make recommendations on alternative mitigation strategies and locations, such as the Colorado Habitat Exchange.

Hard Trigger

In the event that soft triggers and disturbance caps prove to be ineffective, the hard trigger represents a threshold indicating that immediate action is necessary to stop a severe deviation from Greater Sage-Grouse conservation objectives. The hard trigger is intentionally set at or below the normal range of variation to provide a threshold of last resort should either chronic degradation or a catastrophic event occur. The hard trigger is not intended to be an on-again/off-again toggle that would be exceeded periodically throughout the life of the LUPA.

Colorado Greater Sage-Grouse occur in six distinct populations. Two of these populations (Northwest Colorado and North Park) account for about 88 percent of the males in Colorado. Northwest Colorado includes Colorado MZs 1 through 10. North Park includes Colorado MZ 11. The remaining four populations are smaller by an order of magnitude, and, even in the aggregate, do not provide the significant numbers of Greater Sage-Grouse necessary to contribute meaningfully to the hard trigger, and, in some cases, lack the long-term population trend information necessary to support trigger implementation. All six populations are important to Greater Sage-Grouse conservation in Colorado; however, only the Northwest Colorado and North Park populations are large enough to reliably indicate the level of severe decline intended by this hard trigger. While the

hard triggers focus on the two largest populations, all six populations should be rigorously managed via the soft triggers. If soft triggers work as intended, a hard trigger should never be breached.

Development of the Hard Trigger
The hard trigger is based on two metrics: Greater Sage-Grouse lek (high male) counts and habitat loss.

Lek Counts. The lek count threshold is determined from the 25 percent quartile of the high male count in each of the Northwest Colorado and North Park populations over the period of years for which consistent lek counts are available: 17 years from 1998 to 2014 for Northwest Colorado and 41 years from 1974 to 2014 for North Park. The 25 percent quartiles were determined using the annual high male counts rather than the 3-year running average to ensure that normal variation in lek counts is above the threshold. The hard trigger for Northwest Colorado is 1,575 counted males, and for North Park is 670 counted males.

Habitat Loss. The habitat loss threshold is determined by 30 percent cumulative loss of PHMA, measured independently in Northwest Colorado and North Park. For the purpose of the hard trigger, habitat loss will be measured from the date of the ROD on this LUPA. Hard trigger habitat loss includes both anthropogenic (i.e., the disturbance cap) and non-anthropogenic forms of habitat loss (e.g., wildfire). The 30 percent habitat loss calculation is limited to loss of PHMA in each of Northwest Colorado and North Park populations; GHMA and any habitat loss in the other four populations are not included in the hard trigger. Restored or recovered habitat is not considered in this threshold, although it is tracked and summarized by the BLM's data management system.

Breaching the Hard Trigger
In order for the hard trigger to be breached, both the lek count (1,575 males in Northwest Colorado and 670 males in North Park) and habitat loss thresholds must be breached in both the Northwest Colorado and North Park populations simultaneously. In any other set of circumstances (e.g., when a threshold is violated in a single population), the management response will be as described in the *Soft Trigger* section, above.

Lek Counts. The lek count threshold is compared to the 3-year running average of the high male count in Northwest Colorado and North Park, measured independently. The 3-year running average value is used because it is considered to be more indicative of the population trend than annual high male counts. The 3-year running average in Northwest Colorado and North Park must fall below the threshold concurrently for this portion of the hard trigger to be breached. The CPW will conduct lek counts and provide this information annually to the statewide implementation team as described in the *Soft Trigger* section, above.

Habitat Loss. The habitat loss threshold is measured by 30 percent cumulative loss of PHMA, beginning when the ROD on this LUPA is signed. The loss will be measured independently in Northwest Colorado and North Park. The BLM will track anthropogenic and non-anthropogenic habitat loss. The statewide implementation team as described in the *Soft Trigger* section, above, will review summary information, above.

Hard Trigger Response

Upon determination that a hard trigger has been tripped, the BLM will immediately defer issuance of discretionary authorizations for new actions for a period of 90 days. In addition, within 14 days of a determination that a hard trigger has been tripped, the Northwest Colorado Greater Sage-Grouse Statewide Implementation Team will convene to develop an interim response strategy and initiate an assessment to determine the causal factor or factors (hereafter the "causal factor assessment").

H.4.3 Adaptive Management – Habitat Boundaries

The BLM relies on CPW's expertise and responsibility to manage wildlife and to provide habitat information on a multitude of species. CPW evaluates habitat boundaries for all species that they manage, including Greater Sage-Grouse, on a regular basis. If CPW determines, based on their regular evaluation, or on new information, that the Greater Sage-Grouse habitat area boundaries should be updated, the BLM would:

1. Evaluate the proposed changes to determine if the modifications to habitat area boundaries would continue to allow the BLM to meet objectives of the LUP. The determination would include evaluation of the magnitude of the change and the ability of the BLM to effectively apply management decisions. If it is determined that the BLM can effectively apply management to the new habitat area boundaries and the LUP objectives would be met, the new habitat area boundaries would be adopted administratively (i.e., plan maintenance).
2. If the BLM, in consultation with CPW, determines that additional management clarification is required to define whether proposed changes to habitat boundaries would continue to meet the goals and objectives of the 2015 Northwest Colorado Greater Sage-Grouse ARMPA/ROD, incorporation of the new habitat maps may need to be analyzed under a new NEPA process and incorporated through the appropriate planning process (i.e., plan amendment).

H.5 REFERENCES

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