Appendix 21

Detailed Description of Draft EIS Alternatives

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Appendix 21. Detailed Description of Draft EIS Alternatives

This appendix provides the description of the six alternatives analyzed in the Draft EIS in the same manner they were presented in the Draft EIS. Some updates to the alternatives have been made in response to internal review and comments received from cooperating agencies and the public during the Draft EIS comment period. These updates include edits in the comparison of alternatives tables to improve the clarity of the description of the alternatives and updates to the Areas of Critical Environmental Concern (ACEC) **Table 21-13**. Please also refer to **Appendix 5** for updates and clarifications on the ACECs proposed for nomination under Alternatives 3 and 6 between the Draft EIS and the Final EIS.

21.1 Detailed Description of Draft Alternatives

At the beginning of each management direction section there is a brief description introducing the action/topic and rationale for alternatives development. These introductions are not planning decisions but are included to establish context for the alternatives. **Section 2.5** includes rangewide alternatives applicable to all states, organized by the cross-cutting management topics/issues identified during scoping (see **Section 1.6**). Accompanying these narratives are tables showing side-by-side descriptions of the alternatives. **Section 2.6** includes the alternatives associated with state-specific circumstances, organized by state. Alternatives 1 and 2 in **Section 2.5** are presented as summaries due to variations by state or planning area. Not all decisions from the 2015 and 2019 amendment efforts are included in Alternatives 1 and 2. Only management actions being considered for amendment in Alternatives 3, 4, and 5 are brought forward from the 2015 and 2019 efforts. The remaining decisions from the prior planning efforts will remain in place regardless of which alternative is selected. **Appendix 2**, Existing GRSG Management in BLM RMPs identifies all existing GRSG management (inclusive of both 2015 and 2019 ARMPAs) for each state and identifies whether an action may be amended in the current effort.

Actions applicable to all alternatives are shown in one cell across a row and would be implemented regardless of which alternative is ultimately selected. Actions applicable to more than one but not all alternatives are indicated by either combining cells for the applicable alternatives, or by denoting them as the same for another alternative (e.g., "same as Alternative A"). "No similar action" is used to indicate there is no similar goal, objective or action to the other alternatives, or that the similar goal, objective or action is reflected in another management action in the alternative.

Many management actions are informed by the location of GRSG leks (breeding areas associated with GRSG nesting habitat). Existing management actions across the species' range use different lek definitions (e.g., active, occupied, pending, or historic), as identified by state wildlife agencies where the lek occurred. In 2022, the Western Association of Fish and Wildlife Agencies (WAFWA) published standardized definitions for leks to resolve inconsistencies between states, thereby allowing for comparable data analyses across the species' range (Cook et. al., 2022). Through these plan amendments, the BLM proposes to adopt the lek definitions published by WAFWA and use them when implementing GRSG management. **Appendix 4** compares the new WAFWA lek definitions to definitions used in each existing BLM RMP/EIS. Unless otherwise specifically noted, the term "lek" applies to the WAFWA definition for "active lek."

21.1.1 Clarifying the RMP Goal for GRSG

In 2015, BLM RMPs were amended or revised to include updated goals or objectives for GRSG management in consideration of the National Technical Team (NTT) Report (BLM 2011). The NTT comprised resource specialists and scientists from the BLM, State Fish and Wildlife Agencies, U.S. Fish and Wildlife Service (USFWS), Natural Resources Conservation Service (NRCS) and U.S. Geological Survey (USGS). In the report the authors identified a management goal to: "Maintain and/or increase sage-grouse abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners."

Some iteration of the NTT Report goal is in all current BLM RMPs for GRSG. Through this planning effort, the BLM proposes to clarify its goal, which is to conserve, enhance, restore, and manage GRSG habitats to support persistent, healthy populations, consistent with BLM's Special Status Species Management Policy (BLM-M-6840) and in coordination and cooperation with state wildlife agencies. Habitat conservation and management should maintain existing connectivity between GRSG populations.

Table 21-1, Comparison of Alternatives, GRSG RMP Goal, presents management by alternative for this management issue.

Table 21-1. Comparison of Alternatives, GRSG RMP Goal

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
All states have at least one goal or objective that includes the following language and/or concept: • Maintain and enhance populations and distribution of GRSG by protecting and improving sagebrush habitats and ecosystems that sustain GRSG populations. • Conserve, enhance, and restore the sagebrush ecosystem upon which GRSG populations depend in an effort to maintain and/or increase their abundance and distribution, in cooperation with other conservation partners. • Maintain and enhance quality/suitable habitat to support the expansion of GRSG populations on federally-administered lands within the planning area.		BLM resource management plans (RMPs) would identify the desired condition for GRSG in the following overarching goal: Conserve, enhance, restore and manage GRSG habitats to support persistent, healthy populations, consistent with BLM's Special Status Species Management Policy (BLM-M-6840) and in coordination and cooperation with state wildlife agencies. Habitat conservation and management should maintain existing connectivity between GRSG populations.		

21.1.2 Habitat Management Area Alignments and Associated Major Land Use Allocations

The BLM has reviewed new scientific publications since our previous planning efforts which provide key population (e.g., Doherty et al. 2016, Coates et al., 2021), genetic (e.g., Cross et al., 2018, Oyler-McCance et al., 2022) connectivity (e.g., Row et al. 2018, Cross et al., 2023) habitat (e.g., Doherty et al., 2016, Wann et al., 2022, Doherty et al., 2022) and climate change (Palmquist et al., 2021, Rigge et al., 2021). This information was used to update GRSG habitat designations in concert with state wildlife agencies, to determine if BLM was applying appropriate management allocations consistent with the purpose and need of this amendment. While HMAs may encompass multiple land ownerships, reflecting the wide-ranging ecological needs of GRSG, management actions that follow are specific to BLM-administered lands.

Priority Habitat Management Areas (PHMA) have the highest value to maintaining sustainable GRSG populations and can include breeding, late brood-rearing, winter concentration areas, and migration or connectivity corridors. The BLM objective for these areas is to maintain and enhance habitat conditions that will support persistent and healthy GRSG populations through management to minimize habitat loss and degradation. See **Appendix 3** for a description of the strategies applied by each state to identify PHMA.

Important Habitat Management Areas (IHMA; ID only) are defined as lands that encompass moderate to high-quality GRSG habitat and populations necessary for providing a management buffer for PHMA, connecting patches of PHMA, and in some cases supporting important populations and habitat independent of PHMA. The objective for IHMA is to maintain habitat conditions that will support persistent and healthy GRSG populations.

General Habitat Management Areas (GHMA) are lands that are or have the potential to become occupied seasonal or year-round habitat outside of PHMA or IHMA, managed to sustain GRSG populations. These areas are defined differentially by state wildlife management agencies, but generally are of poorer GRSG habitat quality with reduced occupancy when compared to PHMA. Some state wildlife agencies have identified areas of GHMA as important for restoration, connectivity, or seasonal habitats, and most require mitigation for unavoidable impacts within this designation. The objective for GHMA is to maintain habitat conditions to support GRSG populations consistent with the state agency designations of recovery, connectivity, or seasonal habitats.

Other habitat management areas are identified by individual states for a variety of purposes, typically as subsets of GHMA (i.e., lower priority than PHMA). These are defined and described in detail in **Appendix 3**.

Table 21-2, Comparative Summary – Acres GRSG Habitat Management Areas by State by Alternative. **Appendix 3** provides a summary of each state strategy in developing their habitat management areas, as well as the definitions for the GRSG habitat management areas used in each state. **Maps 2.1** through **2.6** show the relationship of the habitat management areas across the west.

In addition to habitat management areas, this section summarizes allocations for major land uses. Additional details for alternatives 1 and 2 (e.g., specific avoidance criteria for rights-of-way, specific controlled surface use stipulations for fluid minerals, etc.), is presented in **Appendix 2**. If specific language from previous plans is not included in this amendment, it is not being considered for amendment in this effort.

Table 21-2. Comparative Summary – Acres GRSG Habitat Management Areas by State by Alternative (BLM administered surface only)

Habitat Management Area	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Rangewide Habitat Management Area Alignments					
PHMA	32,465,000	32,535,000	69,199,000	36,701,000	34,803,000
GHMA	26,383,000	25,878,000	N/A	25,946,000	23,718,000
Colorado Habitat Management Area Alignments					
PHMA	748,000	921,000	1,538,000	751,000	751,000
GHMA	788,000	727,000	N/A	786,000	786,000
LMA	97,000	82,000	97,000	97,000	97,000
Idaho Habitat Management Area Alignments					
PHMA	4,178,000	4,106,000	8,860,000	4,472,000	4,573,000
IHMA	2,736,000	2,796,000	N/A	2,477,000	2,503,000
GHMA	1,958,000	1,958,000	N/A	1,910,000	1,722,000
Montana/Dakotas Habitat Management Area Alignments					
PHMA	3,275,000	3,275,000	5,254,000	3,300,000	3,300,000
GHMA	2,384,000	2,384,000	N/A	1,859,000	1,859,000
RHMA	165,000	165,000	N/A	94,000	94,000
CHMA	N/A	N/A	298,000	298,000	298,000
Nevada/California Habitat Management Area Alignments					
PHMA	9,266,000	9,268,000	21,138,000	9,780,000	9,661,000
GHMA	5,783,000	5,749,000	N/A	7,551,000	6,183,000
OHMA	4,862,000	4,870,000	N/A	3,806,000	2,977,000
Oregon Habitat Management Area Alignments					
PHMA	4,589,000	4,557,000	11,022,000	6,283,000	6,281,000
GHMA	5,634,000	5,662,000	N/A	4,739,000	3,539,000
Utah Habitat Management Area Alignments					
PHMA	2,080,000	2,080,000	3,568,000	2,192,000	1,627,000
GHMA	438,000	N/A	N/A	1,195,000	646,000
Wyoming Habitat Management Area Alignments					
PHMA	8,328,000	8,328,000	17,821,000	9,921,000	8,609,000
GHMA	9,397,000	9,397,000	N/A	7,905,000	8,981,000
Stewardship Areas	N/A	N/A	N/A	N/A	15,000

Table 21-3. Comparison of Alternatives, Habitat Management Area Alignments, Associated Major Land Use Allocations, and Non-Habitat

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Habitat Management Area Alignments and Associated Major Land Use Allocations				
GRSG habitat management areas would be identified and managed using the boundaries from the 2015 amendments or revisions (as maintained). See **Map 2.1** for the HMA map. Acres by state and rangewide are shown in **Table 21-2** above. Information on state-by-state GRSG HMA mapping strategies is in **Appendix 3**. ID, MT, NV, OR, UT, WY: Manage Sagebrush Focal Areas (SFAs) as described in the 2015 amendments or revisions. CA, CO, ND, SD: Does not include SFAs.	GRSG habitat management areas would be identified and managed using the boundaries from the 2019 amendments. See **Map 2.2** for the map of the HMAs. Acres by state and rangewide are shown in **Table 21-2** above. Information on state-by-state GRSG HMA mapping strategies is in **Appendix 3**. MT/DK: Manage the same HMAs as Alternative 1. ID, NV, UT, WY removed SFAs and associated management. CA, CO, MT/DK are the same as Alternative 1. OR retained the SFAs, but removed the recommendation for withdrawal from location and entry under the Mining Law of 1872.	GRSG habitat management areas would be identified and managed as shown on **Map 2.3**. Acres by state and rangewide are shown in **Table 21-2** above. Information on state-by-state GRSG HMA mapping strategies is in **Appendix 3**. Under Alternative 3, all areas managed for GRSG would be PHMA. (In addition to the PHMA, there would be ACECs designated. See the ACEC section below, and **Appendix 5**.)	GRSG habitat management areas would be identified and managed as shown on **Map 2.4**. Acres by state and rangewide are shown in **Table 21-2** above. Information on state-by-state GRSG HMA mapping strategies is in **Appendix 3**. No areas would be identified or managed as SFAs.	GRSG habitat management areas would be identified and managed as shown on **Map 2.5**. Acres by state and rangewide are shown in **Table 21-2** above. Information on state-by-state GRSG HMA mapping strategies is in **Appendix 3**. No areas would be identified or managed as SFAs. (HMA boundaries under Alternative 6 are the same as those under Alternative 5. **Map 2.6** shows the HMA boundaries and the GRSG ACECs that would be designated.See the ACEC section below, and **Appendix 5**.)

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Summarized PHMA (and ID IHMA) allocations: (Wind, solar, livestock grazing, and major ROWs are addressed in separate tables below.) • Fluid minerals: o Except as noted below, all states are open to new leasing, with no surface occupancy (NSO) stipulations in PHMA (and in IHMA in ID). o WY: NSO within 0.6 mi of leks. PHMA outside 0.6 mi has seasonal limitations (breeding, nesting, early brood-rearing & winter habitat) and CSU (density and disturbance). o CO: Closed within 1 mile of leks. • Saleable Minerals/Mineral Materials: o Except as noted below, all states are closed in PHMA (and in IHMA in ID), but open for new free use permits and expansion of existing pits. o WY: Open subject to occupancy, seasonal limitations, disturbance, and density.	**Summarized PHMA (and ID IHMA) allocations:** (Wind, solar, livestock grazing, and major ROWs are addressed in separate tables below.) • Fluid minerals: Same as Alternative 1, except CO PHMA is NSO (no closed areas). • Saleable Minerals/Mineral Materials: Same as Alternative 1, except as noted below: o NV/CA: Exception criteria added to the closure.	**Summarized PHMA allocations**: (Wind, solar, livestock grazing, and major ROWs are addressed in separate tables below.) • Fluid minerals: Closed to leasing • Saleable Minerals/Mineral Materials: Closed	**Summarized PHMA allocations:** (Wind, solar, livestock grazing, and major ROWs are addressed in separate tables below.) • Fluid minerals: o Except as noted below, all states have NSO in PHMA (and IHMA in ID and RHMA in MT). o MT: Closed in UMRBNM; CSU in Cedar Creek RHMA; NSO 0.6 mile from lek, then CSU for Musselshell RHMA. (See the CO, MT/DK, and WY state specific circumstances for additional details for fluid mineral allocation decisions) • Saleable Minerals/Mineral Materials: o Except as noted below, all states are closed in PHMA, but open for new free use permits and expansion of existing pits. o ID: open for new free use permits and expansion of existing pits if screening and development criteria met o ID IHMA open o WY: Same as Alternative 1. (See the ID and OR state specific circumstances for additional details for saleable mineral allocation decisions)	**Summarized PHMA allocations:** (Wind, solar, livestock grazing, and major ROWs are addressed in separate tables below.) • Fluid minerals: o Same as Alternative 2. (See the CO, MT/DK, and WY state specific circumstances for additional details for fluid mineral allocation decisions) • Saleable Minerals/Mineral Materials: Same as Alternative 4 except ID PHMA, which is open for new free use permits and expansion of existing pits subject to screening and development criteria. (See the ID and OR state specific circumstances for additional details for saleable mineral allocation decisions)

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• Non-Energy minerals: ○ Except as noted below, all states are closed, but can consider expansion of existing leases. ○ WY: Open subject to occupancy, seasonal limitations, disturbance, and density. ○ IHMA in ID is open in Known Phosphate Leasing Areas (KPLAs). IHMA Outside KPLAs is open subject to disturbance thresholds.	• Non-Energy minerals: Same as Alternative 1, except NV/CA added exception criteria to the closure.	• Non-Energy minerals: Closed	• Non-Energy minerals: ○ Except as noted below, all states are closed. ○ NV/CA: Closed with exceptions. ○ ID IHMA: Open ○ WY: Same as Alternative 1. (See the NV/CA state specific circumstances for additional details for non-energy mineral allocation decisions)	• Non-Energy minerals: Same as Alternative 4.
• Coal: ○ CO, MT/DK, UT, and WY include the following language: 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 as per 43 CFR Part 3461.5(o)(1). ○ ID, NV/CA, and OR: Did not address coal due to absence of the mineral.	• Coal – All States same as Alt 1, except UT: At 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. Coordination with the appropriate State of Utah agency and the determination of essential habitat for maintaining GRSG as per the suitability criteria at 43 CFR Part 3461.5(o)(1) will consider site-specific information associated with lease nomination areas as part of the unsuitability process identified above.	• Coal: ○ CO, MT/DK, UT and WY would include the same language as UT Alt 2, unless a suitability process has already been conducted that considered GRSG HMAs. ○ ID, NV/CA, and OR would not address coal due to absence of the mineral.	• Coal: Same as Alternative 3	• Coal: Same as Alternative 3.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• Locatable minerals: ID, MT, NV, OR, UT, WY: SFAs were recommended for withdrawal from location and under the Mining Law of 1872. The BLM applied for a withdrawal pursuant to 204(a) of FLPMA and the Secretary initiated the withdrawal process for those lands. That process is currently underway. o MT: UMRBNM is already withdrawn.	• Locatable minerals: o MT/DK: Same as Alternative 1. o ID, NV/CA, OR, UT, and WY: Same as alternative 1, except removed the recommendation for withdrawal from location and entry under the Mining Law of 1872 associated with SFAs.	• Locatable minerals. The BLM recommends PHMA for withdrawal from location and entry under the Mining Law of 1872. The portion of the PHMA that is within the SFA boundaries from 2015 were recommended for withdrawal from location and under the Mining Law of 1872. The BLM applied for a withdrawal pursuant to 204(a) of FLPMA and the Secretary initiated the withdrawal process for those lands. That process is currently underway.	• Locatable minerals: o MT: UMRBNM is already withdrawn	• Locatable Minerals: Same as Alternative 4.
• Minor Rights-of-Way (ROW): o Except as noted below, PHMA in all states is avoidance for minor ROWs (<100 kV transmission lines and < 24" pipelines) o IHMA in ID is avoidance when consistent with screening criteria and subject to RDFs and buffers. o WY: Open to smaller ROWs, subject to buffers and mitigation.	• Minor ROW: Same as Alternative 1, except NV/CA added exception criteria to the Avoidance.	• Minor ROW: Exclusion (outside of designated corridors)	• Minor ROW: o Same as Alternative 1(including IHMA), except as noted below: o For minor ROWs, MT/DK exclusion within 1.2 miles of active leks and crucial winter range. Avoidance in designated corridors in those areas, and in the remainder of PHMA and RHMA. (See the CO state specific circumstances for additional details for ROW allocation decisions)	• Minor ROW: o Same as Alternative 1 (including IHMA), except as noted below: o For minor ROWs, MT/DK exclusion within 0.6 miles of active leks and crucial winter range. Avoidance in designated corridors in those areas, and in the remainder of PHMA. RHMA Avoidance within 1.2 miles of active leks and in crucial winter range. Remainder of RHMA open. (See the CO state specific circumstances for additional details for ROW allocation decisions)

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• Travel and Transportation Management: o All states: Manage PHMA and IHMA as limited to existing roads and trails, with isolated areas open to cross-country use where suitable based on local conditions (e.g., sand dunes, rocky areas, etc.).	• Travel and Transportation Management: Same as Alternative 1.	• Travel and Transportation Management: Same as Alternative 1.	• Travel and Transportation Management – Same as Alternative 1.	• Travel and Transportation Management – Same as Alternative 1.
Summarized GHMA allocations: • Fluid minerals: o CO: closed within 1 mile of leks, NSO within 2 miles of leks, and seasonal limitations elsewhere. o ID: CSU (lek buffers) o MT/DK – varies by local office (see **Table 21-27**). o NV/CA: CSU (lek buffers and seasonal limitations) o OR: NSO within 1 mile of leks, and CSU (seasonal limitations) o UT: NSO near leks (varies by office) and CSU (seasonal limitations) based on allocations in plans that predated the 2015 amendment. o WY: NSO within 0.25 miles of leks, and seasonal limitations within 2 miles of leks. open with standard terms and conditions outside of 2-mile lek buffer.	**Summarized GHMA allocations:** • Fluid minerals: Same as Alternative 1, except CO changed the closure within one mile of leks to be an NSO.	**Summarized GHMA allocations:** Not applicable to this alterative, as GHMA, IHMA, OHMA, and RHMA under Alternative 3 would be managed as PHMA.	**Summarized GHMA allocations:** • Fluid minerals: o CO: NSO w/in 2 miles of leks, TL elsewhere. o ID: CSU o MT/DK: NSO w/in 0.6 mile of leks and in crucial winter range; CSU elsewhere and in CHMA. o NV/CA, OR: open with minor stipulations (CSU – seasonal limitations) o UT: NSO near leks and seasonal limitations (varies by office) o WY: NSO w/in 0.25 mile of leks; seasonal limitations within 2 miles of leks; open with standard terms and conditions outside of 2-mile lek buffer. (See the CO and WY state specific circumstances for additional details for fluid mineral allocation decisions)	**Summarized GHMA allocations:** • Fluid minerals: o Same as Alternative 4 for all states except CO: CSU w/in 2 miles of leks, TL w/in rest of GHMA o CO Alternative 6: CSU w/in 1 mile of PHMA, TL w/in rest of GHMA. (See the CO and WY state specific circumstances for additional details for fluid mineral allocation decisions)

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• Saleable minerals/Mineral Materials: o All states: no allocations for GHMA (meaning open), though most have minimization measures such as RDFss/BMPs and mitigation.	• Saleable minerals/Mineral Materials: Same as Alternative 1, except ID changed applying "RDFs and buffers" in GHMA to applying "BMPs."	—	• Saleable minerals/Mineral Materials: Same as Alternative 2.	• Saleable minerals/Mineral Materials: Same as Alternative 2.
• Non-energy minerals: o All states: no specific allocations for GHMA(meaning open) though most have minimization measures such as RDFs/BMPs and mitigation	• Non-energy minerals: Same as Alternative 1, except ID changed applying "RDFs and buffers" in GHMA to applying "BMPs."	—	• Non-Energy minerals – Same as Alternative 1.	• Non-Energy minerals – Same as Alternative 1.
• Coal: No states mentioned coal management in GHMA.	• Coal: Same as Alternative 1.	—	• Coal – Unsuitability evaluation approach same as applied in PHMA.	• Coal – Same as Alternative 4.
• Locatable minerals: SFAs were recommended for withdrawal from location and under the Mining Law of 1872. The BLM applied for a withdrawal pursuant to 204(a) of FLPMA and the Secretary initiated the withdrawal process for those lands. That process is currently underway.	• Locatable minerals: Same as Alternative 1.	—	• Locatable minerals – Same as Alternative 1.	• Locatable minerals – Same as Alternative 1.
• Minor Rights-of-Way: Substantial variation by state: o All states: open to minor ROWs with mitigation, except in WY.	• Minor Rights-of-Way: Same as Alternative 1, except ID changed applying "RDFs and buffers" in GHMA to applying "BMPs."	—	• Minor Rights-of-Way: o CO, MT/DK: Avoidance o OR: Avoidance within breeding, nesting, and/or seasonal habitats, otherwise open o ID, NV/CA, UT, WY: Open	• Minor Rights-of-Way: o CO: Avoidance o ID, UT, WY: Open o MT/DK: Avoidance w/in 1.2 miles of active leks and w/in crucial winter range, open elsewhere. CHMA: Avoidance o NV/CA, OR: Open with minimization measures

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• Travel and Transportation Management: Limited to existing roads and trails, with isolated areas open to cross-country use where suitable based on local conditions (e.g., sand dunes, rocky areas, etc.).	• Travel and Transportation Management: Same as Alternative 1.	—	• Travel and Transportation Management: Same as Alternative 1.	• Travel and Transportation Management Same as Alternative 1.
Criteria-Based Management for Non-Habitat within GRSG Habitat Management Areas				
All states include language encouraging location of potential projects in areas of non-habitat before considering them in areas with habitat in GRSG habitat management areas. UT included management (MA-SSS-1) allowing managers to identify areas of GHMA that lack principal habitat components necessary for GRSG, including but not limited to rock outcrops, alkaline flats, and pinyon-juniper ecological sites. This non-habitat in GHMA could be identified when considering a project proposal and application of GHMA objectives and management actions could be excepted if: • the non-habitat does not provide important connectivity between areas with existing or potential habitat; • all direct and indirect impacts that impair the function of adjacent seasonal habitats or the life-history or behavioral needs of the GRSG population are eliminated through project design (e.g.,	All states include language encouraging location of potential projects in areas of non-habitat before considering them in areas with habitat in GRSG habitat management areas. UT adjusted MA-SSS-1 to apply to PHMA – allowing managers to identify areas of PHMA that lack principal habitat components necessary for GRSG, including but not limited to rock outcrops, alkaline flats, pinyon-juniper ecological sites, and areas that have crossed an ecological threshold to a different stable non-GRSG habitat vegetation community, such as cheatgrass monocultures or pinyon/juniper woodlands (phase 3, absent sagebrush understory) . This non-habitat in PHMA could be identified when considering a project proposal and application of PHMA objectives and management actions could be excepted if: • the non-habitat does not provide important connectivity between seasonal habitats; and	No similar action.	The GRSG habitat management areas include areas where goals, objectives, and management for conservation of GRSG are applied. The habitat management area boundaries are not intended to represent a survey-grade habitat boundary, may include results of large-scale modeling, and are not to be used exclusively for habitat determinations at a project or site-level scale. However, habitat use and occupancy, and vegetation communities are dynamic, and therefore careful consideration of areas within habitat management areas and field investigations are needed to apply GRSG management in a manner that meets GRSG plan goals and objectives. In accordance with existing law, regulation and policy, inventories will continue to be conducted to provide information on GRSG habitat and distribution (FLPMA, 43 USC 1701 Sec. 201 (a), BLM Manual 6840 .04 D 3; BLM-M-6840 .04 E 2). If during consideration of a proposed action (project level authorization) within GRSG PHMA, GHMA, IHMA (in ID), RHMA (in MT), SHMA (in WY) and OHMA (in NV/CA) potential non-habitat is identified, a field investigation should be conducted by a BLM biologist (or reviewed and accepted for confirmation). This investigation should use published, scientific methods (preferably more than 1) for identifying GRSG habitat (e.g., Stiver et. al. 2015 [as revised], NRCS ecological site descriptions (ESDs) and associated state and transition models) and be coordinated with the interdisciplinary team. Any discrepancies between the mapped GRSG habitat management areas and the site-specific conditions will be disclosed, with supporting data (e.g., vegetation monitoring, state and transition models, ecological site descriptions, etc.) and analyzed as a component of the NEPA process. In the mapped GRSG habitat management areas there may be areas of non-habitat – areas that lack the ecological potential to provide principal habitat components necessary to support GRSG and where conformance with the RMP would not support GRSG conservation (see definitions for existing habitat, potential habitat,	

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
minimize sound, preclude tall structures, require perch deterrents), as demonstrated in the project's NEPA document. Any exception granted by the Authorized Officer based on above criteria would only apply to the specific project-level authorization. Excepting a site-specific project from compliance with GRSG management in an area of non-habitat would not change the boundaries of GHMA.	• direct and indirect impacts on adjacent seasonal habitats (disturbance to or disruption of) that would impair their biological function of providing the life-history or behavioral needs of the GRSG population are eliminated through project design (e.g., minimize sound, preclude tall structures, require perch deterrents), as demonstrated in the project's NEPA document. Any exception granted by the Authorized Officer based on the above criteria would only apply to the specific project-level authorization. Excepting a site-specific project from compliance with GRSG management in an area of non-habitat would not change the boundaries of PHMA. NV/CA added management (MD SSS 5) that allowed the State Director to grant exceptions to allocations and stipulations in PHMA, GHMA, and OHMA if location of the proposed activity is determined to be unsuitable"(by a biologist with GRSG experience using methods such as Stiver et. al. 2015, as revised) and lacks the ecological potential to become marginal or suitable habitat; and will not result in direct, indirect, or cumulative impacts on GRSG and its habitat. Management allocation decisions will not apply to those areas determined	*(See above.)*	and non-habitat in glossary). However indirect and direct impacts to adjacent GRSG populations and their habitats (including potential habitat) still need to be considered when planning and authorizing projects in these non-habitat areas. All management objectives and decisions associated with each management area type will apply unless all the following criteria are documented: • The project is proposed in verified non-habitat. • In addition to indirect impacts associated with distance (as established above), indirect impact consideration also includes: no direct or indirect impacts (considering impacts within distances described in applicable research) to adjacent habitat and potential habitat or individual or populations of GRSG occupying these adjacent areas due to project design and required design features (e.g., minimize noise, preclude tall structures, require perch deterrents, etc.), as demonstrated in the project's NEPA document. Indirect impact consideration includes the following: o The project does not impact connectivity: (1) within or between populations, (2) between seasonal habitats (e.g., nesting, early brood rearing, winter, etc.), or (3) within or between existing habitat. o Project related access through/across GRSG habitat (as verified through site-specific field checks) only occurs on existing routes, and the proposed action would not include new roads or upgrades to roads that would change the vehicle use, vehicle type, or traffic volume during the applicable season of GRSG use, subject to valid existing rights, throughout all stages of the proposed project. • Coordination with the appropriate state and federal agencies, including applicable biologists, has been documented. If coordination is not possible the reasons will be documented. Any proposed action approved through application of the above criteria would only apply to that specific project-level authorization. Any other proposed projects in the same area would need to undergo individual analysis to confirm the criteria are met prior to subsequent authorizations. Excepting a site-specific project from conformance with GRSG management in an area of non-habitat based on the above criteria would not change the GRSG habitat management area boundaries as identified in the RMP.	

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	to be unsuitable if the area has passed a threshold and lacks the ecological potential to become marginal or suitable habitat.	*(See above.)*	The determination to not apply GRSG management to a proposed project based on the above criteria may only be made by the Authorized Officer. However, if there is not concurrence between the coordinating federal and/or state biologists, then the conclusion will be at the discretion of the BLM State Director. Projects that do not meet the above criteria are not automatically denied by the Authorized Officer, but they must comply with the applicable habitat management area management. Further consideration of projects that don't meet the above criteria will be subject to the analysis and requirements (disturbance, RDFs, buffer distances, mitigation, etc.) outlined for GRSG.	

21.1.3 Mitigation

FLPMA provides the Secretary and the BLM broad authority to conserve and enhance public land values, including requiring mitigation. In all GRSG habitat management areas and consistent with valid existing rights and applicable law, BLM will apply the mitigation hierarchy (avoidance first, then minimization, compensation last) when authorizing actions resulting in GRSG habitat loss and degradation. For alternatives 3 through 6 the proposal is to achieve the at a minimum no net habitat loss (full restoration of functional habitats or enhancement of habitats such that it offsets the loss of capacity in impacted areas). The principles of HAF can be used to measure habitat sufficiency in implementing mitigation. The BLM is focusing on habitat mitigation, as sagebrush habitat fragmentation, loss and disturbance have been identified as the primary influences on GRSG population trends (Knick and Hanser, 2011). Compensatory mitigation should be durable, ensuring it will be resilient and persist as GRSG habitat (barring any natural disaster), and should be completed prior to associated actions occurring. Compensatory mitigation should also be prioritized to occur within the same area of the impact (within the same HAF fine scale area, or if not possible, within the same neighborhood cluster (e.g., Greater sage-grouse hierarchical population monitoring framework level 2; Coates et al. 2021) or HAF mid-scale area where practicable) so that it provides habitat for GRSG populations affected by the project.

Table 21-4, Comparison of Alternatives, Mitigation, presents management by alternative for this management issue.

Table 21-4. Comparison of Alternatives, Mitigation

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6

CO, ID, MT/DK (most plans), NV/CA, OR, and UT: Requires and ensures mitigation provides a net conservation gain to GRSG. Mitigation will follow the regulations from the White House Council on Environmental Quality (CEQ) (40 CFR Part 1508.20), referred to as the mitigation hierarchy. Any compensatory mitigation will be durable, timely, and in addition to that which would have resulted without the compensatory mitigation. The BLM will develop a WAFWA Management Zone Regional Mitigation Strategy to guide the application of the mitigation hierarchy.
The Regional Mitigation Strategy should include mitigation guidance on avoidance, minimization, and compensation, as follows:
• Avoidance
  ○ Include avoidance areas; and,
  ○ Include any potential, additional avoidance actions with regard to GRSG conservation.
• Minimization
  ○ Include minimization actions already included in laws, regulations, policies, land use plans, and/or land-use authorizations; and,
  ○ Include any potential, additional minimization
	CO, ID, NV/CA, OR, UT and WY: Specify compensatory mitigation would be voluntary unless required by laws other than FLPMA or by the State. Other differences are described below.	In all GRSG habitat management areas and consistent with valid existing rights and applicable law, BLM will apply the mitigation hierarchy when authorizing third-party actions resulting in GRSG habitat loss and degradation (including indirect impacts) to achieve the minimum standard of no net habitat loss (see **Appendix 7**, Monitoring Framework for table of activities related to habitat loss and degradation). BLM will apply mitigation in accordance with the BLM mitigation handbook and other mitigation related BLM policy, as well as CEQ regulations (40 CFR Part 1508.20). Mitigation shall be durable and resilient ensuring GRSG habitat will persist (barring any natural disaster). Mitigation shall be prioritized to occur within the same area of the impact (within the same HAF fine scale area (Stiver et al., 2015, as revised), or if not possible, within the same neighborhood cluster (Coates et al. 2021) to the extent practicable or nearest equivalent HMA designated habitat so that it provides habitat for GRSG populations affected by the project. Compensatory mitigation will not be required for activities implemented to conserve species listed as threatened or endangered under the Endangered Species Act.
		
		Application of Mitigation Hierarchy:
		Avoidance: Avoiding impacts is defined by not taking certain action or parts of an action (CEQ regulations; 40 CFR Part 1508.20). Impact avoidance in GRSG habitats is the priority since restoration of most sagebrush systems can take decades. While the avoidance priority is reflected in many PHMA allocations, BLM may also determine on a case-by-case basis to avoid impacts by not issuing an authorization in areas open to development.
		
		Minimization: Where avoidance is not possible, impacts can be minimized through managing the severity of a project impact at a specific location. If impacts to GRSG habitats cannot be avoided, minimization measures will be applied (e.g., minimizing the disturbance footprint, lek buffers, BMPs, and RDFs). BLM can consider site-specific minimization measures beyond those listed in this plan, through site-specific environmental review to meet the no net habitat loss standard. Minimization does not eliminate project impacts and remaining residual impacts may require compensatory mitigation for habitat loss or degradation.
		
		Compensation: Any impacts that cannot be avoided or minimized to no net habitat loss would be compensated at a level and in a manner to fully offset both direct and indirect (e.g., disturbance, noise, changes in water availability) impacts to habitat function. Mitigation amounts should comply with State agency or regulatory requirements and consistent with BLM mitigation policy. In States without a mitigation requirement, mitigation should minimally meet no net habitat loss. Establishing no net loss will require full restoration of functional habitats or enhancement of habitats to minimally support the number of GRSG present prior to disturbance at the apex of the population cycle. The metrics identified in the HAF should be used to determine if restoration actions provide GRSG habitat. Where restoration is not possible, preservation (e.g., conservation easements, acquisition of inholdings) can be used to offset impacts and should be designed to protect uniquely important habitats (e.g., limiting winter habitats, connectivity corridors) or areas of GRSG habitats that are at a high risk of conversion. Compensatory mitigation should be completed prior to initiating the activity causing the need for compensation and monitored for retention and efficacy. Compensatory		

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
actions with regard to GRSG conservation. • Compensation o Include discussion of impact/project valuation, compensatory mitigation options, siting, compensatory project types and costs, monitoring, reporting, and program administration. No similar language for WY.	*(See above.)*	mitigation is not required by the BLM for operations conducted under the Mining Law of 1872, but operators may always voluntarily engage in compensatory mitigation. Minimization actions and compensation should be discussed with project proponents/operators and incorporated into alternatives when appropriate. Compensation may also be required by state regulations.		
• CO, ID, MT/DK, NV/CA, OR, UT: When authorizing actions that result in habitat loss and degradation, require and ensure mitigation achieves a net conservation gain in all HMA types. • In WY: Same as other states in PHMA. No mitigation required in GHMA. • UT: Includes exception for vegetation treatments to benefit Utah prairie dog. • ID and NV (not CA): Includes specific language regarding coordination with local GRSG teams to develop or implement compensatory mitigation programs. • CO, ID, MT/DK (most plans), NV/CA, OR, and UT: Includes an appendix with further details on how mitigation would be applied. • WY: Mitigation applied according to the Wyoming Strategy (EO2015-4).	• MT/DK and OR: Same as Alternative 1. • CO: Would work with the state to provide mitigation with outcomes that are "at least equal to the lost or degraded values." • ID: Similar to Alternative 1, except would manage for a no net loss standard. • NV/CA: Maintains net conservation gain standard, in coordination with State goals for GRSG. • UT and WY: Removed the net conservation gain requirement. • ID, NV/CA, UT, and WY: Reference mitigating to meet the BLM's overarching planning goals and objectives, as well as the BLM Manual 6840 to "minimize or eliminate threats affecting the status of [GRSG] or to improve the condition of [GRSG] habitat…"	The BLM will apply the mitigation hierarchy to address changes in existing development or new development as the result of valid existing rights. Where avoidance or minimization will not fully offset a project's impacts compensatory mitigation is required and will at minimum meet the requirements of the state wildlife agency or other appropriate state authority, and BLM/DOI mitigation policy. If the state agency does not require mitigation, BLM will require compensatory mitigation to achieve no net habitat loss.	The BLM will apply the mitigation hierarchy. Where avoidance or minimization will not fully offset a project's impacts compensatory mitigation is required and will at minimum meet the requirements of the state wildlife agency or other appropriate state authority, and BLM/DOI mitigation policy. If the state agency does not require mitigation, or state-sponsored mitigation is determined by BLM to be inconsistent with BLM/DOI policy, BLM will require compensatory mitigation to achieve no net habitat loss. Where habitat and/or population adaptive management thresholds have been met, compensatory mitigation beyond what is required by the States may be considered. BLM shall coordinate closely with the state wildlife management or other appropriate state agency in determining the amount and form of additional mitigation on	The BLM will apply the mitigation hierarchy. Where avoidance or minimization will not fully offset a project's impacts compensatory mitigation is required and will at minimum meet the requirements of the state wildlife agency or other appropriate state authority, and BLM/DOI mitigation policy. If the state agency does not require mitigation, or state-sponsored mitigation is determined by BLM to be inconsistent with BLM/DOI policy, BLM will require compensatory mitigation to achieve no net habitat loss.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• ID: Full reclamation bond required, consistent with regulations for minerals activities, in all HMA types.	• CO, ID, NV/CA, UT, and WY: Describe various processes for coordinating mitigation efforts with the state.	*(See above.)*	a case-by-case basis, considering project activity, direct and indirect impacts to GRSG habitats, and restoration success rates.	*(See above.)*

21.1.4 Application of Habitat Objectives

Habitat objectives identify the desired habitat outcome on BLM-administered lands in GRSG HMAs at multiple scales including seasonal habitats and connectivity within and between populations. Tables identifying indicators and benchmarks for use as guidelines at the site-scale will be retained in the Habitat Indicators appendix (**Appendix 8**) as a tool through which habitat suitability is informed based on location and ecological conditions.

The Habitat Assessment Framework (HAF/ BLM TR 6710-1; Stiver et al., 2015, as revised) provides a standardized, scientifically based methodology to assess GRSG habitat suitability at multiple scales (mid, fine, and site-scale, see Map 3.7 and 3.8). Using multi-scale evaluations considers the entire suite of conditions contributing to high quality habitat, the success of past conservation actions, and prioritizing future land uses and conservation actions. Descriptions of habitat scales (broad-, mid-, fine-, and site-) and associated indicators for assessment at each scale are available in the HAF (BLM TR 6710-1). The Habitat Indicators Tables (**Appendix 8, Tables 8-1.A-G**) provide a list of indicators and benchmarks, derived from local and regional research on GRSG habitat selection, that collectively are used to inform habitat suitability. BLM offices will use **Appendix 8**, Greater Sage-grouse Habitat Indicators and Benchmarks, notably **Tables 8-1.A-G** to assess each monitoring location within seasonal habitats for site-scale suitability, with data collected during the appropriate corresponding seasonal use period, as applicable to address phenological changes.

The BLM will use terrestrial AIM methods (Herrick et al., 2017), additional monitoring approaches for wetland & riparian habitats, partner data as available, and supplemental guidelines (e.g., training, monitoring guidelines, sampling protocols, etc.) to collect data on site-scale habitat condition (**Appendix 8**). As research advances, new data could refine, or clarify GRSG selection for vegetation structure and composition in seasonal habitats. The Habitat Indicators Table(s) (**Appendix 8, Table 8-1.A-G**) will be periodically reviewed to consider, and as needed, incorporate the best available science in coordination with applicable federal, state, and tribal agencies. The addition or adjustment to indicators or benchmarks in the Habitat Indicators Table must include the reference or basis for which the changes are made. Revisions will only be made if warranted by scientific evidence. Use and inclusion of the HAF, including the relationship to Land Health Standards and monitoring is covered in more detail in the appendices (e.g., **Appendix 8, Table 8-2**).

Table 21-5, Comparison of Alternatives, Application of Habitat Objectives, presents management by alternative for this management issue.

Table 21-5. Comparison of Alternatives, Application of Habitat Objectives

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• CO, ID, MT/DK, NV/CA, UT: Include language noting indicators and values from habitat objectives table would be considered when authorizing activities in GRSG habitat. • CO, ID, MT/DK, NV/CA, UT, and WY: Note the values in the table would be used during the land health evaluation process to help determine if the standard applicable to GRSG habitat is being met. • ID, MT/DK, UT and WY: The values may not be obtainable on every acre, and/or should consider local ecological ability. • MT/DK and UT: The values may be adjusted based on local factors, data, or updated science. • NV/CA and OR: Land uses will be managed to meet the desired conditions identified in the tables. • UT: Identifies a qualitative desired condition, with a note that the table is a summary of what science indicates may be needed to meet the qualitative objective.	• CO, ID, MT/DK, NV/CA, UT: Same language regarding considering indicators and values as Alternative 1. • All States: Same language regarding using the habitat objectives table during the land health evaluation process as Alternative 1. • ID, MT/DK, OR, UT and WY: Same language regarding values not being obtainable on every acre as Alternative 1. • ID, MT/DK, NV/CA, OR, and UT: Same language regarding values being adjusted as Alternative 1. • ID and UT: Identify a qualitative desired condition separate from the quantitative values in the table.	The tables with the attributes, indicators, and values with associated text would be replaced in the action alternatives with the following new objectives and management actions: **Objective SSS [X]:** Within GRSG habitat management areas provide suitable habitat by managing for connected mosaics of sagebrush and associated communities that provide for seasonal habitats, dispersal, and migration, while limiting widespread anthropogenic disturbances and fragmentation. This objective will be accomplished by applying RMP land use allocations and management actions among HMAs, proactive habitat treatments, and project-level application of mitigation (avoiding, minimizing, and compensating, per MS-1794 and H-1794) for internal and external project proposals. **Management Action SSS [X1]:** Assess the suitability of GRSG habitat at HAF mid- and fine-scales (HAF Levels 2 and 3, respectively) based on the methods in the Sage-grouse Habitat Assessment Framework (HAF, Stiver et al. 2015, BLM TR 6710-1, as revised; see **Appendix 8**). **Management Action SSS [X2]:** Design and implement projects that will maintain or improve habitat suitability, availability, and connectivity, based on site location, existing seasonal values, and habitat needs using the results of mid- and fine-scale habitat assessments and other complementary research, tools, or information and in coordination with partners across land management jurisdictions. **Objective SSS [Y]:** Manage GRSG habitat management areas to provide seasonal habitats at the HAF Site Scale (Level 4) by providing for habitat characteristics that support seasonal habitat needs, including adequate protective cover and food needed to survive and reproduce. Seasonal habitats may include areas where sagebrush is the current dominant vegetation type, sagebrush is a primary shrub species within the various states of the ecological site, or dominated by other vegetation types but still provides GRSG habitats, such as mesic areas. This objective will be accomplished through the combination of RMP land use allocations and management actions and restoration – based on ecological potential, current vegetative condition, and existing seasonal values – and the project-level application of mitigation (avoiding, minimizing, and compensating, per MS-1794 and H-1794) for internal and external project proposals. **Management Action SSS [Y1]:** Assess suitability of GRSG habitat at the HAF site-scale (Level 4) based on the methods in Sage-grouse HAF (Stiver et al. 2015, BLM TR 6710-1, as revised; **Appendix 8**) utilizing current geographically applicable research on seasonal habitat requisites of GRSG (see **Appendix 8**). Updates to seasonal habitat indicators and ESDs will be developed locally and coordinated with partners (see **Appendix 8**). **Management Action SSS [Y2]:** Maintain, improve, or restore the suitability of GRSG seasonal habitats using the Habitat Indicators Table (see **Appendix 8**) to inform measurable project objectives during implementation-level planning for BLM-permitted and BLM-initiated site-specific actions in HMAs, in coordination with applicable partners. Use the results of site-scale habitat assessments and other best available information to inform management decisions and the design and implementation of habitat projects.		

21.1.5 Disturbance Cap

Anthropogenic disturbance negatively impacts GRSG abundance and persistence (Knick et al., 2011, 2013). When authorizing disturbing activities within important GRSG habitats (PHMA and IHMA in Idaho) the BLM applies disturbance caps to limit habitat losses associated with discrete anthropogenic disturbances and their associated human activity. Other management tools consider effects from diffuse or non-anthropogenic disturbances such as wildfire, such as sagebrush availability objectives, GRSG habitat objectives, and adaptive management thresholds. Disturbance caps identify an upper limit (maximum disturbance permitted) above which no new development is generally permitted (subject to applicable laws and regulations and valid existing rights). A disturbance cap acts as a "backstop" to ensure that total disturbance does not exceed the level of GRSG tolerance for anthropogenic activities. Disturbance caps only address direct impacts and indirect impacts associated with anthropogenic disturbances may not be fully captured by use of this tool; other management tools consider indirect impacts, such as noise required design features/actions and mitigation requirements. Additional minimization measures may be necessary to reduce the full impact of a project on GRSG.

To conserve seasonal habitat requirements associated with a local GRSG populations disturbance caps will be applied to PHMA within the Habitat Assessment Framework (HAF) fine scale (Stiver et al. 2015, as revised)., as well as at the project scale. Previous application of a disturbance cap at a larger scale (e.g., biologically significant unit) did not limit the consideration to local populations and were often "diluted" by large amounts of non-habitat. Calculation of disturbance caps must consider all disturbances (existing and new) since GRSG are negatively impacted by the total disturbance. Within designated spatial analysis areas, disturbance on all surface ownerships should be considered to accurately capture potential impacts of new authorizations on GRSG.

With the exception of Wyoming and Montana, disturbance caps are currently set at 3% of the project and "biologically significant units" identified by the BLM at the state level, but do not include habitat loss from wildfire or agricultural conversion. The latter two factors will be quantified by separate calculations of sagebrush availability via the vegetation objectives, habitat objectives, and adaptive management thresholds, as tracked by approaches described in the Monitoring Framework (**Appendix 7**). Ninety-nine percent of active leks occurred within landscapes that were less than 3% developed in a landscape analysis of GRSG (Knick et al. 2013) and a follow-up study on disturbance from existing energy infrastructure and human activity supported those findings (Kirol et al. 2020). Similar results were observed for other species that use sagebrush for all or part of their life cycle, including mule deer (Sawyer et al. 2020, Lambert et al. 2022), pronghorn (Lambert et al. 2022) pygmy rabbits (Germaine et al. 2017), elk (Gigliotti et al. 2023), and sagebrush songbirds (Kirol and Fedy 2021). Wyoming and Montana use a 5% disturbance cap but include wildfire and agricultural conversion (the latter is not applicable on BLM lands) to their calculations. North Dakota and South Dakota apply a mix of the two approaches – with a 5% cap that includes wildfire and agriculture, but also limiting anthropogenic disturbances to 3%.

Table 21-6, Comparison of Alternatives, Disturbance Cap, presents management by alternative for this management issue.

Table 21-6. Comparison of Alternatives, Disturbance Cap

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Disturbance Cap Overview				
• CO, ID, NV/CA, OR, UT, ND, SD: 3% disturbance cap in PHMA (and IHMA in ID) on specific anthropogenic activities such as development of minerals and renewable energy, as well as ROWs. • CO, ID, NV/CA, OR, UT, ND, SD: disturbance cap applies at both BSU-scale and at proposed project analysis area (calculated similar to WY Disturbance Density Calculation Tool – DDCT) within PHMA. • MT, ND, SD, WY: 5% disturbance cap at the project DDCT area scale in PHMA. Includes wildfire and agriculture.	• CO, ID, NV/CA, OR, UT, ND, SD: 3% disturbance cap in PHMA (and IHMA in ID) on specific anthropogenic activities such as development of minerals and renewable energy, as well as ROWs. • CO, NV/CA, OR, UT, ND, SD: disturbance cap applies at both BSU-scale and at proposed project DDCT analysis area within PHMA. • ID cap applies at just the BSU scale. • MT, ND, SD, WY: Same as Alt 1.	In PHMA (and IHMA in ID), direct habitat disturbance from existing infrastructure developments would be limited to 3% at the 1) project scale (see description below) and 2) Habitat Assessment Framework (HAF) Fine Scale habitat selection area (or CO management zones and populations – see **Section 2.7.1**). The disturbance cap would not be applicable to new authorizations since all PHMA would be closed to new infrastructure projects. The disturbance cap would be applied to existing authorizations within the agencies' capacity to do so to the extent allowable under applicable law and while recognizing prior authorizations, lease terms, and valid existing rights.	In PHMA (and IHMA in ID), if direct habitat disturbance from existing and proposed infrastructure developments exceeds either 3% at the 1) project scale (see description below) or 2) Habitat Assessment Framework (HAF) Fine Scale habitat selection area (or CO management zones and populations – see **Section 2.7.1**), new infrastructure projects would be deferred to the extent allowable under applicable laws (such as the Mining Law of 1872), or valid existing rights: • until such time as the percentage of habitat disturbance in the areas has been reduced below the cap threshold through restoration of existing disturbance to meeting habitat objectives, or • redesigned to not result in additional surface disturbance (co-location), redesigned to move it outside of habitat in PHMA (and IHMA in Idaho) (see non-habitat criteria), or redesigned to move it outside PHMA (and IHMA in Idaho).	In PHMA (and IHMA in ID), if direct habitat disturbance from existing and proposed infrastructure developments exceeds either 1) 3% at the project scale (see description below) in all states except MT and WY, where it is 5% at the project scale, or 2) 3% at the Habitat Assessment Framework (HAF) Fine Scale habitat selection area for all states (or CO management zones and populations – see **Section 2.7.1**), new infrastructure projects would be deferred to the extent allowable under applicable laws (such as the Mining Law of 1872), or valid existing rights: • until such time as the percentage of habitat disturbance in the areas has been reduced below the cap threshold through restoration of existing disturbance to meeting habitat objectives or increasing the amount of suitable habitat through restoration, or • redesigned to not result in additional surface disturbance (co-location), redesigned to move it outside of habitat in PHMA (and IHMA in Idaho) (see non-habitat criteria), or redesigned to move it outside PHMA (and IHMA in Idaho).

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Disturbance Cap Numerator				
• CO, ID, NV/CA, OR, UT, ND, SD: infrastructure only - cap does not include wildfire or agriculture. • MT, WY, ND, SD: 5% cap includes infrastructure, wildfire and agriculture.	• CO, ID, NV/CA, OR, UT, ND, SD: same as Alt 1. • MT, WY: Same as Alt 1.	For all states, the disturbance cap calculation is limited to the following specific activities, whether existing projects or new proposals (see **Appendix 7** for additional details on how these items would be monitored): • Oil and gas wells and development facilities • Coal mines • Wind developments (e.g., towers, sub-stations, etc.) • Solar fields • Geothermal development facilities • Mining (active locatable, nonenergy leasable and saleable/mineral material developments) • Roads (transportation features with a maintenance intensity of level 3 or 5 – see BLM Technical Note 422 – Roads and Trails Terminology, 2006 or as updated (does not include two-tracks) • Railroads • Power lines • Communication towers • Other vertical infrastructure, as well as developed rights-of-way with habitat loss (e.g., pipelines) • Coal bed methane ponds (at the project scale) • Meteorological towers (e.g., wind energy testing) (at the project scale) • Nuclear energy facilities (at the project scale)	Same as Alternative 3, however under this alternative wildfire would not be included as a numerator for disturbance.	Same as Alternative 3 at the project scale for all states except for WY and MT which would include disturbances associated with their respective DDCT approaches (e.g., wildfire and agricultural, with Montana also including subdivisions and urban development) in the numerator (agriculture and subdivision disturbance data would be provided by the state, since no such activities are permitted on public lands). None of the states would include wildfire and agriculture (or Montana subdivisions and urban development) in the numerator at the HAF Fine Scale.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	• Airport facilities and infrastructure (at the project scale) • Military range facilities and infrastructure (at the project scale) • Hydroelectric plants/facilities (at the project scale) • Recreation areas facilities and infrastructure larger than 0.25 acres (e.g., parking lots, campgrounds, trail heads, etc.) (at the project scale) • Wildfire Where such data are available, this disturbance is measured by the footprint of direct disturbance of the PHMA (and IHMA in ID) area where habitat is removed (including staging areas, dispersed structures, parking lots, equipment storage areas, etc.), or by the distance between the outermost lines for transmission lines. When considering new project proposals, any project associated with the above list that has been approved/authorized but not yet constructed should be treated as though it were already constructed when calculating the disturbance cap to account for authorized but not yet constructed disturbance. No other activities or actions beyond those listed in the above list are included when calculating the cap (e.g., wildfire, agriculture, vegetation treatments, residences, barns, fencing or range improvements, etc.).	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	A disturbed area is included in the numerator until it has been restored to provide equal or improved habitat function as was provided by the area before the disturbance. Consistent with the BLM's responsibility to consider cumulative impacts when making decisions for activities on public lands, the disturbance percentage includes acres from the above disturbances regardless of land ownership, where such data are available. This will only inform decision-making on public lands and cannot impact private property rights.	*(See above.)*	*(See above.)*
Disturbance Cap Denominator				
• CO, ID, NV/CA, OR, UT, ND, SD 3% cap applies at both BSU-scale and at proposed project DDCT analysis area within PHMA. • MT, ND, SD, WY: 5% cap applies at the project DDCT area scale in PHMA. Includes wildfire and agriculture. Using the DDCT approach to identify project level boundaries developed by the State of Wyoming is, in summary, as follows: 1) Determine potentially affected active leks by placing a 4-mile buffer around the proposed area of physical disturbance related to the proposed project. All active leks located within the 4-mile project buffer and within PHMA	• CO, NV/CA, OR, ND, SD same as Alt 1. • UT similar to Alternative 1, but allows project boundaries to be identified based on what areas of PHMA are used by the birds affected by the project. • ID removed the disturbance cap at the project scale, applying it only at the BSU scale. • MT, ND, SD, WY: Same as Alternative 1.	At the project scale, the assessment area (denominator) is determined by identifying the extent of the GRSG PHMA (and IHMA in ID) that supports the GRSG population potentially affected by the proposed project that is also located in PHMA (and IHMA); it is not to be limited to the area where indirect impacts are anticipated. The project scale denominator should include the PHMA (and IHMA) used by the potentially affected local GRSG population, including the associated seasonal habitats and the transition zones between those habitats (only within PHMA) associated with where the project is proposed.	Same as Alternative 3.	Same as Alternative 3, except as noted below: At either scale, all areas in PHMA (and IHMA in ID) would be included in the denominator unless specific information documents otherwise (i.e., seasonal habitat maps for the HAF Fine Scale assessment area). Any potential areas that are unsuitable at the HAF site scale are treated neither as habitat nor disturbance, which results in the area being removed from the denominator piece of the formula.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(and IHMA) will be considered affected by the project. 2) Next, place a 4-mile buffer around each of the affected active leks. 3) All PHMA (and IHMA) within the 4-mile project buffer, combined with the 4-mile lek buffer(s), creates the project analysis area for each individual project, absent other monitoring data. If there are no active leks within the 4-mile project buffer, the project scale analysis area will be that portion of the 4-mile project buffer within PHMA.	*(See above.)*	If sufficient monitoring information is not available to identify the portions of the PHMA used by the potentially affected local GRSG population, identify project level boundaries using an approach similar to the DDCT approach developed by the State of Wyoming: 1) Determine potentially affected active leks by placing a 4-mile buffer around the proposed area of physical disturbance related to the proposed project. All active leks located within the 4-mile project buffer and within PHMA (and IHMA) will be considered affected by the project. 2) Next, place a 4-mile buffer around each of the affected active leks. 3) All PHMA (and IHMA) within the 4-mile project buffer, combined with the 4-mile lek buffer(s), creates the project analysis area for each individual project, absent other monitoring data. If there are no active leks within the 4-mile project buffer, the project scale analysis area will be that portion of the 4-mile project buffer within PHMA. "Pending leks" and other similarly defined state-based lek categories can be considered as active leks based on inclusion from the state wildlife agency. In CO, BLM would use the state management zones (see **Section 2.7.1**). At the HAF Fine Scale, the assessment area (denominator) is the acres of PHMA (and IHMA in Idaho) within the boundaries of	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	the HAF Fine Scale habitat delineation area. Calculation of the 3 percent cap would include all acres of PHMA (and IHMA in Idaho) in the Fine Scale area as the denominator. In CO, BLM would use the state identified populations (see **Section 2.7.1**). At either scale, all areas in PHMA (and IHMA in ID) would be included in the denominator. Portions of PHMA that are potential or non-habitat (e.g., areas not currently supporting sagebrush cover due to wildfire) would still be included in the denominator piece of the formula. The denominator includes all lands (regardless of land ownership) to help the BLM consider the cumulative impacts of disturbances on GRSG when considering projects on public lands.	*(See above.)*	*(See above.)*
Disturbance Cap Exceptions				
• ID: 3% cap can be exceeded within existing designated utility corridors at the project scale only if there would be a net benefit to GRSG (multiple states have this in the Lands section, ID just has it specifically in the disturbance cap section) • NV: Disturbance can exceed 3% at the project or BSU scale except where a biological analysis indicates a net conservation to GRSG.	• ID: 3% cap can be exceeded within existing designated utility corridors at the project scale only if there would be a net benefit to GRSG (multiple states have this in the Lands section, ID just has it specifically in the disturbance cap section). • UT: 3% can be exceeded if will benefit GRSG. • NV: Disturbance can exceed 3% at the project or BSU scale except where a biological	Unless required by law, regulation, policy, or presence of valid existing rights, the BLM would not consider allowances for exceptions to the disturbance cap. All states: Apply the disturbance cap to the extent consistent with applicable law (such as the Mining Law of 1872) and valid existing rights.	All states: The Authorized Officer may consider projects on public lands that could result in exceeding the 3% disturbance cap across all ownerships at the project scale only if the following three criteria are met: 1) with concurrence from the State Director, 2) if the environmental review document(s) explains how the GRSG RMP goals and objectives will be met, including compliance	Same as Alternative 4, except in WY and MT where the project scale disturbance cap is 5%. All states would also replace bullet #4 under criteria #3 with the following: • Compensatory mitigation would not have to be completed and functioning prior to being able to grant the exception. To grant the activity based on compensatory mitigation, prior to construction, surface

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Exceedance may be approved only with concurrence of the State Director, and unless NDOW, USFWS, and BLM unanimously find the proposed action achieves a net conservation gain. • MT: Any proposals for deviations must demonstrate that the proposed activities will not cause declines in GRSG populations in core areas, with input from MT FWP and USFWS (see **Appendix 2** for specific text). • WY: 5% cap can be exceeded if the project, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of GRSG. All states: Apply the disturbance cap to the extent consistent with applicable law (such as the Mining Law of 1872) and valid existing rights.	analysis indicates a net conservation to GRSG. The requirement for unanimous concurrence was removed. • NV/CA: includes exception options if: ○ The area is non-habitat including through ground-truthing of areas mapped as habitat, and will not have direct, indirect, or cumulative effects, or ○ Compensatory mitigation is provided, or ○ The proposed activity addresses public health and safety concerns, or ○ The proposed activity is a renewal or re-authorization of existing infrastructure in previously disturbed sites and would not result in direct, indirect, or cumulative impacts, or ○ The proposed activity is determined to be a routine administrative function…and will have no adverse impacts on GRSG and its habitat • MT: Same as Alternative 1. • WY: Same as Alternative 1. All states: Apply the disturbance cap to the extent consistent with applicable law (such as the Mining Law of 1872) and valid existing rights.	*(See above.)*	with the RMP's GRSG mitigation strategy, documenting efforts to: • First avoid impacts by locating the proposed project in areas outside of PHMA, collocated within the footprint of existing disturbance, or in areas of non-habitat shall be documented. • Second to minimize impacts by applying project design features shall be documented (e.g., use of RDFs, buffer distances, seasonal limitations, etc.). • Third, only then to consider using compensatory mitigation. It is important to note compensatory mitigation may not be appropriate in some GRSG habitats/populations. Before using compensatory mitigation as an approach for this exception, the effectiveness of whether compensatory mitigation can offset impacts to the affected habitat and associated population without risking impacts to those GRSG habitats and populations shall consider local biological considerations, including, but not limited to population size, connectivity to other populations, availability of existing functional habitat, and the availability of mitigation projects that could benefit the impacted population. **and**	occupancy, or surface disturbing activities the compensation project must be planned, funded, and approved by the operator, BLM, surface owner, and in coordination with the appropriate State agency. However, due to the uncertainty associated with whether the planned compensatory mitigation project would successfully become habitat in order to offset the impacts, one of the following would need to apply: ○ The area of habitat improvement associated with compensatory mitigation would need to increase to account for a level of risk that the compensatory mitigation action may fail or not persist for the full duration of the impact based on the type of specific compensatory project(s) and ecological conditions, or ○ The operator provides long-term assurances that the compensatory project would become functional (e.g. project maintenance or retreatment, easements, mitigation bonding – BLM H-1794-1, section 7.3, etc.). Compensatory mitigation rate would need to consider number of acres necessary to offset acres affected by direct and indirect effects (see

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	3) if one of the following circumstances can be documented: • The exceedance at the project scale is the result of consolidating disturbance associated with the proposed project as a strategy to leave other undisturbed portions of the PHMA (and IHMA) undisturbed from new authorizations, and the third bullet below, addressing compensatory mitigation, is applied to any residual impacts. • Within RMP designated utility corridors, the 3% disturbance cap may be exceeded at the project scale if the site specific NEPA analysis indicates that doing so will decrease the impacts to GRSG habitat in comparison to siting a project outside the designated corridor in areas under the disturbance cap and requiring mitigation. This exception is limited to projects that 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. • If a technical team evaluates and recommends that site-specific GRSG habitat and population information, combined with project design elements – including	Mitigation section), as well as likelihood that the mitigation project may not provide the anticipated compensation for the duration of the impact. In addition, the compensation necessary to grant this exception must provide the offsetting benefit in the same HAF Fine Scale unit being impacted by the potential development.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	compensatory mitigation, indicates the proposed project is expected to improve the condition of GRSG habitat within the proposed project analysis area. Factors considered by the team will include GRSG abundance and trends, movement patterns – including impacts to connectivity, habitat amount and quality, extent and alignment of project disturbance, location and density of existing disturbance (e.g., potential for increased fragmentation), project design options, and other biological factors (e.g., potential for topographic screening, impacts from other threats such as predation, invasive species, drought, noise, etc.). The technical team should consist of, at a minimum, a BLM field biologist and a biologist from the appropriate State agency. The methods, rationale, and data used in developing recommendations shall be retained as part of the project record. • If the exception relies on compensatory mitigation, the mitigation must be completed prior to the disturbance that results in the exceedance of the disturbance cap so the value of the mitigation can be accurately compared to the value of the habitat to be affected by the proposed disturbance. In addition, the	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	compensation necessary to grant this exception must provide the offsetting benefit in the same HAF Fine Scale unit being impacted by the potential development. Consideration may be given to providing compensatory mitigation in adjacent fine-scale HAF areas if doing so will more effectively provide the offsetting benefit. • Disturbance associated with the renewal or re-authorization of existing infrastructure in previously disturbed sites or expansions of existing infrastructure that do not result in new direct, indirect, or cumulative impacts on GRSG and its habitat. There would be no exceptions to the 3% PHMA (and IHMA) disturbance cap at the HAF Fine Scale unless the disturbance is needed for the protection of human life and safety, as concurred by the State Director. If proposed disturbance cap exception is requested in an area (neighborhood cluster) that has met one of the adaptive management thresholds (hard or soft), no exceptions to the 3% disturbance cap at the project scale would be considered until the causal factor analysis is completed unless the disturbance is needed for the protection of human life and safety, as concurred by the State Director.	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	To approve this exception, the Authorized Officer must document, in coordination with the appropriate State agency, that the proposed action satisfies the three criteria listed above. All states: Apply the disturbance cap to the extent consistent with applicable law (such as the Mining Law of 1872) and valid existing rights.	*(See above.)*

21.1.6 Fluid Mineral Development and Leasing Objective

Research indicates fluid mineral development can negatively affect GRSG at multiple scales through direct impacts (habitat loss and fragmentation; Connelly et al. 2004, Lyon and Anderson 2003, Walker et al. 2007, Holloran et al. 2010, Knick et al. 2011, Green et al. 2017) and indirect impacts (increased noise and behavioral avoidance of human activity and infrastructure, including roads; Aldridge and Boyce 2007, Holloran et al. 2010, Kirol et al. 2015, Rice et al. 2016, Coates et al. 2023). Development can also contribute to cumulative impacts if it results in an increased distribution of invasive annual grasses or predator abundance.

This section addresses the RMP objective for GRSG habitat in relation to fluid minerals, RMP management actions providing guidance when considering leasing GRSG habitat management areas, and development associated with existing fluid mineral leases. Other aspects of fluid mineral leasing and development are addressed elsewhere in this amendment or existing RMP language, including specific fluid mineral allocations and associated stipulations (see **Section 2.5.2**), and waivers, exceptions, modifications (see **Section 2.5.7**). and application of RDFs (existing RMP decisions that are not being considered for amendment in this process).

Table 21-7, Comparison of Alternatives, Fluid Mineral Development and Leasing Objective, presents management by alternative for this management issue.

Table 21-7. Comparison of Alternatives, Fluid Mineral Development and Leasing Objective

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• CO, ID, ND, NV/CA, OR, UT, WY, parts of MT/DK (Dillon, Billings, HiLine, Miles City, ND, SD): Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of PHMAs and GHMAs, or within the least impactful areas within PHMA and GHMA if avoidance is not possible. • No similar objective in Lewistown or Butte.	• CO, ID, OR, and MT/DK offices: Same as Alternative 1. • UT, NV/CA: No similar objective (removed the objective). • WY: Clarified the objective to acknowledge that leasing is allowed in PHMA, and that if the BLM has a backlog of Expressions of Interest for leasing, the BLM would prioritize its work first in non-habitat management areas, followed by lower priority habitat management areas (e.g., GHMA) and then higher priority habitat management areas (i.e., PHMA). Clarified that for fluid mineral development on existing leases that could adversely affect GRSG populations or habitat, the BLM would work with the lessees, operators, or other project proponents to avoid, reduce, and mitigate adverse impacts on the extent compatible with lessees' rights to drill and produce fluid mineral resources.	All States: • No leasing strategy/objective is needed since PHMA would be closed to leasing. Leasing objective language would be removed. • New Management Action to address development in areas already leased: In PHMA (and IHMA), the BLM will work with lessees, operators, or other project proponents to avoid, minimize, and compensatorily mitigate for impacts to GRSG and their habitat (e.g., habitat loss, fragmentation, indirect impacts, etc.) from new oil and gas development on existing leases to the extent consistent with surface use rights as part of the environmental review process (e.g., 43 CFR Part 3101.1-2). If possible, place development outside of PHMA (and IHMA); if determined that such placement renders the recovery of fluid minerals on the lease infeasible, or where development of existing leases exceeds a disturbance density of 1 per 640, and/or 3 percent disturbance cap, seek to apply other measures to site the proposed lease activities to meet GRSG habitat objectives and require compensatory mitigation to replace direct and indirect habitat impacts. Locate infrastructure in areas that avoids or minimizes	Revised Fluid Mineral Objective for all states: • Manage fluid mineral leasing and development (including geothermal) in GRSG habitat management areas to avoid, minimize, and compensate for adverse impacts to GRSG habitat to the extent practical under the law and BLM jurisdiction. New management action: • Leasing is allowed in GRSG habitat management areas open to fluid mineral leasing (including geothermal), subject to the stipulations and RDFs included in the RMP. The BLM will evaluate parcels or those portions of parcels available for leasing associated with nominations (e.g., expressions of interest) and determine areas to continue analyzing for inclusion in a lease sale as part of the lease sale NEPA review or analysis. Where there is an existing evaluation process that considers at a minimum GRSG habitat and development proximity, the BLM will use that evaluation process. However, in the absence of an existing evaluation process or where informative to an existing process, the BLM will evaluate parcels with GRSG habitat management areas as part of the lease sale NEPA review or	Revised Fluid Mineral Objective for all states would be the same as Alternative 4. No specific objective or management action would specify a fluid mineral leasing strategy. However, not including specific leasing prioritization language or a leasing strategy does not remove the desired condition to manage public lands to provide suitable GRSG habitat at the HAF mid-, fine- and site-scales. Fluid mineral leasing would be considered in GRSG habitat management areas consistent with the Secretary's discretion under the Mineral Leasing Act (as amended), as well as applicable BLM regulations and policies, and in conformance with RMP goals, objectives, stipulations, and required design features to avoid, minimize, and compensate impacts to GRSG. • Management Action to address development in areas already leased would be the same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	habitat loss and impacts to breeding and nesting habitats. Work with lessees, operators, or other project proponents to place development at the most distal part of the lease from the lek or in areas least harmful to GRSG populations and habitat (e.g., where local terrain features such as ridges and ravines may shield nearby habitat from disruptive factors, or co-location with existing disturbance). For developments that cannot avoid impacts to GRSG, apply conservation measures that reduce impacts to GRSG through implementation decisions (e.g., approval of an application for permit to drill, geothermal drilling permit, Sundry Notice, Master Development Plans, etc.) and upon completion of the environmental record of review (43 CFR Part 3162.5). In this process, evaluate whether the conservation measures are "reasonable" (43 CFR Part 3101.1-2) and consistent with the valid existing rights. • If an existing lease terminates by operation of law, the reinstatement will not be authorized within PHMA (and IHMA).	• analysis by considering, at a minimum, the following: o Proximity to existing oil and gas developments, giving preference to lands upon which a prudent operator would seek to expand existing operations (e.g., existing leases, leases held by production, designated units, etc.). Such existing developments would not usually include areas with minimal existing infrastructure such as wildcat well locations. Areas with development in PHMA (and IHMA) that is at or approaching the density or disturbance caps at the project scale would indicate areas that would meet this criteria. Any nominated parcel subject to immediate drainage or within five miles of existing development would have a higher preference value for analysis in lease documents. o Potential impacts to important GRSG habitats or areas that provide important connectivity, giving preference to lands that would not result in impairing habitat suitability and proper function (see GRSG habitat objectives). This evaluation should consider impacts to GRSG habitat suitability at the	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	HAF mid-, fine- and site-scales, considering information including, but not limited to the presence and distance from leks; presence of nesting and brood rearing habitats, important winter habitat, or other limiting habitat types; the relationship between leks, nesting habitat and other seasonal habitats with topography; migration/movement corridors; adaptive management thresholds (hard and soft); amount and distribution of existing disturbances; the presence of degraded or non-habitat, and impacts to adjacent habitat that may affect the biological importance of the remaining intact habitat. Coordinate with the applicable State agencies to ensure the most current and applicable biological information is considered. Parcels where development would not decrease habitat suitability would have higher preference value for analysis in lease documents. If a parcel receives a low preference value for impacts to important GRSG habitats, it will receive an overall low preference value. An office may offer low preference	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	parcels in a lease sale if the Field Office resources (e.g., staff time) allow after all high preference parcels have been evaluated for inclusion in the sale. In such a scenario, the office will select one or more low preference parcels that present the least conflicts based on the evaluation criteria to analyze for inclusion in the sale. • Management Action to address development in areas already leased: When considering exploration and development on areas leased for fluid mineral resources in PHMAs (and IHMA in ID), including geothermal, application of measures to avoid, minimize, rectify, reduce and/or mitigate potential impacts will be considered through completion of the environmental record of review (43 CFR Part 3162.5 and 36 CFR Part 228.108), including appropriate documentation of compliance with NEPA. Such measures may include existing lease stipulations, project design, operator-committed measures, RMP required design features (RDFs), and local conditions of approval (COAs). The BLM will work with project proponents to promote measurable GRSG	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	conservation objectives such as, but not limited to, consolidation of project related infrastructure to reduce habitat fragmentation and loss and to promote effective conservation and connectivity of seasonal habitats and PHMAs (and IHMAs). The BLM will continue to work with project proponents and the state wildlife agency to site their projects in a manner that honors their lease rights but have been determined to contain the least sensitive habitats (based on vegetation, topography, or other habitat features) and resources whether inside or outside of PHMAs (and IHMA). Surface use rights associated with existing leases will be recognized and respected. For proposed operations in PHMAs (and IHMAs), the Surface Use Plan of Operations (see 43CFR Part 3162.3-1(f)) shall address, at a minimum, the applicable RDFs in the RMP. Seasonal habitats or project features related to potential GRSG impacts that are not addressed in the Surface Use Plan of Operations based on site-specific or project-specific considerations shall be noted in the project file, along with a rationale for not including them.	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	In this process the BLM will evaluate whether each conservation measure is reasonable and consistent with surface use rights as part of the environmental review process (e.g., 43 CFR Part 3101.1-2).	*(See above.)*

21.1.7 Fluid Mineral Lease Stipulation Waivers, Exceptions, and Modifications

Federal regulations at 43 CFR Part 3171.24 provide the BLM direction for conditions under which variance from specific stipulations can be considered. This document presents the draft range of alternatives for waivers, exceptions, and modifications (WEMs) associated with the described stipulations on new fluid mineral leasing (e.g., oil, gas, and geothermal) in GRSG habitat management areas. Consideration of amending the WEM language in this planning effort is limited to future leases that have stipulations associated with no surface occupancy (NSO), disturbance cap – generally applied as a controlled surface use (CSU) stipulation, and seasonal timing limitations. This planning effort is not considering amendment of WEMs associated with other stipulations.

This section is limited to consideration of WEMs during the development phase. Other aspects of fluid mineral leasing and development are addressed elsewhere in this amendment or existing RMP language, including specific fluid mineral allocations and associated stipulations (see **Section 2.5.2**), the RMP objective for GRSG habitat in relation to fluid minerals (see **Section 2.5.6**), RMP management actions providing guidance when considering leasing GRSG habitat management areas (see **Section 2.5.6**), development associated with existing fluid mineral leases (see **Section 2.5.6**), and application of RDFs (existing RMP decisions that are not being considered for amendment in this process).

The WEMs in this document would apply to new fluid mineral leases and lease reinstatements on public lands, as well as existing leases if they do not specifically include WEMs associated with lease stipulations, and are limited to the stipulations described below. GRSG fluid mineral stipulations not mentioned in this document, as well as those program areas/stipulations not considered in this planning effort would continue where they apply. If there is a conflict between such stipulations and those presented in this document, the more restrictive would take precedence during implementation.

Description of Surface Stipulations

This planning process is considering an amendment to the language for WEMs associated with three general types of GRSG surface stipulations that would be applied to new fluid mineral leases.

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. Generally considered a major constraint, in areas open to fluid mineral leasing with NSO stipulations, fluid mineral leasing activities are permitted, but activities with surface occupancy cannot be conducted unless an exception, modification, or waiver is granted. Absent the approval of a waiver, exception, or modification, access to fluid mineral deposits would require drilling from outside the boundaries of the NSO stipulation. In the 2015 not warranted determination for GRSG the USFWS cited application of regulatory tools, such as NSO stipulations, as an effective conservation tool in minimizing exposure of the species to fluid mineral development.

Controlled Surface Use (CSU) – Disturbance Cap

This planning effort is considering amendments to the GRSG disturbance cap, including clarifying that it will be applied to new fluid mineral leases as a CSU stipulation. 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. A new lease with the disturbance cap CSU stipulation would not guarantee the lessee the right to occupy the surface of the lease for the purpose of producing fluid minerals within GRSG designated PHMAs

(and IHMA in Idaho). The surface occupancy restriction criteria identified in this stipulation may preclude surface occupancy and may be beyond the ability of the lessee to meet due to existing surface disturbance on federal, state, or private lands within designated PHMAs/IHMAs or surface disturbance created by other land users.

Seasonal Timing Limitations (TL)

Areas identified for TLs, a moderate constraint, are closed to fluid mineral exploration and development during identified time frames to eliminate, to the degree possible, activities disruptive to GRSG during the associated seasons of use. Ground disturbing activities, drilling, stimulation, and plug and abandonment work should not be allowed during the identified periods. Production and maintenance activities on wells and well work required by another program to protect the environment (e.g. Underground Injection Control) and administrative activities may be exempt from the timing limitations at the discretion of the BLM Authorized Officer. GRSG seasonal timing limitations from prior planning efforts will not change, but waivers, exceptions, and modifications for seasonal timing limitations are being updated.

Project-specific Flexibility

For fluid minerals, surface stipulations could be excepted, modified, or waived by the Authorized Officer. 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.

An exception, modification, or waiver may be granted at the discretion of the BLM Authorized Officer if the specific criteria described below are met. WEMs specific to each stipulation are included in the leasing documents and are considered based on site-level conditions during implementation of the lease terms. 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. The BLM would consider that information, in combination with all other information provided by State, County, and other local agencies; tribal governments; other federal agencies; or interested stakeholders as applicable, though decision to grant the WEM remains with the Authorized Officer.

In the event there are overlapping stipulations (e.g., NSO area overlapping a disturbance cap CSU overlapping a seasonal timing limitation), WEMs would need to be considered for each stipulation separately based on the processes identified below.

Table 21-8, Comparison of Alternatives, Fluid Mineral Leasing Waivers, Exceptions, and Modifications, presents management by alternative for this management issue.

Table 21-8. Comparison of Alternatives, Fluid Mineral Leasing Waivers, Exceptions, and Modifications

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
No Surface Occupancy Stipulations for GRSG within PHMA (and IHMA in Idaho and West Decker RHMA in MT):				
• ID, MT/DK, NV/CA, OR, UT: In SFA, there will be no waivers, exceptions, or modifications. • CO, ID, MT/DK, NV/CA, OR, UT: The Authorized Officer may grant an **exception** to a fluid mineral lease no-surface-occupancy stipulation only where the proposed action: i. Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or, ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG. Exceptions based on conservation gain (ii) may only be considered in (a) PHMA of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid federal fluid mineral lease existing as of the date of this ARMPA. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such	• MT/DK, OR, and WY: Same as Alternative 1. • CO: <u>NSO-1 – Within One mile of Active Leks:</u> **__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.*	No new WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing so there would be no new leases with associated stipulations.	**Exception #1 – applicable to the NSO stipulation within 0.6 miles of active leks (WAFWA definition) in PHMA (and IHMA in Idaho)**: The Authorized Officer may consider and grant an **exception** to the NSO stipulation within 0.6 miles of active leks in PHMA (and IHMA in Idaho) if it can be demonstrated that development and surface occupancy would have no direct impacts to or disruption of GRSG or its habitat based on at least one of the following – after documenting the review of available information associated with the site proposed for the exception – both internally compiled and as provided by State, County and other local agencies, tribal governments, project proponents, other federal agencies, or interested stakeholders: • The location of the proposed authorization is determined to be non-habitat (see Glossary; as determined by a biologist with GRSG experience using methods such as the Habitat Assessment Framework), does not provide important connectivity between habitat areas, and the project includes design features to prevent indirect disturbance to or disruption of adjacent seasonal habitats (whether adjacent seasonal habitat are within 0.6	Same as Alternative 4, except in CO where the exception would apply in PHMA within 1 mile of active leks.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
benefits will endure for the duration of the proposed action's impacts. Any exceptions to this lease stipulation may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action satisfies (i) or (ii). Such finding shall initially be made by a team of one field biologist or other GRSG expert from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the appropriate BLM State Director, USFWS State Ecological Services Director, and state wildlife agency head for final resolution. In the event their finding is not unanimous, the exception will not be granted. Approved exceptions will be made publicly available at least quarterly. • WY: NSO 0.6 lek buffer in PHMA: **Exception**: The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater	• ID: The Authorized Officer may grant an exception to a fluid mineral lease NSO stipulation only where the proposed action: i. Will not have direct, indirect, or cumulative effects on GRSG or its habitat; or, ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide no net loss to GRSG. Exceptions based on no net loss (ii) may only be considered in (a) PHMA of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP amendment. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts. Any exceptions to this lease stipulation may be approved by the Authorized Officer only with the concurrence of the State Director and in coordination with the Technical and Policy	*(See above.)*	• miles of an active lek or greater than 0.6 miles from active leks) that would impair their biological function. • Topography/areas of non-habitat create an effective barrier to adverse impacts (e.g., protected from visual and audible disturbances to GRSG and its habitat). • By co-locating the proposed authorization with existing disturbance, no additional impacts would be realized above those already associated with the existing similarly-sized infrastructure, including indirect disturbance to or disruption of adjacent seasonal habitats that would impair their biological function. Beyond considering an exception where no direct or indirect impacts on GRSG or its habitat would occur, an exception could also be considered if the proposed location on public lands would be undertaken as an alternative to a similar action occurring on a nearby non-public lands parcel (for example, due to landownership patterns), and development on the public parcel in question would eliminate impacts on more important and/or limited GRSG habitat (e.g., wet meadows, brood-rearing habitat, etc.) on the non-public nearby parcel; this exception must also include measures sufficient to allow the BLM to conclude in its documenting analysis that such	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Sage-Grouse. The BLM can and does grant exceptions if the BLM, in coordination with the WGFD, determines that granting an exception would not adversely impact the population being protected.	Team. Approved exceptions will be made publicly available at least quarterly. • NV/CA: An **exception** to stipulations associated with GRSG Habitat Management Areas (HMAs) may be granted by the authorized officer (State Director), in coordination with the appropriate state agency (NDOW, SETT, and/or CDFW), if one the following conditions are met: i. The location of the proposed authorization is determined to be unsuitable (by a biologist with GRSG experience using methods such as Stiver et al 2015) and lacks the ecological potential to become marginal or suitable habitat; and would not result in direct, indirect, or cumulative impacts on GRSG and its habitat. Management allocation decisions would not apply to those areas determined to be unsuitable because the area lacks the ecological potential to become marginal or suitable habitat, and/or ii. The proposed activity's impacts could be offset to result in no adverse impacts on GRSG or its habitat, through use of the mitigation hierarchy consistent with Federal law	*(See above.)*	benefits will endure for the duration of the proposed action's impacts on public lands (e.g., confirmation of an easement). To approve this exception based on any of the above criteria, after coordination with the appropriate State agency, the Authorized Officer must document, that the proposed action satisfies at least one of the criteria listed above. If the State agency does not concur with granting the exception, the Authorized Officer must provide rationale for how the criteria are met considering the information the State provides. Prior to granting an exception to an NSO stipulation, the potential exception shall be subject to public review for at least a 30-day period (e.g., could be part of the APD NEPA process). If the area associated with the proposed development seeking the exception (e.g., well pad, compressor station, etc.) is in an area (neighborhood cluster) that has met one of the adaptive management thresholds (hard or soft) (see **Section 2.5.13**), no exceptions would be considered until the causal factor analysis is completed. If the causal factor analysis concludes that development associated with the type of activity seeking the exception is or could contribute to the threshold being met or not recovering, no exception would	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	and the state's mitigation policies and programs, such as the State of Nevada's Executive Order 2018-32 (and any future regulations developed to implement this order). In cases where exceptions may be granted for projects with a residual impact, voluntary compensatory mitigation consistent with the State's mitigation policies and programs, such as the State of Nevada's Executive Order 2018-32 (and any future regulations developed to implement this order) would be one mechanism by which a proponent achieves the Approved RMP Amendment goals, objectives, and exception criteria. When a proponent volunteers compensatory mitigation as their chosen approach to address residual impacts, the BLM can incorporate those actions into the rationale used to grant an exception. The final decision to grant a waiver, exception, or modification would be based, in part, on criteria consistent with the State's GRSG management plans and policies. • UT: Within PHMA, the Authorized Officer may grant an **exception** to a fluid mineral lease NSO	*(See above.)*	be granted. If the analysis is inconclusive on cause, exceptions could be considered.	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	stipulation where the proposed action: ○ Occurs in non-habitat that does not provide important connectivity between habitat areas and the development would not cause indirect disturbance to or disruption of adjacent seasonal habitats that would impair their biological function of providing the life-history or behavioral needs of the Greater Sage-Grouse population due to project design (e.g., minimize sound, preclude tall structures, require perch deterrents), as demonstrated in the project's NEPA document; or ○ Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and development on the parcel in question would have less of an impact on Greater Sage-Grouse or its habitat than on the nearby parcel; this exception must also include measures sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts. Approved exceptions will be made publicly available at least quarterly. In addition, any lease activities will apply the pertinent management for discretionary	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	activities in PHMA identified in MA-SSS-3 (e.g., mitigation, disturbance cap, minerals/energy density, seasonal restrictions, and RDFs), including if an exception to the NSO is granted.	*(See above.)*	*(See above.)*	*(See above.)*
Not applicable	A two-tiered NSO exception is not applicable for any state but CO. • CO: NSO-2 – One Mile from Active Leks to the Remainder of PHMA: **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: o 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 o It is determined, based on site-specific information (using tools such as the Habitat Assessment Framework, the Colorado Habitat Exchange Habitat	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Exception #2 – No Surface Occupancy Stipulation in the Remainder of PHMA (or IHMA in Idaho) beyond 0.6 miles from active leks – as applicable:** The Authorized Officer may consider and grant an **exception** to the NSO stipulation associated with the remainder of PHMA (and IHMA in Idaho) if one of the following criteria apply – after documenting the review of available information associated with the site proposed for the exception – both internally compiled and as provided by State, County and other local agencies, tribal governments, project proponents, other federal agencies, or interested stakeholders: 1) The criteria presented in Exception #1. 2) If it can be demonstrated by a biologist with GRSG experience, based on site-specific information (using tools such as the Habitat Assessment Framework, State mitigation programs, or others), where it has been demonstrated that the project cannot be avoided or minimized and granting the exception would not result in adverse effects to GRSG	**Exception #2 – No Surface Occupancy Stipulations in the Remainder of PHMA (or IHMA in Idaho) beyond 0.6 miles from active leks – as applicable:** Same as Alternative 4, except under the #2 criteria, compensatory mitigation would not have to be completed and functioning prior to being able to grant the exception. To grant the activity based on compensatory mitigation, prior to construction, surface occupancy, or surface disturbing activities the compensation project must be planned, funded, and approved by the operator, BLM, surface owner, and in coordination with the appropriate State agency. However, due to the uncertainty associated with whether the planned compensatory mitigation project would successfully become habitat in order to offset the impacts, one of the following would need to apply: • The area of habitat improvement associated with compensatory mitigation would need to increase to account for a level of risk that the compensatory mitigation action may fail or not persist for the full duration of the impact based on the type of

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	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. **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*	*(See above.)*	seasonal habitats. Granting the exception must be in conformance with the RMP GRSG goal and habitat objectives, and the impacts anticipated by the proposed activity would be addressed through application of the mitigation hierarchy, including consideration of compensatory mitigation developed in coordination with the applicable state agency that meets the GRSG mitigation principles identified in the RMP, including providing for no net loss of habitat. To grant an exception based on the use of compensatory mitigation, the following must be followed and documented: a. As the first step in mitigating impacts to GRSG, efforts to avoid impacts by locating the proposed project in areas outside the NSO areas or in areas of non-habitat shall be documented. b. As the second step in mitigating impacts to GRSG, efforts to minimize impacts by applying project design features shall be documented (e.g., use of RDFs, buffer distances, seasonal limitations, etc.). c. Using compensatory mitigation may not be appropriate in some GRSG habitats/populations. Before using compensatory mitigation	the specific compensatory project(s) and local ecological conditions, or • The operator provides long-term assurances that the compensatory project would become functional for the duration of the impact (e.g. project maintenance or retreatment, easements, mitigation bonding – BLM H-1794-1, section 7.3, etc.). Compensatory mitigation rate would need to consider number of acres necessary to offset acres affected by direct and indirect effects (see Mitigation section), as well as likelihood that the mitigation project may not provide the anticipated compensation for the duration of the impact.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*that the proposed action satisfies at least one of the criteria listed above.*	*(See above.)*	as an approach for this exception, the effectiveness of whether compensatory mitigation can offset impacts to the impacted habitat and associated population without risking other impacts shall consider local biological considerations, including, but not limited to population size, connectivity to other populations, availability of existing functional habitat, and the availability of mitigation projects that could benefit the impacted population. d. The compensation project must be completed and habitat functionality documented before the exception is granted to ensure the offset in impacts will occur. e. The compensation necessary to grant this exception must provide the offsetting benefit to the population being impacted by the potential development. For a description of what qualifies as an offsetting benefit, refer to the mitigation framework. To approve this exception, the Authorized Officer must document, in coordination with the appropriate State authority,	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	that the proposed action satisfies at least one of the criteria listed above. If the State agency does not concur with granting the exception, the Authorized Officer must provide rationale for how the criteria are met considering the information the State provides. Prior to granting an exception to an NSO stipulation the potential exception shall be subject to public review for at least a 30-day period (e.g., could be part of the APD NEPA process). If the area associated with the proposed development seeking the exception (e.g., well pad, compressor station, etc.) is in an area (neighborhood cluster) that has met one of the adaptive management thresholds (hard or soft) (see **Section 2.5.13**), no exceptions would be considered until the causal factor analysis is completed. If the causal factor analysis concludes that development associated with the type of activity seeking the exception is or could contribute to the threshold being met or not recovering, no exception would be granted. If the analysis is inconclusive on cause, exceptions could be considered.	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• CO, ID, MT/DK, NV/CA, OR, UT: None • WY: NSO 0.6 lek buffer in PHMA: **Modification**: The authorized officer may modify the area subject to the stipulation or the NSO criteria if an environmental record of review finds that a portion of the NSO area is nonessential, or it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the Greater Sage-Grouse, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting.	• ID, MT/DK, OR and WY: Same as Alternative 1. • CO: <u>NSO-1 – Within One mile of Active Leks:</u> **__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: o Topography/areas of non-habitat create an effective barrier to impacts. o No additional impacts would be realized above those created by existing major infrastructure (for example, State Highway 13). o 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._	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Modification**: The Authorized Officer may consider and grant a **modification** to the fluid mineral lease NSO stipulation, allowing for surface occupancy only where: • an exception is granted, as described above, for the primary disturbance (e.g., well pad, compressor station), and • the potential associated infrastructure related to the development is not individually precluded by other GRSG actions (e.g., roads, pipelines, power lines that could otherwise be considered through a ROW). While the NSO stipulation could be modified for these additional developments, they must still comply with other GRSG management actions (e.g., mitigation, disturbance cap, minerals/energy density, seasonal restrictions, RDFs, etc.) if an exception to the NSO is granted. Prior to modifying the area subject to the NSO stipulation, the potential modification shall be subject to public review for at least a 30-day period (e.g., could be part of the APD NEPA process). If the area (neighborhood cluster) associated with the proposed exception has met one of the adaptive management thresholds (hard or soft) (see **Section 2.5.13**), no exceptions would be considered until the causal factor	Same as Alternative 4, except for the addition of the following: <u>Specifically for Wyoming</u>: In addition to the above, the Authorized Officer may consider and grant a **modification** if after documenting the review of available information, in coordination with the appropriate State agency, that a portion of the NSO area is nonessential (e.g., the lek upon which the NSO is centered is not active), or it is identified through scientific research or monitoring that the existing area (i.e., the active lek and associated buffer) is inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the GRSG, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	• CO: NSO-2 – One Mile from Active Leks to the Remainder of PHMA: ****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 with the State of Colorado (as a requirement of State	*(See above.)*	analysis is completed. If the causal factor analysis concludes that development associated with the type of activity seeking the exception is or could contribute to the threshold being met or not recovering, no modification would be granted. If the analysis is inconclusive on cause, modifications could be considered.	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	offset through compensatory mitigation developed in coordination 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*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*written justification, between the BLM District Manager and CPW that the proposed action satisfies at least one of the criteria listed above.* • NV/CA: The only language for modifications and waivers related to timing stipulations. The language from the NV/CA 2019 ARMPA is located in that section. • UT: The BLM Authorized Officer may grant a **modification** to a fluid mineral lease no surface occupancy stipulation only where an exception is granted, as described above, for the primary disturbance (e.g., well pad, compressor station). A modification to the no surface occupancy stipulation could be considered for the associated infrastructure related to the development that are not individually precluded by other Greater Sage-Grouse actions (e.g., roads, pipelines, power lines). While the no surface occupancy stipulation could be modified for this infrastructure, it must still comply with other Greater Sage-Grouse management contained in MA-SSS-3.	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• CO, ID, MT/DK, NV/CA, OR, UT: None • WY: NSO 0.6 lek buffer in PHMA: **Waiver**: This stipulation may be waived over the entire lease if, in coordination with the state wildlife agency, it is determined that the Greater Sage-Grouse lek has been classified as unactive as determined by the state wildlife agency. Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manuals 1624 and 3101.)	• ID, MT/DK, OR, WY: Same as Alternative 1. • CO: <u>NSO-1 (Within One mile of Active Leks) and NSO-2 (One Mile from Active Leks to the Remainder of PHMA):</u> 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. • NV/CA: **Waiver**: The stipulation may be waived if the authorized officer, in consultation with the appropriate state agency (NDOW, SETT, and/or CDFW), determines that the entire leasehold is within unsuitable habitat (see exceptions above) and would not result in direct, indirect, or cumulative impacts to GRSG and/or its habitat. • UT: The BLM Authorized Officer may grant a **waiver** to a fluid mineral lease no surface occupancy stipulation if, through the appropriate planning process (i.e., plan maintenance, amendment) the area is no longer within PHMA.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Waiver**: The Authorized Officer may consider and grant a **waiver** of the NSO stipulation on an existing lease after documenting, in coordination with the appropriate State agency, that the lease with the GRSG NSO stipulation is no longer in PHMA (and IHMA in Idaho). This would only be applicable on leases that were issued when the parcel was in PHMA, then the PHMA boundaries were subsequently adjusted through the appropriate planning process (i.e., plan maintenance or amendment). Prior to waiving the NSO stipulation for a given area, the potential waiver shall be subject to public review for at least a 30-day period (e.g., could be part of the APD NEPA process).	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
No Surface Occupancy Stipulations Associated with Active Leks in GHMA (applicable in MT/DK, WY, CO, OR, and UT), and Musselshell RHMA in MT:				
• ID, NV/CA do not have NSO for GRSG in GHMA. • While UT has NSO on leks in GHMA, they are associated with RMP decisions that pre-date the 2015 amendment. As such, no new stipulations or WEMs were considered in the 2015 ARMPA. • CO: w/in 2 miles of active leks: **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: o 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 o 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)	• CO, ID, MT/DK, NV/CA, OR, UT, WY: Same as Alternative 1.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Exception**: The Authorized Officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of GRSG due to site-specific terrain and habitat features, such as topographic features that would reduce the habitat impacts by shielding nearby habitat from disruptive factors. An exception could also be granted if it can be demonstrated by a biologist with GRSG experience, based on site-specific information (using State mitigation tools such as Habitat Equivalency Analysis or Habitat Quantification Tool, or other State mitigation programs), that the impacts anticipated by the proposed activity would be offset through compensatory mitigation developed in coordination with the appropriate State agency that meets principles of GRSG compensatory mitigation identified in the RMP, including providing for no net loss of habitat.	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
○ 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. • MT/DK: Miles City (w/in 0.6 miles of a lek in GHMA: The AO, may grant an **Exception** if the action will not result in sage-grouse lek abandonment. South Dakota (w/in .06 miles of leks in GHMA and in winter habitat): The AO may grant an **Exception** only where the proposed action: i. Will not have direct, indirect, or cumulative effects on GRSG or its habitat; or ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel and will provide a clear conservation gain to GRSG. Exceptions based on conservation gain (ii) may only be considered in: a) PHMAs of mixed ownership where Federal minerals underlie less than fifty percent (50%) of the total surface, or	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
b) Areas of the public lands where the proposed Exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP. (See further requirements in the WEMs preamble near the beginning of the Appendix G.1.) Billings (w/in .06 miles of leks in GHMA): A **Modification** or **Exception** may only be considered where the proposed action is determined to be non-habitat, the area is not used by GRSG, and the proposed action would not have direct, indirect, or cumulative effects to GRSG or its habitat. The determination would be made by the BLM in consultation with a team of agency GRSG experts, including an expert from the state wildlife agency, USFWS, and BLM/USFS. The State Director must have received a determination before approving any Modification or Exception. All Modifications or Exceptions must be approved by the State Director. Billings: winter habitat: The AO, after coordination with the state wildlife management agency, may grant an Exception if the action will not result impair the function or suitability of the winter range habitat. HiLine (w/in 0.6 miles of leks in GHMA): The AO, in consultation with Montana Fish, Wildlife and Parks (MFWP), may grant an	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Exception if portions of the area can be occupied without adversely affecting Greater Sage-Grouse leks. Lewistown (winter habitat): The Authorized Officer, after coordination with the state wildlife management agency, may grant an Exception if the action will not impair the function or suitability of the crucial winter range habitat. Lewistown (w/in 0.6 miles of leks in GHMA): The Authorized Officer may grant Exception if the action will not result in Greater Sage-Grouse lek abandonment. • OR: NSO within 1 mile of pending or occupied lek in GHMA: **Exception**: The BLM authorized Officer may grant an exception, in coordination with the ODFW, during project implementation and if BMPs (e.g., anti-perch devices for raptors) are implemented. • WY: NSO 0.25 lek buffer outside PHMA: **Exception**: The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater Sage-Grouse. The BLM can and does grant exceptions if the BLM, in coordination with the WGFD,	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
determines that granting an exception would not adversely impact the population being protected.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*
• ID: None • CO: w/in 2 miles of active leks: 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: o 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 o 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) o 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	• CO, ID, MT/DK, NV/CA, OR, UT, WY: Same as Alternative 1.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Modification**: The Authorized Officer may grant a modification after a review of available information, and in coordination with the applicable state agency, documents that a portion of the NSO area is nonessential, or it is identified through scientific research or monitoring that the existing area is inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the GRSG, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting, considering both direct and indirect impacts from a potential modification.	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
reduce the habitat importance and shield nearby habitat from disruptive factors. • MT/DK: NSO 0.6 lek buffer in GHMA: Miles City: The AO, may **modify** the boundaries of the stipulated area if portions of the leasehold are no longer within 6/10 mile of the perimeter of an active lek, or a portion of the habitat has been altered to the point sage-grouse no longer occupy the site and there is no likelihood of habitat capable of supporting sage-grouse being restored. South Dakota: No modifications. Billings: Modification included in the exception language. Billings: winter habitat: The AO, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold no longer support wintering wildlife HiLine (w/in 0.6 miles of leks in GHMA): The boundaries of the stipulated area may be modified if the AO, in consultation with MFWP, determines that portions of the area can be occupied without adversely affecting Greater Sage-Grouse leks. The AO, in consultation with MFWP, may also modify the size and shape of the area based on studies documenting actual habitat suitability and/or local periods of actual use	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Lewistown (winter habitat): The Authorized Officer, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold no longer support wintering wildlife. Lewistown (w/in 0.6 miles of leks in GHMA): The Authorized Officer may modify the boundaries of the stipulation area if portions of the leasehold are no longer within 0.6 miles of the perimeter of an active lek, or a portion of the habitat has been altered to the point Greater Sage-Grouse no longer occupy the site and there is no likelihood of habitat capable of supporting Greater Sage-Grouse being restored. • OR: NSO within 1 mile of pending or occupied lek in GHMA: **Modification**: None. • WY: NSO 0.25 lek buffer outside PHMA: **Modification**: The authorized officer may modify the area subject to the stipulation or the NSO criteria if an environmental record of review finds that a portion of the NSO area is nonessential, or it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Greater Sage-Grouse, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*
• ID: None • CO: w/in 2 miles of active leks: 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. • MT/DK: NSO 0.6 lek buffer in GHMA: Miles City: The AO, may **waive** this stipulation if no portion of the leasehold is within 6/10 mile of the perimeter of an active lek. South Dakota: The AO, may waive this stipulation if no portion of the leasehold is within 6/10 mile of the perimeter of an active lek. Billings: The AO may waive this stipulation if: o The entire leasehold is no longer within 0.6 mile of the perimeter of a lek; o It is determined sage-grouse are no longer a BLM special status species or federally threatened or endangered;	• CO, ID, MT/DK, NV/CA, OR, UT, WY: Same as Alternative 1.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Waiver**: This stipulation may be waived for a specific lek if, in coordination with the appropriate State agency, it is determined that the GRSG lek that was active has been classified as inactive as determined by the WAFWA definitions and confirmed by the appropriate State agency. Prior to waiving the stipulations, surveys should confirm that the lek is inactive and not moved to another location in the vicinity. Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes.	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
○ No reasonable alternative development scenario exists; or ○ The habitat has been altered to the point sage-grouse no longer use the site and there is little likelihood of habitat capable of supporting sage-grouse being restored. Billings: winter habitat: The AO, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold has been altered to an extent that future use by wintering wildlife is unlikely. HiLine (w/in 0.6 miles of leks in GHMA): The stipulation may be waived if the AO, in consultation with MFWP, determines that no portion of the leasehold is within 0.6 mile of the perimeter of an active lek. Lewistown (winter habitat): The Authorized Officer, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold has been altered to an extent, future use by wintering wildlife is unlikely. Lewistown (w/in 0.6 miles of leks in GHMA): The Authorized Officer may waive this stipulation if no portion of the leasehold is within 0.6 miles of the perimeter of an active lek • OR: NSO within 1 mile of pending or occupied lek in GHMA:	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Waiver: The BLM Field Manager may waive application of the above use restrictions and meeting objectives within general habitat if off-site mitigation were successfully completed in priority habitat or opportunity areas, following discussions with the BLM and ODFW. Even in situations where use restrictions are waived in general habitat, to avoid direct disturbance or mortality of GRSG, disturbances would not be approved during the sensitive seasons. • WY: NSO 0.25 lek buffer outside PHMA: **Waiver**: This stipulation may be waived over the entire lease if, in coordination with the state wildlife agency, it is determined that the Greater Sage-Grouse lek has been classified as unactive as determined by the state wildlife agency. Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manuals 1624 and 3101.)	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Controlled Surface Use: Disturbance Cap				
• CO, ID, MT/DK and OR did not include the disturbance cap as a stipulation. As such, there were no WEMs. • CA: No exceptions. • NV: Nevada lands only—Any **exceptions** to the disturbance cap may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the NDOW, the USFWS, and the BLM unanimously find that the proposed action satisfies the conditions stated in the stipulation. Initially, the technical team would make such finding; the team consists of a field biologist or other GRSG expert from each respective agency. In the event the initial finding were not unanimous, the finding may be elevated to the BLM State Director, USFWS State Ecological Services Director, and NDOW Director for final resolution. In the event their recommendation were not unanimous to grant the exception, the exception would not be granted. • UT: No exceptions. • WY (Core only): **Exception**: The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site	• CO, ID, MT/DK, OR, WY: Same as Alternative 1. • CA: New development/activity would not exceed the 3% disturbance cap protocol at the project scale in PHMA, except in situations where a net conservation gain to the species is achieved as a component of compliance with a state mitigation plan, program, or authority. • NV: Nevada lands only— New development/activity would not exceed the 3% disturbance cap protocol at the project scale in PHMA, except in situations where a net conservation gain to the species is achieved as a component of compliance with a state mitigation plan, program, or authority, such as required by the State of Nevada's Executive Order 2018-32 (and any future regulations adopted by the State of Nevada regarding compensatory mitigation, consistent with federal law). • UT: The 3 percent cap may be exceeded at the proposed project analysis scale if a technical team determines that site-specific Greater Sage-Grouse habitat and population information, combined with project design elements indicates the project will improve the condition of Greater Sage-Grouse habitat within the	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	All States: **Exception**: The Authorized Officer may consider fluid mineral infrastructure on public lands that could result in exceeding the 3 percent disturbance cap at the project scale only if the following three criteria are met: 1) with concurrence from the State Director, 2) if the environmental review document(s) explains how the RMP GRSG goals and objectives will be met, including compliance with the RMP's GRSG mitigation strategy, documenting efforts to: • First avoid impacts by locating the proposed project in areas outside of PHMA, collocated within the footprint of existing disturbance, or in areas of non-habitat shall be documented. • Second to minimize impacts by applying project design features shall be documented (e.g., use of RDFs, buffer distances, seasonal limitations, etc.). • Third, only then to consider using compensatory mitigation. It is important to note compensatory mitigation may not be appropriate in some GRSG habitats/populations. Before using compensatory mitigation as an approach for this exception, the effectiveness of whether compensatory mitigation can offset impacts to the affected habitat and associated population without risking impacts to those GRSG	Same as Alternative 4, except in WY and MT where the project scale disturbance cap is 5%. All states would also include the following additional exceptions included under criteria #3: Compensatory mitigation would not have to be completed and functioning prior to being able to grant the exception. To grant the activity based on compensatory mitigation, prior to construction, surface occupancy, or surface disturbing activities the compensation project must be planned, funded, and approved by the operator, BLM, surface owner, and in coordination with the appropriate State agency. However, due to the uncertainty associated with whether the compensatory mitigation project would successfully offset the impacts, one of the following would need to apply: • the area of habitat improvement associated with compensatory mitigation would need to increase to account for a level of risk that the compensatory mitigation action may fail or not persist for the full duration of the impact based on the type of specific compensatory project(s) and ecological conditions, or • The operator provides long-term assurances that the compensatory project would become functional (e.g., project maintenance or

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater Sage-Grouse. The BLM can and does grant exceptions if the BLM, in coordination with the WGFD, determines that granting an exception would not adversely impact the population being protected. • WY (Connectivity only): **Exception**: The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of Greater Sage-Grouse. An exception to the stated limits may be granted when compensatory mitigation is determined to provide an overall beneficial effect to sage-grouse habitat and populations. The BLM can and does grant exceptions if the BLM, in coordination with the WGFD, determines that granting an exception would not adversely impact the population being protected.	proposed project analysis area. Factors considered by the team are in Appendix E and in MA-SSS-3B (of the 2019 Utah GRSG ARMPA). Such exceptions to the 3 percent disturbance cap may be approved by the Authorized Officer only with the concurrence of the State Director. The finding and recommendation shall be made by the technical team, which should consist of a BLM field biologist, other local Greater Sage-Grouse experts, and biologists and other representatives from the appropriate State of Utah agency. *This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.	*(See above.)*	habitats and populations shall consider local biological considerations, including, but not limited to population size, connectivity to other populations, availability of existing functional habitat, and the availability of mitigation projects that could benefit the impacted population. **and** 3) if one of the following circumstances can be documented: • The exceedance at the project scale is the result of consolidating disturbance associated with the proposed project as a strategy to leave other portions of the PHMA (and IHMA) undisturbed from new authorizations, and the third bullet below, addressing compensatory mitigation, is applied to any residual impacts. No exceedances would be allowed at the HAF Fine Scale. • If a technical team evaluates and recommends that site-specific GRSG habitat and population information, combined with project design elements – including compensatory mitigation, indicates the proposed project is expected to improve the condition of GRSG habitat within the proposed project analysis area. Factors considered by the team will include GRSG abundance and trends, movement patterns – including impacts to connectivity, habitat amount	retreatment, easements, mitigation bonding – BLM H-1794-1, section 7.3, etc.). Compensatory mitigation rate would need to consider number of acres necessary to offset acres affected by direct and indirect effects (see Mitigation section), as well as likelihood that the mitigation project may not provide the anticipated compensation for the duration of the impact. In addition, the compensation necessary to grant this exception must provide the offsetting benefit in the same HAF Fine Scale unit being impacted by the potential development.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	and quality, extent and alignment of project disturbance, location and density of existing disturbance (e.g., potential for increased fragmentation), project design options, and other biological factors (e.g., potential for topographic screening, impacts from other threats such as predation, invasive species, drought, noise, etc.). The technical team should consist of, at a minimum, a BLM field biologist and a biologist and other representatives from the appropriate State agency. • Disturbance associated with the renewal or re-authorization of existing infrastructure in previously disturbed sites or expansions of existing infrastructure that do not result in new direct, indirect, or cumulative impacts on GRSG and its habitat. To approve this exception, the Authorized Officer must document, in coordination with the appropriate State agency, that the proposed action satisfies the three criteria listed above. For this exception to apply, the compensatory mitigation must be completed prior to the disturbance that results in the exceedance of the disturbance cap so the value of the mitigation can be accurately compared to the value of the habitat to be affected by the proposed disturbance. In	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	addition, the compensation necessary to grant this exception must provide the offsetting benefit to the population being impacted by the potential development. Prior to granting an exception to the disturbance cap stipulation the potential exception shall be subject to public review for at least a 30-day period (e.g., could be part of the APD NEPA process). If the area associated with the proposed development seeking the exception (e.g., well pad, compressor station, etc.) is in an area (neighborhood cluster) that has met one of the adaptive management thresholds (hard or soft) (see **Section 2.5.13**), no exceptions would be considered until the causal factor analysis is completed. If the causal factor analysis concludes that development associated with the type of activity seeking the exception is or could contribute to the threshold being met or not recovering, no exception would be granted. If the analysis is inconclusive on cause, exceptions could be considered.	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• NV/CA, and UT: No modifications. • WY (Core only): **Modification**: The authorized officer may modify the area subject to the stipulation or surface occupancy criteria if an environmental record of review finds that a portion of the CSU area is nonessential, or it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the Greater Sage-Grouse, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting. • WY (Connectivity only): **Exception**: The authorized officer may modify the area subject to the stipulation or surface occupancy criteria if an environmental record of review finds that a portion of the CSU area is nonessential, or it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the Greater Sage-Grouse, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting.	• CO, ID, MT/DK, NV/CA, OR, WY: Same as Alternative 1. • UT: The stipulation can be modified to allow disturbance to exceed 3 percent on the lease if disturbance in the project analysis area and PHMA associated with a Greater Sage-Grouse population area remains under 3 percent. *This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Modification:** None.	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• NV/CA, and UT: No waivers. • WY (Core only): **Waiver**: No waiver. • WY (Connectivity only): **Waiver**: No waiver.	• CO, ID, MT/DK, NV/CA, OR, WY: Same as Alternative 1. • UT: The Authorized Officer may grant a waiver to a fluid mineral lease NSO stipulation if, through the appropriate planning process (i.e., maintenance, amendment), the area is no longer within PHMA. *This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Waiver**: The Authorized Officer may consider and grant a **waiver** of the stipulation on an existing lease if the area mapped as PHMA (and IHMA in Idaho) when the lease was issued is no longer mapped as such through the appropriate planning process (i.e., plan maintenance or amendment). Prior to waiving the disturbance cap stipulation for a given area, the potential waiver shall be subject to public review for at least a 30-day period (e.g., could be part of the APD NEPA process).	Same as Alternative 4.
Seasonal Constraints/Stipulations (WEMs associated with such GRSG stipulations in all applicable habitat management area types)				
• ID: No timing/seasonal stipulations were included in the stipulations appendix. • CO: In consultation with the State of Colorado, a **modification** or an **exception** to GRSG TL-46 could be granted based on an analysis of the following factors: o 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 o 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	• CO, ID, OR, UT, WY: Same as Alternative 1. • NV/CA: In the 2019 ARMPA, WEMs for all the seasonal/timing stipulations refer the reader back to the same WEMs for the NSO.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Exception**: The Authorized Officer may consider and provide temporary relief from seasonal constraints by granting an **exception** after documenting the review of available information associated with the site proposed for the exception. While the BLM considers information from all sources, the State wildlife agency can provide information directly associated with bird use, including whether GRSG populations are not using the seasonal habitat during that year's seasonal life cycle period. Based on this information and recommendation, and documented variability in climatic conditions (e.g., early/late spring, long/heavy winter), use patterns, or other applicable information the Authorized Officer may consider a one-time exception if development associated with it will not affect GRSG habitat use, movement or	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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. • MT/DK: Dillon: An Exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. Butte and Dillon: An Exception to this stipulation may be granted by the authorized officer, in consultation with the Montana Fish, Wildlife and Parks (FWP) and the U.S. Fish and Wildlife Service (FWS), if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. North Dakota: This stipulation may be waived or reduced if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts. Exceptions to this	*(See above.)*	*(See above.)*	reproduction, including seasonal reproductive displays, nest attendance, egg or chick survival, or early brood-rearing success or otherwise impair the seasonal function, suitability, and use of winter concentration areas.	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
limitation in any particular year may be specifically approved in writing by the authorized officer. In all cases, the stipulation (including any Modification) will be designed to present the least restrictive measure for avoiding unacceptable adverse impacts. Butte: An Exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are minimal or can be adequately mitigated. Billings: An Exception to this stipulation may be granted by the AO, in consultation with Montana FWP, if the operator submits a plan which demonstrates that the proposed action will not affect sage grouse or their habitat. Refer to "Requirements and/or Guidelines for Wildlife Controlled Surface Use (CSU) and Exceptions to No Surface Occupancy (NSO) and Timing Limitation Stipulations", Appendix H or portions of the area no longer have sage grouse or their habitat, or the lek is confirmed inactive (10 years with no males or sign of lek activity). Activities would be allowed, if they are consistent with the goals and objectives for the Restoration Area (RA) or General habitat. HiLine: The AO may grant an Exception if the operator submits a plan that demonstrates the impacts from the proposed action are acceptable or can be adequately mitigated.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• NV/CA: (w/in 4 miles of active or pending leks in GHMA, winter habitat, early and late brood rearing habitat): The Authorized Officer may grant an **exception** where an environmental review and consultation with the appropriate state agency (Nevada Department of Wildlife, Sagebrush Ecosystem Technical Team, California Department of Fish and Wildlife) determines that the action, as proposed or otherwise restricted, does not adversely affect GRSG or its habitat. An exception may also be granted if the proponent, the BLM, and the appropriate state agency negotiate mitigation that would provide a clear net conservation gain to GRSG and its habitat. • OR GHMA (Winter habitat): The BLM Field Manager could grant **exceptions** to the seasonal restrictions and use restrictions if the project plan and NEPA document demonstrate that impacts from the proposed action can be adequately mitigated. • OR GHMA (Breeding, Nesting, Early and late brood rearing habitat): The BLM Field Manager could grant exceptions to the seasonal and use restrictions under the following conditions: o If surveys determine there are no active or occupied	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
leks within 4 miles of the proposed project during the year (based on ODFW lek survey protocol) and the proposed activity would not take place beyond the season being excepted ○ If the project plan and NEPA document demonstrate that impacts from the proposed action could be adequately mitigated • UT (breeding, nesting, early and late brood rearing, and winter habitat): No exceptions. • WY PHMA (Core and Connectivity) and GHMA: **Exception**: The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, will not affect reproductive displays, nest attendance, egg or chick survival, or early brood-rearing success. Actions designed to enhance the long-term utility or availability of suitable Greater Sage-Grouse habitat may be exempted from this timing limitation. The BLM can and does grant exceptions to seasonal restrictions if the BLM, in coordination with the WGFD, determines that granting an exception would not adversely impact the population being protected.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• WY Winter Concentration Areas: **Exception**: The authorized officer may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, will not impair the function and suitability of the winter concentration area, or it is determined that the winter concentration area is not active by concentrated populations of Greater Sage-Grouse during the period of concern. Actions designed to enhance the long-term utility or availability of suitable Greater Sage-Grouse habitat may be exempted from this timing limitation. The BLM can and does grant exceptions to seasonal restrictions if the BLM, in coordination with the WGFD, determines that granting an exception would not adversely impact the population being protected.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• CO: Modification language included in the exception language above. • MT/DK: Dillon: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks. Butte and Dillon: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer contain Sage Grouse winter/spring range. The dates for the timing restriction may be modified if new information indicates that the December 1 through May 15 dates are not valid for the leasehold. North Dakota: This stipulation may be waived or reduced if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts. Exceptions to this limitation in any particular year may be specifically approved in writing by the authorized officer. In all cases, the stipulation (including any Modification) will be designed to present the least restrictive measure for avoiding unacceptable adverse impacts. Butte: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks.	• CO, ID, MT/DK, OR, UT, WY: Same as Alternative 1. • NV/CA: The authorized officer, in coordination with the appropriate state wildlife agency (NDOW, and/or CDFW), can **modify** and/or **waive** dates for seasonal timing restrictions based on the criteria described below, based on site-specific information that indicates: i. A project proposal's NEPA analysis and/or project record, and correspondence from NDOW and/or CDFW, demonstrates that any modification (shortening/extending seasonal timeframes or waiving the seasonal timing restrictions all together) is justified on the basis that it serves to better protect or enhance GRSG and its habitat than if the strict application of seasonal timing restrictions are implemented. Under this scenario modifications can occur if: a. A proposed authorization would have beneficial or neutral impacts on GRSG and its habitat. b. Topography or other factors eliminate direct and indirect impacts from visibility and audibility to GRSG and its habitat.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Modification:** The BLM can and does grant modifications to seasonal restrictions if the BLM, in coordination with the state wildlife agency on a case-by-case basis, determines that granting the modification would not adversely impact the population being protected. The authorized officer may consider and grant a **modification** to the dates and areas associated with seasonal timing restrictions based on the criteria described below – after documenting the review of available information associated with the site proposed for the modification, if: i. The geographic and temporal conditions demonstrate that any modification (shortening/extending seasonal timeframes) is justified on the basis that it serves to better protect or enhance GRSG and its habitat than if the strict application of seasonal timing restrictions are implemented. Under this scenario modifications can occur if one or more of the following conditions can be documented: a. A proposed authorization is expected to have beneficial or neutral impacts on GRSG and its habitat. b. Topography or other factors eliminate direct and indirect impacts	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Billings: The boundaries of the stipulated area may be modified if the AO determines that portions of the area can be occupied without adversely affecting sage grouse leks or portions of the area no longer have sage grouse or their habitat. The timing restriction dates may be modified if new information indicates that the dates are not valid for the leasehold. HiLine: The boundaries of the stipulated area may be modified if the AO determines that portions of the area no longer contain viable winter range. The dates for the timing restriction may be modified if new wildlife use information indicates that the dates are not valid for the leasehold. The AO may also modify the size and shape of the area based on studies documenting actual habitat suitability and/or local periods of actual use • NV/CA: (w/in 4 miles of active or pending leks in GHMA, winter habitat, early and late brood rearing habitat): The Authorized Officer may **modify** the size and shape of the restricted area or the period of limitation where an environmental review and consultation with the appropriate state agency (Nevada Department of Wildlife, Sagebrush Ecosystem Technical Team, California Department of Fish and Wildlife) determines that	c. There are documented local variations (e.g., higher/lower elevations) and/or annual climatic fluctuations (e.g., early/late spring, long/heavy winter) that indicate the seasonal life cycle periods are different than presented, or that GRSG are not using the area during a given seasonal life cycle period. ii. Modifications are needed to address an immediate public health and safety concern in a timely manner (e.g., maintaining a road impacted by flooding).	*(See above.)*	from visibility and audibility to GRSG and its habitat. c. There are documented local variations that indicate the seasonal life cycle periods are different than presented. ii. Modifications are needed to address an immediate public health and safety concern in a timely manner (e.g., maintaining a road impacted by flooding).	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
the action, as proposed or otherwise restricted, does not adversely affect GRSG or its habitat. • OR GHMA (Winter and breeding, nesting, and early and late brood-rearing habitat): Additionally, the BLM Field Manager may modify the seasonal restrictions and use restrictions under the following conditions: ○ If portions of the area do not include winter habitat (lacking the principle habitat components of winter GRSG habitat, as defined in GRSG habitat indicators **Table 21-2**) or are outside the current defined winter habitat area, as determined by the BLM in discussion with the ODFW, and indirect impacts would be mitigated ○ If documented local variations (e.g., higher or lower elevations) or annual climate fluctuations (e.g., early or late spring, long or heavy winter) reflect a need to change the given dates to better protect GRSG in a given area and the proposed activity would not take place beyond the season being excepted	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• UT (breeding, nesting, early and late brood rearing, and winter habitat): Specific time and distance determinations would be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter) in order to better protect GRSG, in coordination with UDWR biologists. • WY PHMA (Core and Connectivity) and GHMA **Modification**: The authorized officer may modify the size and shape of the TLS area or the TLS criteria if an environmental record of review indicates the actual habitat suitability for seasonal Greater Sage-Grouse activities is greater or less than the stipulated area, or it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the Greater Sage-Grouse, including (but not limited to) reproductive display, daytime loafing/staging activities, and nesting. • WY Winter Concentration Areas: **Modification**: The authorized officer may modify the size and shape of the TLS area or the TLS	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
criteria if an environmental record of review indicates the actual habitat suitability for seasonal Greater Sage-Grouse activities is greater or less than the stipulated area, or it is identified through scientific research or monitoring that the existing criteria are inadequate or overly protective for maintaining the function or utility of the site for the seasonal habitat, life-history, or behavioral needs of the Greater Sage-Grouse.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*
• CO: 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. • MT/DK: Dillon: This stipulation may be waived if the authorized officer, in consultation with the Montana Fish, Wildlife and Parks, determines that the entire leasehold can be occupied without adversely affecting Sage Grouse Leks or the surrounding breeding habitat. Butte and Dillon: This stipulation may be waived if the authorized officer determines that the entire leasehold no longer contains sage	• CO, ID, MT/DK, OR, UT, WY: Same as Alternative 1. • NV/CA: In the 2019 ARMPA, WEMs for all the seasonal/timing stipulations refer the reader back to the same WEMs for the NSO.	No WEMs would be necessary, since all GRSG habitat management areas would be closed to new fluid mineral leasing.	**Waiver**: The Authorized Officer may consider and grant a **waiver** of the stipulation on an existing lease if the area that was mapped as a GRSG habitat management area (regardless of type) when the lease was issued is no longer mapped as such through the appropriate planning process (i.e., plan maintenance or amendment).	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
grouse winter/spring range or, if in coordination with the FWP and FWS, determines that the area is not critical for Sage Grouse. Butte: This stipulation may be waived if the authorized officer, in consultation with the Montana Fish, Wildlife and Parks and U.S. Fish and Wildlife Service, determines that the entire leasehold can be occupied without adversely affecting Sage Grouse Leks or the surrounding breeding habitat. North Dakota: This stipulation may be waived or reduced if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts. Exceptions to this limitation in any particular year may be specifically approved in writing by the authorized officer. In all cases, the stipulation (including any Modification) will be designed to present the least restrictive measure for avoiding unacceptable adverse impacts. Billings: This stipulation may be waived if the AO, in consultation with Montana FWP and the USFWS, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks or the surrounding breeding habitat, the lek is confirmed inactive (10 years with no males or sign of lek activity), or sage grouse are no longer considered BLM special status species and not listed by USFWS.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
HiLine: This stipulation may be waived if the AO determines that the entire leasehold no longer contains viable winter range. • NV/CA: (w/in 4 miles of active or pending leks in GHMA, winter habitat, early and late brood rearing habitat): The Authorized Officer may waive the stipulation where an environmental review and consultation with the appropriate state agency (Nevada Department of Wildlife, Sagebrush Ecosystem Technical Team, California Department of Fish and Wildlife) determines that the described lands do not contain GRSG or suitable habitat or are otherwise incapable of serving the requirements of GRSG and therefore no longer warrant consideration as a component necessary for their protection. • OR GHMA (Winter and breeding, nesting, and early and late brood-rearing habitat): No waivers. • UT (breeding, nesting, early and late brood rearing, and winter habitat): No waivers. • WY PHMA (Core only): **Waiver**: No waiver. • WY PHMA (Connectivity only), and GHMA: **Waiver**: This stipulation may be waived over the entire lease if, in coordination with the state wildlife agency, it is determined that the Greater Sage-Grouse lek	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
has been classified as unactive as determined by the state wildlife agency. Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manuals 1624 and 3101.) • WY Winter Concentration Areas: **Waiver**: No waiver.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

21.1.8 Renewable Energy Development and Associated Transmission

There have been very few published scientific studies on the impacts of wind development on GRSG (Lloyd et al., 2022), direct habitat loss and degradation from facilities and human disturbance are known impacts, and are similar to impacts from development of non-renewable energy resources. Roads account for most of the direct, permanent ground disturbance at wind facilities (Lloyd et al., 2022). Mortality from collision with turbine blades is infrequent (Lloyd et al. 2022). Indirect impacts include potential avoidance of tall structures (Pruett et al., 2009), disturbance due to noise (Blickley et al., 2012) and changes in habitat use by female GRSG (LeBeau et al., 2020). Habitat avoidance and changing habitat use may have compounding effects for extremely philopatric (species that return or stay at a particular location) species, such as GRSG. Increased numbers of known and novel predators may also be a concern, although research on changes in predator abundance at wind facilities is limited. Indirect impacts from solar energy development are anecdotal (Gerringer et al., 2022) and mostly unknown. Loss of habitat from clearing sites for solar panel installation is a direct impact, and can include hundreds to thousands of acres, depending on the scale of the solar development. Such direct habitat loss can also increase habitat fragmentation.

Impacts of transmission lines on GRSG vary with topography and habitat suitability. In general, the presence of transmission lines negatively impacted GRSG habitat selection (Gibson et al., 2018, Kohl et al., 2019, Lebeau et al., 2019, Kirol and Fedy 2023), demographic rates (Gibson et al., 2018) and survival rates (Lebeau et al., 2019). Long-term impacts to GRSG or their demographics are unknown. Ravens using powerline poles for perching and nesting significantly affected habitat use in proximity to powerlines out to a distance of 12.5 km in Nevada (Gibson et al. 2018), but lesser distances were reported in other studies (e.g., Boarman and Heinrich 1999, Bui et al. 2010).

The BLM is currently updating the BLM RMPs for solar energy development in the Solar Programmatic Environmental Impact Statement (PEIS). The is updating the BLM's RMPs related to solar energy development In that analysis of impacts the Solar PEIS considers existing management associated with the 2015 GRSG amendments as those direct current GRSG habitat management on BLM- administered lands. However, the Solar PEIS update defers to this GRSG planning effort to decide how solar energy development is conducted in GRSG habitat management areas.

The following range of alternatives allow for renewable energy development that will contribute to meeting administrative objectives while conserving GRSG habitats from known impacts and addressing potential indirect impacts.

Table 21-9, Comparison of Alternatives, Renewable Energy Development and Associated Transmission, presents management by alternative for this management issue.

Table 21-9. Comparison of Alternatives, Renewable Energy Development and Associated Transmission

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Wind and Solar				
• PHMA/IHMA (ID): ○ Except as noted below, PHMA in all states are Exclusion for wind and solar. ○ ID, NV/CA, and OR specify that the exclusion applies to utility scale wind and solar development. ○ WY is Avoidance for wind unless sufficiently demonstrated that development would not result in population declines. ○ WY does not specifically address solar but general surface disturbance limits would exclude solar near leks (0.6 miles) and minimize (e.g., disturbance cap, mitigation) elsewhere in PHMA. ○ ID IHMA is Avoidance for wind and solar. ○ OR is Avoidance for wind and solar in Lake, Harney, and Malheur Counties outside of SFAs. ○ UT includes an Exception for wind outside PHMA but w/in 5 miles of leks inside PHMA.	• PHMA/IHMA (ID): ○ Same as Alt 1, except NV/CA added exception criteria to the closure and UT changed to Avoidance for wind outside PHMA but w/in 5 miles of leks inside PHMA.	• PHMA: ○ All states: Exclusion.	• PHMA: ○ All states: Manage PHMA as exclusion areas for utility scale wind and solar, including testing and development (including all associated infrastructure [e.g., met towers, powerlines]). ○ Manage ID IHMA as exclusion areas within 3.1 miles from active leks (Cook et al., 2023; unless there are justifiable departures – see buffer appendix) and avoidance in the remainder of the IHMA. Infrastructure could be considered only if it can be demonstrated that as proposed or conditioned it would not impair habitat use by GRSG and will meet that the RMP GRSG goal and habitat objective. Additionally, do not allow surface use, occupancy, or placement of utility scale wind and solar facilities and associated infrastructure within one-half mile of PHMA to protect adjacent PHMA from indirect impacts from development in IHMA. Renewable energy decisions in MT/DK include state specific differences. See **Section 2.6.3** for allocations in those offices.	• PHMA: ○ All states except MT/DK: PHMA and IHMA (ID) would be avoidance areas for utility scale wind and solar energy testing and development (including met towers). Development in all states but ID would not be allowed in breeding and nesting habitats, or in limited/high value (e.g., winter, limited mesic) seasonal habitats unless one of the criteria below is met. In ID, development would not be allowed inside lek buffers (ID Buffers Appendix). ▪ The area is determined to be non-habitat or unsuitable, lacks the ecological potential to become marginal or suitable habitat, and does not provide important connectivity between habitat areas (as determined by a GRSG biologist using criteria such as the Habitat Assessment Framework and coordinated with appropriate state authority). The project should be designed to prevent indirect disturbance to or

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	*(See above.)*	disruption of adjacent seasonal habitats. ▪ Topography/areas of non-habitat create an effective barrier to impacts. ▪ Co-location of the proposed authorization with existing disturbance will result in no additional impacts to those already associated with the existing major infrastructure, including indirect disturbance to or disruption of adjacent seasonal habitats. o The remainder of PHMA/IHMA would be avoidance areas for utility scale wind and solar testing and development. Infrastructure could be considered only if it can be demonstrated that as proposed or conditioned (including disturbance cap and mitigation requirements) it would not impair habitat use by GRSG (as determined in coordination with state wildlife agency) and will meet that the RMP GRSG goal and habitat objective. Renewable energy decisions in MT/DK include state specific differences. See **Section 2.6.3** for allocations in those offices.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• GHMA: o CO, MT, ND and OR are Avoidance for wind and solar. o SD is Exclusion for solar in winter habitat and within 1 mile of leks. o SD and NV/CA are Avoidance for wind. o NV/CA and UT are Exclusion for solar but can co-locate with existing disturbances in CA. o ID and WY are open for wind and solar. o UT is open for wind.	• GHMA: o Same as Alt 1, except ID changed applying "RDFs and buffers" in GHMA to applying BMPs and NV/CA added exception criteria to the Avoidance for wind.	Other HMA types are not applicable to this alterative.	• GHMA: o All states: Manage GHMA in all states as avoidance areas for utility scale wind and solar testing and development.: ▪ Do not allow surface use, occupancy, or placement of utility scale wind and solar facilities including transmission facilities within one-half mile of PHMA (or 2 miles in CO) unless adjacent PHMA is protected from indirect impacts from development in GHMA. ▪ Surface use, occupancy, or placement of utility scale wind and solar facilities should be avoided in accordance with the lek buffer recommendations for tall structures in the lek buffer appendix (contained in the 2015 ARMP/ARMPAs) to minimize impacts to breeding birds unless local data suggest a larger buffer is needed. ▪ Surface use, occupancy or placement of utility scale wind and solar facilities should be avoided in limited/high value seasonal habitats and movement corridors between those areas to protect birds moving from	• GHMA (and SHMA in WY): Open with minimization measures and compensatory mitigation, to maintain habitat supporting GRSG populations consistent and concurrent with state agency habitat designations (e.g., restoration, connectivity, seasonal, or other), and to preclude negative impacts to any adjacent PHMA habitats. Renewable energy decisions in MT/DK include state specific differences. See **Section 2.6.3** for allocations in those offices.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	▪ PHMA to use GHMA seasonal habitats. ▪ Work with State and County governments to locate developments in areas of prior disturbance, including areas where invasive vegetation populations are dominant and areas of non-habitat. • Apply compensatory mitigation to offset habitat losses due to direct and indirect impacts (see mitigation section). Renewable energy decisions in MT/DK include state specific differences. See **Section 2.6.3** for allocations in those offices.	*(See above.)*
Major Rights-of-Way (ROWs)				
• PHMA/IHMA (ID): o All states are Avoidance for major ROWs (≥100 kV transmission and ≥24" pipeline). o OR, UT and WY encourage placement of new lines in designated corridors, or collocated with existing disturbance. o Except as noted below, all states are avoidance for smaller ROWs	• PHMA/IHMA (ID): o Same as Alternative 1, except NV/CA added exception criteria to the Avoidance.	• PHMA: o All states: Exclusion for major rights-of-way (≥100 kV transmission and ≥24" pipeline) outside of RMP designated corridors. o Within designated corridors, avoid PHMA, if possible. If not possible, locate major ROWs within designated corridors and compensate for impacts according to the mitigation strategy.	• PHMA/IHMA (ID): o All states (except MT/DK) are Avoidance for major ROWs (≥100 kV transmission and ≥24" pipeline). o Where development cannot be avoided it would not be allowed in breeding and nesting habitats, or in other limiting/high value seasonal habitats unless one of the following criteria is met: ▪ The ROW can be routed through non-habitat/unsuitable (as determined by a GRSG biologist using criteria such as the Habitat Assessment Framework	• PHMA/IHMA (ID): o All states (except MT/DK) are Avoidance for major ROWs (≥100 kV transmission and ≥24" pipeline). o Micro-siting (siting based on local data) is required to avoid placement near active leks or in connectivity corridors between seasonal habitats. o Areas where major ROWs cannot be avoided apply minimization measures (e.g., disturbance cap, seasonal constraints, tall structure limitations, RDFs, nest and perch deterrents, etc.). Residual direct and indirect impacts

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	and coordinated with State wildlife agencies) and lacks the ecological potential to become suitable habitat. ROWS shall not disrupt connectivity between habitat areas and should be designed to prevent indirect disturbance to or disruption of adjacent seasonal habitats (as disclosed in the environmental analysis). ▪ Co-location of the proposed authorization with existing ROW disturbance results in no additional impacts to those already associated with the existing major infrastructure, including construction, indirect disturbance to or disruption of adjacent seasonal habitats. ○ Additionally, where major ROWs cannot be avoided apply minimization measures (e.g., disturbance cap, seasonal constraints, tall structure limitations, RDFs, nest and perch deterrents, etc.). Residual direct and indirect impacts would be mitigated through compensatory mitigation. ○ Micro-siting is required to avoid disrupting connectivity corridors between seasonal habitats.	would be mitigated through compensatory mitigation. ○ Major ROWs that are located inside RMP designated utility/ROW corridors would not need to comply with disturbance cap (at either the HAF fine scale or project level) or compensatory mitigation requirements unless required by State regulations.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
GHMA – substantial variation by state: ○ CO, NV/CA, and OR GHMA are Avoidance for major ROWs. ○ ID and UT GHMA are open to major ROWs subject to minimization measures such as RDFs, and mitigation. ○ WY is open to major ROWs.	GHMA: • Same as Alt 1, except ID changed applying "RDFs and buffers" in GHMA to applying BMPs.	• Other HMA types are not applicable to this alterative.	GHMA: All states except MT/DK: Avoidance within breeding and nesting habitats and other limited seasonal habitats to meet the RMP GRSG goal and habitat objective. Additionally, any ROW should not be placed within one-half mile of PHMA or IHMA unless adjacent PHMA and IHMA are protected from indirect impacts. Outside those areas, open with compensatory mitigation requirements. Major ROW decisions in MT/DK include state specific differences. See **Section 2.6.3** for allocations in those offices.	GHMA (and SHMA in WY): All States except MT/DK: Open with minimization measures and compensatory mitigation, to maintain habitat supporting GRSG populations consistent with state agency habitat designations (e.g., restoration, connectivity, seasonal, or other), and to preclude negative impacts to adjacent PHMA habitats. Major ROW decisions in MT/DK include state specific differences. See **Section 2.6.3** for allocations in those offices.

21.1.9 Minimizing Threats from Predation

GRSG are a prey species and face a suite of non-specialist predators across their range (Hagen 2011, USFWS 2023). Where sagebrush habitats are intact nest success and adult survival rates are high (Hagen 2011), indicating that predators generally do not limit GRSG populations. However, highly fragmented sagebrush landscapes reduce protective cover and often provide subsidies for sustaining abnormally large populations of predators, and the establishment of novel predators (predators not typically found in sagebrush, Coates et al., 2020). One example is the common raven which has experienced population growth across sagebrush ecosystems due to anthropogenic development (Coates et al., 2020, Dinkins et al. 2021, USFWS 2023). Reduction, isolation, and fragmentation of native shrublands increase GRSG nest exposure to ravens (Lyon and Anderson 2003, Bui et al., 2010, Coates and Delehanty 2010), although research has not been able to determine if raven predation contributes to compensatory or additive GRSG mortality (Taylor et al., 2017) in some areas of the GRSG range ravens are now considered a hyperpredator – having an increased population and therefore increased predation impacts due to the availability of multiple anthropogenic subsidies (e.g., food, nesting substrates) within previously undisturbed sagebrush (Coates et al., 2020).

Where sagebrush habitats are diminished by anthropogenic subsidies and disturbances or other ecological disturbance (i.e., wildfire) predator management may be necessary to conserve local at-risk GRSG populations (Hagen 2011, USFWS 2023). The BLM has committed to work with APHIS and local predator management groups as needed. To address habitat concerns associated with increasing predator abundance, the BLM will minimize new infrastructure and other human subsidies associated with permitted activities to conserve intact landscapes and implement RDFs and BMPs to reduce risk where infrastructure is unavoidable. New anthropogenic developments shall consider their influence on increasing predator abundance, and subsequent impacts on GRSG and make appropriate design modifications. Where ravens have been documented as a concern (e.g., densities greater than 0.4 ravens/km^2; Coates et al., 2022), the BLM supports implementation of the strategy outlined by Dettenmaier et al. (2021) and adopted by the U.S. Fish and Wildlife Service (2023).

Table 21-10, Comparison of Alternatives, Minimizing Threats from Predation, presents management by alternative for this management issue.

Table 21-10. Comparison of Alternatives, Minimizing Threats from Predation

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
All states include some language related to reducing opportunities for avian predators (e.g., nest and perch deterrents, considering burying powerlines, etc.), though the location and except varies substantially between states (e.g., some include references in an objective, some in a management action, some in a Required Design Feature or Best Management Practice). NV/CA, UT, and WY include language encouraging coordinating with other partners on predator management issues. NV/CA, OR, UT, and WY include management precluding and/or minimizing subsidies for predators. CO, NV/CA, and UT include language related to habitat management to provide GRSG concealment from predators. UT includes a header section with management that addresses the threats from predation. WY includes management for monitoring predator populations.	Same as Alternative 1, except UT added language addressing corvid nests discovered during habitat treatments.	All states: Manage habitats to maintain, and as needed, restore healthy native vegetation conditions, especially with respect to providing adequate sagebrush, other shrub, and herbaceous vegetation cover on the landscape, to minimize occurrence and effectiveness of predators. The BLM will collaborate with appropriate state agencies, other landowners, federal agencies (e.g., USFWS, APHIS), and tribal governments in their efforts to minimize impacts from predators on GRSG where needs have been documented (e.g., reduced recruitment of GRSG from predation), including providing needed authorizations, to support predator management actions. Prior to implementation of control actions, data must be presented that demonstrates the targeted predators are limiting GRSG populations in a specified area. A strategy for monitoring removal efficacy shall be developed. Where infrastructure associated authorizations and activities in PHMA (and IHMA in Idaho) are not avoidable, apply or request, consistent with applicable law, minimization measures and BMPs to minimize threats from predators shown to pose a threat to GRSG. This includes, but is not	All states: Same as Alternative 3. Additionally, Alternative 4 would apply minimization measures and BMPs to new authorizations and activities in PHMA (and IHMA in Idaho) and GHMA to minimize threats from predators shown to pose a threat to GRSG, consistent with applicable law. This includes, but is not limited to stopping, slowing, and/or discouraging the incursion of new predators, increased levels of predators, or predators expanding into new areas and can be accomplished by including the following: • Avoiding new anthropogenic infrastructure into undisturbed habitats, • Eliminating or minimizing external food resources from anthropogenic sources (e.g., road killed animals, carcass dumps, trash resources from human activities associated with development or recreation). Where avoidance of new infrastructure is not feasible the project proponent shall develop a predator management plan that: o Outlines how the project will be designed to minimize increasing predator abundance,	All states: Same as Alternative 3. Additionally, Alternatives 5 and 6 would apply minimization measures and BMPs to new authorizations and activities in PHMA (and IHMA in Idaho) to minimize threats from predators shown to pose a threat to GRSG, consistent with applicable law. This includes, but is not limited to stopping, slowing, and/or discouraging the incursion of new predators, increased levels of predators, or predators expanding into new areas and can be accomplished by including the following: • Avoiding new anthropogenic infrastructure into undisturbed habitats, • Eliminating or minimizing external food resources from anthropogenic sources (e.g., road killed animals, carcass dumps, trash resources from human activities associated with development or recreation). Where avoidance of new infrastructure is not feasible the AO could require the project proponent to develop a predator management plan that: o Outlines how the project will be designed to minimize increasing predator abundance,

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	limited to stopping, slowing, and/or discouraging the incursion of new predators, increased levels of predators, or predators expanding into new areas and is accomplished : • Precluding new anthropogenic infrastructure if consistent with applicable law and subject to existing authorizations and valid existing rights. Where preclusion is not possible, avoid new anthropogenic infrastructure into undisturbed habitats, • Eliminating or minimizing external food resources from anthropogenic sources (e.g., road killed animals ASAP, carcass dumps, trash resources from human activities associated with development or recreation). Where avoidance of new infrastructure is not feasible the project proponent shall develop a predator management plan that: ○ Outlines how the project will be designed to minimize increasing predator abundance, ○ Details structure design to reduce or eliminate opportunities for raven and raptor perching and nesting (e.g., burying powerlines, locating structures out of line of site of breeding and nesting habitat, using tubular non-branching	○ Details structure design to reduce or eliminate opportunities for raven and raptor perching and nesting (e.g., burying powerlines, locating structures out of line of site of breeding and nesting habitat, using tubular non-branching material for structures, etc.), ○ Identifies predators to remove, with an estimate of predator abundance, • Includes a monitoring strategy to assess efficacy of the predator removal (e.g., number and location of removal) and GRSG population response. and ○ Explains how predator control programs will be developed and coordinated if they become necessary. ○ Is coordinated with the appropriate state agency and other federal agencies (e.g., USFWS, APHIS) as appropriate. • For existing development, reduce opportunities for raven and raptor perching and nesting through measures such as nest/perch deterrents (including regular maintenance).	○ Details structure design to reduce or eliminate opportunities for raven and raptor perching and nesting (e.g., burying powerlines, locating structures out of line of site of breeding and nesting habitat, using tubular non-branching material for structures, etc.), ○ Identifies predators to remove, with an estimate of predator abundance, • Includes a monitoring strategy to assess efficacy of the predator removal (e.g., number and location of removal) and GRSG population response. and ○ Explains how predator control programs will be developed and coordinated if they become necessary. ○ Is coordinated with the appropriate state agency and other federal agencies (e.g., USFWS, APHIS) as appropriate. • For existing development, reduce opportunities for raven and raptor perching and nesting through measures such as nest/perch deterrents (including regular maintenance).

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	○ material for structures, etc.), ○ Identifies predators to remove, with an estimate of predator abundance, • Includes a monitoring strategy to assess efficacy of the predator removal (e.g., number and location of removal) and GRSG population response. and • Explains how predator control programs will be developed and coordinated if they become necessary. • Is coordinated with the appropriate state agency and other federal agencies (e.g., USFWS, APHIS) as appropriate. • For existing development, reduce or prevent opportunities for raven and raptor perching and nesting through measures such as nest/perch deterrents (including a regular maintenance).	*(See above.)*	*(See above.)*

21.1.10 Livestock Grazing

Livestock grazing is the most widespread land use in the sagebrush ecosystem (Knick et al. 2011, Boyd et al. 2014). Well-managed public lands grazing done in accordance with the laws that guide livestock grazing management, (including but not limited to 43 CFR Part 4100, Taylor Grazing Act of 1934, FLPMA, and the Public Rangelands Improvement Act of 1978) and with consideration of local climatic conditions (e.g., drought) can be compatible with GRSG persistence (FWS 2015). In the 2015 USFWS not-warranted determination on GRSG, the agency determined that meeting Land Health Standards, including proper management of livestock numbers, season of grazing and application of adaptive management strategies minimized population level effects on the species (FWS 2015).

On BLM grazing allotments, grazing activities are managed through several mechanisms (permit terms and conditions, allotment management plans, annual pre-turnout authorization meetings, and ongoing monitoring) to ensure that grazing meets or move towards meeting Land Health Standards. Management for meeting land health standards avoids long-term and wide-spread improper grazing will be avoided. Table 3-7 shows that of the allotments with at least 15% PHMA, 5,140 allotments (53% of all allotments) are in Category A, meeting all standards or making significant progress toward meeting the standard, while 1,887 allotments (19% of all allotments) are in Categories B through F, representing different categories of not meeting land health standards. The remainder of the allotments do not have information on evaluations.

In some instances grazing activities may not meet or make significant progress toward meeting Land Health Standards. In such cases, improper grazing (defined as grazing at an intensity or in ways that impair ecosystem functions of the sagebrush ecosystem) can have localized adverse effects to GRSG habitats by altering the composition, productivity and structure of plants resulting in the loss of abundance or quality of GRSG food and cover (Boyd et al., 2014, Fleischner 1994). Improper grazing may also work synergistically with other threats, such as invasive plants and wildfire, increasing impacts from those sources. The USFWS found improper grazing by domestic livestock and free-roaming horses and burros can have negative impacts to sagebrush and GRSG at local scales (USFWS 2015) but previously did not find it was a principal factor affecting the status of the species (USFWS 2010).

Impacts from improper grazing associated with not meeting Land Health Standards are analyzed in **Chapter 4**. Areas experiencing these effects are generally spatially and temporally distinct, and are addressed through implementation-level corrective actions.

Livestock/range management actions were reviewed to determine if they address potential threats to GRSG at the RMP-level of decision-making. Alternatives 1 and 2 include many livestock grazing actions addressed by regulation, policy, or that duplicate actions already in the RMPs. As these actions would be implemented whether included in this amendment or not they are being considered for removal in Alternatives 4, 5, and 6. The actions from Alternatives 1 and 2 are summarized in the table below with the full text included in **Appendix 15**. Alternatives 4, 5, and 6 would focus on the threat to GRSG from improper livestock grazing and relocating or removing actions that are not needed in the RMP to implement.

Table 21-11, Comparison of Alternatives, Livestock Grazing, presents management by alternative for this management issue.

Table 21-11. Comparison of Alternatives, Livestock Grazing

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
There is substantial variation between the various states in the language and actions that address how domestic livestock grazing would be administered in GRSG HMAs. There are some consistent concepts across GRSG range, but there is substantial variability beyond these main concepts, and even in details associated with those main concepts. There are a number of other management actions that some states include that others don't, including addressing issues such as livestock trailing, placement of feed or mineral supplements, language encouraging coordination, prioritization of various other grazing-related actions, or suggestions of what could be considered during implementation of the grazing program in GRSG HMAs. See **Appendix 2** or **Appendix 15** for specific language by state.	All States: Same as Alternative 1, except: • UT: all actions addressing prioritization, or issues addressed through law, regulation or policy were removed, since they are addressed outside the RMP. • WY: clarifications were provided regarding grazing in riparian areas, management of range improvements, and prioritization (removed SFAs). Additionally, clarifications to applying GRSG objectives to land health standards and applying thresholds and responses were made. • ID: areas that met an adaptive management hard trigger would be prioritized for monitoring. Additionally, clarifications to applying the habitat objectives to land health standards were made. • NV/CA: prioritization in SFAs was removed. Additionally, clarifications to applying the habitat objectives to land health standards were made. • OR: Livestock grazing in the 13 key RNAs was returned to language that pre-dated the 2015 amendments. See **Appendix 2** or **Appendix 15** for specific language by state.	All states: Because PHMA would be unavailable for livestock grazing, no overarching livestock grazing objective would be needed.	All states: **Objective RM-1**: Specific to GRSG habitat, manage livestock grazing in a manner that 1) meets or makes progress toward meeting the Land Health Standard for special status species; 2) avoid direct adverse impacts to limiting GRSG habitats from livestock management range improvements; and 3) applies the guideline for grazing administration that addresses "restoring, maintaining, or enhancing habitats of...special status species to promote their conservation" (43 CFR Part 4180.2(e)(9).	All states: **Objective RM-1**: Specific to GRSG habitat, manage livestock grazing in a manner that 1) meets or makes progress toward meeting the Land Health Standard for special status species, and applies the guideline that addresses "restoring, maintaining, or enhancing habitats of...special status species to promote their conservation" (43 CFR Part 4180.2(e)(9) or subsequent changes to regulations or policy).

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
There is substantial variation between the various states in the language and actions that address how domestic livestock grazing would be administered in GRSG HMAs. There are some consistent concepts across GRSG range, including the following concepts in all states, unless noted otherwise: • GRSG management areas are available for livestock grazing, except in OR, where all or portions of 13 key Research Natural Areas (RNAs) would be unavailable, though not every state has a management action that explicitly states that. • Include/adjust permit terms and conditions needed to meet land health standards and GRSG habitat objectives, including suggestions for what the BLM could do on specific allotments if problems were identified. See **Appendix 2** or **Appendix 15** for specific language by state.	Same as Alternative 1, except as summarized under the row for Objective RM-1 above. See **Appendix 2** or **Appendix 15** for specific language by state.	All states: PHMA would be unavailable for livestock grazing.	**Management Action RM-1**: The presence of GRSG HMAs would not affect whether an area is available for livestock grazing; maintain existing areas designated as available or unavailable for livestock grazing. During grazing authorization renewals, Allotment Management Plan development, or other appropriate implementation-level planning, consider adjustments to active AUMs, timing, intensity, duration, and frequency of grazing are completed at the allotment scale based on site-specific conditions to meet or make progress towards meeting Land Health Standard for special status species. Additionally, temporary adjustments of timing, intensity, duration, and frequency of grazing can be made annually to livestock numbers, the number of AUMs, and season of use within the range of the terms and conditions and in accordance with applicable regulations. In managing livestock grazing, consider and apply where appropriate the livestock grazing best management practices and design features in **Appendix 15**.	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
There is substantial variation between the various states in the language and actions that address how domestic livestock grazing would be administered in GRSG HMAs, including addressing issues such as livestock trailing, placement of feed or mineral supplements, language encouraging coordination, prioritization of various other grazing-related actions, or suggestions of what could be considered during implementation of the grazing program in GRSG HMAs. Many actions are not decisions, but lists of items to consider during implementation. There are some consistent concepts across GRSG range, including the following concepts in all states,: • Prioritize monitoring (both field checks and land health assessments) and renewal of grazing in SFAs (as applicable) and PHMAs outside of SFAs. • Include/adjust permit terms and conditions needed to meet land health standards and GRSG habitat objectives, including suggestions for what the BLM could do on specific allotments if problems were identified. See **Appendix 2** or **Appendix 15** for specific language by state.	Same as Alternative 1, except as summarized under the row for Objective RM-1 above. See **Appendix 2** or **Appendix 15** for specific language by state.	Not applicable.	**Management Action RM-2**: (PHMA/IHMA, GHMA) During the land health assessment (LHA) process, use the criteria identified in the Sage-Grouse Habitat Assessment Framework (BLM-TR-6710-1 - Stiver et al. 2015 – as revised) and other BLM approved methodology to provide multiple lines of evidence (which are consistent with BLM Manual 1283) for determining whether vegetation structure, condition, and composition are meeting or making significant progress towards meeting the Land Health Standards (LHS) for BLM special status species – which includes GRSG. referencing appropriate ESD, associated State and Transition Model (STM) and existing ecological condition information. , For GRSG, the standard would generally be met when vegetation conditions provide for suitable or marginal GRSG habitat at the HAF site scale (see **Table 8-1**, **Appendix 8**), based on existing ecological condition, ecological potential, and existing vegetation information. Where the LHS for SSS habitat (including GRSG) is not being met – as indicated by an unsuitable site-scale HAF assessment relative to site potential – and existing livestock grazing is a significant causal factor (43 CFR Part 4180, BLM H-4180-1 or subsequent changes to regulations or policy),	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	adjustments to livestock grazing practices and activities will be made at the authorization, allotment or activity plan level and in accordance with applicable regulations (43 CFR Part 4180.2l or subsequent changes to regulations or policy). Any adjustments to grazing will be made based on current ecological potential according to ESD, associated STM and existing ecological state.	*(See above.)*
All the states include language related to thresholds and responses to address and respond to future conditions in new fully processed permits. The specificity of this language and when it is required varies by state. See **Appendix 2** or **Appendix 15** for specific language by state.	Same as Alternative 1, except as summarized under the row for Objective RM-1 above. See **Appendix 2** or **Appendix 15** for specific language by state.	Not applicable.	**Management Action RM-3:** In PHMA (and IHMA in ID) the NEPA analysis when fully processing grazing authorizations (I.e., permit or lease) shall include at least one alternative that includes specific thresholds and defined responses in the terms and conditions of the grazing authorization in the following circumstances, as workload capacity allows: • Where the special status species standard is not being met, specific to GRSG habitat suitability and current livestock grazing has been identified as a significant causal factor (43 CFR Part 4180, BLM H-4180-1 or subsequent changes to regulations or policy); • In high priority allotments (e.g., based on prioritization from IM 2018-024, as amended or superseded) in PHMA/IHMA; or • When changing grazing management on a grazing authorization (e.g., new season of use, rotation schedule, new	**Management Action RM-3:** In PHMA (and IHMA in ID) the NEPA analysis when fully processed grazing authorizations should consider including at least one alternative that considers specific thresholds and defined responses in the terms and conditions of the grazing authorization, where the special status species standard is not being met, specific to GRSG habitat suitability, and current livestock grazing has been identified as a significant causal factor (43 CFR Part 4180, BLM H-4180-1 or subsequent changes to regulations or policy), as workload capacity and priorities allow. One or more defined responses will allow the authorizing officer to implement adjustments to livestock grazing during the term of the authorization that have already been analyzed in a NEPA document. Thresholds specific to GRSG habitat would be developed to maintain or move

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	livestock type, etc.) to provide an alternative approach if the terms and conditions do not have the desired intent. One or more defined responses will allow the authorizing officer to implement adjustments to livestock grazing during the term of the authorization that have already been analyzed in a NEPA document. Thresholds specific to GRSG habitat will be developed to maintain or move PHMA/IHMA toward providing suitable GRSG habitat (**Table 8-1**, **Appendix 8**), designed to address the site-level HAF indicators that warranted the HAF assessment rating, and consider ecological site potential, and relevant locally specific conditions, and Land Health Standards (43 CFR 4180.2).	PHMA/IHMA toward providing suitable GRSG habitat (**Table 8-1**, **Appendix 8**), and be designed to address the site-level HAF indicators that warranted the HAF assessment rating, and consider ecological site potential, and relevant locally specific conditions, and Land Health Standards (43 CFR Part 4180.2 or subsequent changes to regulations or policy).

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
All states include guidance on how livestock grazing/range management infrastructure projects are addressed. Some states include actions for existing water projects, new water projects, existing non-water projects, and new non-water projects. All generally relate to limiting impacts from new and existing water and structural range improvements, See **Appendix 2** or **Appendix 15** for specific language by state.	Same as Alternative 1, except UT consolidated multiple actions into one, and WY clarified their action.	Not applicable.	**Management Action RM-4 (existing Range Improvement Projects):** During the grazing authorization renewal process, evaluate all existing livestock management range improvements with respect to their effect on GRSG and GRSG habitat. Consider removal or modification of projects that negatively affect GRSG or GRSG habitat. Functional projects needed for management of sensitive species habitat or other sensitive resources should be maintained but consider improving in a manner less impactful to GRSG (See **Appendix 15** for Livestock Grazing Management Best Management Practices and Design Features).	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
All states include guidance on how livestock grazing/range management infrastructure projects are addressed. Some states include actions for existing water projects, new water projects, existing non-water projects, and new non-water projects. All generally relate to limiting impacts from new and existing water and structural range improvements, See **Appendix 2** or **Appendix 15** for specific language by state.	Same as Alternative 1, except UT consolidated multiple actions into one, and WY clarified their action.	Not applicable.	**Management Action RM-5 (new Range Improvement Projects):** Design new range improvement projects (any activity or program relating to rangelands which is designed to improve forage, change vegetative composition, control patterns of use, provide water, stabilize soil and water conditions and provide habitat for livestock and wildlife) to enhance livestock distribution or management and to control the duration, timing and intensity of utilization, including application of new technologies such as virtual fencing. In PHMA, focus authorization of new water developments and structural range improvements (e.g., fences) to projects that have a nominal or incidental effects or that are beneficial to GRSG seasonal habitats. Any new structural range improvements should be placed along existing disturbance corridors or in the least suitable habitat, to the extent practical, and are subject to appropriate design features (**Appendix 15**).	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
All states include a management action related to fences in GRSG habitat management areas, though the level of detail varies state-to-state. See **Appendix 2** or **Appendix 15** for specific language by state.	Same as Alternative 1.	Not applicable.	**Management Action RM-6 (fences):** Identify fences in high-risk areas - especially within 1.2 miles of an active lek (Christiansen 2009; Stevens 2011) - or other areas identified as important seasonal habitats or areas of GRSG concentration (e.g., geophagy sites) in coordination with the state wildlife agency. Evaluate if the fence is needed and/or up to BLM fencing standards (BLM H 1741). If the fence is unnecessary, remove it. If the fence is needed to support management, mark fences (install reflective fence markers) in high risk or important areas (Christiansen 2009; Stevens 2011). Where marking fences does not reduce fence-related GRSG mortality, modify fences. Modification could include re-routing, altering construction materials, drop fencing, or limiting perch potential. New fences within high-risk areas would only be authorized if: • It is consistent with the overall RMP GRSG objective; • Local terrain features shield nearby habitat or reduce the habitat importance; • The fence is constructed to BLM standards and with high visibility markers to reduce GRSG strikes. Monitoring of existing fences to assess mortality risk is recommended in all GRSG habitats.	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
All states include language related to agency considerations if a permittee voluntarily relinquishes a permit or lease. See **Appendix 2** or **Appendix 15** for specific language by state.	Same as Alternative 1.	Not applicable.	**Management Action RM-7:** At the time a permittee or lessee voluntarily relinquishes grazing preference and the associated authorization, the BLM will consider whether to offer the permit for re-authorization to other grazing applicants or if the public lands where that permitted use was authorized shall be used for other resource management objectives. 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 and associated grazing authorization, 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 wildfire or vegetation treatments. Temporary use of reserve common allotments would not be allowed due to drought or overuse of allotments.	Same as Alternative 4.

21.1.11 Wild Horse and Burro Management

Grazing of wild horses and burros results in reduced plant diversity, altered soil characteristics, lower grass cover, lower grass density, fragmented and reduced shrub cover and increased abundance of cheatgrass (Beever et al. 2008, Beever and Brussard 2000, Coates et al. 2021), although impacts vary with elevation, density, and season and duration of use (Beever and Aldridge, 2011). The loss of shrub and grass cover can increase predation risk to nesting GRSG (Connelly et al., 2000). Wild horse and burros also negatively impact important mesic areas that provide GRSG brood-rearing habitats (Beever and Aldridge 2011). Unlike domestic livestock there is little if any direct management of wild horses and burros, such as fencing, lease deferral and pasture rest, potentially exacerbating their impacts on GRSG habitats at local scales. Recent research in Nevada predicted GRSG declines due to habitat alteration and loss from wild horses when appropriate management levels established for wild horse herds are exceeded (Coates et al., 2021). Therefore, management of wild horses and burros at appropriate management levels is a key component for GRSG planning.

At the RMP-level, the BLM identifies wild horse or burro Herd Areas, Herd Management Areas, and Herd Areas not designated as Herd Management Areas. This planning effort considers not designating wild horse and burro Herd Management Areas in areas that overlap PHMA under Alternative 3. Under alternatives 4, 5, and 6, changes focus on the few actions described below, but the rest of existing wild horse and burro actions would be unchanged. See **Appendix 2** for a description of which actions would be unchanged under Alternatives 4, 5 and 6 by state. Defining the appropriate management level (AML) and managing wild horse and burro populations in designated Herd Management Areas to the AML are implementation-level actions rather than RMP-level decisions. Such actions are dependent on local conditions and available resources to manage the populations using the available tools.

Table 21-12, Comparison of Alternatives, Wild Horse and Burro Management, presents management by alternative for this management issue.

Table 21-12. Comparison of Alternatives, Wild Horse and Burro Management

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
All states (where wild horses and burros overlap with GRSG): • Manage wild horse and burro populations within established appropriate management levels (AML). • Incorporate GRSG habitat objectives into wild horse and burro management (e.g., herd management area plans, AML) monitoring, and gather prioritization, with prioritization of such activities in SFAs, then PHMA, then GHMA. • CO, ID, NV/CA, OR, UT: Prioritize gathers in GRSG SFAs and PHMA unless removals are necessary in other areas to address higher priority issues, including herd health impacts.	Same as Alternative 1, except removal of references to SFAs for the states that removed them, and removal of the reference to GHMA in UT, which removed that HMA type under this alternative.	No new wild horse and burro herd management areas would be designated in areas that overlap PHMA. Where there are currently herd management areas, wild horses and burros would be removed. Because there would be no wild horse and burros herd management areas in PHMA, the wild horse and burro objectives and associated management actions associated with GRSG would be removed. These areas will be monitored and any wild horses or burros that re-establish in PHMA will be removed.	Same as Alternative 2, except references to GHMA in Utah would be retained and applied to GHMA as defined under this alternative.	Same as Alternative 4.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
ID, NV/CA, OR, UT, WY: Manage wild horse and burros herd management areas in GRSG habitat within established appropriate management level (AML) ranges to achieve and maintain GRSG habitat objectives. CO: Manage wild horse population levels within established AML.	Same as Alternative 1.	No wild horse and burro herd management areas would be designated in the Herd Areas that overlap PHMA, or portions of the Herd Areas, if the remaining areas outside PHMA could still support herd management areas. In those areas where there are currently herd management areas, wild horses and burros would be removed. Because there would be no wild horse and burros herd management areas in PHMA, the wild horse and burro objectives and associated management actions associated with GRSG would be removed. These areas will be monitored and any wild horses or burros that re-establish in PHMA will be removed	All States: • Manage wild horse and burros herd management areas in GRSG habitat (or portions of the herd management area overlapping or within GRSG habitat) within the low-end of the established AML ranges to achieve and maintain GRSG habitat objectives and achieve or make significant progress towards achieving LHS, considering the full suite of approaches to maintain AML, including temporary fertility control and non-reproducing, or partially non-reproducing herds.	All States: • Manage wild horse and burros herd management areas in GRSG habitat (or portions of the herd management area overlapping or within GRSG habitat) within the established AML ranges to achieve and maintain GRSG habitat objectives and achieve or make significant progress towards achieving LHS, considering the full suite of approaches to maintain AML, including temporary fertility control and non-reproducing, or partially non-reproducing herds.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
ID, NV/CA, OR, UT: In SFA (where applicable) and PHMA outside of SFA, assess and adjust AMLs through the NEPA process within HMAs when wild horses or burros are identified as a significant causal factor in not meeting land health standards, even if current AML is not being exceeded. CO: AML would be prioritized for all BLM HMAs within PHMA based on indicators that address vegetation structure/condition/composition and measurements specific to achieving GRSG habitat objectives. GRSG habitat requirements would be considered, and preference given to GRSG habitat unless site-specific circumstances warrant an exemption. WY: PHMA (core only) management objectives will be considered when evaluating AML.	Same as Alternative 1, except removal of references to SFAs for the states that removed them.	No wild horse and burro herd management areas would be designated in the Herd Areas that overlap PHMA, or portions of the Herd Areas, if the remaining areas outside PHMA could still support herd management areas. In those areas where there are currently herd management areas, wild horses and burros would be removed. Because there would be no wild horse and burros herd management areas in PHMA, the wild horse and burro objectives and associated management actions associated with GRSG would be removed. These areas will be monitored and any wild horses or burros that re-establish in PHMA will be removed	All States: • If GRSG site scale habitat objectives are not being met in PHMA and GHMA (and IHMA in Idaho), evaluate AMLs and adjust if necessary through the NEPA process where wild horse or burro use is identified as significant causal factor to not meeting LHS, or is a factor in the area not meeting the GRSG habitat objectives.	Same as Alternative 4.

21.1.12 Areas of Critical Environmental Concern

Areas of Critical Environmental Concern (ACECs) are designated where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. To be analyzed in the EIS, potential ACECs must be evaluated and determined to meet two evaluation criteria – relevance and importance. The presence of GRSG meets the relevance criteria across the entire range. Importance evaluations considers substantial significance to include special worth, consequence, distinctiveness, or cause for concern. For the importance criteria to be met values must be more than locally significant.

An evaluation of importance for all GRSG habitats was conducted to determine if any habitat within the range of GRSG met the importance criteria. Evaluation criteria included population density (e.g., Doherty et al., 2016), lek and habitat persistence (e.g., Wann et al., 2022, Palmquist et al., 2021, Rigge et al. 2021), genetic uniqueness and connectivity (e.g., Cross et al, 2018, Row et al. 2018, Cross et al. 2023, Oyler-McCance et al., 2022), amount of existing habitat disturbance and habitat quality (e.g., Doherty et al., 2022). Areas identified with the above criteria are analyzed in this EIS to determine if they meet the third FLPMA required: the need for special management to protect and prevent irreparable damage.

The BLM also received multiple nominations for ACEC designations. Each of these nominations were reviewed using the criteria presented by the nominator(s) and the criteria listed above. Nominated areas that met the importance criteria based on the rangewide review listed above and subsequent local evaluations were moved forward for further consideration. Additional details associated with the ACEC evaluation process is available in **Appendix 5**. These evaluations will be updated and finalized following the public comment period.

ACEC designations are only presented for Alternatives 3 and 6. Management allocations within potential ACECs is targeted at maintaining the importance value for which they would be designated, which varied across the range of GRSG.

Table 21-13, Comparison of Alternatives, ACEC Management, presents management by alternative for this management issue.

Table 21-13. Comparison of Alternatives, ACEC Management

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
No new ACECs specific to management of GRSG were designated as part of the 2015 planning effort.	No new ACECs specific to management of GRSG were designated as part of the 2019 planning effort.	ACECs specific to the management of GRSG would be designated (Refer to **Map 2.3** and **state-specific ACEC** maps in **Appendix 5. Also** refer to **Appendix 5** for additional ACEC information and analysis). **Colorado:** Case Flats – 4,547 acres **Idaho:** Owyhee – 653,199 acres Shoshone Basin – 244, 935 acres Camas-Laidlaw – 457,724 acres Big Desert – 333,528 acres **Montana**: South Valley Phillips – 615,888 acres Carter Crook – 110,162 acres **Nevada/California**: Warm Springs – 89,539 acres North Fork O'Neil – 937,512 acres Grass-Kobeh Valley – 852,979 acres South Fork Dixie Flats – 122,395 acres Idaho Border – 49,019 acres Hays Canyon – 340,850 acres Vya-Massacre – 239,677 acres Montana Mountain – 314,370 acres Butte Long Valley – 606,293 acres Eureka North and South – 66,905 acres Monitor Valley – 173,507 acres Reese River – 85,000 acres Utah Border – 58,650 acres Buffalo Skedaddle – 182,213 acres Owyhee East - 487,122 acres Owyhee West - 704,650 acres **Oregon**: None identified. **Utah**: Rich – 132,924 acres Box Elder – 232,258	No new ACECs specific to management of GRSG would be designated.	Same as Alternative 4.	ACECs specific to the management of GRSG would be designated (Refer to **Map 2.3** and **state-specific ACEC** maps in **Appendix 5. Also** refer to **Appendix 5** for additional ACEC information and analysis). **Colorado:** Case Flats – 4,547 acres **Idaho:** Owyhee – 653,199 acres Shoshone Basin – 244, 935 acres Camas-Laidlaw – 457,724 acres Big Desert – 333,528 acres **Montana**: South Valley Phillips – 615,888 acres Carter Crook – 110,162 acres **Nevada/California**: Warm Springs – 89,539 acres North Fork O'Neil – 937,512 acres Grass-Kobeh Valley – 852,979 acres South Fork Dixie Flats – 122,395 acres Idaho Border – 49,019 acres Hays Canyon – 340,850 acres Vya-Massacre – 239,677 acres Montana Mountain – 314,370 acres Butte Long Valley – 606,293 acres Eureka North and South – 66,905 acres Monitor Valley – 173,507 acres Reese River – 85,000 acres Utah Border – 58,650 acres Buffalo Skedaddle – 182,213 acres Owyhee East - 487,122 acres Owyhee West - 704,650 acres **Oregon**: None identified. **Utah**: Rich – 132,924 acres Box Elder – 232,258

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
(See above.)	*(See above.)*	**Wyoming**: Golden Triangle/Little Sandy – 272,557 acres Carter-Crook (border w/MT) – 19,400 acres Sagebrush Focal Areas in South Central and Southwestern Wyoming – 33,166 acres Greater South Pass and Upper Green River Basin – 311,229 acres Under Alternative 3, the ACECs would have the same allocations as the rest of PHMA: • Locatable minerals –The BLM recommends all PHMA for withdrawal from location and entry under the Mining Law of 1872. The portion of the PHMA that is within the SFA boundaries from 2015 is already being analyzed for withdrawal in a separate NEPA document. Lands recommended for withdrawal would remain open for mineral location and entry under the Mining Law of 1872 unless and until the Secretary of the Interior withdraws them. In addition, In designated ACECs operators must submit a plan of operations and obtain BLM approval before beginning any operations causing surface disturbance greater than casual use (as defined in 43 CFR Part 3809.5). (see 43 CFR Part 3809.11(c)(3)). • Fluid minerals (including geothermal) – Closed to leasing • Non-Energy minerals – Closed to leasing • Saleable Minerals/Mineral Materials – Closed to saleable mineral sale/development, including sand and gravel and other common variety minerals. • Major ROWs – Exclusion area for major ROWs.	*(See above.)*	*(See above.)*	**Wyoming**: Golden Triangle/Little Sandy – 272,557 acres Carter-Crook (border w/MT) – 19,400 acres Sagebrush Focal Areas in South Central and Southwestern Wyoming – 33,166 acres Greater South Pass and Upper Green River Basin – 311,229 acres In addition to the management of the GRSG habitat management areas described in Alternative 5, apply the following management in the potential ACECs: • Locatable minerals –Available for mineral location. Based on federal regulations (43 CFR 3809.11(c)(3)), within In designated ACECs operators must submit a plan of operations and obtain BLM approval before beginning any operations causing surface disturbance greater than casual use (as defined in 43 CFR Part 3809.5). (see 43 CFR Part 3809.11(c)(3)). • Fluid minerals (including geothermal) – Open to leasing subject to major constraints (no surface occupancy stipulation). An exception could be considered to allow surface occupancy only if the criteria described under the NSO Exception #1 are met, but applicable to the entire ACEC area, not just in areas near to the lek(s) (see WEMs language). • Non-Energy minerals – Closed to new leases and expansion associated with existing operations (e.g., fringe leases).

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
(See above.)	*(See above.)*	• Wind – Exclusion • Solar – Exclusion All management not included above would be same as described for PHMA.	*(See above.)*	*(See above.)*	• Saleable Minerals/Mineral Materials – Closed to new operations for all sale types except for free-use pits in order to support maintenance needs for existing local roads to ensure public safety. Even in these instances, new pits should avoid the ACEC; if avoidance is not possible, they would need to apply the minimization measures identified for PHMA (e.g., disturbance cap, noise reduction, seasonal limitations, etc.). • Major ROWs – Exclusion to major ROWs (≥100 kV transmission lines and ≥24" pipelines). Minor ROWs would be avoidance. Designated RMP ROW corridors in the ACECs would be open for new ROWs, but new ROWs within the corridor would require compensatory mitigation to offset direct and indirect impacts of the development. • Wind – Exclusion • Solar – Exclusion • No exceptions to the disturbance cap otherwise available in PHMA. All management not included above would be same as described for PHMA.

21.1.13 Adaptive Management

Implementing adaptive management can address unanticipated negative impacts to GRSG and its habitat before consequences become severe or irreversible. Adaptive management was identified by the U.S. Fish and Wildlife Service (FWS) as a key component of BLM land use plans "…to help ensure that implementation of allocative decisions and limitations on disturbance are effective at conserving sage-grouse and their habitats, and mitigation provisions where disturbance cannot be avoided. Like monitoring, adaptive management is a key element of complex long-term conservation strategies, particularly where there is uncertainty" (FWS, 2015).

Establishing thresholds for adaptive management is essential to identify when potential management changes are needed to continue meeting GRSG conservation objectives. "Soft" thresholds are indicators that management or specific activities may not be achieving the intended results of conservation actions or that unanticipated changes have occurred that have the potential to place habitats or populations at risk. "Hard" thresholds are indicators that management for species conservation is likely not achieving desired conservation results. Adaptive management thresholds are not specific to any one project, but rather identify anomalies in habitat and/or population status. For this planning effort adaptive management responses are directed to addressing habitat concerns on BLM lands and are limited to PHMA (and IHMA in Idaho) even though data are collected across the entire species' range. Local responses to thresholds reached in GHMA can be considered if deemed necessary by the BLM and the appropriate state agency.

Sagebrush habitat fragmentation, loss and disturbance have been identified as the primary influences on GRSG population trends (Knick and Hanser, 2011). GRSG population trends can provide valuable information about habitat conditions on BLM lands. Both the BLM and the States have a responsibility to use the best available information for assessing whether a habitat and/or population threshold (as described below) has been met, and to work together to address causes.

To accurately assess any anomalies or thresholds being met, and any necessary responses, monitoring of habitat and population trend should be conducted at the same scale. The BLM will use neighborhood clusters identified by USGS (Coates et al., 2021) to track habitat conditions, the same spatial scale used by USGS for population trend analyses. A neighborhood cluster generally represents a GRSG population unit and includes local aggregations of leks and seasonal habitats used by birds attending those leks based on state wildlife agency and research data. Habitat trends can also be monitored at smaller scales (e.g., lek level) as identified by state wildlife agency plans for GRSG, or at larger scales if local GRSG populations are known to consistently range outside of neighborhood clusters. (Note: Monitoring habitat for adaptive management purposes does not preclude the need to track habitat losses for conformance with the anthropogenic disturbance caps).

To assess sagebrush habitat availability, the BLM will use geospatial data, updated at a minimum biennially (e.g., RCMAP, LandFire, and multiple geospatial data sources for habitat degradation; see 2023 Monitoring Framework, **Appendix 7**). Additional data collected through the Habitat Assessment Framework (HAF) – a multi-scale assessment tool that provides data to evaluate sagebrush habitats for GRSG suitability (Stiver et al., 2015 and subsequent updates) may also be considered where available. HAF data can inform pre-existing habitat conditions and threshold analyses. Habitat baselines will be determined using geospatial data layers updated in the year prior to threshold assessment.

State wildlife agencies have primacy over GRSG populations and collect data essential for estimating population trends. Population data collected by States are important to the BLM for effective management of the species habitat. Population monitoring methods in previous adaptive management strategies varied

by state, and the metrics to measure trends varied widely. In most instances methods used were inadequate to establish when an anomaly in population trends could be linked to habitat management actions. Further, results were not comparable across political boundaries, creating challenges in determining effective habitat management responses and applying differential management to projects crossing state boundaries. Finally, none of the previous methods identified where habitat concerns, and not climatic conditions were contributing to trends.

The BLM's use of a population threshold as a proxy for habitat condition does not supersede the responsibility of the state for monitoring populations and identifying population areas of concern. The BLM must consider all available information regarding population threshold status. This includes state wildlife agency population trend analyses and annual population trend results published using the Hierarchical Population Monitoring Framework (currently the Targeted Annual Warning System procedures [TAWS]; Coates et al., 2021) or subsequent updates or revisions which provides a consistent and objective range-wide tool incorporating state lek count data and is able to identify if habitat conditions, not climatic conditions, are likely influencing populations. This model was developed with the cooperation of state wildlife agencies to provide an objective and consistent tool to alert land managers to potential habitat issues affecting population trends anywhere within the range of the species. The BLM will additionally use results from population trend analyses provided by state wildlife agencies in determining if habitat concerns may be affecting populations. If a soft or hard population trend threshold is identified by either source, the BLM will coordinate with the state wildlife agency to verify the trend as the first step in an initial causal factor analysis (see below).

Table 21-14, Comparison of Alternatives, Adaptive Management, presents management by alternative for this management issue.

Table 21-14. Comparison of Alternatives, Adaptive Management

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Every state has an adaptive management process. All the states include language to the effect of the following: • While there should be no expectation of hitting a hard trigger, if unforeseen circumstances were to occur that trip either a habitat or population hard trigger, more restrictive management would be required. • Hard triggers represent a threshold indicating that immediate action is necessary to stop a severe deviation from GRSG conservation objectives set forth in the BLM plans. • The BLM will also undertake any appropriate plan amendments or revision if necessary. While the adaptive management concept and the potential for changes in management are consistent across the GRSG range, there is no consistency in the specific triggers between states or the strategies associated with responding to those triggers. The metrics, thresholds, and timeframes and spatial scales vary state by state, as does the level of detail that explains each of these. Similarly, the responses associated with adaptive management triggers varies by state, with some prescribing specific actions and others identifying teams to develop a response.	Same as Alternative 1, though some states applied strategies to improve the process based on lessons learned during implementation between 2015 and 2019. This included the addition of "un-triggers" in some states, to allow management to return to what was in the RMP amendments if conditions improved, requiring timeframes for determining the cause of the trigger being met, or clarifying what management changes would apply. The differences between the states persisted, creating challenges for comparing range-wide trends by using adaptive management triggers, as well as identifying and addressing concerns in populations that cross state lines.	Habitat Adaptive Management Thresholds: • A soft habitat threshold is met when any single occurrence or combination of occurrences in PHMA/IHMA in a neighborhood cluster result in the loss of more than 5% of the area capable of supporting sagebrush in a given year (including wildfire). Where a neighbor cluster overlaps with more than one habitat designation (e.g., PHMA and GHMA) the percent habitat loss will be calculated on the PHMA/IHMA only. Baselines for calculating sagebrush loss will be determined by the sagebrush base layer delineated using LandFire data (detailed in **Appendix 7**) and from the most recent year prior to publication of the RODs. • A hard habitat threshold will be met when existing sagebrush extent, as described in the first bullet, within a neighborhood cluster drops below 65% of the area capable of supporting sagebrush (Aldridge et al., 2008; Connelly et al., 2000). • A hard habitat threshold will also be met if a soft habitat threshold is met in 4 consecutive years (≥5% decline in each of 4 consecutive years). A hard or soft habitat threshold can be reversed if restoration of sagebrush vegetation communities within the neighborhood cluster returns to the sagebrush conditions and/or habitat function prior to the events that resulted in meeting a habitat threshold. If the neighborhood cluster cannot be restored to original sagebrush conditions and/or habitat function due to ecological or disturbance limitations (e.g., intense fire killed soil microfauna, dense anthropogenic activities) restoration and/or habitat enhancement in adjacent neighborhood clusters can be considered to increase the number of GRSG supported in those areas. This will be done in coordination with appropriate state agencies. If enhancing habitats in adjacent areas does not reverse the threshold, and further assessment may be necessary to determine if the area in which the habitat threshold was met should still be considered GRSG habitat.		

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Population triggers vary by state. See **Appendix 2**, Existing GRSG Management, for specifics.	Population triggers vary by state. See **Appendix 2**, Existing GRSG Management, for specifics.	Population Trend Adaptive Management Thresholds: State wildlife agencies can alert the BLM when population thresholds (soft or hard) are met to initiate a causal factor analysis. The BLM will also review the annual results of TAWS in determining if population trends indicate potential habitat concerns. All population thresholds identified by TAWS will be confirmed with the state wildlife agency within 60 days (preferably less) of being identified at the neighborhood cluster scale by the model. If the state wildlife agency determines the TAWS model was in error, the data supporting reversal of the threshold will be documented. If there is disagreement in the analyses, BLM and the state will work together to identify the source of the error (in either agency's analysis). Interpretation of TAWS model results will be as follows: • A soft population trend threshold is equivalent to a TAWS watch (a 2 consecutive year, negative rate of population change at the neighborhood cluster that shows a population decline that is either different or more rapid than that of the associated climate cluster; Coates et al., 2021). • A hard population trend threshold is equivalent to a TAWS warning (a 2 out of 3 (fast) or 3 out of 4 (slow) consecutive year negative rate of population change at the neighborhood cluster that is either different or more rapid than those of the associated climate cluster; Coates et al., 2021). A hard or soft population trend threshold can be reversed if the following criteria are met: • Population trends at the neighborhood cluster trend realigns with the climate cluster trend as indicated by the TAWS model (i.e., no longer a TAWS "watch" or "warning"); OR • There are sufficient numbers of GRSG (abundance) to allow for recovery of population numbers to those present at or before the threshold was met, based on local growth rates determined by the state wildlife management agency, and BLM has the concurrence of the state wildlife management agency; OR • The state wildlife management agency can demonstrate the TAWS model incorrectly identified a watch or warning. If a habitat or population threshold is met the BLM, along with state wildlife management personnel and other stakeholders with		Same as Alternatives 3 and 4 except new authorizations can be considered during the rapid assessment period. Project level NEPA will specifically evaluate if any new permitted activity could contribute to any cause identified during the rapid assessment.

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	knowledge of local conditions will initiate an assessment as soon as alerted to a threshold being hit to determine the causal factor(s). Causal Factor Analysis (CFA) teams will include at a minimum the local BLM biologist, BLM state sage-grouse lead, and a representative from the state wildlife agency. Additional subject matter experts and other affected parties can be added as necessary for individual site-specific analyses. Causal factor analyses will occur within the time periods described below and will be used to inform the adaptive management response, if needed. The analysis shall be detailed in a written report that includes descriptions of existing land uses, landownership patterns, history of population and habitat trends in the area, condition of the habitat, cause(s) of habitat and/or population decline, recommendations of management actions to address the potential causes of decline, and the data and expertise used to reach conclusions presented in the report. The report will be submitted to the local BLM manager, the BLM state sage-grouse lead in the state(s) the threshold was met, and the BLM national sage-grouse coordinator as well as all members on the CFA team as soon as the analyses are complete. An annual review of habitat and population information between the BLM and associated state wildlife agency is encouraged even if no thresholds are identified.		*(See above.)*
Habitat and population adaptive trigger responses vary by state. See **Appendix 2**, Existing GRSG Management, for specifics.	Habitat and population adaptive trigger responses vary by state. See **Appendix 2**, Existing GRSG Management, for specifics.	Adaptive Management Responses: When any adaptive management threshold is met, (and population thresholds confirmed with the state wildlife agency) a rapid assessment to identify "obvious" causes will be completed within 60 days (or less). Obvious causes are those easily identified such as a large wildfire. If the rapid assessment identifies the cause, a formal CFA will not be needed. No new permitted activities will be authorized until the rapid assessment is completed and documented. Existing permitted activities can continue unless those activities are causing mortality to GRSG or direct loss or degradation of occupied GRSG habitat. If an obvious causal factor cannot be identified in the rapid assessment, a l CFA to identify potential causes of the adaptive management threshold being met will be completed within 6 months of the rapid assessment. If a soft threshold is met, new permitted activities can be considered during the completion of the CFA as long as those activities do not result in mortality of GRSG or GRSG habitat loss and degradation. However, if a soft threshold is met and the CFA is not completed within the above time frame, no new permitted activities will be authorized until a CFA is completed, as legally allowed. New		—

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	authorizations, or reauthorization of existing permits can then be considered if similar activities were not contributing to factors resulting in meeting either a population or habitat threshold. Project level NEPA will specifically evaluate if the new permitted activity could result in the threshold being sustained or met again. If a hard threshold is met no new proposed permitted activities will be authorized until a CFA is completed. Project level NEPA will then specifically evaluate if the new permitted activity could result in additional or cumulative impacts to GRSG. The CFA team can alter the level of the threshold met (soft to hard, or hard to soft) based on their review and if supported by local data. For example, habitat loss of 5 percent results in a soft threshold, but if the loss is of limited crucial habitat (e.g., the only winter or mesic habitat in the neighborhood cluster) the CFA team can request hard threshold management responses be implemented. Similarly, a local assessment of habitat loss meeting a hard threshold may be reversed if the loss is of marginal areas, or areas documented as not supporting GRSG. These threshold reversals must be supported by data and fully detailed in a written report. Final determination of the reversal will be made by the authorizing officer, in consultation with the local CFA team. The CFA team can expand the analysis and management response to adjacent neighborhood clusters based on their review. For example, migratory populations that utilize multiple neighborhood clusters may require increased protection during other seasonal habitats and use areas to reverse population declines. If the CFA identifies the cause for habitat or population declines BLM will modify any permitted activity identified as a causal factor to meeting a threshold, as legally allowable, on BLM lands in coordination with the permit holder. Monitoring of the affected habitat or population (or both if appropriate) will be necessary to assess the efficacy of the modification. For new authorizations project level NEPA will specifically evaluate if the proposed new activity could result in contributing to sustaining the threshold or result in the threshold being met again. New authorizations may be limited to restrictions identified in Alts. 3 or 4 for the specific resource, as determined necessary by local information.		*(See above.)*

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6

(See above.)	*(See above.)*	Exceptions to limitations imposed for exceeding thresholds include:
		• Renewal of existing activities that require a permit if:
		  ○ The activity is scheduled within 60 days of when a threshold is met and identified, and
		  ○ The project proponent can show significant negative economic impacts (i.e., documented loss of income equivalent to the income potential of the event), and The renewal can only be considered if it does not result in known impacts to habitats or populations.
		• Activities essential for human health and safety in a current or likely catastrophic event (e.g., repair of dams, emergency vehicle access).
		• ES&R activities essential to restoration after a wildfire.
		• Grazing permits that will expire within the same year the threshold is identified. A permit or lease to extend the current grazing practice for less than 10 years may be renewed until the causal factor analysis is completed. If grazing is not determined as a causal factor to an adaptive management threshold, grazing permit or lease renewal can proceed normally. If grazing is a contributing cause to an adaptive management threshold, the terms and conditions of the grazing permit or lease will need to be examined and based on the outcome, would need to appropriately be modified to reduce or eliminate the impact.
		• Continuing the terms and conditions for livestock grazing when a permit or lease has expired or was terminated due to a grazing preference transfer in accordance with Section 402(c)(2) of the FLPMA as amended by Public Law No. 113-291.
		
		BLM will work with proponents identified in the above exceptions to reduce potential impacts on GRSG habitats.
		
		If the neighborhood cluster in which a population trend threshold is met is 50% or greater GHMA, lek level threshold TAWS analyses should be conducted to determine which leks are contributing to the trend deviation. If meeting the threshold is the result of lek attendance declines entirely within GHMA new permits can be considered prior to completing a CFA if that activity is not in conflict with any GHMA designation identified by the state wildlife agency (restoration, connectivity, seasonal, or other), and if that
				(See above.)

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	activity will not negatively impact habitats or populations in the adjacent PHMA. If a reduction in the ability for the habitat to support GRSG occurs as a result of habitat impacts, additional restrictions may be necessary to preclude further habitat losses. Local responses to thresholds in GHMA can be considered if deemed necessary by the BLM and the appropriate state agency. A similar analysis will be conducted if a neighborhood cluster covers mixed landownerships. The lek level cluster will determine the landownership that is contributing to the threshold. If the threshold is the result of habitat conditions on non-BLM administered lands, new authorizations can be considered if the activity will not negatively impact habitats or populations in the adjacent lands or contribute to indirect or cumulative impacts. The restrictions from meeting soft or hard habitat or population trend thresholds will be removed once the criteria for reversing the threshold, described above are met.		*(See above.)*
Habitat triggers vary by state. See **Appendix 2**, Existing GRSG Management, for specifics.	Habitat triggers vary by state. See **Appendix 2**, Existing GRSG Management, for specifics.	Habitat Threshold due to Wildfire: An assessment of impact on affected GRSG habitat will be conducted within 60 days (or less) by BLM staff and appropriate state agency personnel of the event to determine the actual extent of habitat loss (which can include an assessment of burn severity – did the wildfire burn hot enough to kill the sagebrush) within the wildfire perimeter. This will be done in addition to any BLM ESR review. No new discretionary authorizations that would result in additional habitat loss within PHMA or IHMA in affected neighborhood clusters will be authorized until the assessment of habitat impacted is completed (this can include the initial 60-day rapid assessment if the results indicate the threshold can be reversed). If the assessment indicates wildfire severity is such that habitat services (the ability of the area to provide food, cover, water, and connectivity at the time just prior to the wildfire) for GRSG within the wildfire perimeter remain and the area can support the same abundance of GRSG that was present prior to the wildfire the threshold will be considered reversed. If habitat assessment determines the PHMA (and IHMA) influenced by the wildfire can no longer support GRSG populations at levels prior to the wildfire, new infrastructure projects or permits may be deferred if consistent with applicable law (such as the Mining Law of 1872), and valid existing rights until an assessment demonstrates the habitat can support GRSG at the levels that existed prior to the wildfire event have been restored. Authorizations may be considered if the proposed project will have no direct or indirect impact to GRSG or their habitats. The associated determination must be documented in a report to the BLM state sage-grouse lead, the BLM state director and the National BLM GRSG coordinator. If the wildfire event precludes restoration to GRSG habitat permanently, further assessment may be necessary to determine if the area in should still be considered GRSG habitat.		

Summary of Alternative 1	Summary of Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
No similar action.	No similar action.	Inconclusive CFAs: If no cause for a habitat or population decline can be determined the BLM may consider implementing additional restrictions on existing or new authorizations in the area, consistent with permits/surface use rights in coordination with the permit holder and the state wildlife management agency. This is to reduce disturbance until either a causal factor can be determined through additional monitoring and analyses, or the population declines cease. The state wildlife agency can provide data that supports limiting these potential restrictions made solely on population threshold data (vs. habitat data) if they can demonstrate the population analyses are incorrect. New authorizations must disclose a threshold has been met and consider the proposed activity's potential cumulative impact to either the habitat or population trend (dependent on which threshold has been met). Any restrictions will be determined by the authorizing officer, with the documented biological rationale from BLM field biologists. Any disagreement between BLM staff will be elevated to the BLM State Director for resolution. New permits in an area where the CFA is inconclusive cannot be authorized until the full CFA analyses is completed and reports submitted.		

21.2 STATE-SPECIFIC CIRCUMSTANCES

Though this EIS is range-wide in its scope, there are also state-specific circumstances that will be considered. Such state specific circumstances may warrant consideration at the state level rather than at a range wide level. This could include the following:

- Differences in management tools or approaches specific to a given state – such as Research Natural Areas present in Oregon, Important Habitat Management Areas in Idaho, or Restoration Habitat Management Areas in Montana. These tools are limited to those given states, and adjustments to their management, if considered, would only be applicable in those states.
- Ecological and topographic differences such as the differences between the sweeping prairies of eastern Montana and Wyoming compared to the basin and range of the Great Basin, or the high mountain valleys in Idaho and Utah, or the areas with substantial differences in elevation and vegetation associated with the plateaus associated with the Colorado Plateau in Utah and Colorado.
- Different management situations in different states such as the presence of state-run management tools such as mitigation banks, regulatory state plans, etc.

Issues or management differences between states are not based on preference, but rather on specific circumstances that fall into the above categories. And are focused on issues, topics, and actions that would help meet the purpose and need of improving GRSG conservation. Through the alternative development process all states identified at least one state-specific circumstance. However consideration of non-habitat in the habitat management areas during implementation identified by one state became a cross-cutting topic after discussion with agency staff and cooperating agencies. The following sections present the alternatives associated with state-specific circumstances.

21.2.1 Colorado

Most state-specific circumstances in Colorado are a result of different planning approaches in the 2015 and 2019 NWCO GRSG ARMPAs (plans). The BLM will also clarify management decisions that have been unclear since implementation of the 2015 plan.

Colorado has variable topography leading to naturally fragmented habitats, affecting ecology and plant communities, and therefore differences between GRSG population areas. Significant elevational changes may fall within standard lek buffer distances in some Colorado GRSG populations (e.g., Parachute Piceance Roan (PPR) population). Colorado typically does not see large wildfires in sagebrush ecosystems or conversion to agriculture to the same degree as other states.

Prior to the current planning process, the BLM and the State of Colorado adopted refined habitat management area maps. The multi-year (2016-2019), collaborative mapping process refined previously mapped areas to remove non-habitat in habitat management areas or expand areas with documented GRSG use. The re-mapping effort incorporated state-specific, timely research and mapping tools. See **Appendix 3** for a summary of the Colorado habitat management area mapping strategy. The state specific circumstances for the State of Colorado being addressed in this effort include the following: 1) management scale, 2) application and use of lek buffers, 3) consistency across resource uses, and 4) integration of lessons learned during implementation.

Management Scale

Colorado manages populations and sub-populations by Management Zone (MZ) which are biologically driven units delineated by GRSG use, topographic and other natural features, differences in ecological potential, and differences in issues affecting GRSG (Colorado Greater Sage-grouse Steering Committee 2008). The BLM uses the CO MZs to calculate project-scale disturbance and density caps rather than the density and disturbance methodology used by many other states. The MZs are geographically consistent with the areas used by Colorado Parks and Wildlife (CPW) but have different numbering (e.g.- BLM MZ 2 is the same area as CPW MZ 1). For ease of communication, the BLM intends to adjust the MZ numbering during this planning effort to be more consistent with the CPW naming convention.

Lek Buffers

Clarification of Lek Activity Periods

The BLM will clarify the activity period for the leks being included in management allocations and decisions. Both the 2015 and 2019 plans included allocations and management decisions based on the distance from "active" leks using CPW's definition, which is an area used by two or more displaying males in two of the last five years in larger populations and one or more males in any of the last five years in small populations (Colorado Greater Sage-grouse Steering Committee 2008). There are inconsistencies between the CPW definition and the WAFWA definition, which describes an active lek as a lek that has 2 or more males counted during two or more years within the last 10 years (Cook et al. 2022, Connelly et al. 2000). Because GRSG populations generally follow 9- to 10-year population cycles (Rich 1985, Fedy and Aldridge 2011, Fedy and Doherty 2011), the BLM will use a lek definition that better captures the fluctuation of population dynamics. The BLM will analyze use of the "occupied" lek definition from the 2015 and 2019 plans, which is defined as a lek that has been active during at least one strutting season within the past 10 years. CPW concurs with the approach.

The clarification of lek activity periods results in an increase to the amount of BLM-managed lands within the corresponding buffer distances. According to the Colorado 2022 lek count data from CPW, 276 leks are classified as active using the 5-year activity timeframe. The total number of leks with activity in the last 10 years increases to 445 leks. Using the 2015 and 2019 plan definitions, approximately 571,375 acres of BLM-managed lands were within 1-mile of an active lek (CPW, 5-year timeframe). With the clarification, approximately 811,215 acres are within 1-mile of an occupied lek, representing a 42% increase in BLM-managed lands that are subject to more intensive management decisions for the protection of leks, nesting, and early brood-rearing habitat.

Distance of Buffer

In the 2015 plan, fluid mineral leasing was closed within 1-mile of an active lek compared to a 0.6 mile. In coordination with CPW, the BLM increased the previous stipulation area (i.e.- 0.6-mile buffer NSO) to a 1-mile closure to provide protection for leks and nesting and early brood rearing habitat in the closest proximity to leks. The 2019 plan amended the decision from a 1-mile closure to a 1-mile NSO with a different set of waiver, exception, and modification (WEM) criteria than the rest of PHMA (also NSO) but maintained the 1-mile closure around an active lek. The 1-mile standard was subsequently incorporated into the State of Colorado oil & gas regulations (CO Code § 34-60-101, 2022). The BLM will analyze the 1-mile lek buffer distance as the minimum threshold in Colorado under Alternatives 1 and 2 (No Action alternatives), and 5.

Allocations/Management Decisions within 1-mile Buffer

The 2019 plan amended the decision from a 1-mile closure to a 1-mile NSO with a different set of WEM criteria than the rest of PHMA (also NSO). To reconcile the difference between the 2015 and 2019 plans, the BLM will analyze PHMA as being open to fluid mineral leasing subject to NSO. WEMs will include additional criteria within 1-mile of occupied leks rather than being limited to active (CPW) leks. This clarification would allow for PHMA to remain NSO with the distinction of more intensive management within 1-mile of a lek requiring the use of one NSO stipulation.

Allocations for GHMA

In the 2015 and 2019 plans, Colorado included a NSO stipulation within 2-miles of active leks in GHMA. Because of the lek status clarification above, the BLM will analyze the change between an NSO around active leks versus occupied leks in Alternative 4. The BLM will also analyze using a Controlled Surface Use (CSU) stipulation within 2-miles of occupied leks in Alternative 5 and a CSU within 1-mile of PHMA in Alternative 6 instead of the NSO to assess the impacts of different stipulation types.

CSU stipulations are applied at the leasing phase and allow the BLM to carefully consider site-specific factors during implementation that provide the appropriate level of protection and restrictions. Common CSU measures include relocating operations by more than 200 meters (656 ft) or deferring the action for more than 60 days to avoid or minimize impacts.

Alternative 4 would increase the acreage of GHMA with NSO stipulations compared to Alternatives 1 and 2. Under Alternative 5, the same amount of acreage under major stipulation (NSO) in Alternative 4 would be under moderate stipulation (CSU). Alternative 5 would allow for more flexibility in development while maintaining the BLM's ability to apply site-specific criteria for GRSG habitat protection. Alternative 6 also analyzes CSU stipulations but would be applied in GHMA within 1 mile of PHMA. This would allow for increased flexibility while allowing the BLM to consider the indirect effects that development in GHMA may have on all PHMA, not just where leks occur.

Consistency Across Resources

The BLM will analyze use of more consistent criteria for management actions such as fluid mineral permitting and ROW authorizations. Many fluid mineral permits include both an Application for Permit to Drill (APD) and a ROW (e.g.- an access road to a well pad begins off-lease and crosses on-lease). Under the 2015 and 2019 plans, the authorization would be subject to two varying sets of siting criteria. By using consistent criteria, the BLM intends to ease plan conformance and coordination across resource uses.

Lessons Learned

The BLM is including clarifications to several management decisions because of lessons learned during implementation of the previous GRSG plans. The BLM will clarify management decisions in the Fluid Mineral and Land and Realty sections. Lessons learned primarily involve administrative clarifications and remedies and are not likely to impact GRSG habitat, other resources, or resource uses.

Table 21-15. Colorado State-Specific Circumstances – Fluid Minerals (MR)

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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.** See Appendix B (Existing Management) for WEM criteria.	No new leasing in PHMA. Upon expiration or termination of existing leases, prohibit issuance of new leases or reinstatement of leases in PHMA.	No similar action (see line below)	No similar action (see line below)
MD MR-2: No Surface Occupancy (NSO) without waiver or modification in PHMA. See Appendix B (Existing Management) for 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. See Appendix B (Existing Management) for WEM criteria.	No similar action (Alternative 3 is closed to new leasing)	PHMA will be open to fluid mineral leasing subject to No surface occupancy with waivers, exceptions, or modifications (WEMs). See range-wide WEM criteria.	PHMA will be open to fluid mineral leasing subject to No surface occupancy with waivers, exceptions, or modifications (WEMs). See range-wide WEM criteria, but the exception distance for Colorado will be 1 mile from occupied leks.
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.	Same as Alternative 1 (no change made in 2019).	No similar action (Alternative 3 is closed to new leasing)	In PHMA & GHMA, any new leases would include TL stipulations to minimize impacts to GRSG during lekking, nesting, and early brood-rearing. The following stipulation would apply: No activity associated with construction, drilling, or completions within 4 miles of occupied leks during lekking, nesting, and early brood-rearing (March 1 to July 15). The Authorized Officer could grant an exception, modification, or waiver in coordination with the State of Colorado.	Same as Alternative 4

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6	
				Alt 5	**Alt 6**
MD MR-4: No Surface Occupancy (NSO) within 2 miles of active (CO definition) leks in GHMA. See Appendix B (Existing Management) for WEM criteria.	Same as Alternative 1 (no change made in 2019).	No similar action (Alt 3 is closed to new leasing)	GHMA will be open to fluid mineral leasing subject to **No Surface Occupancy (NSO)** within 2 miles of **active*** (WAFWA active, CO occupied) leks. See range-wide WEM criteria.	GHMA will be open to fluid mineral leasing subject to **Controlled Surface Use (CSU)** within 2 miles of **active*** leks. See CSU criteria below. See range-wide WEM criteria.	GHMA will be open to fluid mineral leasing subject to **Controlled Surface Use (CSU)** in GHMA within 1 mile of PHMA. See CSU criteria below. See range-wide WEM criteria.
No similar action	No similar action	No similar action	No similar action	**Controlled Surface Use (CSU):** Apply CSU constraints on surface use, occupancy, placement of permanent tall structures, and surface-disturbing activities in *[GHMA within 2 miles of occupied leks for Alt 5/GHMA within 1 mile of PHMA for Alt 5a*] that would decrease breeding/nesting habitat availability or functionality, or that create new perching/nesting opportunities for avian predators. Surface use including infrastructure and surface-disturbing activities may require special design, construction, and implementation measures. The actual required measures will be based on the purpose, nature, and extent of the surface occupancy including infrastructure and total surface disturbance, the affected seasonal habitat, and the feasibility of relocating the project. A tall structure is any man-made		

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	*(See above.)*	structure that provides for perching/nesting opportunities for predators (e.g., raptors, ravens) that may naturally be absent, or that decreases the use of an area. A determination as to whether something is considered a tall structure would be made based on local conditions such as existing vegetation or topography. Examples of measures and limitations include: 1) Relocate operations more than 200 meters (656 feet) to areas outside of habitat, to areas of existing disturbance, or to areas where site-specific topography mitigates project impacts; 2) Defer activities longer than 60 days to avoid seasonal habitat use periods; 3) Modify project design to discourage avian predator perching; 4) Limit or relocate placement of tall structures to reduce impacts of project infrastructure; 5) Limit activity associated with construction, drilling, or completions to certain seasons or times of day; 6) Minimize noise using the best available technology to dampen or direct noise away from breeding or nesting habitat. Modify access routes to avoid important areas or habitats.

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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. 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 (Colorado MZ) to allow clustered development.	Same as Alternative 1 (no change made in 2019).	No similar action (Alt 3 is closed to new leasing)	Disturbance on new leases would be limited to 3 percent in PHMA (biologically significant unit) and would be limited to 1 disturbance per 640 acres calculated by Colorado MZ. The following Controlled Surface Use (CSU) would apply: Any lands leased in PHMA are subject to the restrictions of 3 percent disturbance and 1 disturbance per 640 acres calculated by Fine Scale and proposed project analysis area (Colorado MZ) to allow clustered development.	Disturbance on new leases would be limited to 3 percent in PHMA (biologically significant unit) and would be limited to 1 disturbance per 640 acres calculated by Colorado MZ. The following Controlled Surface Use (CSU) would apply: Any lands leased in PHMA are subject to the restrictions of 3 percent disturbance and 1 disturbance per 640 acres calculated by biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) to allow clustered development.
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.	Same as Alternative 1 (no change made in 2019).	Same as Alternative 1	(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 with the application of reasonable measures that minimize impacts to GRSG and GRSG habitat (e.g., helicopter-portable drilling, wheeled or tracked vehicles on existing roads) and are in accordance with seasonal TLs and other applicable restrictions. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood-rearing, and winter habitats during the season of use by GRSG.	Same as Alternative 4

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Leased Fluid Minerals				
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).	Same as Alternative 1 (no change made in 2019).	—	Within 1 mile of occupied 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, use the **criteria*** below to site proposed lease activities to meet GRSG habitat objectives and require mitigation.	Same as Alternative 4, but with siting criteria from Alternatives 5 and 6 (see below)
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. **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	Same as Alternative 1 (no change made in 2019).	In PHMA and GHMA, the **criteria*** below would be applied to guide development of the lease or unit that would result in the fewest impacts possible to GRSG. Additionally, both PHMA and GHMA would be classified as PHMA under this alternative. 1) The location of the proposed authorization is determined to be nonhabitat, lacks the ecological potential to become habitat, does not provide important connectivity between habitat areas, and the project includes design features to prevent indirect	Same as Alternative 3, but both PHMA and GHMA would not be classified as PHMA.	In PHMA and GHMA, the **criteria*** below would be applied to guide development of the lease or unit that would result in the fewest impacts possible to GRSG. 1) The location of the proposed authorization is determined to be nonhabitat, lacks the ecological potential to become habitat, does not provide important connectivity between habitat areas, and the project includes design features to prevent indirect disturbance to or disruption of adjacent seasonal habitats that would impair their biological function.

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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.	*(See above.)*	disturbance to or disruption of adjacent seasonal habitats that would impair their biological function. 2) Topography/areas of non-habitat create an effective barrier to impacts. 3) By co-locating the proposed authorization with existing disturbance, impacts would be minimized or similar to impacts associated with the existing infrastructure. 4) The proposed location would be undertaken as an alternative to a similar action occurring on a nearby parcel (for example, due to landownership patterns), and authorizing the activity on the parcel in question would have less of an impact on GRSG or its habitat than on the nearby parcel; this criterion must also include measures sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts. If the criteria above do not apply but it can be demonstrated that the direct and indirect impacts of the proposed activity would be offset through compensatory mitigation, the authorized officer may consider permitting the action. The environmental record of review must demonstrate the following: 1) As the first step in mitigating impacts to GRSG, efforts to avoid impacts by locating the	*(See above.)*	2) Topography/areas of non-habitat create an effective barrier to impacts. 3) By co-locating the proposed authorization with existing disturbance, impacts would be minimized or similar to impacts associated with the existing infrastructure. 4) The proposed location would be undertaken as an alternative to a similar action occurring on a nearby parcel (for example, due to landownership patterns), and authorizing the activity on the parcel in question would have less of an impact on GRSG or its habitat than on the nearby parcel; this criterion must also include measures sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts. In addition to meeting one of the criteria above, applicable minimization measures including Disturbance Caps, Timing Limitations, Design Features, or other site-specific constraints would be included as Conditions of Approval (COAs) on the authorized activity. If the criteria above do not apply but it can be demonstrated that the direct and indirect impacts of the proposed activity would be offset through compensatory mitigation, the authorized officer may consider permitting the action. The environmental record

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	proposed project in areas outside the NSO areas or in areas of non-habitat shall be documented. 2) As the second step in mitigating impacts to GRSG, efforts to minimize impacts by applying project design features shall be documented (e.g., use of RDFs, buffer distances, seasonal limitations, etc.). The compensation project must be completed and habitat functionality documented before the authorization is granted to ensure the offset in impacts will occur.	*(See above.)*	of review must demonstrate why avoidance is not attainable. To grant the activity based on compensatory mitigation, the compensation project must be planned, funded, and approved by the operator, BLM, surface owner, in coordination with the State of Colorado prior to construction, surface occupancy, or surface disturbing activities.
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*** above.	Same as Alternative 1 (no change made in 2019).	Prohibit construction, drilling, and completion within PHMA during lekking, nesting, and early brood-rearing (March 1 to July 15).	Based on site-specific conditions, prohibit construction, drilling, and completion in PHMA or GHMA within 4 miles of an occupied lek during lekking, nesting, and early brood-rearing (March 1 to July 15). In coordination with the State of Colorado, this TL may be adjusted based on application of the **criteria*** above.	Same as Alternative 4, but with siting criteria from Alternatives 5 and 6 (see above)

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6	
				Alt 5	**Alt 6**
No Similar action	No Similar action	No Similar action	No Similar action	No Similar action	In the Case Flats ACEC, any new leases would include TL stipulations to minimized impacts to GRSG during winter concentration. The following stipulation would apply: No activity associated with construction, drilling, or completions during the winter concentration period (December 1 to March 15). The Authorized Officer could grant an exception, in consultation with the State of Colorado, if the environmental record of review shows no significant direct or indirect disturbance, displacement, or mortality of GRSG. No modifications or waivers would be authorized.

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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.	Same as Alternative 1 (no change made in 2019).	Same as Alternative 1	In PHMA and GHMA, 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 that would result in full restoration of the lands to the condition prior to disturbance. Base the reclamation costs on the assumption that contractors for the BLM will perform the work.	Same as Alternative 4

Table 21-16. Colorado State-Specific Circumstances – Solid Minerals (MR)

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Nonenergy Leasable Minerals				
MD MR-20: Existing nonenergy 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	Same as Alternative 1 (no change made in 2019).	Existing nonenergy 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 occupied leks (Blickley et al. 2012; Harju et al. 2012). • If the lease is entirely within 1 mile of an occupied 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 occupied leks within PHMA. If the lease is entirely within 2 miles of an occupied 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	Same as Alternative 3.	Same as Alternative 3.

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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).	*(See above.)*	not exceed 3 percent in PHMA 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 an occupied lek during lekking, nesting, and early brood-rearing (March 1 to July 15).	*(See above.)*	*(See above.)*

Table 21-17. Colorado State-Specific Circumstances – Lands and Realty (LR)

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Lands and Realty (LR)				
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.) ***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.	Same as Alternative 1 (no change made in 2019).	Manage areas within PHMA as exclusion areas for BLM ROW permits, except for designated corridors.	Manage areas within PHMA as avoidance areas* for BLM ROW permits. ***ROW Avoidance Criteria:** ROWs may be issued if it can be demonstrated that the proposed authorization would have no adverse impacts on GRSG or its habitat based on at least one of the following: 1) The location of the proposed authorization is determined to be nonhabitat, lacks the ecological potential to become habitat, does not provide important connectivity between habitat areas, and the project includes design features to prevent indirect disturbance to or disruption of adjacent seasonal habitats that would impair their biological function. 2) Topography/areas of non-habitat create an effective barrier to impacts. 3) By co-locating the proposed authorization with existing disturbance, impacts would be minimized or similar to impact associated with the existing infrastructure. 4) The proposed location would be undertaken as an alternative to a similar action occurring on a nearby parcel (for example, due to landownership patterns), and authorizing the ROW on the	Manage areas within PHMA as avoidance areas* for BLM ROW permits, except for designated corridors, which would be open to ROW permits. ***ROW Avoidance Criteria:** ROWs may be issued if it can be demonstrated that the proposed authorization would have no adverse impacts on GRSG or its habitat based on at least one of the following: 1) The location of the proposed authorization is determined to be nonhabitat, lacks the ecological potential to become habitat, does not provide important connectivity between habitat areas, and the project includes design features to prevent indirect disturbance to or disruption of adjacent seasonal habitats that would impair their biological function. 2) Topography/areas of non-habitat create an effective barrier to impacts. 3) By co-locating the proposed authorization with existing disturbance, impacts would be minimized or similar to impact associated with the existing infrastructure. 4) The proposed location would be undertaken as an alternative to a similar action occurring on a nearby parcel (for example, due to

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	parcel in question would have less of an impact on GRSG or its habitat than on the nearby parcel; this criterion must also include measures sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts. In addition to meeting one of the criteria above, applicable minimization measures including Disturbance Caps, Timing Limitations, Design Features (Appendix XX- Design Features), or other site-specific constraints would be included as Terms & Conditions of the ROW. If the **criteria*** above do not apply but it can be demonstrated that the direct and indirect impacts of the proposed activity would be offset through compensatory mitigation, the authorized officer may consider permitting the action. The environmental record of review must demonstrate the following: 1) As the first step in mitigating impacts to GRSG, efforts to avoid impacts by locating the proposed project in areas outside the NSO areas or in areas of non-habitat shall be documented. 2) As the second step in mitigating impacts to GRSG, efforts to minimize impacts by applying project design features shall be documented (e.g., use of RDFs, buffer	landownership patterns), and authorizing the ROW on the parcel in question would have less of an impact on GRSG or its habitat than on the nearby parcel; this criterion must also include measures sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts. In addition to meeting one of the criteria above, applicable minimization measures including Disturbance Caps, Timing Limitations, Design Features (Appendix XX- Design Features), or other site-specific constraints would be included as Terms & Conditions of the ROW. If the **criteria*** above do not apply but it can be demonstrated that the direct and indirect impacts of the proposed activity would be offset through compensatory mitigation, the authorized officer may consider granting a ROW. The environmental record of review must demonstrate why avoidance is not attainable. To grant a ROW based on compensatory mitigation, the compensation project must be completed prior to construction, surface occupancy, or surface disturbing activities. Applicable minimization measures including Disturbance Caps, Timing Limitations, Design Features (Appendix XX- Design Features), or other site-specific constraints

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	*(See above.)*	*(See above.)*	distances, seasonal limitations, etc.). 3) The compensation project must be completed and habitat functionality documented before the authorization is granted to ensure the offset in impacts will occur. The compensation necessary to grant this authorization must provide the offsetting benefit to the population being impacted by the potential development.	would be included as Terms & Conditions of the ROW.
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 avoidance criteria above).	Same as Alternative 1 (no change made in 2019).	No similar action	Manage areas within GHMA as avoidance areas* BLM ROW permits (see avoidance criteria above).	Manage areas within GHMA as avoidance areas* for BLM ROW permits, except for designated corridors, which would be open to ROW permits (see avoidance criteria above).
No similar action	No similar action	No similar action	In PHMA and GHMA, If the ROW authorization is the off-lease component of an action that occurs on-lease (e.g.- a road beginning off-lease that crosses on-lease would require both a ROW and subject to the conditions of the APD), ensure that the conditions for each authorization are consistent for mitigation, reclamation, and design features, as appropriate.	Same as Alternative 4

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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: 1. It is consistent with the overall objective of the RMP Amendment; 2. The effect on GRSG populations or habitat is nominal or incidental; 3. 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.	Same as Alternative 1 (no change made in 2019).	No similar action	No new tall structures would be authorized within 1 mile of an occupied lek. Tall structures are defined as any man-made structure that provides for perching/nesting opportunities for predators (e.g., raptors, ravens) that may naturally be absent, or that decreases the use of an area. A determination as to whether something is considered a tall structure would be made based on local conditions such as existing vegetation or topography. Tall structures include but are not limited to: communication towers, meteorological towers, power lines, and transmission lines. Tall structures would only be authorized if it can be demonstrated that the proposed authorization would have no adverse impacts on GRSG or its habitat based on the **ROW Avoidance Criteria*** above. Additionally, if tall structures cannot be buried (i.e.- power lines), require perch deterrents.	Same as Alternative 4, but with ROW avoidance criteria from Alternatives 5 and 6

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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 the 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.	Same as Alternative 1 (no change made in 2019).	No similar decision	No similar decision	No similar decision
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**.)	Same as Alternative 1 (no change made in 2019).	No similar decision	In PHMA and GHMA, prohibit surface occupancy and surface-disturbing activities associated with BLM ROW within 4 miles of occupied leks during lekking, nesting, and early brood-rearing (March 1 to July 15).	Same as Alternative 4
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.	Same as Alternative 1 (no change made in 2019).	No similar decision	(PHMA and GHMA) In PHMA and GHMA, for ROW renewals, where existing facilities cannot be removed, buried, or modified, require perch deterrents.	Same as Alternative 4
MD LR-9: (PHMA) Reclaim and restore ROWs considering GRSG habitat requirements.	Same as Alternative 1 (no change made in 2019).	—	(PHMA and GHMA) Reclaim and restore ROWs considering GRSG habitat requirements.	Same as Alternative 4

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
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.	Same as Alternative 1 (no change made in 2019).	No similar decision	(PHMA and GHMA) Designate new ROW corridors in GRSG PHMA and GHMA 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.	Same as Alternative 4

21.2.2 Idaho

In addition to Idaho's three-tier habitat approach, state specific circumstances are a result of specific language unique from 2015 and 2019, and clarifying 2015 implementation management decisions. State specific circumstances for the State of Idaho include 1) management of saleable minerals/mineral materials – specifically consideration of new free use pits in PHMA, 2) application and use of lek buffers (see **Appendix 19**), and 3) application of renewable energy management to nuclear and hydropower developments in addition to wind and solar.

Table 21-18. Idaho State-Specific Circumstances – Mineral Resources (MR)

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Saleable Minerals/Mineral Materials				
MD MR 11: PHMA are closed to new mineral materials sales. However, these areas remain "open" to free use permits and the expansion of existing active pits only if the following criteria are met: • the project area disturbance cap is not exceeded within a BSU; • the activity is subject to the provisions set forth in the mitigation framework [Appendix F in the 2015 ARMPA]; • all applicable required design features are applied; and • the activity is permissible under the Idaho exception and development criteria (MD SSS 29 and MD SSS 30 in the 2015 ID ARMPA) IHMA: All IHMA will be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (MD SSS 30 in the 2015 ID ARMPA), and subject to RDFs, and buffers. Sales from existing community pits within IHMA will be subject to seasonal timing restrictions (Appendix C in 2015 ARMPA). GHMA: All GHMA will be open to mineral materials development, subject to RDFs and buffers. Sales from existing community pits within GHMA will be subject to seasonal timing restrictions (Appendix C in 2015 ARMPA).	**MD MR 11:** PHMA: All PHMA will be closed to new mineral materials development, but continued use of existing pits will be allowed. New free use permits and the expansion of existing free use permits may be considered only if the following criteria are met: • the project area disturbance cap is not exceeded within a BSU; • the activity is subject to the provisions set forth in the mitigation framework [Appendix F in the 2015 ARMPA]; • all applicable required design features are applied; and • the activity is permissible under the Idaho exception and development criteria (MD SSS 29 and MD SSS 30 in the 2019 ID ARMPA) IHMA: All IHMA will be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (MD SSS 30 in the 2019 ID ARMPA), and subject to RDFs, and buffers. GHMA: All GHMA will be open to mineral materials development, subject to best management practices, as described in Appendix C (in 2019 ARMPA).	**MD MR 11:** PHMA—All PHMA will be closed to new mineral materials development.	**MD MR 11:** PHMA—All PHMA will be closed to new mineral materials development but continued use of existing pits will be allowed. New free use permits and the expansion of existing pits may be considered only if the following criteria are met: a. The disturbance cap is not exceeded in a within a fine-scale HAF; b. The activity is subject to the provisions set forth in the mitigation framework (Appendix F in the 2019 ARMPA); c. All applicable RDFs are applied; and d. The activity is permissible under the Idaho exception and development criteria (MD SSS 29 and MD SSS 30 in the 2019 ID ARMPA). In order to support maintenance needs for existing local roads and ensure public safety, exceptions to criteria b) and d) listed above may be granted for new free-use permits in areas with existing anthropogenic disturbance. IHMA—All IHMA will be open to mineral materials development, consistent with the Idaho Anthropogenic Disturbance Criteria (MD SSS 30 in the 2019 ID ARMPA) and subject to RDFs and buffers. GHMA—All GHMA will be open to mineral materials development, subject to BMPs as described in Appendix C (in the 2019 ID ARMPA).	**MD MR 11:** Same as Alternative 4

Table 21-19. Idaho State-Specific Circumstances – Special Status Species (SSS)

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Anthropogenic Disturbance				
Appendix B. Buffers (in the 2015 ID ARMPA). {The management action associated with the buffers is MD SSS 35; the details on buffer sizes and how to apply them is in the appendix.}	**Appendix B. Buffers** (in the 2019 ID ARMPA) {The management action associated with the buffers is MD SSS 35; the details on buffer sizes and how to apply them is in the appendix.}	**Appendix B. Buffers** (see proposed changes in the Idaho Buffers Appendix Alternative Language (**Appendix 19**). Modified from Appendix B referenced in Alt 1 to apply to active or pending active leks, with no buffer exceptions.	Same as Alternative 3.	**Appendix B. Buffers** (see proposed changes in the Idaho Buffers Appendix Alternative Language (**Appendix 19**). Modified from Appendix B referenced in Alt 2 to apply to active and pending leks and providing buffer exception for IHMA/GHMA.

Table 21-20. Idaho State-Specific Circumstances – Renewable Energy (Wind and Solar) (RE)

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Industrial Solar, Wind, Nuclear, and Hydropower Development				
MD RE 1: PHMA: Designate and manage PHMA as exclusion areas for utility scale (20 MW) wind and solar testing and development, nuclear and hydropower energy development. IHMA: Designate and manage IHMA as avoidance areas for wind and solar testing and development, nuclear and hydropower development. GHMA: Designate and manage GHMA as open for wind and solar testing and development and nuclear and hydropower development subject to RDFs and buffers.	**MD RE 1:** PHMA: Designate and manage PHMA as exclusion areas for utility scale (20 MW) wind and solar testing and development, nuclear and hydropower energy development. IHMA: Designate and manage IHMA as avoidance areas for wind and solar testing and development, nuclear and hydropower development. GHMA: Designate and manage GHMA as open for wind and solar testing and development and nuclear and hydropower development	Same as cross-cutting language for wind and solar described above, but with the additional application to nuclear and hydropower energy development.	Same as Alternative 3.	Same as Alternative 3.

21.2.3 Montana/Dakotas

GRSG in Montana range across most of the state, with about 1,000 confirmed active sage-grouse leks. GRSG in North and South Dakota have limited distributions and small population sizes. These differences resulted in variable factors being considered for identifying HMAs (in cooperation with state natural resource entities) (see **Appendix 3**, GRSG HMA State-by-State Mapping Strategies). Factors include differences in the amount of the population in GHMA, HMAs to address different seasonal movement strategies, and addressing cross-state populations. These differences also require consideration of different management approaches at a local level (state specific circumstances) in contrast to range-wide approaches (cross-cutting issues) considered in this EIS/RMPA.

GRSG planning efforts completed in 2015 were initiated while plan revisions were ongoing for multiple other plans in the region. The 2015 effort resulted in updated GRSG management in seven plans. However, the Butte Field Office (BFO) and the Upper Missouri River Breaks National Monument (UMRBNM) were not included due to minor amounts of habitat (BFO) and protections provided by inclusion of GRSG as an object and value of the UMRBNM proclamation. Subsequently, the Lewistown Field Office completed a plan revision in 2021, and the North Dakota Field Office is currently undergoing a plan revision. Montana-Dakotas BLM offices were not part of the GRSG plan amendments completed in 2019.

While concepts and approaches are generally consistent between the plans, separate planning efforts resulted both wording and management action inconsistencies. State-specific circumstances address: 1) measures to improve consistency between the nine Field Offices (RMPs) for sage-grouse management; 2) incorporating unique circumstances of peripheral populations and accounting for the higher proportion of sage-grouse leks found in GHMA in Montana; and 3) applying 2021 Plan Evaluation recommendations and lessons learned from implementation of the 2015 plans.

Increasing Consistency between Montana-Dakotas BLM Plans and State Conservation Approaches

BLM's review of the seven Montana-Dakotas plans included in the 2015 planning effort identified varying management recommendations. While some of these differences are simply minor wording differences, other inconsistencies include the omission or inclusion of actions not included in neighboring plans. These differences also include numerous stipulations for oil and gas leasing in HMAs and occupied GRSG habitat. Among offices, there are varying objectives for GRSG management under the sensitive status species sections or may contain objectives listed as management action in different plans. Furthermore, BLM identified differences in buffer distances for ROW avoidance around leks, variation in protections for winter range, and several other differences in management among HMAs between offices.

The BLM examined these inconsistencies to determine if they are justified using the following criteria: 1) Biological circumstances between offices that warrant distinction; 2) Wording differences that create inconsistent interpretation and management; 3) Whether specific management objectives and actions were needed within BFO and the UMRBNM, and; 4) Relationships with the state GRSG conservation plans from North Dakota, South Dakota, and Montana.

The action alternatives below strive to provide better consistency among BLM offices and partner natural resource entities. They are intended to provide clear and consistent direction to applicants and partners for cross-office boundary projects and simplify the coordination among field offices. Other potential changes including monitoring, adaptive management, and implementation tracking would be streamlined to increase internal efficiencies and improve coordination with partners.

Addressing Variations in HMAs and Peripheral Populations

In Montana, general habitat, and BLM GHMA, contains a larger proportion of leks relative to these habitat types than many other states (see **Appendix 3**, GRSG HMA State-by-State Mapping Strategies). To meet objectives for GRSG and be more consistent with state management approaches, more restrictive GHMA management is presented for some resources in the alternatives below. The Montana-Dakotas BLM is considering crucial winter range in stipulations and maintains lek-based buffers for ROWs in GHMA (including utility scale renewable energy projects). Peripheral populations present unique challenges to management approaches. The population spanning the Montana and North Dakota Border (Cedar Creek Anticline area) has specific objectives considered to address ongoing development in the area, restoration needs, and cross-state and cross organizational GRSG management in this mixed-ownership area. In Montana, this area is considered as an RHMA in most alternatives to reflect the desire for long-term restoration. In North Dakota, GRSG range is PHMA, but specific objectives and management are considered to address restoration and habitat enhancement, including protecting historical leks (those active in 2010) similar to currently active leks. This is intended to conserve the landscape to provide opportunities for restoration. GRSG in northern Montana and Canada exhibit unique migratory behavior, moving from breeding habitat in silver sage communities to winter south in Wyoming Big Sagebrush dominated communities. To capture these migratory pathways and protect stopover sites the BLM identified connectivity areas, called CHMA, based on the State of Montana connectivity areas (see **Appendix 3**, GRSG HMA State-by-State Mapping Strategies). While the revised GRSG HMAs in the action alternatives and the Pryor Mountain Wild Horse Range overlap by just over 300 acres in the Billings Field Office, GRSG and wild horse use do not overlap due to physical barriers. Therefore, this topic is not addressed in detail.

2015 Plan Evaluations and Lessons Learned

Implementation of the 2015 plans (including 2021 plan evaluations) has identified areas of potential misunderstanding that are included as cross cutting issues in alternatives in this EIS. The BLM Montana-Dakotas has also identified opportunities, unique to the region, including cross-boundary coordination with other natural-resource management entities. Additionally, new local and range-wide research provides updated information to consider for GRSG management action adjustments. As a result, the state-specific alternative below incorporates the following new information. The Dillon FO was previously included in a combined Idaho-SW Montana amendment. However, that amendment included management unique to Idaho, but not applicable in Montana including Wild Horse and Burro management, use of the Fire and Invasives Assessment Tool, and incorporation of Key Habitat references. The Montana-Dakotas BLM also considers options to remove the distinction between major and minor rights of way, both for consistency with state management and to address specific impacts of the proposed disturbance or disruption of ROW actions relative to GRSG. Lastly, the revised guidance on conservation buffer distances, project screens, and design features provides a common approach for analyzing different program and project types that result in similar impacts.

The remainder of this section includes the alternatives related to the applicable management actions. Columns for Alternatives 1 and 2 have been merged, since the BLM RMPs in the Montana/Dakota State Office did not amend any plans in 2019.

Table 21-21. Montana State-Specific Circumstances – Special Status Species (GRSG): Goals and Objectives

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Special Status Species (GRSG): Goals and Objectives				
Goal: Maintain and/or increase GRSG abundance and distribution by conserving, enhancing, or restoring the sagebrush ecosystem upon which populations depend, in cooperation with other conservation partners. (Language varies between plans) **Objective**: Sage-grouse management will utilize the 2005 Management Plan and Conservation Strategies for Sage-Grouse in Montana – Final for overall guidance and direction. (Various inclusion of BLM and state GRSG plans) West Nile Virus: When developing or modifying water developments, use applicable RDFs (see RDF/BMP appendix from each RMP) to mitigate potential impacts from West Nile virus. (Various inclusion as goal, objective, or management action, in different program areas)		Apply the cross-cutting GRSG goal, Habitat Objectives, etc. In addition, retain existing goals and objectives, but edit or add to ensure the following direction is contained: **Goal:** (see cross-cutting issue). **Objective**: Maintain, improve, and restore sagebrush habitats to increase habitat availability and quality for GRSG, sagebrush obligates and other sagebrush dependent species. **Objective**: Manage GRSG through collaborative, coordinated efforts that utilize cooperative planning and implement and monitor activities to achieve desired conditions and to maximize the utilization of available funding opportunities. Coordination efforts can include: adjacent landowners, federal and state agencies, local governments, tribes, communities, other agencies, nongovernmental organizations, and other interested parties/stakeholders. **All HMAs MA**: Greater sage-grouse management will be consistent with current adopted BLM conservation strategies, will utilize GRSG conservation plans, as revised or updated, from partners such as WAFWA (e.g., Sagebrush conservation strategy; Remington et al. 2021), USFWS (e.g., Greater Sage-grouse (Centrocercus urophasianus) Conservation Objectives: Final Report; USFWS 2013), and state wildlife or habitat management agency action, management, or conservation plans (e.g., MT EO 2015, MT SGWG 2005, SD GF&P 2022, ND G&F 2014), and the best available science. **All HMAs MA**: Assess and modify as needed water features to reduce the risk of potential impacts from West Nile Virus or other disease outbreaks (see RDF/BMP appendix from each RMP).		

Table 21-22. Montana State-Specific Circumstances – Special Status Species (GRSG): Cedar Creek Anticline RHMA Objectives

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Special Status Species (GRSG): Goals and Objectives				
Objective 1: Strive for proponents to develop area-wide Habitat Recovery Plans. **Objective 2**: Strive for no net loss of GRSG habitat. **Objective 3:** Strive for the restoration of previously disturbed landscapes in a manner which increases or improves the quality and quantity of GRSG habitat.		**Objective 1:** Develop and implement an area-wide habitat restoration plan. The plan will identify restoration opportunities, including short term actions that can reduce disturbance and threats to sage-grouse (conifer encroachment, duplicative roads, infrastructure removal, etc.), habitat restoration (areas to increase sagebrush cover and understory plants), and longer-term actions to put in place as development is completed. **Objective 2**: Manage for no net loss of GRSG habitat, subject to valid existing rights, and maintained connectivity with North Dakota GRSG habitat. **Objective 3:** Strategically target restoration, as possible with partners across jurisdictions, in disturbed landscapes in a manner which increases or improves the quality and quantity of GRSG habitat.		

Table 21-23. Montana State-Specific Circumstances – Special Status Species (GRSG): North Dakota Specifics

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Special Status Species (GRSG): Goals and Objectives				
Objective SSS-1.1 through Objective SSS-1.4: These objectives cover disturbance cap, delineate PHMA and GHMA, and identify the Habitat Objectives **Objective SSS-1.5:** No similar objective		**Objective SSS 1.1-1.4:** See cross-cutting language for HMAs, disturbance, and habitat objectives above. **Objective SSS-1.5** (New): Maintain the existing distribution of occupied GRSG habitat while taking strategic opportunities to enhance existing habitat and expand occupied habitat through restoration actions that remove the primary threats found on BLM managed surface acres (e.g., conifer encroachment, infrastructure, etc.) in North Dakota. **MA SSS-X** (New): Develop a MOU and/or restoration plan between interested partners such as the Forest Service, State of North Dakota USFWS, NRCS and other conservation partners and adjacent states (Montana, South Dakota) to establish a cooperative approach regarding implementation of sage-grouse conservation measures, proposed management changes, mitigation, site-specific monitoring, adaptive management, and addressing threats to GRSG. The MOU/plan will identify responsibilities, roles and interaction to maximize the party's individual conservation efforts.		

Table 21-24. Montana State-Specific Circumstances – Vegetation: GRSG Objectives and Actions

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Vegetation: GRSG Objectives and Actions				
All HMAs: Various objectives and management actions **PHMA (Goal, Objective, or MA):** The desired condition is to maintain all lands ecologically capable of producing sagebrush (but no less than 70%) with a minimum of 15% sagebrush canopy 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 Tech Ref 1734-6). (Slight variations between plans, no quantitative objective for Butte and UMRBNM) **PHMA**: Make re-establishment of sagebrush cover and desirable understory plants (relative to ecological site potential) a high priority for restoration efforts in PHMA. Prioritize areas for juniper removal to benefit GRSG habitat. (Slight variation between plans, juniper not only issue in MT/Dak). **MA (All HMAs):** Conifers encroaching into sagebrush habitats will be removed, in a manner that considers tribal cultural values. Treatments will be prioritized closest to occupied sage-grouse 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 Tool (FIAT) 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. (Slight variations between plans, no FIAT analysis for MT/Dak) **PHMA:** Treatment actions (Slight variations between plans)		**Retain existing objectives and management actions, but edit or add to ensure the following direction is contained:** **VEG OBJ-X (PHMA):** The desired condition is to maintain all lands ecologically capable of producing sagebrush (but no less than 70%) with a minimum of 15% sagebrush canopy 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 Tech Ref 1734-6). **VEG OBJ-Y (PHMA):** Make re-establishment of sagebrush cover and desirable understory plants (relative to ecological site potential) a high priority for restoration efforts in PHMA. Prioritize areas for conifer removal to benefit GRSG habitat. **MA (All HMAs):** Remove conifers encroaching into sagebrush habitats, in a manner that considers tribal and cultural values, as well as other key resources (e.g., other SSS, including T&E, species, soils, etc.). Prioritize treatments closest to occupied GRSG habitats and near occupied leks, and where encroachment is phase 1 or phase 2. Use of site-specific analysis and tools will help refine the location for specific areas to be treated. **VEG MA-X (PHMA):** Treatments that conserve, enhance or restore GRSG habitat will be allowed as well as treatments that benefit other resources and do not adversely affect GRSG or their habitat.	

Table 21-25. Montana State-Specific Circumstances – Special Status Species: Surface Disturbing Activities in GRSG Habitat Objective

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Special Status Species: Surface Disturbing Activities in GRSG Habitat Objective				
All HMAs: 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 United States geological Survey (USGS) Report (see Appendix B, GRSG Conservation Buffer). [*Minor variations between plans, including if buffers are referenced, or not, in different program areas*] (Plans variable in including additional language such as: • Conduct implementation and project activities, including construction and short-term anthropogenic disturbances consistent with seasonal habitat restrictions described in Appendix C. • Other resource uses within PHMA may be allowed pending project level environmental review provided that Mitigation, BMPs Guidelines, standard operating procedures (SOP), and RDFs are implemented, Impacts are evaluated as described in the GRSG Effects Analysis Process (Appendix I) and the project does not exceed the disturbance cap (Appendix E) and the goals for sage-grouse and sage-grouse habitat are not compromised.)		**Objective:** Limit overall surface disturbance and disruption that impacts GRSG habitat through factors such as the reduction, co-location, and siting of activities and occupancy, and the restoration and enhancement of habitat. Uses in HMAs should be neutral or beneficial to GRSG as determined by analysis for projects. Consider general management practices as well as specific approaches and management for each program area when considering projects in all HMAs. **Management Action (all HMAs):** For all activities, in undertaking BLM management actions and consistent with valid existing rights and applicable law in authorizing actions, the BLM will assess impacts to seasonal habitat and apply conservation measures and the mitigation hierarchy. Analyses for any individual action will apply best available science and consider the type and location of activities during implementation-level project analysis. BLM will apply applicable BMPs, design features, and COAs (see applicable appendices in existing plans) as needed and demonstrated through project analysis.		

Table 21-26. Montana State-Specific Circumstances – Wind, Solar, and Associated ROWs

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Utility Scale Solar and Wind (>20 MW and/or based on power supply to a community)				
PHMA: Exclusion **RHMA**: • Exclusion (Elk Basin, Cedar Creek, South Carter County, West Decker) • Avoidance (Outside Elk Basin in Billings) **GHMA**: • Avoidance • Exclusion (SD in winter habitat and within 1 mile of leks) **CHMA**: No similar action (No specific action in Butte. UMRBNM is Exclusion.)		**PHMA**: Exclusion **RHMA**: No similar action **GHMA**: No similar action **CHMA**: Avoidance	**PHMA**: Exclusion **RHMA**: • Exclusion (Cedar Creek, West Decker) • Same as GHMA (Billings) **GHMA**: • Exclusion o Within 3.3 km (2 miles) of active leks o UMRBNM o Crucial winter habitat • Avoidance o >2 miles from active leks **CHMA**: Avoidance	**PHMA**: • Exclusion o Within 3.3 km (2 miles) of active leks o UMRBNM o North Dakota o Crucial winter habitat • Avoidance o >2 miles from active leks **RHMA**: • Exclusion (Cedar Creek, West Decker) • Same as GHMA (Billings) **GHMA**: • Exclusion o UMRBNM o Crucial winter habitat • Avoidance o Within 3.3 km (2 miles) of active leks o Wind in HiLine per existing management actions • Open, subject to GRSG LUP objectives o >2 miles from active leks **CHMA**: Same as GHMA

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Rights of Way				
Major **PHMA**: Avoidance **RHMA**: Avoidance **GHMA**: Avoidance **Minor** **PHMA**: Avoidance (Dillon open w/ RDFs and Buffers) **RHMA**: • Billings – Avoidance • Miles City – Allowed with design features **GHMA**: • Avoidance (South Dakota within 2 miles of leks) • Open (Dillon, Billings, Lewistown, HiLine, Miles City, North Dakota, and outside 2 miles from lek in South Dakota) (Corridors exist in UMRBNM, HiLine, and Billings, no specific action in Butte, UMRBNM avoidance) **Definitions**: Major: 100 kilovolts and over for overhead transmission lines, 24 inches and over in width for pipelines. Minor: other ROWs and land use authorizations/permits, such as smaller infrastructure and communication sites and towers.		**PHMA**: • Avoidance in currently designated corridors • Exclusion (otherwise) **CHMA**: Avoidance	**PHMA**: • Exclusion: o Surface disturbing or disruptive activities within 2km (1.2 miles) of active leks (in ND – occupied leks in 2010) o Crucial winter range • Avoidance o In existing corridors or ROWs o Rest of PHMA **RHMA**: Same as PHMA **GHMA**: Avoidance **CHMA**: Avoidance	**PHMA**: • Exclusion: o Surface disturbing or disruptive activities within 1km (0.6 miles) of active leks (in ND – active leks and those occupied in 2010) o Crucial winter range • Avoidance o In existing corridors or ROWs o Rest of PHMA **RHMA**: Same as GHMA **GHMA**: • Avoidance o Within 2 km (1.2 miles) of active leks o Crucial winter range • Open, subject to GRSG LUP objectives o >1.2 miles from active leks **CHMA**: Open

Table 21-27. Montana State-Specific Circumstances – Minerals

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Minerals				
All HMAs: Where the federal government owns the mineral estate in PHMA and GHMA, and the surface is in nonfederal ownership, the federal government will apply the same stipulations, Conditions of Approval (COAs), and/or conservation measures and mineral RDFs 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. Where the federal government owns the surface and the mineral estate is in non-federal ownership in PHMA and GHMA, the federal government will apply appropriate surface use COAs, stipulations, and mineral RDFs through ROW grants or other surface management instruments, to the maximum extent permissible under existing authorities, in coordination with the mineral estate owner/lessee. (Language and inclusion varies, silent on other HMAs)		**All HMAs**: Where the federal government owns the mineral estate in GRSG HMAs, and the surface is in nonfederal ownership, the federal government will apply the same stipulations, Conditions of Approval (COAs), and/or conservation measures and mineral RDFs as 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. Where the federal government owns the surface and the mineral estate is in non-federal ownership in GRSG HMAs, the federal government will apply appropriate surface use COAs, stipulations, and mineral RDFs through ROW grants or other surface management instruments, to the maximum extent permissible under existing authorities, in coordination with the mineral estate owner/lessee.		

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Oil and Gas (including Geothermal)				

PHMA:
• Open with Major stipulations (NSO)
• No WEMs in SFAs
RHMA:
• Open with Major stipulations (NSO in West Decker and South Carter)
• Open with Major stipulations (0.6 m NSO from leks in Billings)
• Open with moderate (CSU for Billings and Cedar Creek, but language varies)
• Open with Minor (TL w/in 3 miles of a lek in Billings)
GHMA:
• Open with Major stipulations (0.6 m NSO from leks in Billings, Lewistown, HiLine, Miles City, South Dakota)
• Open with Major stipulations (NSO in winter range in Billings and South Dakota)
• Open with moderate (CSU for crucial winter range in HiLine)
• Open with moderate (CSU for Dillon, North Dakota, HiLine, Miles City, and South Dakota, but language and distances vary)
• Open with Minor (TL varies by office including winter range, lek buffers, etc.)
Other:
• LN – GRSG Habitat and compensatory mitigation (some offices)
• ¼ mile lek NSO (Butte)
• Winter/spring TL (Butte)
• Geothermal is based on O&G where explicit decisions do not exist
UMRBNM: Closed
		PHMA: Closed
		CHMA: Open with Major Stipulations (NSO)
			All HMAs:
			• TL (Breeding and Winter)
			PHMA:
			• Open with Major Stipulations (NSO)
			• CSU for Disturbance/Density
			• Closed (UMRBNM)
			RHMA:
			• Open with Major stipulations (NSO in West Decker)
			• Open with moderate (CSU for Cedar Creek)
			• Billings-Musselshell (same as GHMA)
			GHMA:
			• Open with Major stipulations (NSO)
			  ○ 0.6 m from active leks
			  ○ Crucial winter range
			• Open with moderate (CSU for all GHMA)
			• Closed (UMRBNM)
			CHMA: Open with CSU
				HMAs: Same as 4

Nonenergy Leasable Minerals				
PHMA: Closed **RHMA**: Language/inclusion varies **GHMA**: Language/inclusion varies (No specific action in Butte, Miles City, and Billings, and UMRBNM Withdrawn)		**PHMA**: Closed **CHMA**: Open	**PHMA**: Closed **RHMA**: Closed **GHMA**: • UMRBNM (Withdrawn) • Other offices open **CHMA**: Open	**HMAs**: Same as 4

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Saleable Minerals/Mineral Materials				
PHMA: • Lewistown (Open to new for both free and commercial use with guidelines) • Other offices closed (Open for new free use permits & expansion of existing) **RHMA**: Language/inclusion varies **GHMA**: Language/inclusion varies (No specific action in Butte, UMRBNM withdrawn)		**PHMA**: Closed **CHMA**: Open	**PHMA**: • Closed UMRBNM • Other offices closed (Open for new free use permits & expansion of existing) **RHMA**: Closed (Open for new free use permits & expansion of existing) **GHMA**: • UMRBNM (Withdrawn) • Other offices open **CHMA**: Open	**HMAs**: Same as 4
Locatable Materials				
PHMA: • The BLM recommended all SFAs for withdrawal from location and entry under the Mining Law of 1872. The proposed withdrawal itself is being analyzed in a separate NEPA document. Lands recommended for withdrawal would remain open for mineral location and entry under the Mining Law of 1872 unless and until the Secretary of the Interior withdraws them. • Withdrawn (UMRBNM) **RHMA**: Same as PHMA, but without the SFA recommendation for withdrawal. **GHMA**: Same as RHMA. (No specific action in Butte, UMRBNM withdrawn)		**PHMA**: • The BLM recommended all SFAs for withdrawal from location and entry under the Mining Law of 1872. The proposed withdrawal itself is being analyzed in a separate NEPA document. Lands recommended for withdrawal would remain open for mineral location and entry under the Mining Law of 1872 unless and until the Secretary of the Interior withdraws them. • UMRBNM (Withdrawn) **CHMA**: Open	**PHMA**: • Withdrawn (UMRBNM) **RHMA**: Same as PHMA **GHMA**: • UMRBNM (Withdrawn) • Other offices same as PHMA **CHMA**: Same as PHMA	**HMAs**: Same as 4

Table 21-28. Montana State-Specific Circumstances – Fire and Fuels

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Fire and Fuels				
All HMAs: If prescribed fire is used in GRSG habitat, the NEPA analysis for the Burn Plan will address: • why alternative techniques were not selected as a viable options; • how GRSG goals and objectives will be met by its use; • how the COT Report objectives will be addressed and met; • a risk assessment to address how potential threats to GRSG habitat will be minimized Prescribed fire as 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 can be used to meet specific fuels objectives that will protect GRSG habitat in PHMA (e.g., creation of fuel breaks that will 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, 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 will need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality. (Slight variations between plans)		**All HMAs**: If prescribed fire is used in GRSG habitat, the NEPA analysis for the Burn Plan will address: • why alternative techniques were not selected as a viable options; • how GRSG goals and objectives will be met by its use; • how the COT Report objectives will be addressed and met; • a risk assessment to address how potential threats to GRSG habitat will be minimized Prescribed fire as 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 can be used to meet specific fuels objectives that will protect GRSG habitat in PHMA (e.g., creation of fuel breaks that will 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, 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 will need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality.		

Table 21-29. Montana State-Specific Circumstances – Field Office Specific Actions

Alternative 1 Summary	Alternative 2 Summary	Alternative 3	Alternative 4	Alternatives 5 and 6
Dillon FO Objectives and Management Decisions				
Fire and Invasives Tool (FIAT): MDs including SSS MD 5, 6, 37; VEG Objective 2, VEG MD 2, 8, and 9; and MD FIRE 3, 5, 7, 9-13, 20, 21, and 33. Key Habitat References: MDs including as SSS MD 8, 9, 17, 18, 13, 41, and 42 Wild Horse and Burro Section		Remove or modify Management Actions to clarify the FIAT does not apply to SW Montana (geographic scope ended at Idaho border) Remove MDs with key habitat management actions (key habitats are an ID specific GRSG habitat effort). Remove MDs or clarify these only apply to WH&B's in Idaho (no WH&B HMAs in Dillon)		

21.2.4 Nevada/California

As noted in **Appendix 3** (GRSG HMA State-by-State Mapping Strategies) Nevada and California states developed their HMAs using a habitat prioritization model based on an intersection of seasonal habitat selection patterns and indices of space use to prioritize areas with varied relevance to GRSG. This model was initially developed for 2015 and is periodically updated with additional field data and advances in mapping products. An update of this model provided the base for HMA delineation in the 2019 planning effort. The model is currently being updated again and will incorporate GRSG survival metrics, which allow for the identification of population source areas. The latest version will be incorporated into this EIS following publication. The identification of source areas is unique to the States of Nevada and California, and the alternatives consider this draft data in both HMA identification and several management actions within this document. The role wildfire and invasive grasses play in the health of GRSG habitat in Nevada and California resulted in considering adjustments to several management actions focused on addressing these threats compared to the 2015 and 2019 decisions. Decisions being considered for amendment for these states are development of non-energy leasable minerals on lands where mining operations are currently authorized under 43 CFR Subpart 3715, 3802, or 3809, adjustment of allocation exception language considered in 2019, and clarification of application of perch deterrents and lek buffers to newly discovered leks.

Table 21-30. Nevada/California State-Specific Circumstances – Special Status Species

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Special Status Species				
MD SSS 1: In PHMAs and GHMAs, work with the proponent/applicant, whether in accordance with a valid existing right or not, and use the following screening criteria to avoid effects of the proposed human activity on GRSG habitat. A. First priority—locate project/activity outside PHMAs and GHMAs B. Second priority—if the project/activity cannot be placed outside PHMAs and GHMAs, locate the surface-disturbing activities in non-habitat areas first, then in the least suitable habitat for GRSG I. In non-habitat, ensure the project/activity will not create a barrier to movement or connectivity between seasonal habitats and populations C. Third priority—collocate the project/activity next to or in the footprint of existing infrastructure	Same as Alternative 1 (no change made in 2019). A.	**MD SSS 1:** In PHMAs and GHMAs, work with the proponent/applicant, whether in accordance with a valid existing right or not, and use the following screening criteria to avoid effects of the proposed human activity on GRSG: A. First priority—locate project/activity outside PHMAs and GHMAs while avoiding and/or minimizing direct and indirect impacts to GRSG and/or their habitat; B. Second priority—if the project/activity cannot be placed outside PHMAs and GHMAs, locate and adjust the project/activity to: a. avoid and/or minimize indirect impacts to lekking and source areas (e.g., PHMA+ in Coates et al. HMA manuscript in review; See **Appendix 3**) by using topography and/or other available methods to negate or reduce auditory and visual intrusions; AND b. locate direct impacts (i.e., surface-disturbing activities) in non-habitat areas first, then in the least suitable habitat for GRSG without creating a barrier to movement or connectivity between GRSG seasonal habitats and populations. C. Third priority—collocate the project/activity next to or in the footprint of existing infrastructure.		

Table 21-31. Nevada/California State-Specific Circumstances – Fire and Vegetation

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Fire and Vegetation Actions				
Not included	Not included	**MD VEG X (new):** Use collaborative planning efforts (e.g., Cooperative Range Improvement Agreement, Local Area Working Groups, Shared Stewardship, etc.) to develop and implement habitat restoration and enhancement projects. Projects of this type will use expertise and ideas from entities such as local landowners, local GRSG working groups, permitted land users, and other federal, state, county, and private organizations. Input from interested partners will be solicited by BLM and considered in development of restoration projects.		
Objective Fire 3: Protect post-fire treatments in SFA first, followed by PHMAs outside of SFA, and then GHMAs from subsequent wildfires.	**Objective Fire 3:** Protect post-fire treatments in PHMAs first, followed by GHMAs from subsequent wildfires.	**Objective FIRE 3**: Protect post-fire treatments, source areas (e.g., see **Appendix 3**), or areas that are vulnerable to invasive annual grass conversion, including areas essential for connectivity, in PHMAs first, followed by similar areas in GHMAs from subsequent wildfires. Incorporate the best available science in the prioritization of post-fire treatments.		
Not included	Not included	**MD FIRE X (new):** Prioritize actions (pre-suppression, suppression, and rehabilitation) that support the persistence of GRSG source areas (e.g., see **Appendix 3**). Use the best available science (e.g., Doherty et al. 2022, Ricca and Coates 2020, Stringham et al. 2016, etc.) to identify habitats essential for maintaining current GRSG populations.		
MD FIRE 23: If prescribed fire is used in GRSG habitat, the NEPA analysis for the Burn Plan will address: • Why alternative techniques were not selected as a viable option • How GRSG goals and objectives will be met by its use • How the COT report objectives will be addressed and met • A risk assessment to address how potential threats to GRSG habitat will be minimized. Allow prescribed fire as a vegetation or fuels treatment, and it shall only be considered after the NEPA analysis for the burn plan has addressed the four bullets outlined above. Prescribed fire can be used to meet specific	Same as Alternative 1 (no change made in 2019).	**MD FIRE 23:** Use prescribed fire designed to reduce wildfire risk or improve GRSG habitat, only when there is no other feasible means to achieve the same or similar result. The NEPA analysis for project implementation will address: • Why alternative techniques were not selected as a viable option • How GRSG goals and objectives will be met by its use • How the COT report objectives, as updated, will be addressed and met • A risk assessment to address how potential threats to GRSG habitat will be minimized. Prescribed fire shall only be considered after the NEPA analysis for the project has addressed the four bullets outlined above. Prescribed fire can be used to meet specific fuels objectives that will protect GRSG habitat in PHMAs (e.g., creation of fuel breaks, burning slash piles from conifer reduction treatments, burning high-elevation late brood-rearing habitat (e.g., restore senescent vegetation, etc.), used as a component with other treatment methods to combat annual grasses and restore native plant communities, etc.). Avoid prescribed broadcast burns in known GRSG winter habitat.		

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
fuels objectives that will protect GRSG habitat in PHMAs (e.g., creation of fuel 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, used as a component with other treatment methods to combat annual grasses and restore native plant communities). Allow prescribed fire in known winter range, and it 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 will need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality.	*(See above.)*	*(See above.)*		
MD FIRE 25: Design fuels treatments through an interdisciplinary team process to expand, enhance, maintain, and protect PHMAs and GHMAs. Fuel reduction techniques, such as prescribed fire and chemical, biological (including targeted grazing), and mechanical treatments, are acceptable. Use green strips and fuel breaks, where appropriate, to protect seeding from subsequent fires.	Same as Alternative 1 (no change made in 2019).	**MD FIRE 25:** Design fuels treatments such as, but not limited to, conifer or annual invasive grass removal through an interdisciplinary team process to expand, enhance, maintain, and protect PHMAs and GHMAs. Fuel reduction techniques, such as mechanical, chemical, and biological (including prescribed and targeted grazing) treatments and prescribed fire (see MD FIRE 23), are acceptable. Use green strips and fuel breaks, where appropriate, to protect treatment areas from subsequent fires. Use the best available science (e.g., Doherty et al. 2022, Ricca and Coates 2020, Stringham et al. 2016, etc.) to identify habitats essential for maintaining current GRSG populations.		

Table 21-32. Nevada/California State-Specific Circumstances – Non-Energy Minerals

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Non-Energy Minerals				
MD MR 25: Manage PHMAs as closed to new non-energy leasable mineral leasing (see Appendix A; Figure 2-7).	**MD MR 25:** Manage PHMAs as closed to new non-energy leasable mineral leasing, unless the new non-energy leasable mineral lease meets one of the allocation exception criteria outlined in MD SSS 5 (see Appendix A; Figure 2-7).	**MD MR 25:** Manage PHMA as closed to new non-energy leasable mineral leasing.	**MD MR 25:** Manage PHMAs as closed to new non-energy leasable mineral (e.g., phosphate, sodium, potassium, sulfur, etc.) leasing, unless the new non-energy leasable mineral lease meets one of the allocation exception criteria outlined in MD SSS 5 (see Appendix A; Figure 2-7, in the 2019 NV/CA ARMPA) or the new non-energy leasable mineral has coincident occurrence within existing disturbance and is subject to a non-competitive lease. No additional direct or indirect impacts shall result from extraction of the new non-energy leasable mineral.	

Table 21-33. Nevada/California State-Specific Circumstances – Allocation Exception Criteria

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Allocation Exception Criteria				
{*MD SSS 5 in the 2015 NV/CA ARMPA addressed designation and management of SFAs. In the 2019 effort the SFAs were removed. This management action number was then used for the Allocation Exception Criteria. In this effort, SFAs are addressed as a cross-cutting topic in the HMA actions above. The management number here is less important than the management being considered. Under the 2015 NV/CA ARMPA, there was no specific action that provided exception criteria for allocations.*} **MD SSS 5:** Designate SFA, as shown on Figure 1-3 (of the NV/CA 2015 ARMPA) (2,797,400 acres). SFA will be managed as PHMAs, with the following additional management: • Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights	**MD SSS 5 (Allocation Exception Criteria):** In PHMA, GHMA, and OHMA, the State Director may grant an exception to the allocations and stipulations described in Table 2-1 (of the 2019 NV/CA ARMPA): Comparative Summary of Alternatives if one of the following applies (in coordination with NDOW, SETT, and/or CDFW): i. The location of the proposed activity is determined to be unsuitable (by a biologist with GRSG experience using methods such as Stiver et. al. 2015, as revised) and lacks the ecological potential to become marginal or suitable habitat; and will not result in direct, indirect, or cumulative impacts on GRSG and its habitat. Management allocation decisions will not apply to those areas	**MD SSS 5 (Allocation Exception Criteria):** In PHMA, GHMA, and OHMA, the State Director (in coordination with NDOW, SETT, and/or CDFW) may grant an exception to the allocation decisions (described in Table 2-1: Summary of Allocation Decisions by GRSG Habitat Management Areas, in the 2019 NV/CA ARMPA and potentially amended through this planning effort in **Section 2.5.2**) if one of the following applies: i. {Consideration of non-habitat is removed from this section and addressed in **Section 2.5.2**, Criteria-Based Management for Non-Habitat within GRSG Habitat Management Areas. See that section for comparable language for these alternatives.} ii. The proposed activity will be authorized to address federal, state, or local government public health and safety concerns, specifically as they relate to preventing an emergency or responding to a catastrophic event such as a flood, wildfire, or earthquake. iii. The proposed activity is determined to be a routine administrative function conducted by federal, state or local governments, including renewal or reauthorization of prior existing uses, valid existing rights and existing infrastructure (i.e., rights-of-way for roads) or expansion of existing county or local government infrastructure that serves a public purpose and will have no adverse impacts on GRSG and its habitat, or is in compliance with BLM mitigation policy, CEQ regulations (40 CFR Part 1508.1(s) and the State's mitigation policy (NAC 232.400-480). iv. Exceptions to non-disposal or exchange of lands that are identified for retention in Appendix A, Figure 2-12 (in the 2019 NV/CA ARMPA) could be considered if (a) the lands in question are identified for disposal through previous planning efforts or address a Congressional Acts (e.g., the respective Lincoln and White Pine County Conservation, Recreation, and Development Acts) and are in conformance with State law (e.g., NAC 232.400-480), or (b) the agency can demonstrate that the disposal, including land exchanges, will have no adverse direct, indirect or cumulative impacts on GRSG and its habitat.	

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing • Prioritized for vegetation management and conservation actions in these areas, including, but not limited to land health assessments, wild horse and burro management actions, review of livestock grazing permits/leases, and habitat restoration (see specific management sections).	determined to be unsuitable if the area has passed a threshold and lacks the ecological potential to become marginal or suitable habitat. ii. The proposed activities impacts will be offset to result in no adverse impacts on GRSG or its habitat, through use of the mitigation hierarchy and the State's mitigation policies and programs, such as the State of Nevada's Executive Order 2018-32 (and any future regulations adopted by the State of Nevada regarding compensatory mitigation, consistent with federal law). In cases where exceptions may be granted for projects with a residual impact, voluntary compensatory mitigation consistent with the State's mitigation policies and programs, such as the State of Nevada's Executive Order 2018-32 (and any future regulations adopted by the State of Nevada regarding compensatory mitigation, consistent with federal law) will be one mechanism by which a proponent achieves the Approved RMPA goals, objectives, and exception criteria. When a proponent volunteers compensatory mitigation as their chosen approach to address residual impacts, the BLM will incorporate those actions	*(See above.)*		

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	into the rationale used to grant an exception. The final decision to grant a waiver, exception, or modification will be based, in part, on criteria consistent with the State's GRSG management plans and policies. iii. The proposed activity will be authorized to address public health and safety concerns, specifically as they relate to federal, state, local government and national priorities. iv. Renewals or re-authorizations of existing infrastructure in previously disturbed sites or expansions of existing infrastructure that do not result in direct, indirect, or cumulative impacts on GRSG and its habitat. v. The proposed activity is determined to be a routine administrative function conducted by federal, state or local governments, including prior existing uses, authorized uses, valid existing rights and existing infrastructure (i.e., rights-of-way for roads) that serve a public purpose and will have no adverse impacts on GRSG and its habitat, consistent with the State's mitigation policies and programs, such as the State of Nevada's Executive Order 2018-32 (and any future regulations adopted by the State of	*(See above.)*		

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
(See above.)	Nevada regarding compensatory mitigation, consistent with federal law). vi. Exceptions to non-disposal or exchange of lands that are identified for retention in Appendix A, Figure 2-12 could be considered if (a) they are identified for disposal through previous planning efforts or address a Congressional Acts (e.g., the respective Lincoln and White Pine County Conservation, Recreation, and Development Acts), (b) the agency can demonstrate that the disposal, including land exchanges, will have no adverse direct, indirect or cumulative impacts on GRSG and its habitat, or (c) adverse impacts on GRSG or its habitat will be offset, through use of voluntary compensatory mitigation, consistent with the States' mitigation policies and programs, such as the State of Nevada's Executive Order 2018-32 (and any future regulations adopted by the State of Nevada regarding compensatory mitigation, consistent with federal law).	*(See above.)*		

Table 21-34. Nevada/California State-Specific Circumstances – Lek Buffers

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Lek Buffers				
MD LR 17: Within 4 miles of active and pending leks in GRSG habitat, require ROW, permit, and lease holders to retrofit those portions of power lines and other utility structures with nesting and perch- deterring devices. Do this during the renewal and amendment process if adverse effects, such as increased nest predation, on GRSG populations have been documented. This requirement shall be predicated on research and monitoring studies specific to power lines or other utility structures.	Same as Alternative 1 (no change made in 2019).	**MD LR 17:** Within 4 miles of active and pending leks, require ROW, permit, and lease holders to retrofit those portions of power lines and other utility structures with nesting and perch- deterring devices. Do this during the renewal and amendment process. Monitor and maintain perch-deterring effectiveness through the life of the structures following guidance from scientifically accepted protocols.		
Concept not included.	Concept not included.	**MD SSS 18 (new**) – (insert after MD SSS 17, then move subsequent MDs down a number): If an Active or Pending Active lek is identified in an area outside of PHMA or GHMA lek buffer-distances will be applied as described in Appendix B (of the 2019 NV/CA ARMPA) to avoid direct and indirect impacts to lek activity and habitat. Active or Pending Active leks not included in the HMA model will be added when the model is updated.		

21.2.5 Oregon

State specific circumstances for the State of Oregon include management of 18 Areas of Critical Environmental Concern/Research Natural Areas (ACEC/RNA) as "Key RNAs" or "Key ACECs", as well as management of saleable minerals/mineral materials in GRSG HMAs. This amendment effort is limited to RMP-level actions needed to provide guidance for subsequent implementation-level actions. The land use allocation will be identified in the ROD, but if public lands are disposed of or devoted to a public purpose which precludes livestock grazing, a site-specific NEPA and a site-specific decision process pursuant to the Taylor Grazing Act and 43 C.F.R. 4100.4-2 is necessary to cancel permits and/or removal of livestock from these areas.

Key ACECs/RNAs

The 2015 Oregon GRSG ARMPA designated the entirety of fifteen (15) existing Areas of Critical Environmental Concern/Research Natural Areas (ACEC/RNAs) as "Key RNAs" and all of three additional ACECs as "Key ACECs" (see 2015 ARMPA Special Designations Objective SD 4 and Table 2-6). The 2015 Oregon ARMPA also allocated all or portions of thirteen Key RNAs as unavailable to livestock grazing. Two ACEC/RNAs are already unavailable to livestock grazing; Foster Flat in Three Rivers Field Office under the 1992 Three Rivers RMP and Guano Creek-Sink Lakes in Lakeview Field Office by a 1998 act of Congress. The three ACECs and fifteen ACEC/RNAs were designated in various, underlying district Resource Management Plans (RMPs) prior to the 2015 amendment.

During the 2019 GRSG RMP amendment process, BLM Oregon proposed and analyzed a reversal of the 2015 decision to make all or portions of the 13 key RNAs (excluding the two ACEC/RNAs allocated as unavailable to livestock grazing under the 1992 Three Rivers and 2003 Lakeview RMPs) available to livestock grazing. However, the 2019 GRSG ARMPA retained the Key RNA designations, along with the applicable Management Objectives and Management Direction (BLM OR 2019 FEIS; Pages 2-8 and 2-9). **Table 21-35** below displays, as Alternatives 1 and 2 respectively, the 2015 and 2019 estimated acreages available or unavailable to livestock grazing, along with anticipated changes to the number of Animal Unit Months (AUMs) affected by the availability/unavailability decisions.

Alternatives 3, 4, 5, and 6 are based upon changed habitat management area boundaries. In 2022, ODFW informed BLM that they were going to update core and low density HMA s. The timeline outlined by ODFW for updating and approving Core- and Low-Density areas was inconsistent with the EIS analysis process. Therefore, after coordination with the state, BLM used ODFW's published methodology and data up through the 2022 field season to estimate likely core habitat and draft PHMA map.

Under Alternative 3, all proposed PHMA and GHMA from Alternative 4 would become PHMA and be allocated as unavailable to livestock grazing, including all of the 13 key RNAs. The mapping process referenced above became the basis for BLM's proposed PHMA and GHMA designations in Alternative 4. This alternative would retain the 2015 decision that makes all or portions of the 13 key RNAs as unavailable to livestock grazing. Alternatives 5 and 6 propose management clarifications and changes to areas unavailable to livestock grazing. The updated Key RNAs and revised portions allocated as unavailable to livestock grazing would continue to be managed over the long term to meet the objectives established by the 2015 ARMPA and to reflect a diversity of vegetative communities that are representative of important GRSG habitat needs.

Under Alternatives 5 and 6, modifications to areas allocated as unavailable to livestock grazing in the 13 key RNAs are based on district-generated, site-specific information. The proposed modifications vary by individual Key RNA and reflect site specific vegetation or habitat conditions in those areas (**Table 21-35**

below). In most cases, the Key RNA designation and objectives to provide opportunities for research and serve as a broad spectrum of vegetation communities across GRSG habitat are retained. Additionally, the BLM is proposing eliminating or modifying certain portions or all of areas within Key RNAs that were allocated as unavailable to livestock grazing, to avoid resource conflicts. These conflicts include but are not limited to constructing fences in proximity to cultural sites, within 1.2 miles of an occupied or pending lek (a conformance violation of the 2015 ARMPA) or within existing designated Wilderness Study Areas. Under Alternatives 5 and 6, and depending on the specific Key RNA, the area presently allocated as unavailable to livestock grazing under the 2015 ARMPA may be reallocated to livestock grazing or the size and/or location of the area excluded from grazing may be modified.

The alternatives below present the range of alternatives for management of the Key RNAs/Key ACECs.

Table 21-35. Oregon Key RNAs – Summary of Estimated Acres and AUMs by Alternative[1]

RNA Name	District	Total Acres of the Key RNA	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Alternatives 5 and 6	
			Key RNA Acres Available for Livestock Grazing	Key RNA Acres / estimated AUMs Unavailable for Livestock Grazing	Key RNA Acres / estimated AUMs Available for Livestock Grazing	Key RNA Acres Unavailable for Livestock Grazing	Key RNA Acres Available for Livestock Grazing	Key RNA Acres / estimated AUMs that would continue to be Unavailable for Livestock Grazing	Key RNA Acres Available for Livestock Grazing	Key RNA Acres / estimated AUMs that would continue to be Unavailable for Livestock Grazing	2015 Key RNA Acres that would become Available for Livestock Grazing	Key RNA estimated Acres / estimated AUMs that would become Unavailable for Livestock Grazing
Black Canyon	Vale	2,600 [2]	0	2,600/260	2,600/260	0	0	2.600/260	0	2,600/260	2,600	0/0
Dry Creek Bench	Vale	1,637	1,015	622/52	1,637/52	0	0	1,637/52	1,015	622/52	622	0/0
East Fork Trout Creek	Burns	361	57	304/47	361/47	0	0	361/0 [9]	57	304/0	57 [3]	304/0 [3]
Fish Creek Rim	Lakeview	8,725	5,966	2,750/110	8,725/110	0	0	8,725/110	5,966	2,750/110	8,621	95/4 [4]
Foley Lake	Lakeview	2,228	959	1,269/51	2,228/51	0	0	2,228/51	959	1,269/51	1,342	797/33 [4]
Foster Flat	Burns	2,687	0	2,687	0	2,687	0	2,687	0	2,687	0	2,687
Guano Creek–Sink Lakes	Lakeview	11,185	0	11,185	0/0	11,185	0	11,813	0	11,813	0	11,813 [5]
Lake Ridge	Vale	3,872	3,091	778/74	3,872/74	0	0	3,872/74	3,091	778/74	778	13/0 [6]
Mahogany Ridge [7] (southern unit only)	Vale	444	527	155/27	155/27	0	0	140/27	527	140/27	15	140/0
North Ridge Bully Creek	Vale	1,569	1,405	164/19	1,569/19	0	0	1,569/19	1,405	164/19	164	0/0
Rahilly-Gravelly	Lakeview	18,678	10,396	8,282/586	18,678/586	0	0	18,678/586	10,396	8,282/586	16,653	2,025/144

RNA Name	District	Total Acres of the Key RNA	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Alternatives 5 and 6	
			Key RNA Acres Available for Livestock Grazing	Key RNA Acres / estimated AUMs Unavailable for Livestock Grazing	Key RNA Acres / estimated AUMs Available for Livestock Grazing	Key RNA Acres Unavailable for Livestock Grazing	Key RNA Acres Available for Livestock Grazing	Key RNA Acres / estimated AUMs that would continue to be Unavailable for Livestock Grazing	Key RNA Acres Available for Livestock Grazing	Key RNA Acres / estimated AUMs that would continue to be Unavailable for Livestock Grazing	2015 Key RNA Acres that would become Available for Livestock Grazing	Key RNA estimated Acres / estimated AUMs that would become Unavailable for Livestock Grazing
South Bull Canyon [8]	Vale	770	21	749/116	749/116	0	0	749/116	43	749/116	492	257/0
South Ridge Bully Creek	Vale	621	224	397/61	621/61	0	0	621/61	224	397/61	397	0/0
Spring Mountain	Vale	996	0	996/153	996/153	0	0	996/153	0	996/153	995	0/0
Toppin Creek Butte [9]	Vale	3,998	1,133	2865/216	3,998/216	0	0	2,865/216	1,133	2,865/216	2,626	239/0
Totals		60,362	24,996	35,803/1,772	46,775/1,772	13,872	0	59,532/1,772	24,996	36,416/1,772	35,403	18,370/288

Notes:

1 – Acreage estimates and AUM estimates/calculations have been updated from the 2015 ARMPA ROD .

2 – Black Canyon ACEC/RNA acres were reduced by 40 acres to reflect corrections in GIS of the boundary.

3 – The Oregon 2015 ARMPA estimated that 47 AUMs may be removed based strictly on the change in acreage. The 2019 RMPA used the same estimate of 47 AUMs. Alternatives 1 and 2 reflect the numbers from the prior EISs. This key RNA has been excluded from the allotment and pasture through an administrative process; no change to permitted AUMs is necessary because the remaining pasture can support the estimated 47 AUMs associated with the key RNA made unavailable to livestock grazing.

4 – Estimated AUMs for Alternatives 5 and 6 associated with the area allocated as 'unavailable to livetock grazing' would be absorbed in portions of the associated pasture and/or allotment in which the Key RNA exists. Site-specific monitoring would inform if AUMs cannot be absorbed, with site-specific NEPA and grazing decisions to implement any reductions in AUMs as a result of implementing removal of livestock from those areas allocated as unavailable to livestock grazing as a result of this alternative.

5 – The 2015 and 2019 estimates of acres used the Guano Creek Wilderness Study Area boundary. The Guano Creek-Sink Lakes ACEC/RNA is much smaller and contained entirely within the larger WSA boundary. The corrected acres reflect just the ACEC/RNA portion that is, and would continue to be, unavailable to livestock grazing use under all alternatives.

6 – Lakeridge key RNA would become available for livestock grazing, however a 13-acre area adjacent to the 2015 ARMPA identified Lakeridge key RNA and still within the ACEC/RNA would be available for research and would be unavailable to livestock grazing.

7 – Mahogany Ridge ACEC/RNA is divided into two "Parcels", totaling 622 acres. The southern parcel is 476 acres; the Key RNA is located solely in the southern parcel and totals 155 acres. In Alternatives 5 and 6, OR/WA BLM proposes 140 acres be retained as Key RNA and allocated as unavailable to livestock grazing. 15 acres would be outside of the Key RNA under this alternative and reallocated to available to livestock grazing.

8 – South Bull Canyon data has been revised based on district specific information resulting from assessments made during the closure process. The entire ACEC/RNA acreage is 770 of which 749 acres were designated as Key RNA (and allocated as unavailable to livestock grazing). The acres that would be allocated as available to livestock grazing under Alternatives 5 and 6 is the proposed new exclosure (and retention of unavailable allocation) subtracted from the 2015 Key RNA (749 minus 257 = 492)

9 – Exception criteria would be have to be met for construction of exclosure fencing within WSA or increased management presence would be needed.

Table 21-36. Oregon State-Specific Circumstances – Research Management Areas

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Research Natural Areas				
Objective SD 4: Manage key RNAs, or large areas within the RNAs, as undisturbed baseline reference areas for the sagebrush plant communities they represent that are important for Greater Sage-grouse. Manage key RNAs for minimum human disturbance allowing natural succession to proceed.	**Objective SD 4:** Manage the Foster Flat and Guano Creek–Sink Lakes RNAs as undisturbed baseline reference areas for the sagebrush plant communities they represent that are important for Greater Sage Grouse. Minimize human disturbance in all 15 key RNAs, allowing natural ecological processes to proceed.	**Objective SD 4:** Manage Key RNAs, or large areas within the RNAs, as baseline reference areas for sagebrush plant communities they represent that are important to Greater Sage-grouse. Active or passive restoration actions are allowed within Key RNAs to support maintenance or improvement of identified vegetation communities and to meet GRSG habitat objectives.		
MD LG 1: All or portions of key RNAs will be unavailable to grazing (see **Table 21-35** above). Determine whether to remove fences, corrals, or water storage facilities (e.g. reservoirs, catchments, ponds).	**MD LG 1** is deleted. Livestock grazing management in the 13 key RNAs returns to being governed by applicable district RMPs as amended by the 2015 Oregon Greater Sage-Grouse ROD/ARMPA goals, objectives, and management decisions.	**MD LG 1:** All, some, or none of key RNAs will be unavailable to livestock grazing (see **Table 21-35** above). Determine whether to remove, modify or construct additional fences, corrals, or water storage facilities (e.g. reservoirs, catchments, ponds). New proposed water-related range improvements (springs, pipelines, troughs, etc.) may be authorized where existing critical water development is no longer accessible as a result of implementing areas within the Key RNAs as unavailable to livestock grazing.		
All or part of Key RNAs identified would be closed to all disturbance types, including livestock grazing, OHV, minerals development, and lands and realty actions. The reason for these closures would be for research-related activities, including studying vegetative communities important to GRSG that do not contain land disturbing activities, as well as studying the effects of climate change on these vegetative communities.	RNAs remain subject to management to promote the key characteristics of the RNAs, including regulation of grazing, to maintain and promote the key characteristics of the RNAs.	Key RNAs and all PHMA areas allocated as unavailable to livestock grazing.	Key RNAs and areas allocated as unavailable to livestock grazing to facilitate the ability to compare un-grazed vegetation types to grazed vegetation types.	

Table 21-37. Oregon State-Specific Circumstances – Saleable Minerals/Mineral Materials

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Saleable Minerals/Minerals Management				
MD MR 14: PHMA are closed to new mineral material sales. However, these areas 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 Oregon PAC (also called BSU, and is the same footprint as PHMA) and project area disturbance cap. • The activity is subject to the provisions set forth in the mitigation framework in Appendix F (in the 2015 OR GRSG ARMPA). • All applicable required design features are applied and the activity is permissible under screening criteria (see SSS 13 in the 2015 OR GRSG ARMPA). Federal Highway Act material sites are a ROW and not subject to mineral sale requirements. See ROW section for management (MD LR 7 in the 2015 OR GRSG AMPRA).	Same as Alternative 1 (no change made in 2019).	**MD MR 14:** PHMA are closed to new mineral material sales.	Same as Alt 1, with the following addition: If BLM's NEPA analysis determines that the use or expansion of an existing, authorized material site (up to the entire footprint of the existing authorized area) could be implemented without significant impacts (i.e., upon completion of an Environmental Assessment, BLM determines that a FONSI is applicable) and the applicable area has not met the disturbance cap, BLM is authorized to implement without further analysis or mitigation.	

21.2.6 Utah

The BLM will address GHMA management as a Utah state-specific circumstance. HMA management in Utah is a result of different approaches to planning in the 2015 and 2019 Utah GRSG RMP amendments. In the BLM's 2019 GRSG ARMPA, the BLM increased habitat management area alignment with the State of Utah's Sage-Grouse Management Areas (SGMAs) and prioritized the importance of management prescriptions on PHMA. This was to focus protection on seasonal habitats that support over 95 percent of GRSG populations in Utah, and removed GHMA designation and management. .

The state-specific circumstances for the State of Utah being addressed in this effort is the result of the 2019 amendment effort. The remainder of this section includes management alternatives specific to GHMA in Utah under alternatives 4, 5 and 6. Refer to **Appendix 2** for specific language from the 2015 and 2019 amendments, and **Appendix 3** for additional information on the Utah approaches for identifying habitat management areas.

Table 21-38. Utah State-Specific Circumstances – General Habitat Management Areas

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Special Status Species (SSS)				
MA-SSS-5: In GHMA, apply the following management to meet the objective of a net conservation gain for discretionary actions that can result in habitat loss and degradation: A- Existing Management: Implement GRSG management actions included in the existing RMPs and project specific mitigation measures associated with existing decisions. B- Net Conservation Gain: In all GRSG 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. Exceptions to net conservation gain for GRSG may be made for vegetation treatments to benefit Utah prairie dog. Mitigation will be conducted according to the mitigation	**MA-SSS-5:** No similar action.	**MA-SSS-5:** No similar action.	**MA-SSS-5:** In GHMA, apply the following management to meet a minimum standard of no net loss for discretionary actions that can result in habitat loss and degradation: A- Existing Management: Same as Alternative 1. B- Net Conservation Gain: Apply a minimum standard of no net loss consistent with cross-cutting language. Refer to Mitigation in **Table 21-4**. C- Buffers: In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will assess and address impacts within the lek buffer-distances identified in the US Geological Survey Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239; Manier et al. 2014) in accordance with Appendix B, Applying Lek-Buffer Distances (Utah 2019 ARMPA). D- Required Design Features/Best Management Practices: Same as Alternative 1.	**MA-SSS-5:** Same as Alternative 4

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
framework contained in Appendix F (Utah 2015 ARMPA). C- Buffers: 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 US Geological Survey Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239; Manier et al. 2014) in accordance with Appendix B (Utah 2015 ARMPA). D- Required Design Features/Best Management Practices: In GHMA, apply the fluid mineral RDFs that are associated with GHMA identified in Appendix C (Utah 2015 ARMPA) when authorizing/permitting site-specific fluid mineral development activities/projects. The applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known. Because of site specific circumstances, some RDFs may not apply to some projects and/or may require slight variations. All variations in RDFs will require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
• A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable; • An alternative RDF, state-implemented conservation measure, or plan-level protection is determined to provide equal or better protection for GRSG or its habitat; • A specific RDF will provide no additional protection to GRSG or its habitat.	*(See above.)*	*(See above.)*	*(See above.)*	*(See above.)*
MA-SSS-6 <u>Sage-Grouse Management Outside PHMA/GHMA</u> Proposed projects within State of Utah SGMA and USFWS priority areas for conservation (PAC), as well as adjacent to PHMA outside these areas, will consider impacts on GRSG and implement measures to mitigate impacts when preparing site-specific planning and environmental compliance documents. Outside of PHMA, prior to site-specific authorizations, the BLM will evaluate habitat conditions and may require surveys to determine if the project area contains GRSG habitat (FLPMA, 43 United States Code (USC) 1701 Sec. 201 (a); BLM Manual	**MA-SSS-6:** <u>Sage-Grouse Management Outside PHMA</u> Outside PHMA, implement GRSG management actions included in the RMPs and project-specific mitigation measures associated with decisions that predated the 2015 amendments. Proposed projects within State of Utah SGMA and USFWS PACs, as well as adjacent to PHMA outside these areas, will consider impacts on GRSG and may implement measures to mitigate impacts on GRSG populations within adjacent PHMA when preparing site-specific planning and environmental compliance documents.	**MA-SSS-6:** Same as Alternative 2.	**MA-SSS-6**: Same as Alternative 2 but applying management to areas outside GHMA based on amended GHMA boundaries.	**MA-SSS-6:** Same as Alternative 4.

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
6840.04 D3; BLM-M-6840.04 E2). Surveys will be required prior to authorizing discrete anthropogenic disturbances within 4 miles of an occupied lek that is located in PHMA, but only in existing sagebrush. If an area is determined to be GRSG habitat (e.g., nesting, brood-rearing, winter, transition), mitigation will be considered as part of the project level NEPA analysis and will be attached as conditions of approval to new discretionary actions, if deemed necessary to protect the habitat (BLM Manual 6840.04 D 5). Measures that may be considered include those identified in Appendix C. (Utah 2015 ARMPA) Outside of PHMA, but within SGMAs and PACs, avoid removal of sagebrush and minimize development that creates a physical barrier to GRSG movement; these areas may be used by GRSG to connect to other populations or seasonal habitat areas. Exceptions shall be made for vegetation treatments to benefit Utah prairie dog, where the landscape will be managed for both species. Outside of PHMA, but within SGMAs and PACs, consider noise and permanent structure stipulations around leks. Outside PHMA, portions of State of Utah opportunity areas (see	Outside of PHMA, but within SGMAs and PACs, avoid removal of sagebrush and minimize development that creates a physical barrier to GRSG movement; these areas may be used by GRSG to connect to other populations or seasonal habitat areas. Exceptions shall be made for vegetation treatments to benefit Utah prairie dog, where the landscape will be managed for both species. Outside of PHMA, but within SGMAs and PACs, consider noise and permanent structure stipulations around leks. Outside PHMA, after analyzing the impacts using the buffer distances identified in Appendix B (Utah 2019 ARMPA) from a lek that is located in PHMA, portions of State of Utah opportunity areas will be managed with the following allocations: • Fluid minerals will be open for leasing with CSU stipulations (noise and tall structures). • Lands ROWs, permits, and leases will be avoided, applying avoidance criteria for noise and tall structures. Avoid siting wind energy development in opportunity areas within the buffer distances identified in Appendix B (Utah 2019 ARMPA) from occupied GRSG leks that are in PHMA, if the lek buffer analysis as identified in Appendix B (Utah 2019	*(See above.)*	*(See above.)*	*(See above.)*

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Utah 2015 Final EIS Map 2.4) within 4 miles of a lek that is located in PHMA will be managed with the following allocations: • Fluid minerals will be open for leasing with CSU stipulations (noise and tall structures). • Lands ROWs, permits, and leases will be avoided, applying avoidance criteria for noise and tall structures. Do not site wind energy development in opportunity areas within 5 miles from occupied GRSG leks that are in PHMA. Outside of PHMA, avoid and minimize effects from discrete anthropogenic disturbances in areas that have been treated with the intent of improving or creating new GRSG habitat. Evaluate conditions in the treated area to determine if it is providing habitat for GRSG and if additional measures are necessary to protect the habitat.	ARMPA) shows that siting wind energy development in opportunities areas will impact lek persistence within PHMA. Outside of PHMA, avoid and minimize effects from discrete anthropogenic disturbances in areas that have been treated with the intent of improving or creating new GRSG habitat. Evaluate conditions in the treated area to determine if it is providing habitat for GRSG and if additional measures are necessary to protect the habitat. Outside of PHMA, provide that acres of GRSG seasonal habitat (based on best available maps, then confirmed to be regularly used by GRSG Grouse to sustain one or more seasonal habitat requirements through coordination with the appropriate State of Utah agency and through on-the-ground information) that is lost to habitat degradation actions (Appendix C, Table C.2 of the Utah 2015 ROD/ARMPA) are replaced by creating/improving GRSG habitat within PHMA.	*(See above.)*	*(See above.)*	*(See above.)*

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Changes to Other Sections/Management Actions				
The following management actions include a reference to GHMA, usually just pointing to the GHMA polygons or in a prioritization approach (see **Appendix 2**, Utah existing GRSG management): • MA-SSS-1 • MA-FIRE-8 • MA-LG-1 • MA-LG-5 • MA-WHB-2 • Objective MR-1 • MA-MR-20 • MA-MR-24 • MA-RE-1	No GHMA in Utah under these alternatives, so no similar action.		Same as Alternative 1, but with the inclusion of the changes by alternative described in the rangewide alternatives (**Section 2.5**), including the updated GHMA boundaries described under Alternatives 4, 5 and 6.	
The following management actions include a reference to GHMA, only include a reference to GHMA that references application of MA-SSS-5. • MA-MR-1 • MA-MR-4 • MA-MR-14 • MA-MR-16 • MA-MR-23 • MA-LR-7	No GHMA in Utah under these alternatives, so no similar action.		Same as Alternative 1, by applying the amended MA-SSS-5 language described above and the updated GHMA boundaries described under Alternatives 4, 5, and 6.	

21.2.7 Wyoming

Wyoming's Alternatives 5 and 6 are considering Stewardship Habitat Management Areas (SHMA) in addition to PHMA and GHMA. The SHMA designation is being applied in northeastern Wyoming where private landowners worked with the State of Wyoming to establish management objectives and approaches.

The remainder of this section includes the alternatives related to the applicable management actions associated with SHMA. Because these areas are only being considered under Alternative 5 and 6, there is no corresponding actions under Alternatives 1-4.

Table 21-39. Wyoming State-Specific Circumstances – Additional Habitat Management Area

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Habitat Management Area Alignments				
Not applicable	Not applicable	Not applicable	Not applicable	Stewardship Habitat Management Areas (SHMAs) as defined for Wyoming are GRSG habitats that are generally characterized by large percentages of private land, existing disturbance and prior and existing rights, and fragmented landscapes but that continue to support substantial populations of GRSG, provide important connections between populations, and are important for maintaining GRSG populations. Management in SHMA is consistent with GHMA restrictions.
Major Land Use Allocations				
Not applicable	Not applicable	Not applicable	Not applicable	Allocations in SHMA same as GHMA restrictions as proposed for Alternatives 5 and 6 in the cross-cutting topics above.
Fluid Mineral Leasing/Development				
Not applicable	Not applicable	Not applicable	Not applicable	Fluid mineral leasing/development in SHMA same as proposed for Alternatives 5 and 6 in the cross-cutting topics above.
Waivers, Exceptions, and Modifications (WEMs)				
Not applicable	Not applicable	Not applicable	Not applicable	WEMs in SHMA same as those proposed for active leks in GHMA for Alternatives 5 and 6 in the cross-cutting topics above.
Mitigation				
Not applicable	Not applicable	Not applicable	Not applicable	Mitigation in SHMA same as proposed for Alternatives 5 and 6 in the cross-cutting topics above.
Wind/Solar and Major ROWs				
Not applicable	Not applicable	Not applicable	Not applicable	Wind/Solar and Major ROWs in SHMA same as proposed for GHMA in Alternatives 5 and 6 in the cross-cutting topics above.
Adaptive Management				
Not applicable	Not applicable	Not applicable	Not applicable	Adaptive management in SHMA same as proposed for GHMA.
Application of Habitat Objectives				
Not applicable	Not applicable	Not applicable	Not applicable	Application of Habitat objectives in SHMA same as proposed for Alternatives 5 and 6 in the cross-cutting topics above.
Disturbance Caps				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable (disturbance caps in SHMA same as current GHMA)
Threats from Predation				
Not applicable	Not applicable	Not applicable	Not applicable	Threats from predation in SHMA same as proposed for PHMA for Alternatives 5 and 6 in the cross-cutting topics above.
Livestock Grazing				
Not applicable	Not applicable	Not applicable	Not applicable	Livestock grazing in SHMA same as proposed for PHMA for Alternatives 5 and 6 in the cross-cutting topics above.
Wild Horse and Burro Management				
Not applicable	Not applicable	Not applicable	Not applicable	Wild horse and burro management in SHMA same as proposed for PHMA for Alternatives 5 and 6 in the cross-cutting topics above.

Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternatives 5 and 6
Additional Management Considerations				
Not applicable	Not applicable	Not applicable	Not applicable	In partnership with appropriate Federal and State Agencies and landowners and their representatives, encourage the development and implementation of landowner-led conservation benefit agreements in SHMA that focus on ensuring the long-term viability of GRSG populations in the area, and at a minimum identify key habitats and linkages, potential threats to GRSG and its habitat, appropriate conservation measures, and an avoid/minimize/compensate strategy that identifies mitigation opportunities within the boundaries of SHMA.
Not applicable	Not applicable	Not applicable	Not applicable	Because the functional movement (i.e., movements that result in genetic connectivity) of GRSG likely occurs among leks, encourage the establishment of conservation benefit agreements that include management measures specific to maintaining active leks in SHMAs.
Not applicable	Not applicable	Not applicable	Not applicable	Support research that identifies habitat conditions that promote or limit the movement of GRSG through a landscape to better inform management of SHMAs. Research supported by BLM and partners should be actionable.
Not applicable	Not applicable	Not applicable	Not applicable	Encourage the development and implementation of invasive vegetation – including encroaching native species – management strategies in SHMA. Strategies should be inclusive of all private and public land managers and include, but not be limited to: engagement of all pertinent stakeholders, inventory and monitoring requirements, prioritization approaches, treatment and removal options, restoration (to include site-specific management of livestock), responses to wildfire, and an adaptive management framework.
Not applicable	Not applicable	Not applicable	Not applicable	Work with the appropriate State and Federal agencies to establish wildfire response in SHMA at the same priority as protection of property.
Not applicable	Not applicable	Not applicable	Not applicable	To minimize impact of predators to GRSG, encourage the development of a predator management plan in SHMA. Plans should include, but not be limited to: coordination requirements with appropriate State and Federal agencies if implementation of the plan becomes necessary, assessments of habitat conditions and relationships with predator populations and impacts to GRSG, anthropogenic structure design details to reduce opportunities for corvid and raptor perching and nesting, disposal options for anthropogenic food subsidies, approaches for addressing predation from domestic pets, descriptions of concurrent management actions required to address GRSG survival concerns long-term (for example, habitat enhancement), and monitoring requirements.