
Appendix 5

Areas of Critical Environmental Concern
for Greater Sage-Grouse Habitat

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Appendix 5. Areas of Critical Environmental Concern for Greater Sage-Grouse Habitat

5.1 INTRODUCTION

This appendix provides an overview of the potential Areas of Critical Environmental Concern (ACECs) considered in the Draft and Final EIS and describes the rangewide and state-by-state process the BLM undertook in identifying and addressing internal and externally provided ACEC nominations and evaluating areas for inclusion as potential ACECs in the RMPA. This appendix also provides an analysis of the effects of the alternatives on the potential ACECs that were considered under Alternatives 3 and 6.

The BLM identified 32 potential ACECs for consideration in the Draft EIS under Alternatives 3 and 6. Between the Draft EIS and the Final EIS the BLM refined the boundaries of some of the ACECs based on updated data and input and, in five instances in Idaho and Nevada/California, removed ACECs from consideration. All of the changes that occurred between Draft and Final EIS are described in the state-by-state sections below. Following is a summary of the ACECs acres by state as identified in the Final EIS in both Alternatives 3 and 6.

Table 5-1. Summary of Potential GRSG ACECs by State

State	Acres of Potential ACEC in Draft EIS	Acres of Potential ACEC in Final EIS
Colorado	4,547	4,547
Idaho	3,438,307	1,689,386
Montana/Dakotas	726,062	726,050
Nevada/California	5,766,150	5,364,627
Utah	365,181	365,182
Wyoming	839,225	636,352
Total	11,139,472	8,786,144

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

Triangle – 92,000 acres (identified in Draft EIS and removed from consideration in the Final EIS)

Antelope – 39,230 acres (identified in Draft EIS and removed from consideration in the Final EIS)

Mountain Valley Complex – 336,009 acres (identified in Draft EIS and removed from consideration in the Final EIS)

Upper Snake Complex – 247,491 acres (identified in Draft EIS and removed from consideration in the Final EIS)

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
Buffalo Skedaddle – 182,213 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
Owyhee East - 487,122 acres
Owyhee West- 704,650 acres
Little Butte Long Valley – 85,510 acres (identified in Draft EIS and removed from consideration in the Final EIS)

Oregon

None identified.

Utah

Rich – 132,924 acres
Box Elder – 232,258

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

Management direction associated with these ACECs considered in Alternative 3 and Alternative 6 is summarized in **Chapter 2, Table 2-14** and detailed in **Appendix 21, Section 21.1.12** and **Table 2-14**. The management direction for ACECs under Alternative 3 and 6 is also summarized below in **Table 5-2**. Alternative 3 generally provides the highest level of protection. Under Alternative 3, the management protections for PHMA are the highest of all the alternatives and this direction would apply in the potential ACECs. This management direction includes closing the areas to the development of utility-scale solar, utility-scale wind, fluid minerals, non-energy leasable minerals, and saleable mineral/material management and proposing the areas for mineral withdrawal. In addition, ACECs under Alternative 3 also receive two additional protections not provided by the PHMA management direction: the exclusion for major rights-of-way with no exceptions (in PHMA under Alternative 3, designated corridors are avoidance areas) and for locatable minerals the requirement for operators to submit a plan of operations (refer to 43 CFR Part 3809.11(c)(3)) and obtain BLM approval before beginning any operations causing surface disturbance greater than casual use as defined in 43 CFR Part 3809.5 (in PHMA under Alternative 3, plan of operations are not required).

Table 5-2. Summary of ACEC Management Direction

Management Category	Alternative 3	Alternative 6
Fluid Mineral (including geothermal)	Closed	Open, No Surface Occupancy with w/exception that must be applicable to entire ACEC
Saleable Minerals & Materials	Closed	Closed to new operations except for free-use pits in support of maintenance for existing local roads and public safety.
Nonenergy Leasable Minerals	Closed	
Coal	BLM determines suitability pursuant to 43 CFR Part 3461.5	
Locatable Mineral	Proposed for withdrawal. Operators must submit a plan of operations (refer to 43 CFR Part 3809.11(c)(3)) and obtain BLM approval before beginning any operations (as defined in 43 CFR 3809.5).	Operators must submit a plan of operations (refer to 43 CFR Part 3809.11(c)(3)) and obtain BLM approval before beginning any operations (as defined in 43 CFR 3809.5).
Major Rights of Way	Major and Minor Rights of Way - Exclusion	Major Rights of Way – Exclusion. Minor rights of way – 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.
Solar (utility scale)	Exclusion	
Wind (utility scale)	Exclusion	
Criteria-Based Management for Non-Habitat	Process by which potential non-habitat may be reviewed via a field inspection.	
Mitigation	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.
Adaptive Management	Soft and hard adaptive management threshold based on habitat and population trends. Causal factor analysis is conducted to identify causal factor(s) and adaptive management response are instituted.	
Habitat Objectives	The habitat objectives identify the desired outcome for habitat on BLM-administered lands in all GRSG HMAs to support suitable GRSG habitat at multiple scales in order to support connected mosaics of sagebrush and provide seasonal habitats and dispersal.	

Management Category	Alternative 3	Alternative 6
Disturbance Cap	3% cap for new and pre-existing authorizations in the project analysis area and within HAF Fine-Scale boundaries while honoring valid existing rights. Cap would include infrastructure, fire, and agriculture.	All states: 3% cap in PHMA in the HAF Fine-Scale boundaries (5% in WY and MT). Applicable only to infrastructure. No exceptions to the disturbance cap.
Predation	Collaborate with appropriate state Agencies and others in their efforts to minimize impacts from predators on GRSG. Avoid new infrastructure in undisturbed habitat. Minimize food sources. Predator management plan requirement.	Same as Alt. 3 but predator management plan may be required.
Livestock Grazing	Unavailable to livestock grazing.	Managing livestock grazing to meet land health standards and avoid direct impacts to GRSG habitats from livestock range improvements.
Wild Horse and Burro	Wild horse and burros would be removed.	Manage within established appropriate management levels (AML). Incorporate GRSG habitat objectives into plans. Prioritize WH&B activities - such as monitoring, gathers, AML adjustments (due to causal factor) etc.

Under Alternative 6, the PHMA management direction for Alternative 5 would be applied in the potential ACECs but, unlike PHMA under Alternative 5, the following additional protections would be provided: potential ACECs would be closed to development of utility-scale solar and utility scale wind and would include additional protections related to fluid mineral development, saleable mineral/material management, major rights of way, the application of the disturbance cap with no exceptions, and for locatable minerals the requirement for operators to submit a plan of operations (refer to 43 CFR Part 3809.11(c)(3)) and obtain BLM approval before beginning any operations causing surface disturbance greater than casual use as defined in 43 CFR Part 3809.5.

Following is a comparative summary of the management direction for ACECs under Alternative 3 and 6. Refer to **Appendix 21, Section 21.1.12** and **Table 2-14** for full management descriptions.

5.2 AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACECs) POLICY AND REGULATIONS

The Federal Land Policy and Management Act (FLPMA) requires that priority shall be given to the designation and protection of areas of critical environmental concern (ACECs). ACECs are defined in FLPMA Section 103(a) (43 United States Code 1702) and in 43 Code of Federal Regulations (CFR) 1601.0-5(a) as “areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.”. The following analysis and the resultant findings for ACEC relevance and importance criteria has been performed pursuant to FLPMA Section 202(c)(3) (43 United States Code 1712) and BLM implementing regulations 43 CFR 1610.7-2 *Designation of areas of critical environmental concern*. The ACEC regulations were revised as part of the BLM’s Public Lands Rule (PLR) in April 2024 and an updated BLM ACEC Manual 1613 was issued in August 2024. Although the Notice of Availability (NOA) for

the GRSG RMP Amendment and EIS was published prior to the effective date of the PLR, and is, therefore, not expected to incorporate all elements of the PLR as per BLM IB 2024-048, the GRSG Proposed RMPA/FEIS is largely consistent with the PLR and the updated ACEC manual.

5.3 ACEC CRITERIA

Nominated ACECs that are found by BLM to meet the relevance and importance criteria identified in 43 CFR 1610.7-2 (d) must be evaluated in at least one alternative in the EIS or EA for the RMP or relevant RMP amendment (where ACECs are within the scope of the amendment). Following are the relevance and importance criteria identified in 43 CFR 1610.7-2:

(1) Relevance. *The area contains important historic, cultural, or scenic values; fish or wildlife resources; natural systems or processes; or natural hazards potentially impacting life and safety.*

(2) Importance. *A historic, cultural, or scenic value; a fish or wildlife resource; a natural system or process; or a natural hazard potentially impacting life and safety has importance if it has qualities of special worth, consequence, meaning, distinctiveness, or cause for concern; national or more than local importance, subsistence value, or regional contribution of a resource, value, system, or process; or contributes to ecosystem resilience, landscape intactness, or habitat connectivity. A natural hazard can be important if it is a significant threat to human life and safety.*

To be designated as an ACEC, an area must meet the relevance and importance criteria and the need for special management attention criterion which is identified in 43 CFR 1610.7-2:

(3) Special management attention. *The important historic, cultural, or scenic values; fish or wildlife resources; natural systems or processes; or natural hazards potentially impacting life and safety require special management attention. "Special management attention" means management prescriptions that:*

(i) *Protect and prevent irreparable damage to the relevant and important values, or that protect life and safety from natural hazards; and*

(ii) *Would not be prescribed if the relevant and important values were not present. In this context, "irreparable damage" means harm to a value, resource, system, or process that substantially diminishes the relevance or importance of that value, resource, system, or process in such a way that recovery of the value, resource, system, or process to the extent necessary to restore its prior relevance or importance is impossible.*

In this RMP Amendment EIS, in compliance with 43 CFR 1617.7-2 and the updated Areas of Critical Environmental Concern Manual MS 1613, the BLM has evaluated the areas found to have relevance and importance and has proposed them for ACEC designation in Alternatives 3 and 6. The BLM has also analyzed the effects of the management direction to these potential ACEC areas under all of the alternatives, including the Proposed RMP Amendment, in this appendix. This effects analysis provides the State Directors who will be signing the Records of Decision for this RMP Amendment with the information needed to determine if special management attention is needed to protect and prevent irreparable damage to the relevant and important values identified for the areas as required by 43 CFR 1610.7-2(3).

5.4 IDENTIFICATION OF POTENTIAL ACECS

5.4.1 Internally Identified ACECs

In identifying ACECs for consideration in this RMPA, the BLM took into account the entirety of GRSG habitat on BLM-administered lands, with no distinction between habitat management areas, specific nominated areas, or prior identified areas. With all GRSG habitat as the starting point, BLM then considered available data at multiple spatial scales to determine what, if any areas met relevance and importance criteria.

The BLM began this ACEC identification process at the rangewide scale and made refinements to the identification of potential ACECs at the state-specific scale.

In considering the relevance, the BLM considered just two of the components of the relevance criteria: 1) a wildlife resource, and 2) a natural process or system – related to GRSG habitats. No cultural, scenic, values or natural hazards were evaluated. The BLM considered multiple lines of information, never relying on just one data set to conclude a criterion was met. Rangewide models were an important starting point, but incorporation of local information, and considerations of data accuracy and scale of application were carefully reviewed prior to making the preliminary delineations of potential ACECs. The consideration of relevance and importance was conducted in a two-step approach that started with rangewide scientific data and models, followed by a review by staff at the state and field office levels who are more familiar with the local habitat conditions.

Rangewide Review

In conducting the initial rangewide review, BLM did not rely on prior designations such as Priority Areas for Conservation (PACs) and Sagebrush Focal Areas (SFAs) to identify potential ACECs. Rather than using the composite results of prior mapping efforts, which were identified for purposes different than land use planning or ACEC evaluation, this evaluation sought to use primary datasets because previous designations were not developed using the regulatory and policy criteria associated with the BLM ACEC process. Additionally, PACs and SFAs were developed using data that was available at the time of their publication (2013 and 2015, respectively). The PACs were developed by the States and helped inform the BLM's habitat management areas in the 2015 GRSG amendment effort. Since the 2013 COT Report, the BLM has worked with state wildlife agencies to update habitat management area boundaries for this amendment, in particular the BLM worked with all the states to re-evaluate the habitat management areas based on new science and research products that have been completed since 2015. For these reasons, the BLM did not use PACs or SFAs as an automatic delineation of potential ACECs, but instead visually reviewed a series of rangewide spatial layers (see list below) across the entire GRSG range. This preliminary review did not consider SFAs because the intention was to do the SFA review with updated data at the state level during the next step in the evaluation process. The purpose of the review was to identify potential areas where multiple data sources indicated areas of high value or concern related to GRSG use and conservation. The resulting areas were identified as an initial screening for consideration by BLM state and field office staff in their identification of areas that met the relevance and importance criteria and should be identified as potential ACECs in the RMPA. Every layer in the list below was considered but some carried more importance in some areas than others. For example, areas that models indicated as important genetic connectivity may have resulted in that layer receiving more emphasis than others where genetic connectivity was not a factor.

Layers reviewed

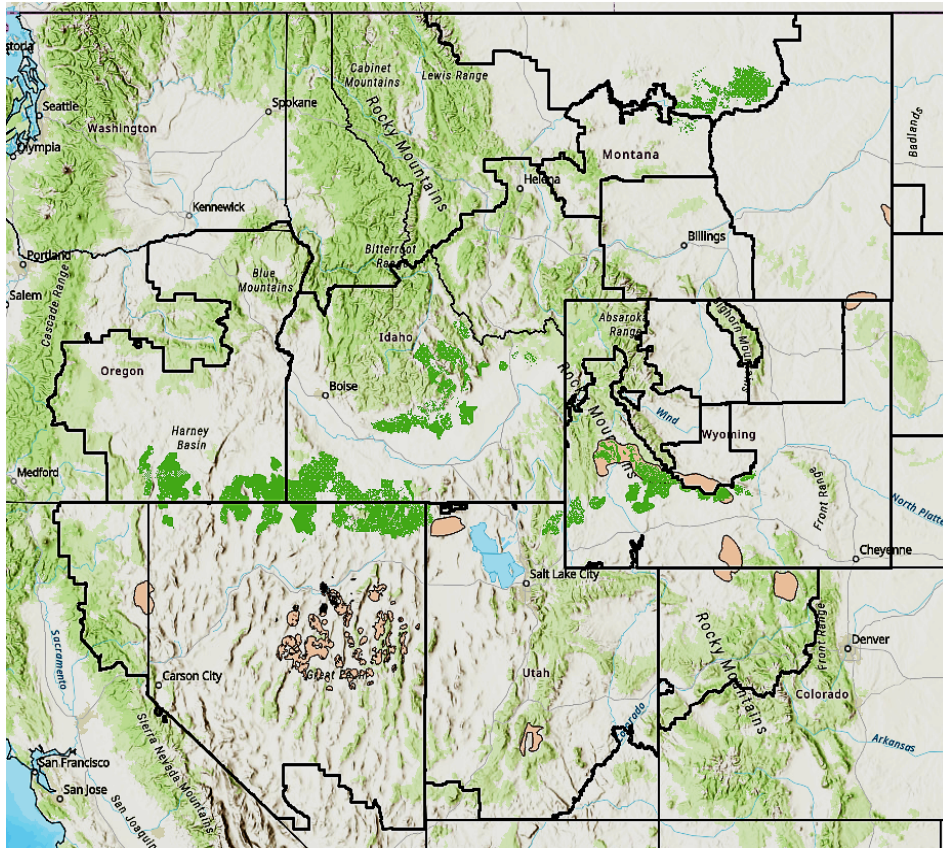
- Coates et al., 2021. Range-wide Greater sage-grouse Hierarchical Monitoring Framework, Implications for Defining Population Boundaries, Trend Estimation, and a Targeted Annual Warning System (<https://doi.org/10.3133/ofr20201154>);
- Cross et al., 2018. The genetic network of greater sage-grouse: Range-wide identification of keystone hubs of connectivity (<https://onlinelibrary.wiley.com/doi/full/10.1002/ece3.4056>)
- Doherty et al. 2016. Importance of regional variation in conservation planning: a range-wide example of the Greater Sage-Grouse (<https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.1462>)

- Oyler-McCance et al., 2022. New strategies for characterizing genetic structure in wide ranging, continuously distributed species: lessons learned from Greater Sage-grouse (<https://doi.org/10.1371/journal.pone.0274189>)
- Row et al., 2018. Quantifying functional connectivity: the role of breeding habitat, abundance, and landscape features on range-wide gene flow in sage-grouse (<https://onlinelibrary.wiley.com/doi/full/10.1111/eva.12627>)
- Palmquist et al., 2021. Divergent climate change effects on widespread dryland plant communities driven by climatic and ecohydrological gradients (<https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.15776>)
- Rigge et al. 2021. Projected change in rangeland fractional component cover across the sagebrush biome under climate change through 2085 (<https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.3538>)
- Cross et al. 2022. The ties that bind the sagebrush biome: integrating genetic connectivity into range-wide conservation of greater sage-grouse

After initial areas were identified, the size and extent of the polygons were reviewed in context of the presence of BLM-administered lands. Areas where the BLM had marginal or scattered parcels were removed, as the effectiveness of habitat management in such areas is low without cross-ownership coordination. Some areas extend beyond BLM lands simply for consideration of external factors that may influence the conservation value of the areas being considered. For each area, the information supporting the decision to identify that area for further consideration is outlined below in the description of the state evaluations.

Figure 5-1 shows the potential areas that were identified through this rangewide review in relation to the SFAs identified in the 2015 RMP Amendment.

Figure 5-1: Rangewide Review Areas (light orange) and SFAs (dark green areas)



The following list summarizes the areas identified through the rangewide review, organized by state. Bullets that are bolded indicated the most influential considerations in identifying areas for further consideration.

Colorado

- North Park
 - Most of the area is PHMA
 - High relative abundance
 - Entire area is modeled breeding habitats
 - High habitat connectivity for genetics.
 - Climate change models predict 5-25% sagebrush cover into the future, with moderate increase in sagebrush biomass.
 - Area anchored by National Wildlife Refuge
 - **Few current threats**
 - **Appears to be an isolated population on the “edge” of the range**
- Wyoming/Colorado Border
 - Areas within PHMA in Colorado, and mostly PHMA in Wyoming
 - High relative abundance
 - Modeled breeding habitats cover entire area in Colorado, most of the area in Wyoming

- Many genetic nodes, including an important node in Colorado. **Genetic movement between these areas suggest extensive population movements**
- **High habitat connectivity for genetics within and between the areas**
- Climate change models predict 5-25% sagebrush cover into the future and a mix of mostly increasing sagebrush biomass

Montana/Dakotas

- Area bordering North Dakota
 - GHMA in Montana, PHMA in North Dakota
 - High relative abundance
 - Several connected genetic nodes
 - **May provide the only refuge for the North Dakota birds; important for that genetic subpopulation**
 - Future sagebrush cover models suggest 0-4%, but that is not atypical for this area.
 - Future sagebrush biomass to increase
- Area bordering Wyoming
 - RHMA in Montana, mostly GHMA in Wyoming
 - High relative abundance
 - lots of modeled breeding habitat
 - contains an important genetic node (maybe hub?); **may provide a connection with the GRSG in the Dakotas, and Southeast Montana.**
 - Future sagebrush cover models suggest 0-4%, but that is not atypical for this area
 - Future sagebrush biomass to increase in PHMA and RHMA, but decrease in GHMA

Nevada/California

- Central Nevada (Areas that are currently PHMA and high abundance only)
 - **High relative abundance**
 - High modeled breeding habitats
 - **High connectivity within the PHMA areas**
 - Two key genetic nodes and many other genetic nodes
 - Overlaps two genetic subpopulations
 - Climate change models predict 5-25% sagebrush cover, but decreasing biomass in most areas
- East-central California
 - Area is PHMA
 - **High relative abundance – likely the greatest number of males in California**
 - Breeding habitat mimics relative abundance
 - **Few genetic nodes but those indicate connection to the north (Oregon) and Southeast into Nevada**
 - Medium connectivity (combined models)
 - Climate change models predict reduction in sagebrush biomass, but sagebrush cover at 5-25%

Utah

- Northwest Utah
 - Area is PHMA
 - Some areas of high relative abundance

- Breeding habitat model are in the same area of high relative abundance
- Habitat connectivity for genetic is high throughout the area
- **Area has two key genetic nodes and several others. The key nodes are connected with populations in Idaho and eastern Nevada, while other nodes are connected with southern Utah populations and northeastern Utah.**
- **3 subpopulations overlap this area – may indicate value for maintaining connectivity.**
- Climate change models predict 5-25% sagebrush cover into the future and increasing sagebrush biomass
- **Looking at wintering habitat – breeding habitat is on private ground**
- Parker Mountain
 - Area is currently PHMA
 - High relative abundance
 - Area is modeled breeding habitat
 - **Contains one key genetic node and a few other nodes – appears to be connected both to the north and the west**
 - Habitat connectivity high within the outlined area
 - Climate change models predict 5-25% sagebrush cover and increase in sagebrush biomass.
 - **Likely has the largest population of GRSG in the subpopulation**

Wyoming

- Wyoming/Colorado border
 - Areas within PHMA in Colorado, and mostly PHMA in Wyoming
 - High relative abundance
 - Modeled breeding habitats cover entire area in Colorado, most of the area in Wyoming
 - Many genetic nodes, including an important node in Colorado. **Genetic movement between these areas suggest extensive population movements**
 - **High habitat connectivity for genetics within and between the areas**
 - Climate change models predict 5-25% sagebrush cover into the future and a mix of mostly increasing sagebrush biomass
- Wyoming Pinedale and Atlantic City area
 - Most of the area is PHMA, some in original SFA
 - **High relative abundance – likely the largest number of GRSG in the entire range**
 - Entire area modeled breeding habitat
 - Many genetic nodes including two important nodes
 - High habitat genetic connectivity
 - Climate change models project 5-25% sagebrush cover into the future and an increase in sagebrush biomass.
 - **Area of high risk for continued development**
 - Northern end of Green River watershed is mostly private land.
- Area bordering Wyoming – RHMA in Montana, mostly GHMA in Wyoming – Note this area overlaps with the area identified in Montana
 - High relative abundance,

- lots of modeled breeding habitat
- contains an important genetic node (maybe hub?); **may provide a connection with the GRSG in the Dakotas, and southeastern Montana.**
- Future sagebrush cover models suggest 0-4%, but that is not atypical for this area
- Future sagebrush biomass to increase in PHMA and RHMA, but decrease in GHMA

The rangewide review did not identify any areas in Idaho or Oregon outside the SFAs.

State-specific Review

The results of the rangewide review were shared with staff from each applicable BLM state office, with discussions reviewing the rationale behind the identification. The states used the information identified in the rangewide review, their own state-specific information and data, and externally nominated ACECs to identify potential ACECs for consideration. In identifying areas for consideration, the states evaluated potential areas to determine if they met the relevance and importance criteria.

Relevance Criterion

The states applied the relevance criteria described above for the rangewide review and also applied the importance criterion to their evaluations. In their relevance considerations, the states affirmed the presence of GRSG populations or associated sagebrush habitats with multiple data inputs (distribution maps, seasonal habitats, leks, etc.). All areas with GRSG and their habitats were determined to meet the relevance criteria. Areas of split surface and mineral estates, where the BLM manages the mineral estate but not the surface, were not included in the relevance consideration. Areas where the agency administers just the mineral estate would have no wildlife resource within the agency's jurisdiction, and therefore the area would not meet the relevance criterion.

Importance Criterion

Once the presence of GRSG and associated habitats was confirmed, the BLM then evaluated importance criteria. This evaluation effort focused on determining whether a given area of GRSG habitat being considered has characteristics that make it more than locally significant, and the evaluation compared areas of GRSG habitat to determine if any particular area had characteristics that were more than locally important. The importance criteria considerations are not an assessment of biological value of habitat to a given population, but how that habitat and its characteristics compare to other GRSG habitat throughout the species range. Rising to a level of national importance required multiple lines of evidence identifying and area as exemplary for GRSG.

The state-by-state sections below provide a summary of the evaluation process followed in each state and the ACECs that were identified for consideration in this RMPA within that state.

5.4.2 Externally Nominated ACECs

The BLM's Notice of Intent (86 FR 66331) for this greater sage-grouse (GRSG) amendment effort invited the public "to nominate or recommend areas that may be considered for designation as areas of critical environmental concern (ACEC), per 43 CFR 1610.7-2." Because this planning effort is only considering amending resource management plan (RMP) actions related to GRSG and its habitat, the invitation clarified that "nominations or recommendation of potential ACECs should be relevant to the preliminary purpose and need of this planning initiative." In other words, any ACEC nomination (or component thereof) that included values other than GRSG and its habitat were not evaluated or included as part of this planning effort. However, ACEC nominations that included GRSG as one of the nominated values were considered.

Nominations that were not related to GRSG will be considered by BLM during the next RMP or applicable RMP amendment process in the area where the ACEC was nominated.

The nominations received by the BLM during the scoping period are identified in the table below. The ACEC nominations were considered by the BLM states receiving the nomination and the evaluation process conducted in each state is described in the state specific sections below.

Table 5-3. ACEC Nominations Received During Scoping

Nominated ACEC	Location	Acres
Sagebrush Sea Reserve	Oregon, California, Nevada, Idaho, Utah, Wyoming, Washington, Montana, Colorado	48,202,418
Little Sandy	Wyoming	367,362
Red Desert	Wyoming	153,763
McDermitt Caldera	Nevada/Oregon	No specific area delineated
South Valley Phillips	Montana	
Frenchman Breaks Expansion	Montana	45,725
Musselshell Breaks	Montana	122,290
North of the Charles M Russell National Wildlife Refuge	Montana	185,055
Powderville Expansion	Montana	20,053

The 35 nominations received by the BLM during the Draft EIS comment period are identified in the table below. The ACEC nominations were considered by the BLM states receiving the nomination and the evaluation process conducted in each state is described in the state specific sections below.

Table 5-4. ACEC Nominations Received During the Draft EIS Comment Period

Nominated ACEC	Location	Acres
Nevada Department of Wildlife Population Management Units	Nevada	41,110,833
Firestone Basin	Oregon	135,171
Ibex Butte	Oregon	23,912
Packsaddle Draw-Horseshoe Ridge	Oregon	260,134
Coyote Hills	Oregon	110,203
Irish Hill-Big Lake	Oregon	120,375
Catlow Valley	Oregon	841,812
Beatys Butte	Oregon	595,796
Riddle Creek	Oregon	56,650
West Steens	Oregon	110,860
Grassy Ridge	Oregon	186,623
Oregon Canyon Mountains	Oregon	156,242
Hog Creek Ridge	Oregon	260,987
Star Mountain	Oregon	425,305
Willow (analyzed as a potential ACEC in the 2015 RMPA)	Oregon	53,803
Virtue Flat (analyzed 2015 RMPA)	Oregon	21,983
Trout Creek (analyzed in 2015 RMPA)	Oregon	675,218
Star Mountain (analyzed in 2015 RMPA)	Oregon	102,858
Red Hills (analyzed in 2015 RMPA)	Oregon	83,849
Lone Mountain (analyzed in 2015 RMPA)	Oregon	244,797
Jackass (analyzed in 2015 RMPA)	Oregon	428,057
Goose (analyzed in 2015 RMPA)	Oregon	4,785
Frederick Butte (analyzed in 2015 RMPA)	Oregon	527,739
East Warner (analyzed in 2015 RMPA)	Oregon	313,182
Diablo Peak (analyzed in 2015 RMPA)	Oregon	345,250
Cow Creek (analyzed in 2015 RMPA)	Oregon	42,776
Corner (analyzed in 2015 RMPA)	Oregon	355,598
Buck Creek (analyzed in 2015 RMPA)	Oregon	143,151
Beauty Butte (analyzed in 2015 RMPA)	Oregon	507,050
Antelope (analyzed in 2015 RMPA)	Oregon	117,076
Abert Rim (analyzed in 2015 RMPA)	Oregon	18,049
Louse Canyon	Oregon, Nevada	449,854
Table Mountain	Oregon, Idaho, Nevada	139,859
Juniper Ridge	Oregon, Idaho, Nevada	209,814
aa-Tiipi Flat	Oregon, Idaho, Nevada	61,743

Although the state-specific sections below address the nominations received by state, due to the multi-state nature of the Sagebrush Sea Reserve ACEC nomination, the BLM headquarters GRSG planning team evaluated the nomination. The Sagebrush Sea Reserve mirrors, to a large extent, the Priority Areas for Conservation (PACs) from the US Fish and Wildlife Service's (USFWS) 2013 Conservation Objectives Team Report (COT Report). However, in Wyoming the nominated area was expanded beyond the PACs to also include all the 75% breeding density areas from Doherty, et. al 2010¹, as well as new Wyoming Core Area designations from 2015. From all those areas in Wyoming the nominators removed areas with a density of

¹ Doherty, K.E., J.D. Tack, J.S. Evans, J.S.N. and D.E. Naugle. 2010. Mapping breeding densities of greater sage-grouse: a tool for range-wide conservation planning. BLM completion report: Agreement # L10PG00911.

active oil and gas wells that exceeded five wells per square mile. For Nevada, the nominated area expanded beyond the PACs “to increase coverage of important seasonal habitats for [GRSG] and ensure connectivity between numerous patches of high-quality habitat that are separated by rocky mountain ranges, playas, and other expanses of marginal quality habitat.” In addition to identifying the area for consideration, the proposal also included suggestions for how the nominated ACEC should be managed.

The BLM did not identify the Sagebrush Sea as potential ACEC in the Draft or Final EIS alternatives because the area does not meet the ACEC relevance and importance criteria (1610.7-2 (d)) because the BLM believes the PAC criteria utilized in identifying the Sagebrush Sea nomination no longer reflects the most up to date science on habitat connectivity, populations, effects to habitat from climate change, and genetic information across the range of the species. In this RMP Amendment effort, the BLM is choosing to focus management direction that protects and conserves GRSG in Priority and General GRSG Habitat Management Areas (PHMA, PHMA with limited exceptions, and GHMA). The BLM reviewed new scientific publications since our previous planning efforts on 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) and coordinated with state authorities (such as wildlife agencies) to identify and update GRSG habitat management areas (HMA). The HMAs are identified using inventory data on habitat use and occupancy and reflect the dynamic nature of the vegetation communities that make-up GRSG habitat. Analyzing the Sagebrush Sea would not meet the BLM’s purpose and need to amend a subset of 2015 and 2019 GRSG RMP Amendment decisions based on new scientific information or changes in land use.

COLORADO

BLM Colorado considered the previous ACEC evaluation from the 2015 FEIS and discussed whether there was new information or resource values making any of the populations and subpopulations (Colorado Management Zones) eligible for ACEC nomination. BLM Colorado also considered two areas highlighted by the rangewide ACEC review process. The two highlighted areas were the North Great Divide and Fly Creek portions of the Northwest Colorado GRSg population and the North Park GRSg population. The North Great Divide and Fly Creek areas have contiguous habitat connecting north into the Wyoming Basin in Wyoming. BLM Colorado and BLM Wyoming coordinated during review of these areas, but separate determinations were made by the respective interdisciplinary teams.

BLM Colorado also coordinated with BLM Utah regarding the functional connectivity on the cross-border Blue Mountain habitat area. Row et al. (2018) demonstrates high connectivity between GRSg populations in CO and UT which is supported by bird collar location data (unpublished CPW data). However, Row et al. (2018) does not model a known connectivity area in the Diamond Mountain or Cold Springs Mountain areas to the north. For these reasons, the Blue Mountain connectivity area was not considered to be more than locally significant and was not carried forward for additional evaluation.

North Great Divide and Fly Creek

North Great Divide and Fly Creek are situated within the northeast extent of the Northwest Colorado GRSg population. These areas include high quality sagebrush with relatively low disturbance except for the Highway 13 designated corridor, which bisects the areas. North Great Divide and Fly Creek provide breeding, nesting, brood-rearing, and winter habitat for GRSg and include several active leks.

The North Great Divide and Fly Creek areas were highlighted by the range wide planning team because of the genetic and functional genetic connectivity between the Northwest Colorado population and the Wyoming Basin population (Cross et al. 2018, Row et al. 2018) and high likelihood of lek persistence (Wann et al. 2022). The area contains many genetic nodes, or leks that are important to maintaining gene flow in a population, including an important node in Great Divide (Cross et al. 2018). Important nodes maintain gene flow between populations in the species range (Cross et al. 2018). Genetic movement between these areas suggest that the habitat has previously supported population movements within and between populations. Row et al. (2018) and Cross et al. (2023) modeled high habitat connectivity for genetics between these areas and the Wyoming Basin.

Genetic and functional connectivity between Northwest Colorado and the Wyoming Basin are modeled in other portions of the Northwest Colorado population as well. Row et al. (2018) modeled connectivity areas between Northwest Colorado and the Wyoming Basin occurring in the Sand Wash/Powder Wash area and in the Cold Springs area. Sand Wash also contains a genetically important node (Cross et al. 2018). Strong population genetics between the Northwest Colorado and Wyoming Basin do not indicate that there is a risk of the populations becoming genetically distinct (Oyler-McCance et al. 2022).

The North Great Divide and Fly Creek areas provide valuable GRSg habitat that is well-connected to the Wyoming Basin, but several other areas in the Northwest Colorado Population also demonstrate habitat and genetic connectivity. For this reason, BLM Colorado determined that the area does not have more than local significance and is not recommended to move forward as a potential ACEC.

North Park

North Park is a large basin bounded by Medicine Bow Range on the east and by the Park Range on the west. The Rabbit Ears Range separates North Park from Middle Park to the south. BLM Colorado discussed all

areas of North Park for values important to GRSG. North Park provides well connected lekking, nesting, brood-rearing, and winter habitat for GRSG. A large majority of seasonal habitats for GRSG in North Park are suitable (North Park HAF Site-Scale Report, 2022). North Park has genetic connections to the Middle Park population to the south and a narrow connection north to the Wyoming Basin but is otherwise disjunct from the Northwest Colorado population (Cross et al. 2018; Row et al. 2018; Cross et al. 2023). The BLM Kremmling Field Office is implementing treatments to increase the value of GRSG habitat, particularly the extent of available mesic habitats.

Case Flats

BLM Colorado highlighted the Case Flats area, which is a known winter concentration area. CPW staff discovered the Case Flats winter concentration area while conducting GRSG research in the North Park Basin. For unknown reasons, GRSG from the entire basin congregate in large numbers at this location each year during late winter/early spring prior to lekking (CPW Wildlife Mitigation Plan, 2021). The area has been highlighted in conversations with Colorado Parks and Wildlife and outlined as a resource for concern in the CPW Wildlife Mitigation Plan with the local operator but has not been otherwise recognized for specific management by the BLM.

Case Flats includes unitized fluid mineral leases and is in proximity to active oil & gas development, Highway 14, and ex-urban development. The likelihood of lease development is high, which could have direct and indirect impacts on GRSG and winter concentration in the area.

Due to the unique nature of the winter concentration area, population-wide importance, and likelihood of lease development, BLM Colorado evaluated the area as a potential ACEC. This nominated area meets relevance and importance criteria for wildlife and a natural process or system as presented in the table below.

Importance Evaluations

Colorado GRSG ACEC Importance Evaluation: Case Flats Nominated ACEC		
Importance Consideration	Yes/No	Rationale for Determination
More than locally significant qualities, especially compared to any similar resource, that give it: <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	The area contains unique GRSG winter concentration areas, providing special worth to the North Park GRSG population.
Qualities or circumstances that make it: <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened 	Yes	Case Flats provides a unique winter concentration area for a BLM sensitive status species. The habitat provides for unique GRSG congregating behavior which may be irreplaceable because it is not known why GRSG concentrate in this area and may not be replicable in other habitats. The area contains several unitized oil and gas leases and could be adversely impacted by development.

Colorado GRSG ACEC Importance Evaluation: Case Flats Nominated ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<ul style="list-style-type: none"> Vulnerable to adverse change 		
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	Yes	The area is within Greater Sage-Grouse Priority Habitat Management Areas which have been at the focus of national planning efforts, and state and local land use plans.
Other Items		
Boundaries	South of Walden, bound by Highways 14 and 125, Bordering Arapaho Wildlife Refuge.	
Conclusion		
This internally nominated area meets both relevance and importance criteria for a fish and wildlife resource. Because Case Flats meets the relevance and importance criteria it was identified as a potential ACEC under Alternatives 3 and 6. Refer to BLM Colorado - ACEC Maps for Alternatives 3 and 6 that follow.		
Colorado GRSG ACEC Importance Evaluation: North Great Divide/Fly Creek Nominated ACEC		
Importance Consideration	Yes/No	Rationale for Determination
More than locally significant qualities, especially compared to any similar resource, that give it: <ul style="list-style-type: none"> Special worth: Consequence Meaning Distinctiveness Cause for concern 	No	<p>The areas are modeled as having high genetic and functional genetic connectivity between the Northwest Colorado population and the Wyoming Basin (Cross et al. 2018; Row et al. 2018; Cross et al. 2023) and high likelihood of lek persistence (Wann et al. 2022). The area contains many genetic nodes, including an important node in Great Divide (Cross et al. 2018).</p> <p>However, genetic and functional connectivity between Northwest Colorado and the Wyoming Basin are modeled in other portions of the Northwest Colorado population as well. Row et al. (2018) modeled connectivity areas between Northwest Colorado and the Wyoming Basin occurring in the Sand Wash/Powder Wash area and in the Cold Springs area. Sand Wash also contains a genetically important node (Cross et al. 2018). Strong population genetics between the Northwest Colorado and Wyoming Basin do not indicate that there is a risk of them becoming genetically distinct (Oyler-McCance et al. 2022).</p> <p>Because there are multiple points of connection cross-state between the populations and, this area is not more than locally significant.</p>
Qualities or circumstances that make it: <ul style="list-style-type: none"> Fragile Sensitive Rare Irreplaceable: Exemplary Unique: Endangered Threatened Vulnerable to adverse change 	No	Because there are multiple points of connection cross-state between the populations, this area is not unique, rare, or irreplaceable.

Colorado GRSG ACEC Importance Evaluation: North Great Divide/Fly Creek Nominated ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	The area is within Greater Sage-Grouse Priority Habitat Management Areas which have been at the focus of national planning efforts, and state and local land use plans. However, this area contains only a small portion of the PHMA within Colorado and of the Western US and the area has not been specifically addressed as a national priority.
Other Items		
Boundaries	Great Divide is bound by the Little Snake River to the west and Highway 13 to the east, and the Wyoming border to the north and Highway 40 to the south. Fly Creek is bound by the Elkhead Mountains to the south and connected sagebrush habitat moving north into Wyoming. Highway 13 bisects the areas.	
Conclusion		
The nominated area meets relevance criteria but does not meet importance criteria. Therefore, it is not recommended that the area be considered a potential ACEC for GRSG for analysis in the current range-wide planning effort.		

Effects of the Alternatives on the Potential Case Flats ACEC

In Colorado, the potential Case Flats ACEC, totaling 4,544 acres was the only ACEC identified for potential designation under Alternatives 3 and 6. This area provides a unique wintering habitat that supports the population in North Park, Colorado.

Table 5-5 displays the HMA allocations for this area under each alternative. Under the Proposed RMP Amendment, the entire area would be managed as PHMA with limited exceptions. Under Alternatives 2 the entire area would be managed as PHMA. Under Alternatives 3, the area would be proposed for designation as an ACEC and would receive PHMA management direction except where stronger, ACEC protections are identified related to developing plans of operations for locatable mineral development and major rights of way. Under Alternative 6, the area would be proposed for designation as an ACEC and would receive PHMA management direction identified for Alternative 5 except where stronger, ACEC protections are identified for locatable minerals, fluid minerals, non-energy leasables, saleable minerals, major rights of way, solar, wind, and disturbance cap. Under Alternatives 1, 4, and 5, 88% of the area would be managed as PHMA and 12% would be managed as GHMA.

Table 5-5. 4 HMA Allocations in the Colorado Potential ACEC by Alternative

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ²
Case Flat							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	4,547 acres (100%)
PHMA	3,988 acres (88%)	4,547 acres (100%)	4,547 acres (100%)	3,988 acres (88%)	3,988 acres (88%)	4,547 acres (100%)	4,547 acres (100%)
GHMA	559 acres (12%)	0 acres (0%)	0 acres (0%)	559 acres (12%)	559 acres (12%)	0 acres	0 acres (0%)
Total	4,547 acres	4,547 acres	4,547 acres	4,547 acres	4,547 acres	4,547 acres	4,547 acres

² PHMA with limited exceptions are areas within PHMA where additional protections to support conservation of GRSG habitat would reduce impacts from highly probable resource threats. These acreages are therefore included in both PHMA and PHMA with limited exceptions.

This section details the effects of the alternatives on the potential Case Flats ACEC.

Fluid Mineral Development

Fluid mineral development is considered the primary threat to the Case Flats Potential ACEC. Under the Proposed RMP Amendment the Case Flats potential ACEC would be wholly managed under the PHMA with limited exceptions HMA designation and the No Surface Occupancy (NSO) with no exceptions management direction identified for that designation would protect the potential ACEC from the development threat. The fluid mineral direction protections identified under the Proposed RMP Amendment would be the same as identified under Alternative 3 which also closes the area to fluid mineral development without exception. Under Alternative 6, the area would also be subject to NSO but development could occur if an exception for the entire ACEC area could be met. Under Alternative 1, the PHMA within the potential ACEC would be managed as NSO without waiver or modification and within GHMA, any new leases would include stipulations to protect GRSG and there would be NSO within two miles of active leks. Under Alternative 2, areas would be open to leasing one mile from active leks subject to NSO with exceptions, waivers, and modifications. Under Alternative 1 and 2, in GHMA, new leases would include timing stipulations within four miles of leks during lekking, nesting, and early brood-rearing, and NSO within two miles of active leks, with waivers, exceptions, and modifications. Under Alternative 4, there would be an NSO stipulation within .6 miles of active leks in PHMA unless it could be demonstrated that it meets either a non-habitat, topographic, or co-location exception. Under Alternative 5, the NSO stipulation would be the same as under Alternative 4, but an exception could only be applied within 1 mile of active leks. Alternatives 1 and 2 would manage fluid minerals to avoid, minimize, and compensate for direct disturbance, displacement, or mortality of GRSG, direct loss of habitat and cumulative landscape level impacts and would prioritize fluid mineral development outside of PHMA and GHMA areas in non-habitat areas first and then in the least suitable habitat for GRSG, subject to valid existing rights.

The Proposed RMP Amendment and Alternative 3 provide the greatest amount of protections from fluid mineral development by prohibiting fluid mineral development. The second highest protections would occur under Alternative 6 followed by Alternative 5. Alternative 4 would provide the least amount of protections to the potential ACEC from fluid mineral development followed by Alternatives 1 and 2.

Solar, Wind, Major Rights of Way, Saleable Minerals/Material Management, and Locatable Minerals

The Proposed RMP Amendment and Alternatives 3 and 6 would all provide additional protections to the potential ACEC by excluding solar, wind, and non-energy leasable mineral development. While all three alternatives also exclude major rights of way and close the area to saleable minerals/material management, Alternative 3 provides the greatest protection as Alternative 3 provides no exceptions to the rights of way exclusion or to the saleable closure. In addition, under Alternative 3, the area would be recommended for locatable mineral withdrawal. Under both Alternative 3 and 6, a plan of operations and BLM approval would be required before beginning any locatable mineral operations causing surface disturbance greater than casual use.

Under Alternatives 1, 2, and 4, the area would be exclusion for solar and wind in PHMA and avoidance in GHMA and avoidance for major rights of way in PHMA and GHMA which would provide similar but slightly less protections than afforded under the Proposed RMP Amendment and Alternatives 3 and 6. Under Alternative 5, the area would be avoidance for solar and wind in PHMA and open with minimization measures in GHMA and would be avoidance for major rights-of-way in PHMA and open with minimization measures in GHMA. Therefore, Alternative 5 provides the least amount of protections from solar, wind, and rights of way development. Under Alternatives 1, 2, 4, 5, 6, and the Proposed RMP Amendment the area would be

open to locatable mineral development. Under Alternatives 1, 2, 4, 5, and the Proposed RMP Amendment, notice level exploration would be allowed without a plan of operations.

Disturbance Cap

The Proposed RMP Amendment sets a 3% disturbance cap at the Colorado Management Zone scale with exceptions and conditions. Alternative 6 sets the same disturbance cap for the area but there are no exceptions and Alternative 3 closes the area to new infrastructure projects and sets a 3% disturbance cap for existing developments. Alternatives 1 and 2 set a 3% disturbance cap in PHMA and the cap applies at both BSU-scale and at the project scale. Under Alternatives 4 and 5, in PHMA within area the disturbance cap is 3% at the project and Colorado Management Zone scale and projects would be deferred until disturbance in the areas has been reduced below the cap threshold or the projects could be redesigned to not result in additional surface disturbance or moved outside of PHMA. Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to the disturbance cap.

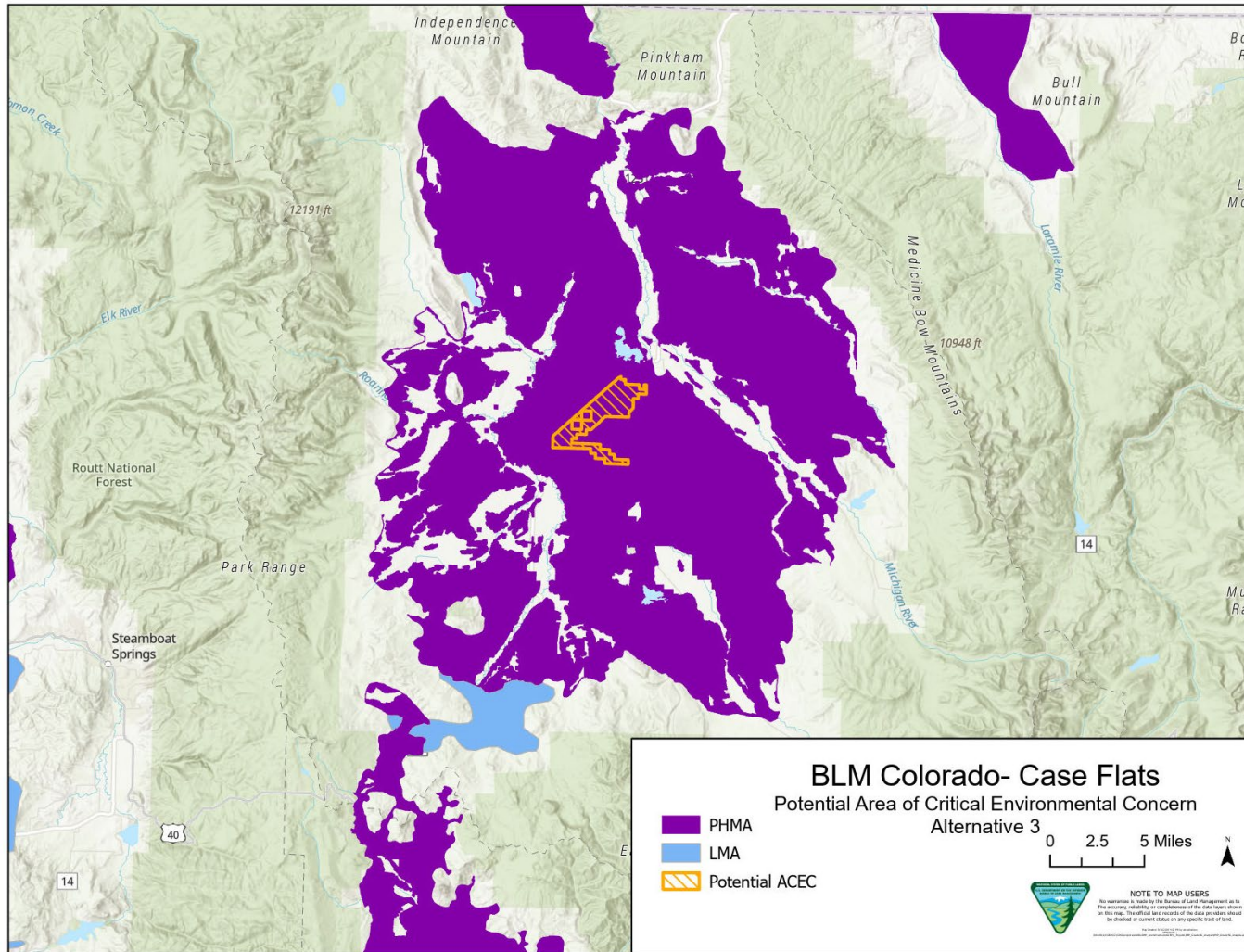
Livestock Grazing

Under Alternative 3, GRSG habitat would be unavailable to livestock grazing. Under Alternatives 1 and 2, in PHMA, thresholds and responses that would allow the authorized officer to make adjustments to livestock grazing as required. Under Alternatives 4, 5, 6, and the Proposed RMP Amendment, thresholds and responses are also addressed but under these alternatives, more comprehensive guidance is provided for addressing areas not meeting the special status species land health standard due to livestock grazing and for addressing livestock improvements and fencing in a manner to reduce impacts to GRSG. Alternative 3 provides the greatest protections to the ACEC by removing any potential disturbance associated with livestock grazing.

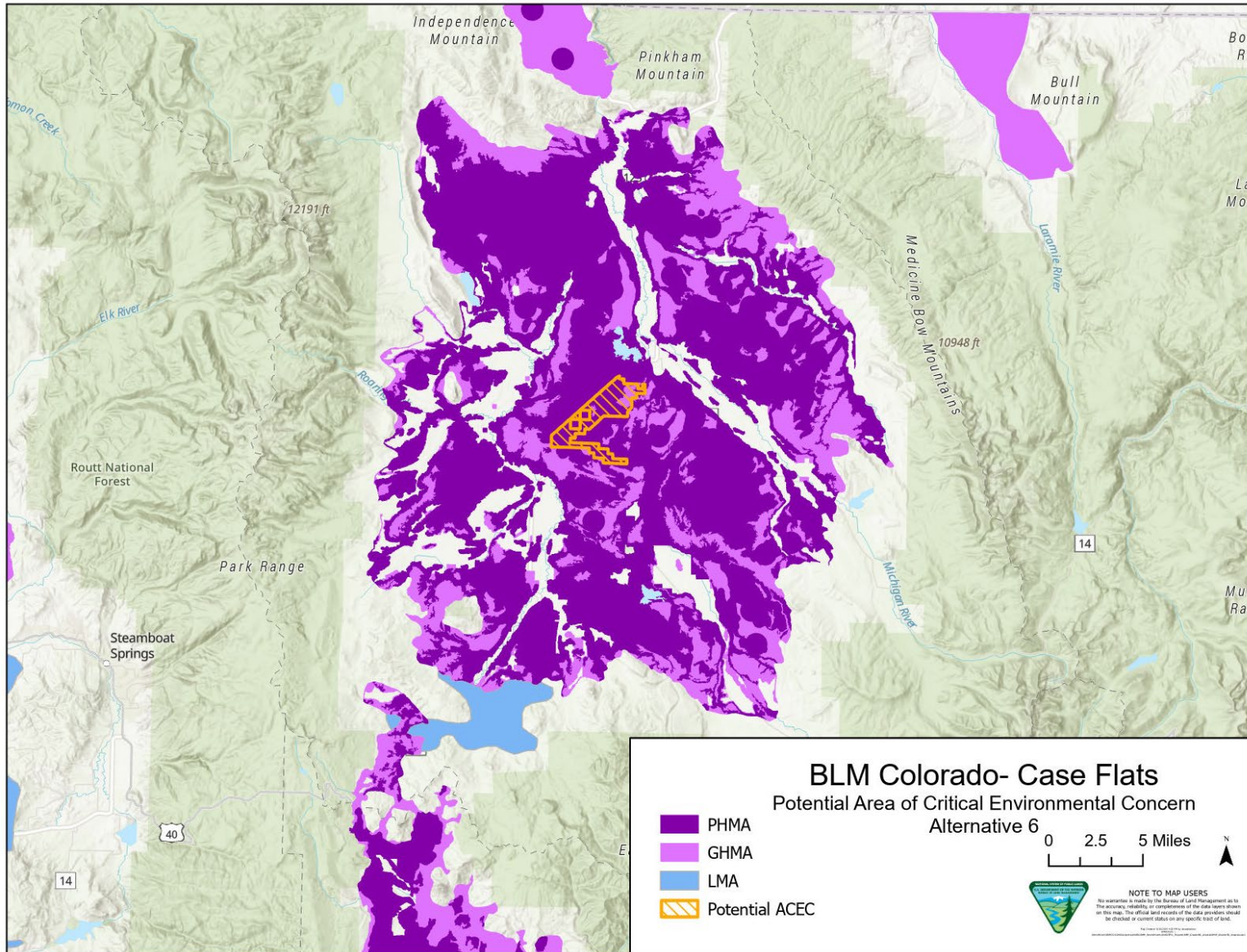
Summary of Effects

Considered comprehensively, the management direction provided under Alternatives 3 and 6 and the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the potential Case Flats ACEC; with Alternative 3 providing the highest level of protection. Alternatives 1, 2, 4, and 5 provide a relatively high degree of protection within PHMA within the ACEC; however, fluid mineral development under all of these alternatives could negatively impact the relevant and important values of the potential ACEC.

Map 5.1: Colorado Alternative 3 Potential ACEC



Map 5.2: Colorado Alternative 6 Potential ACEC



IDAHO

The ACEC evaluation in Idaho had several unique aspects. Even though the rangewide evaluation did not identify any additional areas beyond the SFAs, the rangewide evaluation did include areas within the 2015 SFAs. The ACEC evaluation process at the Idaho State Office overlapped with the mapping effort of Idaho's three-tiered system of habitat management areas. At the state level, the Idaho State Office evaluated the following local datasets to help identify and delineate areas that meet the importance criteria:

- **Local scale data:**
 - Idaho BLM developed a Landscape Importance Model (LIM) in 2015 to prioritize areas of Low to Highest Importance related to GRSG. The LIM model incorporates 3 orthogonal datasets related to GRSG: State level Bird Breeding Density (BBD), State level Lek Kernel Density, and Lek Persistence (related to amount of sagebrush within a 5-km window). These datasets are recalculated every year. Individual datasets are scored 1-10 and the resulting combined dataset is Categorized 1 (lowest) to 5 (Highest). For ACEC delineation we used the 2022 LIM – moderate to highest values (3,4,5) to extract a base ACEC polygon, focusing on the top two values.
 - Idaho contains a significant proportion of the estimated GRSG population in the Great Basin (excluding WY); therefore, the current (2022) state-level Bird Breeding Density (BBD) data was used, with the top 25th percentile of the population selected as indicating areas that had high levels of importance. These leks were then buffered 10K and the resulting polygon was added to the ACEC base.
- **Regional scale data:** Recently published regional GRSG data (BBD, Lek Persistence, and Priority Genetic Pathways) was used to inform regional importance. These data were combined (i.e. 25% and 50% BBD; medium or high lek persistence; >90 or >95% Priority Genetic Pathways) to provide an overall score of 0-6, from which a subset was included only using values 4 – 6. The resulting polygon was added to the ACEC base.

In some areas, moderate LIM values or top 50th percentile of the population (from the BBD data) were added to polygons in order to connect the delineated areas identified above.

Between the Draft EIS and Final EIS, Idaho BLM refined the model for identifying and delineating areas that meet importance criteria:

- **Local scale data:**
 - For the Landscape Importance Model (see description above), RCMAP (average for 2021-2023) was used for Lek Persistence within a 5-km moving window. In addition, state level BBD and lek kernel density were calculated from 2023 lek data.
 - Habitat Suitability Index (HSI) Models (general, spring, summer, winter; IDFG 2019) were used to identify areas with high habitat suitability.
- **Regional scale data:** same as specified above.

For delineation, larger blocks of land lacking sagebrush cover and areas with existing protections, such as wilderness areas, were excluded. Furthermore, areas that did not meet the regional importance criteria and were removed from further consideration. Three of the reviewed areas were not recommended as potential ACECs in the Draft EIS (Whiskey Mountain, South Mountain, Bear Lake) because they did not meet the criteria, i.e. not in the top 25% BBD rangewide in Idaho. Areas listed in the table below as 'not recommended for potential ACEC' are not included in the **Map 5.3** and **Map 5.4**.

The following table summarizes the areas that were identified for consideration through the state-level modeling effort and whether the areas met the relevance and importance criteria and were identified for consideration in the Draft EIS as potential ACECs in Alternatives 3 and 6. The table also identifies the Triangle, Antelope Valley, Mountain Valley Complex, and Upper Snake Complex areas that were identified as potential ACECs in the Draft EIS in Alternatives 3 and 6 but were removed from the alternatives in the Final EIS due to the refinements discussed above.

Importance Evaluations

Geographic Reference	Importance	Recommendation
Bear Lake	BLM lands not in 25% BBD; No adjacency with ACEC proposals with WY or UT. No important genetic nodes.	Not recommended as potential ACEC.
Whiskey Mountain	N/A. SW Idaho area. Poor habitat on OR side, per discussion with Oregon SO; Medusa, cheatgrass threats. Not in 25% BBD on ID or OR side.	Not recommended as potential ACEC.
South Mountain	N/A. Poor habitat on OR side per discussion with Oregon SO; small proportion high genetic connectivity on east side of polygon; Medusahead, cheatgrass threats. Not in 25% BBD on ID or OR side. Boulder Creek ACEC occupies high value regional genetic pathway.	Not recommended as potential ACEC.
Triangle	Good habitat; high Resistance and Resilience; BBD 25%, but 50% rangewide; High value in Combined model. Genetic hub and keystone. Adjoins Castle Creek Canyon Lands with Wilderness Characteristics. Threats are related to juniper encroachment and wildfire. Lacks importance criteria.	The area was identified as a potential ACEC in Alternatives 3 and 6 in the Draft EIS but was removed in the Final EIS because it did not meet the importance criteria. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)
Owyhee	West of the Jarbidge River of previous Owyhee-Shoshone Basin area. Significant representation of the 25% BBD rangewide and in Idaho (i.e., contains 17 of the 77 leks comprising the 25% BBD in Idaho including several leks in the 10% BBD in Idaho). High amount of genetic connections/nodes; Also represents a large area of contiguous BLM administered lands and large blocks of unfragmented intact sagebrush.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)
Shoshone Basin	East of Jarbidge River of previous Owyhee-Shoshone Basin area. Significant representation of the 25% BBD rangewide and in Idaho (i.e., contains 11 of the 77 leks comprising the 25% BBD in Idaho including several leks in the 10% BBD in Idaho). Several stable or increasing populations. Adjacent to NV Priority and Priority+ HMA; Significant contribution value from new regional datasets; High amount of genetic connections/nodes; Also represents a large area of contiguous BLM administered lands.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)

Geographic Reference	Importance	Recommendation
Camas-Laidlaw	Significant representation of the 25% BBD in Idaho (i.e., contains 6 of the 77 leks comprising the 25% BBD in Idaho); Several genetic nodes constituting linkage to NV and UT; High value priority genetic pathways; In the top 25% of the MZ IV GRSG population; Large area of contiguous BLM administered lands; Adjacent to a major regional genetic node.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)
Big Desert	Significant representation of the 25% BBD rangewide and in Idaho (i.e., contains 6 of the 77 leks comprising the 25% BBD in Idaho); Adjacent to a major regional genetic node; contains several genetic nodes with Sand Creek/Upper Snake, Mountain Valleys/Salmon, Craters Monument, and Utah.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)
Antelope Valley	Smaller, distinct area of 25% BBD in Idaho, but not rangewide; No genetic nodes; Relatively low anthropogenic disturbance; Surrounded by mostly private lands. Lacks importance criteria.	The area was identified as a potential ACEC in Alternatives 3 and 6 in the Draft EIS but was removed in the Final EIS because it did not meet the importance criteria. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)
Mountain Valley Complex	25-50% BBD in Idaho, but not rangewide; Middle section has large existing ACEC (Donkey Hills); High potential as a refugia for future climate change effects; NW polygon, per Arkle et al, shows a lek cluster with increasing Lambda (+ pop growth but other lek clusters declining); Surrounded by private lands. Relatively low anthropogenic disturbance and low threats. Lacks importance criteria.	The area was identified as a potential ACEC in Alternatives 3 and 6 in the Draft EIS but was removed in the Final EIS because it did not meet the importance criteria. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)
Upper Snake Complex	Significant representation of the 25% BBD rangewide and in Idaho (i.e., contains 15 of the 77 leks comprising the 25% BBD in Idaho); Contains a major regional genetic node; contains several genetic nodes with the Mountain Valleys, Snake River Plain and Montana. Good habitat/ high Resistance and Resilience. Captures Table Butte, a known important GRSG winter concentration area; Southern polygon provides significant movement connectivity corridor (based on telemetry) with the proposed Big Desert ACEC. Land ownership is extremely patchy in this area; most large leks are not on BLM lands; therefore, not considered further.	The area was identified as a potential ACEC in Alternatives 3 and 6 in the Draft EIS but was removed in the Final EIS because it did not meet the importance criteria. (Refer to BLM Idaho - ACEC Maps for Alternatives 3 and 6 that follow.)

Consideration of ACECs nominated during the public comment period

During the comment period on the Draft EIS, the BLM received ACEC nominations for the Table Mountain, Juniper Ridge, aa-Tiipi Flat areas that include acreage within Oregon, Idaho, and Nevada. The three states coordinated on the nominated ACECs and the BLM Oregon State Office took the lead on considering the nominations. It was determined that none of these areas warranted consideration as potential ACECs in the Final EIS. Additional details are provided in the **Oregon** section of this appendix.

Effects of the Alternatives on the Potential Shoshone Basin, Owyhee, Camas-Laidlaw, and Big Desert ACECs

In Idaho, the Shoshone Basin and Owyhee areas were identified in the Draft EIS as one potential ACEC in Alternatives 3 and 6 totaling 1,746,745 acres. Between the Draft and Final EIS, the acreage was refined as described above and the areas were considered separately in the Final EIS. In the Final EIS, the Shoshone Basin ACEC totals 244,935 acres and the Owyhee ACEC totals 635,199 acres.

Under the Proposed RMP Amendment, the 244,935-acre Shoshone Basin area would receive PHMA with limited exceptions protections and is proposed for ACEC designation under Alternatives 3 and 6. The Shoshone Basin is contiguous with the North Fork O'Neil Nevada population and is one of the largest intact habitat areas in that state. The area is threatened by rights of way and renewable energy development. The area has a significant representation of the 25% Bird Breeding Density (BBD) rangewide and in Idaho (i.e., contains 11 of the 77 leks comprising the 25% BBD in Idaho including several leks in the 10% BBD in Idaho), has a high amount of genetic connections/nodes and represents a large area of contiguous BLM administered lands. Considering the Shoshone Basin and the North Fork O'Neil areas in tandem allows for seamless conservation across state lines and supports the population of GRSG that use both areas (refer to Nevada section of this appendix for information on the North Fork O'Neil potential ACEC).

The potential Owyhee ACEC totaling 635,199 acres has a high amount of genetic connections/nodes and represents a large area of contiguous BLM administered lands and unfragmented intact sagebrush and is identified for potential ACEC designation under Alternatives 3 and 6. The potential Camas-Laidlaw ACEC was identified in the Draft EIS as a potential ACEC totaling 631,324 acres under Alternatives 3 and 6. Between Draft and Final EIS, the acreage was refined and totals 475,724 acres in the Final EIS. The potential Camas-Laidlaw ACEC has a significant representation of the 25% BBD in Idaho (i.e., contains 6 of the 77 leks comprising the 25% BBD in Idaho) and several genetic nodes constituting linkage to Nevada and Utah. The potential Big Desert ACEC was identified in the Draft EIS as a potential ACEC totaling 333,687 acres under Alternatives 3 and 6. Between Draft and Final EIS, the acreage was refined and totals 333,528 acres.

The potential Big Desert ACEC has a significant representation of the 25% BBD rangewide and in Idaho (i.e., contains 6 of the 77 leks comprising the 25% BBD in Idaho) and is adjacent to a major regional genetic node. Similar to the potential Shoshone Basin ACEC, the development threats to these three potential ACECs are primarily from major rights of way development but the development threat is not considered as high as under the potential Shoshone Basin ACEC. **Table 5-6** displays the HMA allocations for these four areas under each alternative. Under the Proposed RMP Amendment, the areas within the Owyhee, Camas-Laidlaw, and Big Desert potential ACECs would be managed entirely as PHMA and the area within the Shoshone Basin potential ACEC (as well as some surrounding areas) would be managed entirely as PHMA with limited exceptions. Under Alternatives 1, 2, 4, and 5 the areas within the Shoshone Basin, Owyhee, and Camas-Laidlaw potential ACECs would be entirely managed as PHMA. The area within the Big Desert potential ACEC would be managed as 86% PHMA and 14% IHMA in Alternatives 1 and 2. Under Alternative 3 and 6, all four areas would also be designated as ACECs. Under Alternatives 3, the potential ACECs would

receive PHMA management direction except where stronger, ACEC protections are identified related to developing plans of operations for locatable mineral development and major rights of way. Under Alternative 6, the potential ACECs would receive PHMA management direction identified for Alternative 5 except where stronger, ACEC protections are identified for locatable minerals, fluid minerals, non-energy leasables, saleable minerals, major rights of way, solar, wind, the disturbance cap, and the development of plans of operations for locatable mineral development.

Table 5-6. HMA Allocations in the Idaho Potential ACECs by Alternative

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ³⁴
Shoshone Basin							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	257,472 acres (100%)
PHMA	244,935 acres (100%)	244,935 acres (100%)	244,935 acres (100%)	244,935 acres (100%)	244,935 acres (100%)	244,935 acres (100%)	257,472 acres (100%)
IHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	244,935 acres	244,935 acres	244,935 acres	244,935 acres	244,935 acres	244,935 acres	257,472 acres
Owyhee							
PHMA	635,199 acres (100%)	635,199 acres (100%)	635,199 acres (100%)	635,199 acres (100%)	635,199 acres (100%)	635,199 acres (100%)	635,199 acres (100%)
IHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	635,199 acres	635,199 acres	635,199 acres	635,199 acres	635,199 acres	635,199 acres	635,199 acres
Camas-Laidlaw							
PHMA	475,724 acres (100%)	475,724 acres (100%)	475,724 acres (100%)	475,724 acres (100%)	475,724 acres (100%)	475,724 acres (100%)	475,724 acres (100%)
IHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	475,724 acres	475,724 acres	475,724 acres	475,724 acres	475,724 acres	475,724 acres	475,724 acres

³ PHMA with limited exceptions are areas within PHMA where additional protections to support conservation of GRSG habitat would reduce impacts from highly probable resource threats. These acreages are therefore included in both PHMA and PHMA with limited exceptions.

⁴ In some cases, the Proposed RMP Amendment establishes PHMA with limited exceptions management direction in areas larger than the potential ACECs to ensure adequate protection of GRSG habitat. In these instances, the acreage calculation includes the entirety of the potential ACEC and some adjacent areas.

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ³⁴
Big Desert							
PHMA	288,056 acres (86%)	288,056 acres (86%)	333,528 acres (100%)	333,528 acres (100%)	333,528 acres (100%)	333,528 acres (100%)	333,528 acres (100%)
IHMA	45,472 acres (14%)	45,472 acres (14%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	333,528 acres	333,528 acres	333,528 acres	333,528 acres	333,528 acres	333,528 acres	333,528 acres

This section details the effects of the alternatives on these areas considered for ACEC designation.

Major Rights of Way

All four of the potential ACEC areas in Idaho face threats from major rights of way development. Under the Proposed RMP Amendment, the potential Shoshone Basin ACEC would be wholly managed under the PHMA with limited exceptions HMA designation and, as such, major rights of way would be excluded from development unless a criterion and conditions can be met. A new major right of way could only be considered if the right of way is in an existing RMP designated corridor and is the same category of right of way for which the corridor was designated and co-location of the proposed authorization results in minimal impacts to those already associated with existing major infrastructure. Under the Proposed RMP Amendment, the Owyhee, Camas-Laidlaw, and Big Desert potential ACEC areas are all managed as PHMA, and major rights of way would be avoidance for new major rights of way that require criteria and conditions be met and would be subject to Idaho-specific anthropogenic disturbance screening criteria (MD SS 29).

Under Alternative 3, all of the potential ACEC areas would be managed as avoidance within designated corridors and exclusion outside of designated corridors within PHMA. Under Alternative 4, all four areas would be managed as avoidance for major rights of way and where development could not be avoided, it would not be allowed in breeding and nesting habitats unless habitat and impact criteria could be met. Where impacts could not be avoided, residual direct and indirect impacts would be mitigated through compensatory mitigation. Where major rights of way are collocated withing designated corridors, they would not need to comply with disturbance cap or compensatory mitigation requirements unless required by State regulations. Under Alternatives 1 and 2, all four areas would be managed as avoidance areas for major rights of way (even in the Big Desert area where the IHMA acres receive the same PHMA management direction as described for PHMA). Under Alternative 5, all four areas would also be managed as avoidance areas similar to Alternative 4 but without disturbance cap or compensatory mitigation requirements. Alternative 6, like Alternative 3, would be exclusion for major rights of way but unlike Alternative 3 it would be open for new rights of way in designated corridors with compensatory mitigation required to offset direct and indirect impacts.

Under the Proposed RMP Amendment and Alternative 3, the threats from rights of way development to all four ACECs would be prevented by the management direction provided. The management direction provided under Alternative 6 would also provide a high degree of protection, but to a lesser degree. The avoidance direction under Alternatives 1, 2, 4, and 5 would provide the least amount of protections from major rights of way development and the relevant and important values of the four potential ACEC areas could be impacted under these alternatives.

Solar and Wind

The threats from solar and wind development in these four areas are lower than those from major rights of way. Alternatives 3 and 6 would exclude utility scale solar and wind development in all of the four areas. Under the Proposed RMP Amendment, the Shoshone Basin ACEC would be managed as exclusion for solar and wind development and the other three areas would be managed as exclusion with exceptions.

Under Alternatives 1 and 2, all four potential ACECs would be managed as avoidance areas for wind. Alternatives 1 and 2 do not provide management direction for solar development in PHMA, however, general surface disturbance limits would exclude solar near leks (0.6 miles) and minimize (e.g., disturbance cap, mitigation) effects elsewhere. Under Alternative 4, the four areas would be managed as exclusion areas for wind and solar. Under Alternative 5, the areas would be managed as avoidance for solar and wind with criteria that would need to be met for development to occur.

For solar and wind development, Alternatives 3, 6, and the Proposed RMP Amendment provide the greatest amount of protection followed by Alternatives 4, 1, and 2. Alternative 5 provides the least amount of protection related to solar and wind development.

Non-energy Minerals, Saleable Minerals/Material Management, and Locatable Minerals

For non-energy minerals, under the Proposed RMP Amendment, the Shoshone Basin area would be closed to new leases and the expansion of existing leases. Under the Proposed RMP Amendment, the other three areas would also be closed to new leases but the expansion of existing leasing could occur. Under Alternatives 1 and 2, all four areas would be closed to new leases but the expansion of leasing could occur. Under Alternatives 3, 4, 5, and 6 areas all of the areas would be closed to new leases and expansion of existing. Therefore, the protections are strongest for all of the areas under Alternatives 3, 4, 5, and 6 and equally strong for the Shoshone Basin area under the Proposed RMP Amendment.

For saleable minerals and materials, under Alternative 1 and 2 all of the areas would be closed to saleable mineral and material development but open for free use permits and expansion of existing pits. Under Alternative 3, all of the areas would be closed. Under Alternatives 4, 5, and 6, all of the areas would be closed but open for free use permits and expansion of existing pits if screening and development criteria are met. Under the Proposed RMP Amendment, the Shoshone Basin area would be closed but open for free use permits and expansion of existing pits under stringent criteria and the rest of the areas would be closed but open for new free use permits and open for the expansion of existing pits with a slightly different, but similarly stringent criteria. As a result, Alternative 3 provides the most protections from saleable minerals and materials followed by the Proposed RMP Amendment.

Under Alternative 3, all four potential ACECs would be recommended for locatable mineral withdrawal and operators would be required to submit a plan of operations (refer to 43 CFR Part 3809.11(c)(3)) and obtain BLM approval before beginning any operations causing surface disturbance greater than casual use as defined in 43 CFR Part 3809.5 (refer to 43 CFR Part 3809.11(c)(3)) and obtain BLM approval before beginning any operations causing surface disturbance greater than casual use as defined in 43 CFR Part 3809.5. Under Alternative 1, any portions of the four areas that overlap with SFAs would be proposed for withdrawal. All other portions of these four areas that do not overlap SFAs under Alternative 1 would not be proposed for withdrawal and would be open for development (unless otherwise withdrawn) and there would be no requirement for a plan of operations. Under Alternative 2, 4, 5, and the Proposed RMP Amendment, all four areas would be open for locatable mineral development (unless otherwise withdrawn) and notice level exploration would be allowed without a plan of operations. Under Alternative 6, all of the areas would be

open for locatable mineral development (unless otherwise withdrawn) and, like under Alternative 3, operators would be required to submit a plan of operations (refer to 43 CFR Part 3809.11(c)(3)) and obtain BLM approval before beginning any operations causing surface disturbance greater than casual use as defined in 43 CFR Part 3809.5 (refer to 43 CFR Part 3809.11(c)(3)). As a result, Alternative 3 provides the highest amount of protection from locatable mineral development followed by Alternative 6.

Fluid Mineral Development

Under Alternatives 1 and 2 the four areas would be open to new leasing with no surface occupancy (NSO) stipulations with possible waivers, exceptions, and modifications. Under Alternative 3, all four areas would be closed to fluid mineral leasing. Under Alternatives 4 and 5, similar to Alternatives 1 and 2, the areas would be open to new leasing with NSO stipulations but Alternative 4 and 5 have updated waivers, exceptions, and modifications. Under Alternative 6, all four areas would be open to new leasing with NSO stipulations but under very stringent constraints. Under the Proposed RMP Amendment, the Shoshone Basin would be open to new leasing with NSO but there would be no waivers, exceptions, or modifications. Under the Proposed RMP Amendment, the other three areas would be open to new leasing with NSO with more protective waivers, exceptions, and modifications than under Alternatives 4 and 5. As a result, Alternative 3, 6, the Proposed RMP Amendment and Alternatives 1 and 2 provide the most protective measures from fluid mineral development.

Disturbance Cap

In Idaho, under Alternatives 1 and 2, there is a 3% disturbance cap that does not include fire or agriculture disturbance. This disturbance cap applies at both biologically significant units (BSU) scale and at proposed project analysis area within PHMA and can be exceeded in utility corridors if there is a benefit to GRSG. Under Alternative 3, there would be a 3% disturbance cap for new and pre-existing authorizations in the project analysis area within Habitat Assessment Framework (HAF) fine-scale boundaries and includes infrastructure, fire, and agriculture. Under Alternative 4, there would be a 3% disturbance cap and it only applies to infrastructure at the project analysis area and HAF fine scale. Under Alternative 5, there would be a 3% disturbance cap at the HAF fine-scale and project analysis area and the cap would not include fire or agriculture. Alternative 6 would apply the same management direction for disturbance cap as under Alternative 5, but in these four areas, there would be no allowable exceptions to the disturbance cap. Under the Proposed RMP Amendment, the 3% disturbance cap management direction is similar to that identified under Alternative 5 except that the exceptions align more closely with those identified under Alternative 4 which requires compensatory mitigation be in place when an exception is granted. As a result, Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to disturbance followed by the Proposed RMP Amendment and Alternative 4.

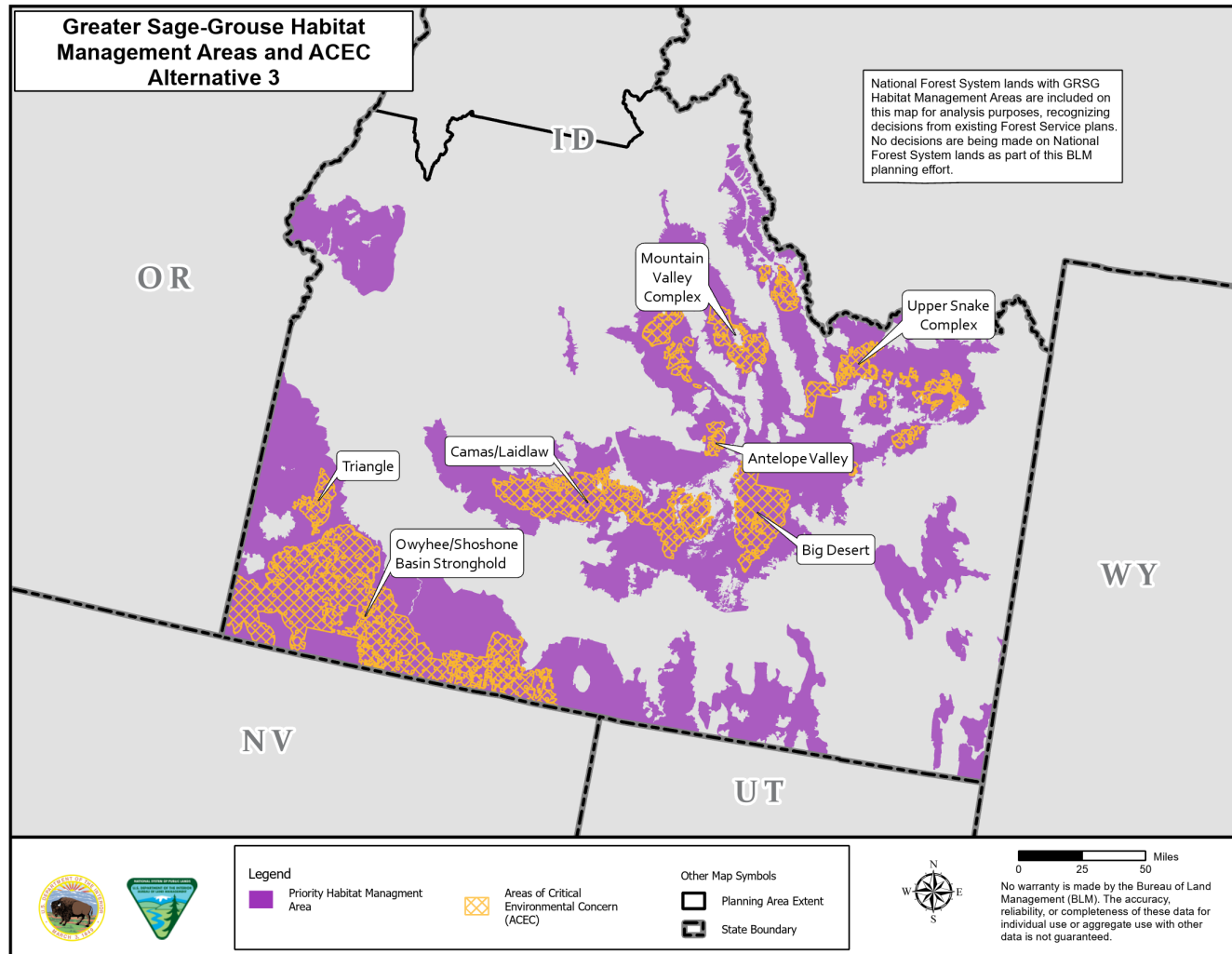
Livestock Grazing

Under Alternative 3, GRSG habitat would be unavailable to livestock grazing. Under Alternatives 1 and 2, in PHMA, thresholds and responses that would allow the authorized officer to make adjustments to livestock grazing as required. Under Alternatives 4, 5, 6, and the Proposed RMP Amendment, thresholds and responses are also addressed but under these alternatives, more comprehensive guidance is provided for addressing areas not meeting the special status species land health standard due to livestock grazing and for addressing livestock improvements and fencing in a manner to reduce impacts to GRSG. Alternative 3 provides the greatest protections to the potential ACECs by removing any potential disturbance associated with livestock grazing.

Summary of Effects

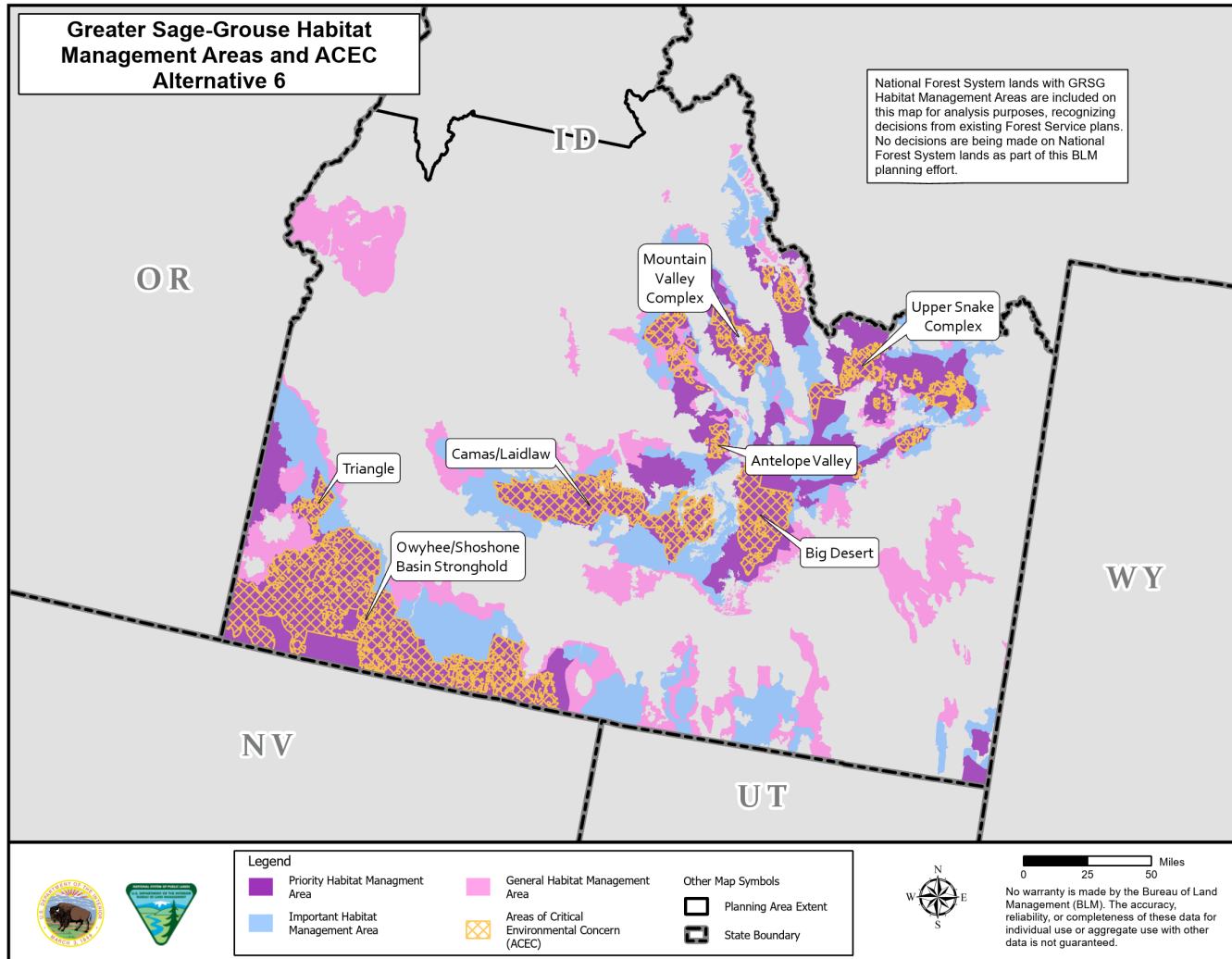
Considered comprehensively, Alternatives 3 and 6 would protect and prevent irreparable damage to the relevant and important values of all four of the potential ACECs. The application of PHMA with limited exceptions management direction under the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the Shoshone Basin potential ACEC and the application of the PHMA management direction in the Owyhee, Camas-Laidlaw, and Big Desert potential ACEC areas would protect and prevent irreparable damage to their relevant and important values. Alternative 4 provides a high degree of protection from development and would also protect and prevent irreparable damage to the relevant and important values of all four of the ACECs. Although Alternatives 1, 2, and 5 provide a relatively high degree of protection within these potential ACEC areas; fluid mineral, solar, wind, and major rights of way development under these alternatives is more likely to occur and could negatively impact the relative and important values of all four of the potential ACECs.

Map 5.3: Idaho Alternative 3 Potential ACECs



As described above, the Triangle, Antelope Valley, Mountain Valley Complex, and Upper Snake Complex were considered as potential ACECs in Alternatives 3 and 6 in the Draft EIS but were removed from consideration in the Final EIS.

Map 5.4: Idaho Alternative 6 Potential ACECs



As described above, the Triangle, Antelope Valley, Mountain Valley Complex, and Upper Snake Complex were considered as potential ACECs in Alternatives 3 and 6 in the Draft EIS but were removed from consideration in the Final EIS.

MONTANA/DAKOTAS

The Montana/Dakotas State Office considered new information and resource values in identifying habitat areas potentially eligible for ACEC nomination. Montana/Dakotas considered three areas highlighted by the range-wide planning team based on a review of new science and an evaluation of Sagebrush Focal Areas (SFAs) from the 2015 plans. The three areas that were evaluated are the South-Valley-Phillips (Sagebrush Focal Area), Cedar Creek, and Carter-Crook areas. Refer to the evaluations below.

Nominations were evaluated for habitat supporting 25-50% relative abundance and associated seasonal habitats, high lek persistence, key genetic nodes and/or concentration of genetic nodes and existing or potential land uses that would be a concern for persistence of GRSG.

While the scoping period closed on February 8, 2022, on July 21, 2023, BLM received an external ACEC submission for consideration of four additional ACECs in Montana. These nominations included expansion of two existing ACECs, the Powderville Expansion ACEC and the Frenchman Breaks Expansion ACEC. Two new areas were nominated, including the Musselshell Breaks ACEC and the North of Charles M. Russel National Wildlife Refuge ACEC. The nominations contained potential relevant and important values for these four proposed ACECs and suggestions for expanded, existing ACECs.

In addition to values related specifically to GRSG, the nominations contained potentially relevant values for grassland bird/mid-grass prairie habitat, ecological connectivity, intactness, paleontological resources and climate stability that are outside of the purpose and need of this planning effort. and will be considered in considered by the BLM during future planning efforts.

In considering the GRSG components of the four nominations received and the internally identified potential ACECs, the BLM considered multiple lines of evidence to determine if the GRSG habitat values had “more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern.” Those values are present primarily in portions of the North of Charles M. Russel National Wildlife Refuge ACEC, which overlaps the internally developed South Valley-Phillips area, and was evaluated to determine if the area met the importance criteria (refer to importance evaluations below). The Frenchman Breaks Expansion ACEC nomination presents important connectivity values for GRSG, that are locally unique. However, the density of the GRSG population, genetic uniqueness, lek persistence, sagebrush conservation design, and other lines of evidence to identify “substantial significance” were not determined by the BLM to rise to the level of importance needed to move forward for evaluation in the alternatives of this RMP amendment. However, other HMA management direction for PHMA and CHMA is proposed across the alternatives in the EIS that conserve GRSG values in this area. The Musselshell Breaks ACEC and Powderville Expansion ACEC nominations fall primarily outside of GRSG PHMA, with some overlap with GHMA. The BLM determined that while these areas are adjacent to priority GRSG habitat they did not meet the relevance criteria for GRSG (the nominations are primarily for other values) and would not move forward for evaluation in the alternatives of this RMP amendment.

Importance Evaluations

Montana GRSG ACEC Importance Evaluation: Cedar Creek Anticline GRSG Habitat Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	No	<p>Greater sage-grouse are distributed throughout the western United States. The portion of the distribution in Montana, Wyoming, North Dakota, South Dakota, Alberta, and Saskatchewan are designated as Management Zone I (Stiver et al. 2006). Management zones are delineations of greater sage-grouse populations and subpopulations within floristic zones with similar management issues. Within Management Zone I Montana, Wyoming, North Dakota, and South Dakota have designated core areas, and in 2015 BLM designated Priority, General, and Restoration Habitats.</p> <p>Since the 2015 BLM plans, new science addressing GRSG density and habitats has provided additional information about the locations of areas that may contain special worth, consequence, or distinctiveness. While higher density areas and genetic connectivity are considered important to greater sage-grouse conservation, areas with similar characteristics to the Cedar Creek area are dispersed throughout the region and are not significantly unique to a specific region or planning unit. In addition, greater sage-grouse habitat in the Cedar Creek area is owned by a number of different entities and habitat on BLM-administered lands is not distinct from habitat managed by other ownerships. While a portion of the area contains high relative abundance (Doherty et al. 2016), the size of the area is not distinct compared to other areas. Most leks have seen decreased counts since the 2010-14 period used to calculate relative density (e.g., FA-38: 34 males in 2010, now 0; FA-004A: 14 males in 2010 to 9 now; FA-013: 24 in 2011 to 6 now).</p> <p>In addition, this area is close to the small fringe population in North Dakota, However the Cedar Creek Anticline represents only a small portion of the larger population as defined by recent genetic work (Oyler-McCance 2022). Therefore, this area is not particularly distinct or critical to maintaining unique genetics for the SE Montana and Dakotas area relative to other PHMA.</p> <p>The Cedar Creek Anticline is a unitized oil and gas field that is predominantly leased, mostly developed, with a high level of anthropogenic activity. Additional substantial activity or development relative to current level is unlikely.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	No	<p>The area is not particularly fragile or sensitive to change as compared to other sites in the Montana-Dakotas region. The area does not contain key or cluster of genetic nodes and represents a fringe population with genetic nodes as terminal sites (Cross et al 2018). Ongoing disturbance is high, including a high density of O&G wells, and is predominantly already leased. The area is found to have only a small area of core sagebrush as identified in Doherty (2022) Sagebrush Conservation Design and has only a small proportion as core relative to other areas in the region. Similarly, the MT GRSG Conservation Program's Habitat Quantification Tool identifies much of the area as low habitat value, with only a small portion providing high modeled habitat quality values.</p>

Montana GRSG ACEC Importance Evaluation: Cedar Creek Anticline GRSG Habitat Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA</p>	<p>No</p>	<p>The BLM 2015, 2019, and current initiatives to conserve, enhance, and restore greater sage-grouse habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that finding, the USFWS concluded that greater sage grouse was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species.</p> <p>Without multiple lines of evidence, including reasonably foreseeable development, valid existing rights, land ownership, crucial GRSG habitat characteristics from multiple science-based models, on-the-ground conditions/evidence this area does not have protection requirements beyond the standard approaches to implemented FLPMA and national priorities.</p>
Other Items		
<p>Boundaries</p>	<p>No proposed changes to the boundary.</p>	
<p>Additional Notes</p>	<p>This area is a unitized oil and gas field, largely leased and developed, and with limited ability for the BLM to enhance GRSG habitat in the short term. The delineation as a RHMA is reflective of these challenges, the focus here is on longer-term objectives of the BLM to manage the area to maintain GRSG habitat and conduct restoration to provide for higher quality habitat (to support past bird density) in the future.</p>	
Conclusion		
<p>Due to current habitat conditions and limited evidence for the Cedar Creek Anticline to qualify as more distinct or critical than other HMAs, the BLM MT-Dak does not find the Cedar Creek anticline to meet relevance and importance for an ACEC nomination. While the area is part of a larger population with ND (and beyond) there are other areas within the population that are more likely to maintain any local genetics and be a source population for North Dakota. We do not recommend moving this area forward to identify and consider unique management.</p>		

Montana GRSG ACEC Importance Evaluation: Carter Crook GRSG Connectivity Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<p>Greater sage-grouse are distributed throughout the western United States. The portion of the distribution in Montana, Wyoming, North Dakota, South Dakota, Alberta, and Saskatchewan are designated as Management Zone I (Stiver et al. 2006). Management zones are delineations of greater sage-grouse populations and subpopulations within floristic zones with similar management issues. Within Management Zone I Montana, Wyoming, North Dakota, and South Dakota have designated core areas, and in 2015 BLM designated Priority, General, and Restoration Habitats.</p> <p>Since the 2015 BLM plans, new science addressing GRSG density and habitats has provided additional information about the locations of areas that may contain special worth, consequence, or distinctiveness. A portion of the area contains high relative abundance (Doherty et al. 2016), a factor considered important to greater sage-grouse conservation. However these higher density areas in the Carter-Crook area are similar to other areas dispersed throughout the region and are not significantly unique to this unit. Greater sage-grouse habitat in the Carter-Crook area is owned by a number of different entities and habitat on BLM-administered lands is not distinct from habitat managed by other ownerships.</p> <p>While a limited portion of the Carter-Crook boundary contains high relative abundance (Doherty et al. 2016), the area has evidence it is a consequential genetic connection. Chiefly, it encompasses a keystone genetic node (Cross et al. 2018), and a potential corridor where genetic connections between the northern and southern portions of management Zone I are constricted (Row et al 2018, Cross et al. 2023). This area of genetic connectivity may provide the most likely link between GRSG in Montana-Dakotas and Wyoming.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	<p>The area is not particularly fragile or sensitive to change as compared to other sites in the Montana-Dakotas region. However, due to the key genetic node (Cross et al 2018), and constricted habitat, this area is the primary connectivity link between populations in northern portions of MZI with populations throughout the rest of the species' range. As such, loss of this area could isolate populations in the NE from populations in the rest of the range, which could have relatively dramatic impacts on populations in MT and the Dakotas.</p> <p>Ongoing disturbance in isolated portions nearby (see boundary discussion below) the area are high, primarily in a unitized oil and gas field in Wyoming and on Bentonite producing areas in Montana. Much of the area is core sagebrush as identified in Doherty (2022) Sagebrush Conservation Design with proportionally large core relative to other areas in the region. Similarly, the MT GRSG Conservation Program's Habitat Quantification Tool identifies much of the area in Montana as higher habitat value, with only a small portion providing low modeled habitat quality values due to development.</p>

Montana GRSG ACEC Importance Evaluation: Carter Crook GRSG Connectivity Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	Yes	<p>The BLM 2015, 2019, and current initiatives to conserve, enhance, and restore greater sage-grouse habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that finding, the USFWS concluded that greater sage grouse was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species, therefore, areas that meet national priority concerns or specific FLPMA mandates require multiple lines of evidence supporting more than local priorities and conservation value.</p> <p>The proposed Carter-Crook ACEC includes multiple lines of evidence, identifying the area as highly valuable GRSG habitat, especially for genetic connectivity. Therefore, this area likely provides a key connection between GRSG populations in multiple states. In addition, conserving habitat connectivity is a national priority for managing bureau sensitive status species (Manual 6840 and IM 2023-005).</p>
Other Items		
Boundaries		<p>The boundary for this ACEC began by considering the HQ proposal. To better reflect local information and concentrate on where the most likely, high-value, GRSG corridor falls, the boundaries were adjusted.</p> <p>In Montana this focused on removing active areas of bentonite development and adjusting the boundary to the north to capture key GRSG leks that would “supply” birds that would migrate through the corridor to Wyoming leks. In addition, the ID Team considered GRSG relative density models, the MT HCP Habitat Quantification Tool, Sagebrush Conservation Design Core Areas, and other models along with on-the-ground experiences and conditions. Adjustments to the WY portion of the ACEC included analysis of cheatgrass and other habitat conditions (see Wyoming analysis). To avoid inconsistencies across jurisdictional boundaries, the MT-Dak and WY BLM State Offices met to edge map the revised boundaries produced by each state in cooperation with Cooperating Agencies and Field Offices.</p> <p>The ACEC boundary reflects an area focused on the area with the highest likelihood of facilitating long-distance (e.g., lek moving) GRSG dispersal and the and high-quality sagebrush habitat supporting leks in the area of the corridor.</p>
Additional Notes		Part of this original area is identified in an area that is one of the larger bentonite producing areas in the US. There are active claims, proposed additional projects, and a large amount of existing proven claims.
Conclusion		
Due to meeting the relevance and importance criteria, this area, with a revised boundary from original proposal, was identified as a potential ACEC in Alternatives 3 and 6. Refer to BLM Montana/Dakotas – ACEC Maps for Alternatives 3 and 6 that follow.		

Montana GRSG ACEC Importance Evaluation: South Valley Phillips GRSG Habitat Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<p>Greater sage-grouse are distributed throughout the western United States. The portion of the distribution in Montana, Wyoming, North Dakota, South Dakota, Alberta, and Saskatchewan are designated as Management Zone I (Stiver et al. 2006). Management zones are delineations of greater sage-grouse populations and subpopulations within floristic zones with similar management issues. Within Management Zone I Montana, Wyoming, North Dakota, and South Dakota have designated core areas, and in 2015 BLM designated Priority, General, and Restoration Habitats.</p> <p>Since the 2015 BLM plans, new science addressing GRSG density and habitats has provided additional information about the locations areas that may contain special worth, consequence, or distinctiveness. Higher density areas and genetic connectivity are considered important to greater sage-grouse conservation, and small areas or lek clusters with limited connectivity are dispersed throughout the region.</p> <p>However, the greater sage-grouse habitat in the South-Valley Phillips area is owned predominantly by BLM and the state of Montana. The majority of the area contains high relative abundance, representing the largest high-density area in Management Zone I (Doherty et al. 2016). There are well connected genetic nodes (Cross et al. 2018) within the area, and to surrounding areas.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	<p>The area is not particularly fragile or sensitive to change as compared to other sites in the Montana-Dakotas region. Ongoing disturbance in the area is limited to a few Bentonite mined area. The area is mostly core sagebrush as identified in Doherty (2022) Sagebrush Conservation Design with proportionally large core relative to other areas in the region. Similarly, the MT GRSG Conservation Program’s Habitat Quantification Tool identifies much of the area as higher habitat value.</p> <p>Furthermore, this area contains the wintering area for a unique GRSG population that exhibits long distance migration in the spring and fall (Newton et al. 2017, Tack et al. 2019)</p>
<p>Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA</p>	Yes	<p>The BLM 2015, 2019, and current initiatives to conserve, enhance, and restore greater sage-grouse habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that finding, the USFWS concluded that greater sage grouse was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species.</p> <p>With multiple lines of evidence, including land ownership, highly valuable GRSG habitat characteristics from multiple science based models, and supporting on-the-ground conditions and evidence, this area may provide habitat key to meeting national GRSG conservation goals.</p>

Other Items	
Boundaries	The boundary for this ACEC began by considering the SFA in the area from the 2015 GRSG Planning Effort. To better reflect new information and GRSG habitat with the highest conservation value, the boundaries were adjusted. For example, isolated BLM parcels that fall in predominantly agricultural areas and lower value GRSG habitat were removed (e.g., areas south of the Missouri River). In addition, the ID Team considered GRSG relative density models, the MT HCP Habitat Quantification Tool, Sagebrush Conservation Design Core Areas, and other models along with on-the-ground experiences and conditions. Finally, a portion of this area is already designated as the Mountain Plover ACEC. To avoid duplicative, conflicting, or overlapping management, this existing ACEC was removed from the boundary. The ACEC boundary reflects an area focused on the highest density of GRSG, contiguous BLM lands, and high-quality sagebrush habitat.
Additional Notes	None.
Conclusion	
Due to meeting relevance and importance criteria, the area was identified as a potential ACEC in Alternatives 3 and 6. Refer to BLM Montana/Dakotas – ACEC Maps for Alternatives 3 and 6 that follow.	

Effects of the Alternatives on the Potential South Valley Phillips and Carter Crook ACECs

As described above, the 615,888-acre South Valley Phillips potential ACEC area is mostly core sagebrush as identified in Doherty (2022) Sagebrush Conservation Design with proportionally large core relative to other areas in the region. Similarly, the Montana GRSG Conservation Program’s Habitat Quantification Tool identifies much of the area as higher habitat value. The majority of the area contains high relative abundance, representing the largest high-density area in Management Zone I (Doherty et al. 2016). There are well connected genetic nodes (Cross et al. 2018) within the area, and to surrounding areas, which include other protected federal lands (notably Charles M. Russell National Wildlife Refuge). This area also contains the wintering area for a unique GRSG population that exhibits long distance migration in the spring and fall (Newton et al. 2017, Tack et al. 2019), maintaining the persistence of those birds, which are listed as endangered in Canada (refer to **Appendix 5** for more information).

The 110,162-acre Carter Crook potential ACEC area encompasses a keystone genetic node (Cross et al. 2018), and a potential corridor where genetic connections between the northern and southern portions of management Zone I are constricted (Row et al 2018, Cross et al. 2023). This area of genetic connectivity may provide the most likely link between GRSG in Montana-Dakotas and Wyoming.

Table 5-7 displays the HMA allocations for these two areas under each alternative. Under the Proposed RMP Amendment, the South Valley Phillips area would be managed as PHMA with limited exceptions. Under the Proposed RMP Amendment, the Carter Crook area would be managed as 92% PHMA, 8% SCHMA, with a small amount managed as GHMA. Under Alternatives 1 and 2, the areas would be managed mostly as PHMA, with about 30% of the Carter Crook area as RHMA and 0.4% of the South Valley Phillips area managed as GHMA. Under Alternatives 4 and 5 nearly all of these two areas would be managed as PHMA.

Under Alternative 3 and 6, both areas would also be designated as ACECs. Under Alternatives 3, the potential ACECs would receive PHMA management direction except where stronger, ACEC protections are identified related to developing plans of operations for locatable mineral development and major rights of way. Under Alternative 6, the potential ACECs would receive PHMA management direction identified for Alternative 5 except where stronger, ACEC protections are identified for locatable minerals, fluid minerals, non-energy leasables, saleable minerals, major rights of way, solar, wind, the disturbance cap, and the development of plans of operations for locatable mineral development.

Table 5-7. HMA Allocations in the Montana Potential ACECs by Alternative

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ⁵
South Valley Phillips							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	615,888 acres (100%)
PHMA	613,332 acres (99.6%)	613,332 acres (99.6%)	615,888 acres (100%)	615,888 acres (100%)	615,888 acres (100%)	615,888 acres (100%)	615,888 acres (100%)
GHMA	2,556 acres (0.4%)	2,556 acres (0.4%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	615,888 acres	615,888 acres	615,888 acres	615,888 acres	615,888 acres	615,888 acres	615,888 acres
Carter Crook							
PHMA	77,108 acres (70%)	77,108 acres (70%)	110,162 acres (100%)	110,115 acres (100%)	110,115 acres (100%)	110,162 acres (100%)	101,444 acres (92%)
GHMA	47 acres (0%)	47 acres (0%)	0 acres (0%)	47 acres (0%)	47 acres (0%)	(0%)	47 acres (0%)
RHMA	33,007 acres (30%)	33,007 acres (30%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
SCHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	8,674 acres (8%)
Total	110,162 acres	110,162 acres	110,162 acres	110,162 acres	110,162 acres	110,162 acres	110,162 acres

This section details the effects of the alternatives on these areas considered for ACEC designation.

Solar, Wind, and Major Rights of Way

Under the Proposed RMP Amendment, as PHMA and SCHMA, the Carter Crook potential ACEC would be managed as exclusion for utility-scale solar and wind development with exceptions. For ROWs, the Carter Crook potential ACEC area would be managed as exclusion for surface disturbing or disruptive activities within 1 km (0.6 miles) of active leks or crucial winter range, and avoidance in existing corridors or ROWs. As PHMA with limited exceptions, the potential South Valley Phillips ACEC would be managed as exclusion for utility-scale solar and wind development and exclusion for major rights of way with no exceptions, providing additional protections to GRS habitat.

Under Alternatives 1 and 2, both potential ACECs would be managed as avoidance areas for wind in PHMA and SCHMA. Alternatives 1 and 2 do not provide management direction for solar development in PHMA, general surface disturbance limits would exclude solar near leks (0.6 miles) and minimize (e.g., disturbance cap, mitigation) elsewhere in PHMA. The minor portions of the potential South Valley Phillips and Carter Crooks ACECs managed as GHMA under Alternatives 1 and 2 would be open for wind and solar. Under Alternative 4, the two areas would be managed as exclusion areas for wind and solar as PHMA. Under Alternative 5, in PHMA and SCHMA, the areas would be managed as avoidance for solar and wind with criteria that would need to be met for development to occur. Under Alternative 4, the areas would be

⁵ PHMA with limited exceptions are areas within PHMA where additional protections to support conservation of GRS habitat would reduce impacts from highly probable resource threats. These acreages are therefore included in both PHMA and PHMA with limited exceptions.

avoidance areas for major rights of way and under Alternative 5, these areas would be avoidance for major rights of way in PHMA.

Alternative 3 and the Proposed RMP Amendment provide the greatest protection to GRSG habitat and protect and prevent irreparable damage to the relevant and important values of the South Valley Phillips ACEC by managing the area as exclusion for utility-scale solar, utility-scale wind, and major rights of way, with no exceptions. Alternative 3 also protects and prevents irreparable damage to the relevant and important values of the potential Carter Crook ACEC for the same reason. The Proposed RMP Amendment also provides strong protection to the relevant and important values, but some impacts could occur from utility-scale solar, utility-scale wind, or major rights of way developed under the exceptions. Alternative 4 provides the next highest level of protection by managing as exclusion areas for wind and solar and avoidance areas for major rights of way. Alternatives 1, 2, and 5 would provide the least protection to the potential ACECs from potential development given the allocation of avoidance for wind and solar.

Saleable Minerals/Material Management and Locatable Minerals

Under the Proposed RMPA, as PHMA and SCHMA, the potential Carter Crook ACEC would be closed to new non-energy leasable mineral development but allow expansion of existing operations and would be closed to saleable minerals/mineral materials but open for new free use permits and open for the expansion of existing pits. As PHMA with limited exceptions, the potential South Valley Phillips ACEC would be closed to new non-energy leasable mineral development leases, including fringe acreage leasing, and closed to saleable minerals/mineral materials but open for new free use permits and expansion of existing pits.

Under Alternative 3 and Alternative 6, both areas would be designated as ACECs. Under both these alternatives, a plan of operations and BLM approval would be required before beginning any locatable mineral operations causing surface disturbance greater than casual use in these areas. Under Alternative 3, the South Valley Phillips and Carter Crook potential ACEC areas would be closed to saleable minerals/mineral materials and non-energy leasable minerals, with no exceptions, and both potential ACECs would be recommended for locatable mineral withdrawal. Under Alternative 6, the areas would be closed to non-energy leasable minerals and closed to saleable minerals/material management for 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, with restrictions.

Under Alternatives 1, 2, 4, 5, and the Proposed RMP Amendment, these potential ACEC areas would be open to locatable mineral development and notice level exploration would be allowed without a plan of operation. For the 30% of the Carter Crook potential ACEC managed as RHMA in Alternatives 1 and 2, management direction varies, and some stipulations apply for saleable minerals/material management and for non-energy leasable minerals.

Alternative 3 would provide the greatest protection to GRSG habitat, protecting and preventing irreparable damage to the relevant and important values of the potential South Valley Phillips and Carter Crook ACECs from mineral development by closing the areas to saleable minerals/mineral materials and non-energy leasable minerals, with no exceptions, and by recommending locatable mineral withdrawal. The Proposed RMP Amendment and Alternative 6 also provide a high level of protection to the relevant and important values of the potential ACECs by closing the areas to these types of mineral development, with some exceptions. Alternatives 1, 2, 4 and 5 would provide the least protection to the potential ACECs from potential development.

Fluid Mineral Development

Under the Proposed RMP Amendment the South Valley Phillips potential ACEC would be managed under the PHMA with limited exceptions designation and the No Surface Occupancy (NSO) with no exceptions management direction identified would protect the potential ACEC from the threat of fluid mineral development. Under the Proposed RMP Amendment, as PHMA, the Carter Crook potential ACEC area would be managed as NSO for fluid mineral development within .6 miles of leks and season limitations (breeding, nesting, early brood-rearing and winter habitat) and Controlled Surface Use (CSU) (density and disturbance) outside of the 0.6-mi NSO buffer with exceptions.

Under Alternative 3, the South Valley Phillips and the Carter Crook potential ACECs would be closed to fluid mineral development without exception. Under Alternative 6, both areas would also be subject to NSO but development could occur if an exception for the entire ACEC area could be met.

Under Alternatives 1, 2, and 5, in PHMA, which includes the majority of areas within these potential ACECs, NSO would be allowed within .6 miles of leks. PHMA outside .6 miles has season limitations (breeding, nesting, early brood-rearing and winter habitat) and CSU (density and disturbance). Under Alternative 4 there would be NSO in the potential ACEC areas. The 30% of the Carter Crook potential ACEC managed as RHMA, in Alternatives 1 and 2, would be open with variable stipulations (Open with Major stipulations/NSO in the West Decker and South Carter RMP planning areas, open with Major stipulations/0.6 m NSO from leks in Billings RMP planning area, open with moderate/CSU in the Billings and Cedar Creek RMP planning areas, but language varies, and open with Minor/TL w/in 3 miles of a lek in the Billings RMP planning area).

In the South Valley Phillips potential ACEC area, Alternative 3 provides the greatest protection from fluid mineral development by prohibiting fluid mineral development followed by the Proposed RMP Amendment that restricts fluid mineral development to NSO with no exceptions. In the Carter Crook potential ACEC area, Alternative 3 provides the greatest protections from fluid mineral development by prohibiting fluid mineral development, and the Proposed RMP Amendment and Alternative 6 both provide a high level of protection by establishing NSO with major constraints. Alternative 1, 2, and 4 would provide the least protections to the potential ACECs from fluid mineral development.

Disturbance Cap

In these areas managed as PHMA, the Proposed RMP Amendment utilizes two approaches/caps at the project scale, with specific modifications. These are a disturbance cap at 3% cap, following the rangewide approach, and a 5% cap, including fire and agriculture. The 3% fine scale HAF cap will also apply. Alternative 6 sets the same disturbance cap for the area but there are no exceptions and Alternative 3 closes the area to new infrastructure projects and sets a 3% disturbance cap for existing developments. Similar to the Proposed RMP Amendment, Alternatives 1 and 2 set a 5% disturbance cap in PHMA in MT/DKs, and with a 3% disturbance cap in PHMA for specific on specific anthropogenic activities such as development of minerals and renewable energy, as well as ROWs in the Dakotas. Under Alternatives 4 and 5, in PHMA the disturbance cap is 3% the project scale or 3% at the HAF Fine Scale selection area and projects would be deferred until disturbance in the areas has been reduced below the cap threshold or the projects could be redesigned to not result in additional surface disturbance or moved outside of PHMA. Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to disturbance.

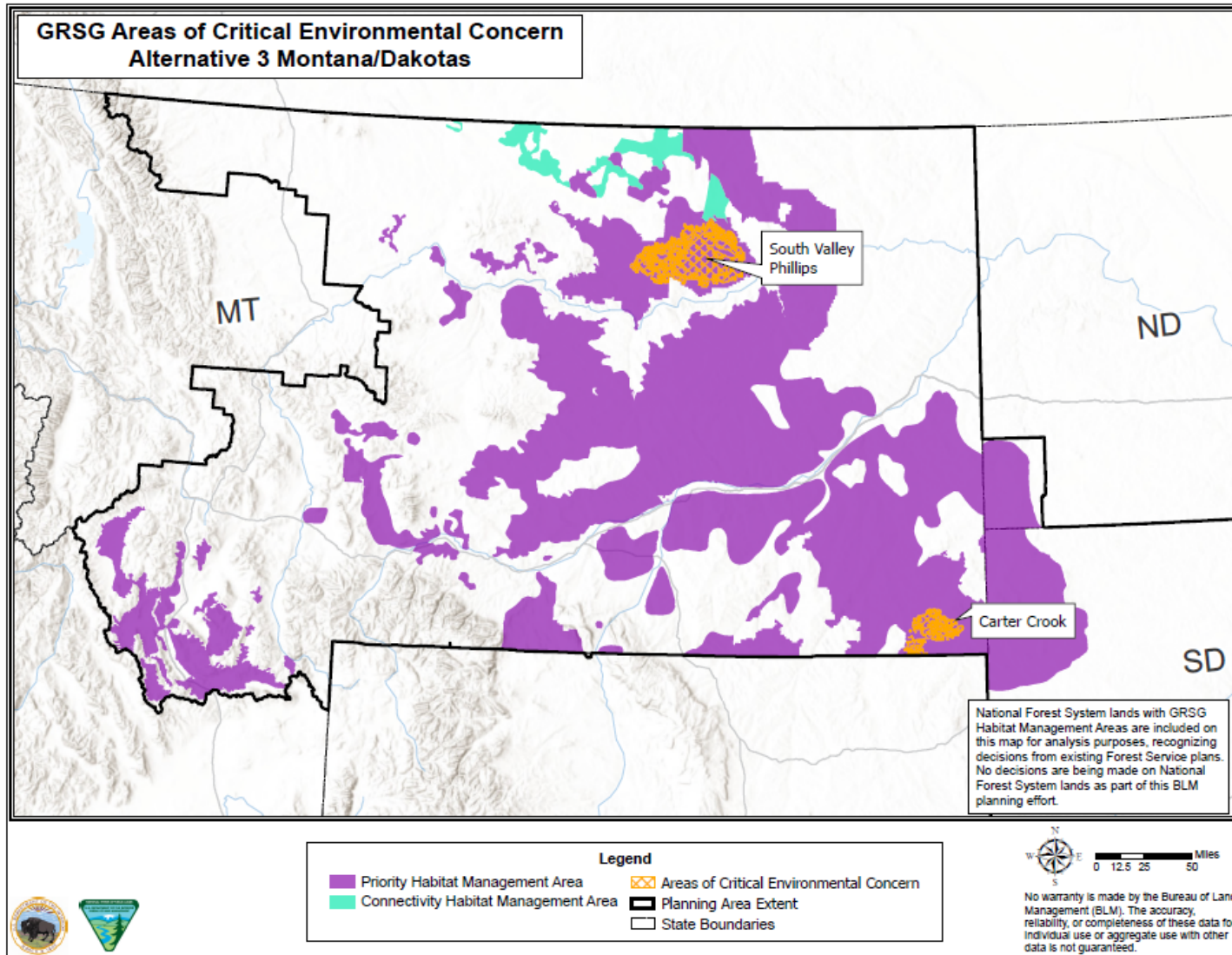
Livestock Grazing

Under Alternative 3, GRSG habitat would be unavailable to livestock grazing. Under Alternatives 1 and 2, in PHMA, thresholds and responses that would allow the authorized officer to make adjustments to livestock grazing are required. For the 30% of the Carter Crook potential ACEC managed as RHMA in Alternatives 1 and 2, management direction varies. Under Alternatives 4, 5, 6, and the Proposed RMP Amendment, thresholds and responses are also addressed but under these alternatives, more comprehensive guidance is provided for addressing areas not meeting the special status species land health standard due to livestock grazing and for addressing livestock improvements and fencing in a manner to reduce impacts to GRSG. Alternative 3 provides the greatest protections to the potential ACECs by removing any potential disturbance associated with livestock grazing.

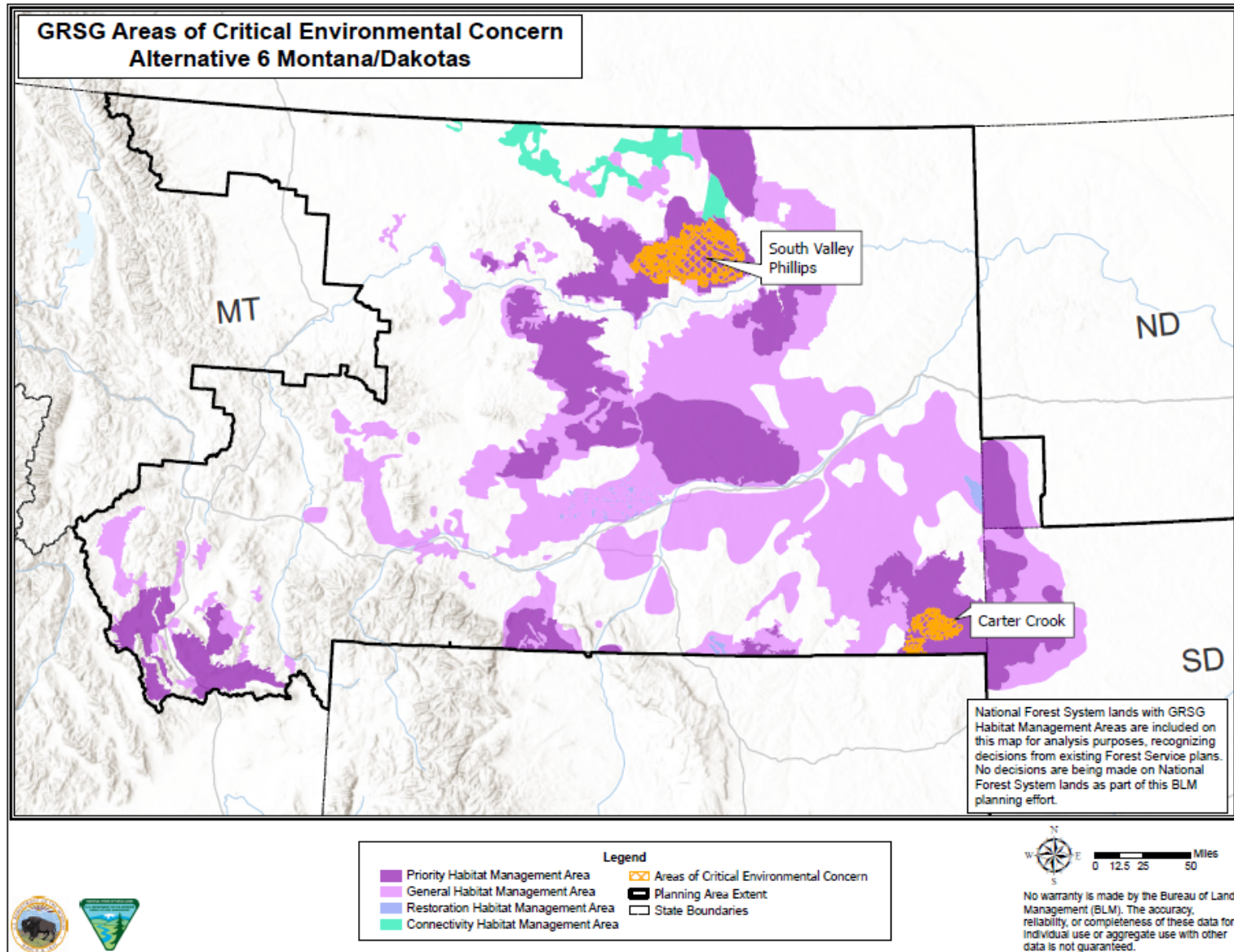
Summary of Effects

Considered comprehensively, Alternatives 3 and 6 would protect and prevent irreparable damage to the relevant and important values of both potential ACECs. The application of PHMA with limited exceptions management direction under the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the South Valley Phillips potential ACEC and the application of the PHMA management direction in the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the Carter Crook potential ACEC. Although Alternatives 1, 2, 4, and 5 provide a relatively high degree of protection within PHMA management direction in most of these potential ACEC areas, disturbance from mineral, fluid mineral, solar, wind, and major rights of way development under these alternatives is more likely to occur and could negatively impact the relative and important values of the potential ACECs.

Map 5.5: Montana Alternative 3 Potential ACECs



Map 5.6: Montana Alternative 6 Potential ACECs



NEVADA/CALIFORNIA

Areas for consideration as potential ACECs in Nevada were identified through the rangewide preliminary evaluation and from input from the Nevada Department of Wildlife. The draft polygons were reviewed and refined in coordination with preliminary input from federal, state, and county cooperating agencies. The relevance and importance determinations were informed by the evaluation of both State- and Regional-level information.

The following datasets were used to help delineate the draft ACECs.

- **Local scale data:** Draft Nevada/California Habitat Management Area Map (USGS in preparation) –that provided updates to abundance and space use indices and provided an example of combining space use, habitat selection, and survival.
- **Regional scale data:** Recently published regional GRSG data (BBD, Lek Persistence, Priority Genetic Pathways, genetic nodes, R&R, probability of breeding habitat, TAWS) was used to inform regional importance.

The BLM updated the ACEC evaluations following public review of the Draft RMP Amendment/EIS, both in response to public comments and consistent with updates to Habitat Management Areas, as described in **Appendix 3**. The ACEC boundaries were adjusted and refined to comport with the updated habitat data. In some instances, this led to increases in acres in some of the potential ACECs and decreases in others.

Importance Evaluations

Geographic Reference	Importance	Recommendation
Warm Springs	Greater than 60% core habitat, remainder is growth; low to medium Resistance and Resilience; ~50% of area in 50% to 25% BBD; 1 neighborhood cluster with declining population (<0.95) and active pop warning; About 90% PHMA with some PHMA+; High to Medium lek persistence; Includes Warm Springs LWC; Partially includes and adjoins East Fork High Rock Canyon Wilderness; adjoins North Black Rock Range Wilderness; Low genetic connectivity; no nodes. Solid habitat that includes LWC and Wilderness. Population center but warning triggered for NC and population is in decline.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Montana Mountains	Strong representation of the 25% BBD in NV; Connects with OR population; High lek persistence; intersects three neighborhood clusters, primary neighborhood cluster shows population growth ($\lambda > 1.03$), adjacent NCs nearly stable to declining ($\lambda = 0.99-0.95$); Low R&R; mostly Growth area for sagebrush; about 10% of area includes Disaster Peak WSA. Source population likely supporting connection between OR/NV and ID/NV populations. Includes Disaster Peak WSA.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)

Geographic Reference	Importance	Recommendation
Owyhee West	<p>Supports two separate population centers; provides regionally important genetic connectivity with eastern NV and ID to OR populations; Several genetic nodes including a Keystone node; Large area of contiguous BLM administered lands; includes North Fork Little Humboldt River and Little Humboldt River WSA; High value area for LCT.</p> <p>Regionally important genetic connectivity, includes two WSA, and provides important LCT habitat.</p>	<p>Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)</p>
Owyhee East	<p>Concentration of active leks and high lek persistence; near stable to growing population trend; provides regionally important genetic connectivity between ID and northeast NV to the remainder of NV populations; five genetic nodes; ~ 40% of the area is Core sagebrush and ~ 50% sagebrush Growth; Medium R&R</p> <p>Regionally important genetic connectivity, supports population centers and large tract of Core sagebrush.</p>	<p>Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)</p>
North Fork O'Neil	<p>Adjoins ID proposed ACEC; provides regionally important genetic connectivity between ID and NV; population center with stable to growing trend; large area of contiguous BLM administered lands that is mostly Core and Growth sagebrush, PHMA and PHMA +; Medium R&R; includes Bad Lands WSA; Bisected by Proposed Designated Utility Corridor (possibly split ACEC into two separated by corridor).</p>	<p>Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)</p>
South Fork Dixie Flats	<p>Stepping-stone population between northern and southern NV; medium to high regional genetic connectivity; comprised of 25% and 50% BBD; high to medium lek persistence; about 40% of area in checkerboard private ownership or BLM administration; important high elevation brood rearing habitat (PHMA+); population declining ($\lambda = 0.97-0.99$) but no warnings; L-M R&R; adjacent to Cedar Ridge and Red Spring WSA; proposed designated corridor bisects northeast corner.</p>	<p>Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)</p>
Butte Long Valley	<p>Provides regionally important genetic connectivity between northern and southeastern NV; adjacent to a keystone lek; supports three population centers; supports 5 NCs – 1 with increasing population trend and remaining 4 declining; H-M lek persistence; proposed designated utility corridor bisects southeastern quarter; adjacent to Goshute Canyon and Bristlecone Wilderness.</p>	<p>Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)</p>
Little Butte Long Valley	<p>Includes keystone genetic node; medium genetic connectivity; mostly 75% BBD; bisected by Hwy 93; 75% of area in proposed designated utility corridor.</p> <p>Between Draft and Final EIS, it was determined that due to the bisection of the area by Highway 93 and the presence of a major right of way that crosses a portion of the area that the area did not meet the importance criteria.</p>	<p>Identified as a potential ACEC in Alternatives 3 and 6 in the Draft EIS but not carried forward in the Final EIS. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)</p>

Geographic Reference	Importance	Recommendation
Eureka North and South	High genetic connectivity between northern and southern NV; high elevation brood-rearing habitat; ~30% of northern area in PHMA+; 6 miles east of genetic node that is both a keystone and hub; northern area bisected by large proposed designated corridor and HWY 50 runs between north and south; supports three population centers across the entire area.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Grass-Kobeh Valley	Regionally important genetic connectivity between north and central NV; 4 genetic nodes; supports three 25% population centers and four 50% population centers; about 20% of area is PHMA+; H-M lek persistence; includes 5 NCs – 2 NCs have positive growth trend, remaining in decline; 2 NCs (about 15% of area) with active warnings; bounded on three sides by HWYs 305 (western side), 50 (south side), and 278 (eastern side); eastern side includes large proposed designated energy corridor; includes Simpson Park and Roberts Mountain WSA.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Monitor Valley	Supports three population centers (25-50% BBD) that are important to the southern portion of range in NV; provides genetic connectivity to central and northern NV; includes two genetic nodes; primarily core and growth sagebrush and PHMA; bordered by and supporting USFS GRSG populations/habitat; bisected by proposed designated utility corridor.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Reese River	Supports two population centers (25-50% BBD) that are important to the southern portion of range in NV; provides genetic connectivity to central and northern NV; includes two genetic nodes; primarily core and growth sagebrush and PHMA; bordered by and supporting USFS GRSG populations/habitat.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Hays Canyon	Stepping-stone population connecting the northern portion of MZ V (OR & NV) to the southern portion (CA); about 70% of area in 25%-50% BBD; one NC that is declining and has tripped an active warning; most of area is PHMA with about 25% of total area being PHMA+; primarily Growth with some Core sagebrush; M-H lek persistence; M-L R&R; bisected by proposed designated corridor (that includes an existing transmission line)	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Idaho Border	Provides continuity of habitat and population connectivity with neighboring states that have proposed ACEC areas. The Idaho Border area borders the potential Shoshone Basin ACEC identified in Idaho.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Utah Border	Provides continuity of habitat and population connectivity with neighboring states that have proposed ACEC areas. The “Utah Border” area is made up of two areas that border the potential Box Elder ACEC identified in Utah.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)
Vya-Massacre	See description in the “California GRSG ACEC Evaluation: Importance Criteria” below.	Identified as a potential ACEC in Alternatives 3 and 6. (Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.)

California GRSG ACEC Importance Evaluation: Buffalo Skedaddle Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<p>BLM CA included designated GRSG Priority, General, and Other Habitat Management Areas in the 2015 GRSG Plan Amendment. In 2022, updates to the GRSG Habitat Management Areas were initiated based on the best available science. These updates identified Priority Plus areas. Priority Plus are areas that are most productive to GRSG populations within Priority Habitat Management Areas (PHMA). PHMA plus includes modeled population performance, specifically survival of nests and broods and is informed by selection models and areas of increased survival. PHMA plus are considered “source” habitats.</p> <p>In addition to PHMA plus, other new science has emerged since the 2015 plans related to GRSG density, habitats, population trends, and genetic exchange among populations which has provided information on areas that may contain special worth, consequence, or distinctiveness within CA BLM managed lands.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	<p>The area is not particularly fragile or sensitive to change as compared to other areas on CA BLM managed lands. However, the area has been undergoing intensive restoration efforts due to the Rush Fire over 10 years ago. In addition, this area is on the western fringe of GRSG populations in California with documented genetic exchange with populations in Nevada.</p>
<p>Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA</p>	Yes	<p>The March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse as Threatened or Endangered concluded that GRSG was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species, therefore, areas that meet national priority concerns or specific FLPMA mandates require multiple lines of evidence supporting more than local priorities and conservation value.</p> <p>The proposed Buffalo Skedaddle ACEC identifies the area as highly valuable for GRSG habitat and population persistence in northeastern California.</p>

Other Items	
Boundaries	The boundary for this ACEC was initially delineated using the Population Management Unit (PMU) for the Buffalo Skedaddle PMU. The boundary was then refined to focus on the revised GRSG Habitat Management Area delineations, areas that have been successful in habitat restoration efforts since the Rush Fire and genetic exchange between CA and NV GRSG populations based on new science.
Additional Notes	—
Conclusion	
Due to meeting the Relevance and Importance criteria, this area was identified as a potential ACEC under Alternatives 3 and 6. Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.	

California GRSG ACEC Importance Evaluation: Vya/Massacre GRSG Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<p>BLM CA and NV included designated GRSG Priority, General, and Other Habitat Management Areas in the 2015 GRSG Plan Amendment. In 2022, updates to the GRSG Habitat Management Areas were initiated based on the best available science. These updates identified Priority Plus areas. Priority Plus are areas that are most productive to GRSG populations within Priority Habitat Management Areas (PHMA). PHMA plus includes modeled population performance, specifically survival of nests and broods and are informed by selection models and areas of increased survival. PHMA plus are considered “source” habitats.</p> <p>In addition to PHMA plus, other new science has emerged since the 2015 plans related to GRSG density, habitats, population trends, and genetic exchange among populations which has provided information on areas that may contain special worth, consequence, or distinctiveness within CA BLM managed lands.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	<p>The area is not particularly fragile or sensitive to change as compared to other areas on CA BLM managed lands. However, Bitner Ranch provides key brood-rearing habitat to GRSG in CA and connectivity between populations in NV, including the Sheldon Hart Refuge.</p>

California GRSG ACEC Importance Evaluation: Vya/Massacre GRSG Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	Yes	<p>The March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse as Threatened or Endangered concluded that GRSG was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species, therefore, areas that meet national priority concerns or specific FLPMA mandates require multiple lines of evidence supporting more than local priorities and conservation value.</p> <p>The proposed Vya-Massacre ACEC includes multiple lines of evidence, identifying the area as highly valuable GRSG habitat providing key brood-rearing habitat and connectivity among multiple states. In addition, conserving habitat connectivity is a national priority for managing bureau sensitive status species (Manual 6840 and IM 2023-005).</p>
Other Items		
Boundaries	The boundary for this ACEC was initially delineated combining the Population Management Units (PMU) for Vya and Massacre PMUs. The boundaries were then refined to focus on the revised GRSG Habitat Area delineations, key brood-rearing habitat and additional new science.	
Additional Notes	—	
Conclusion		
Due to meeting the Relevance and Importance criteria, this area was identified as a potential ACEC under Alternatives 3 and 6. Refer to BLM Nevada/California - ACEC Maps for Alternatives 3 and 6 that follow.		

Consideration of ACECs nominated during the public comment period

BLM received nominations for the Table Mountain, Juniper Ridge, aa-Tiipi Flat areas that includes acreage within Oregon, Idaho, and Nevada. The three states coordinated on the nominated ACECs and the BLM Oregon State Office took the lead on considering the nominations. It was determined that none of these areas warranted consideration as potential ACECs in the Final EIS. Additional details are provided in the **Oregon** section of this appendix.

The BLM Nevada also received a nomination for the Nevada Department of Wildlife Population Management Units (PMU). The 59 PMUs totaling 41,110,833 acres include all habitat management areas as well as areas of non-habitat within the Nevada and northeastern California sub-region. The BLM evaluated the PMUs for consistency with ACEC policy and concluded that these areas generally meet the relevance criteria for fish and wildlife resource (specific to GRSG) but did not meet the importance criteria (more than locally significant). Because the nominated areas did not meet both relevance and importance criteria, and because GRSG habitat within the PMUs are already identified for GRSG-specific management, BLM did not identify the PMUs as a potential ACEC in the Final EIS.

Effects of the Alternatives on the Potential Warm Springs, North Fork O’Neil, Grass-Kobeh Valley, South Fork Dixie Flats, Idaho Border, Hays Canyon, Vya Massacre, and Buffalo Skedaddle ACECs

Nine areas identified as potential ACECs under Alternatives 3 and 6 would be managed as PHMA with limited exceptions under the Proposed RMP Amendment⁶. These are:

- Warm Springs: 89,539 acres, reduced from 92,727 acres in Draft RMPA/EIS
- North Fork O’Neil: 937,512 acres, increased from 894,940 acres in Draft RMPA/EIS
- Owyhee East: 487,122 acres
- Grass-Kobeh Valley: 852,979 acres, increased from 823,831 acres in Draft RMPA/EIS
- South Fork Dixie Flats: 122,395 acres, reduced from 138,060 acres in Draft RMPA/EIS
- Idaho Border: 49,019 acres, reduced from 74,971 acres in Draft RMPA/EIS
- Hays Canyon: 340,850 acres, reduced from 352,873 acres in Draft RMPA/EIS,
- Vya-Massacre: 293,677 acres, reduced from 307,495 acres in Draft RMPA/EIS, and
- Buffalo Skedaddle: 182,213 acres, reduced from 182,219 acres in Draft RMPA/EIS

These areas represent remaining intact sagebrush habitat with minimal anthropogenic disturbance, providing important regional genetic connectivity, high-quality brood-rearing habitat, and/or identified as highly valuable for GRSG habitat and population persistence, as detailed in the above evaluations. Given Nevada’s basin and range ecology, GRSG habitat is naturally fragmented and GRSG have experienced significant habitat losses due to wildfire. Restoration is challenging due to the low elevation and dry climate, making conserving these remaining intact landscapes a conservation priority. These areas are primarily subject to threats from major rights of way, renewable energy, and mineral development.

Table 5-8 displays the HMA allocations for these nine areas under each alternative. Under the Proposed RMP Amendment, the areas within the Warm Springs, North Fork O’Neil, Grass-Kobeh Valley, South Fork Dixie Flats, Idaho Border, Hays Canyon, Vya Massacre, and Buffalo Skedaddle potential ACECs (as well as some surrounding areas) would be managed entirely as PHMA with limited exceptions. The Grass-Kobeh Valley potential ACEC areas would be managed mostly as PHMA with limited exceptions, with 40% of the area managed as PHMA.

Under Alternative 3 and 6, all nine areas would also be designated as ACECs and would be managed entirely as PHMA, with direction varying consistent with PHMA and ACEC direction in each alternative.

Under Alternatives 1, 2, 4, and 5 these areas would all be managed mostly as PHMA, with relatively small portions managed as GHMA, OHMA, and non-habitat. In Alternatives 1 and 2, these nine areas would be managed as 90% or more PHMA, with minor areas managed as other HMAs except for the Grass Kobeh potential ACEC, which would be managed as 87% PHMA, 10% GHMA, 2% OHMA, and 2% non-habitat and the Idaho Border potential ACEC, which would be managed as 76% PHMA, 23% GHMA, and 1% OHMA. Under Alternatives 4, and 5, these nine areas would be managed mostly as PHMA, with some GHMA, with under 5% as OHMA or non-habitat. In Alternatives 4 and 5, the Idaho Border potential ACEC would have the highest percentages of other HMA management, managed as 68% PHMA, 27% GHMA, and 5% OHMA.

⁶ As the two areas are adjacent, the Owyhee East potential ACEC area was incorporated into the North Fork O’Neil PHMA with limited exceptions area in the Proposed RMP Amendment.

Table 5-8. HMA Allocations in the Nevada Potential ACECs by Alternative⁷⁸

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ⁹¹⁰
Warm Spring							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	89,539 acres (100%)
PHMA	87,742 acres (98%)	87,742 acres (98%)	89,539 acres (100%)	88,270 acres (99%)	88,275 acres (99%)	89,539 acres (100%)	89,539 acres (100%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	1,269 (1%)	1,264 (1%)	0 acres (0%)	0 acres (0%)
OHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Non-habitat	1,797 acres (2%)	1,797 acres (2%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	89,539 acres	89,539 acres	89,539 acres	89,539 acres	89,539 acres	89,539 acres	89,539 acres
North Fork O'Neil							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	1,546,044 acres ¹¹ (100%)
PHMA	846,562 acres (90%)	846,562 acres (90%)	937,512 acres (100%)	888,405 acres (95%)	888,405 acres (95%)	937,512 acres (100%)	1,546,044 acres (100%)
GHMA	49,766 acres (5%)	49,766 acres (5%)	0 acres (0%)	42,799 acres (5%)	42,799 acres (5%)	0 acres (0%)	0 acres (0%)
OHMA	24,894 acres (3%)	24,894 acres (3%)	0 acres (0%)	6,308 acres (1%)	6,308 acres (1%)	0 acres (0%)	0 acres (0%)
Non-habitat	16,290 acres (2%)	16,290 acres (2%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	937,512 acres	937,512 acres	937,512 acres	937,512 acres	937,512 acres	937,512 acres	(see above)

⁷ The areas identified in this table were identified as PHMA with limited exception areas in the Proposed RMP Amendment.

⁸ Acreage calculated utilizing the USGS HMA model for NV/CA (Milligan et al. 2024) (Refer to Appendix 3).

⁹ PHMA with limited exceptions are areas within PHMA where additional protections to support conservation of GRSG habitat would reduce impacts from highly probable resource threats. These acreages are therefore included in both PHMA and PHMA with limited exceptions.

¹⁰ In some cases, the Proposed RMP Amendment establishes PHMA with limited exceptions management direction in areas larger than the potential ACECs to ensure adequate protection of GRSG habitat. In these instances, the acreage calculation includes the entirety of the potential ACEC and some adjacent areas.

¹¹ As the two areas are adjacent, the Owyhee East potential ACEC area was incorporated into the North Fork O'Neil PHMA with limited exceptions area in the Proposed RMP Amendment.

Appendix 5. Evaluation of Areas of Critical Environmental Concern for Greater Sage-Grouse Habitat

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ^{9,10}
Owyhee East							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	(incorporated into North Fork O'Neil PHMA with limited exceptions- see above)
PHMA	475,417 acres (98%)	475,417 acres (98%)	487,122 acres (100%)	486,040 acres (100%)	486,040 acres (100%)	487,122 acres (100%)	0 acres (0%)
GHMA	8,042 acres (2%)	8,042 acres (2%)	0 acres (0%)	383 acres (0%)	383 acres (0%)	0 acres (0%)	0 acres (0%)
OHMA	1,943 acres (0%)	1,943 acres (0%)	0 acres (0%)	699 acres (0%)	699 acres (0%)	0 acres (0%)	0 acres (0%)
Non-habitat	1,720 acres (0%)	1,720 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	487,122 acres	487,122 acres	487,122 acres	487,122 acres	487,122 acres	487,122 acres	(see above)
Grass-Kobeh Valley							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	488,972 acres (57%)
PHMA	739,032 acres (87%)	739,032 acres (87%)	852,979 acres (100%)	797,108 acres (93%)	797,108 acres (93%)	852,979 acres (100%)	826,122 acres (97%)
GHMA	86,792 acres (10%)	86,792 acres (10%)	0 acres (0%)	39,808 acres (5%)	39,808 acres (5%)	0 acres (0%)	19,835 acres (2%)
OHMA	13,150 acres (2%)	13,150 acres (2%)	0 acres (0%)	16,063 acres (2%)	16,063 acres (2%)	0 acres (0%)	7,022 acres (1%)
Non-habitat	14,005 acres (2%)	14,005 acres (2%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	852,979 acres	852,979 acres	852,979 acres	852,979 acres	852,979 acres	852,979 acres	852,979 acres
South Fork Dixie Flats							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	133,406 acres (100%)
PHMA	112,983 acres (92%)	112,983 acres (92%)	122,395 acres (100%)	117,500 acres (96%)	117,500 acres (96%)	122,395 acres (100%)	133,406 acres (100%)
GHMA	7,537 acres (6%)	7,537 acres (6%)	0 acres (0%)	4,837 acres (4%)	4,837 acres (4%)	0 acres (0%)	0 acres (0%)
OHMA	1,873 acres (2%)	1,873 acres (2%)	0 acres (0%)	58 acres (0%)	58 acres (0%)	0 acres (0%)	0 acres (0%)
Non-habitat	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	122,395 acres	122,395 acres	122,395 acres	122,395 acres	122,395 acres	122,395 acres	133,406 acres

Appendix 5. Evaluation of Areas of Critical Environmental Concern for Greater Sage-Grouse Habitat

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ^{9,10}
Idaho Border							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	49,140 acres (100%)
PHMA	37,075 acres (76%)	37,075 acres (76%)	49,019 acres (100%)	33,154 acres (68%)	33,154 acres (68%)	49,019 acres (100%)	49,140 acres (100%)
GHMA	11,443 acres (23%)	11,443 acres (23%)	0 acres (0%)	13,244 acres (27%)	13,244 acres (27%)	0 acres (0%)	0 acres (0%)
OHMA	372 acres (1%)	372 acres (1%)	0 acres (0%)	2,621 acres (5%)	2,621 acres (5%)	0 acres (0%)	0 acres (0%)
Non-habitat	129 acres (0%)	129 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	49,019 acres	49,019 acres	49,019 acres	49,019 acres	49,019 acres	49,019 acres	49,140 acres
Hays Canyon							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	350,502 acres (100%)
PHMA	330,326 acres (97%)	330,326 acres (97%)	340,850 acres (100%)	330,952 acres (97%)	330,952 acres (97%)	340,850 acres (100%)	350,502 acres (100%)
GHMA	9,194 acres (3%)	9,194 acres (3%)	0 acres (0%)	9,632 acres (3%)	9,632 acres (3%)	0 acres (0%)	0 acres (0%)
OHMA	836 acres (0%)	836 acres (0%)	0 acres (0%)	266 acres (0%)	266 acres (0%)	0 acres (0%)	0 acres (0%)
Non-habitat	494 acres (0%)	494 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	340,850 acres	340,850 acres	340,850 acres	340,850 acres	340,850 acres	340,850 acres	350,502 acres
Vya-Massacre							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	305,529 acres (100%)
PHMA	288,393 acres (98%)	288,393 acres (98%)	293,677 acres (100%)	259,093 acres (88%)	259,093 acres (88%)	293,677 acres (100%)	305,529 acres (100%)
GHMA	2,427 acres (1%)	2,427 acres (1%)	0 acres (0%)	26,733 acres (9%)	26,733 acres (9%)	0 acres (0%)	0 acres (0%)
OHMA	463 acres (0%)	463 acres (0%)	0 acres (0%)	7,851 acres (3%)	7,851 acres (3%)	0 acres (0%)	0 acres (0%)
Non-habitat	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	293,677 acres	293,677 acres	293,677 acres	293,677 acres	293,677 acres	293,677 acres	305,529 acres

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ^{9,10}
Buffalo Skedaddle							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	190,800 acres (100%)
PHMA	180,865 acres (99%)	180,865 acres (99%)	182,213 acres (100%)	177,221 acres (97%)	177,221 acres (97%)	182,213 acres (100%)	190,800 acres (100%)
GHMA	986 acres (1%)	986 acres (1%)	0 acres (0%)	2,899 acres (2%)	2,899 acres (2%)	0 acres (0%)	0 acres (0%)
OHMA	168 acres (0%)	168 acres (0%)	0 acres (0%)	2,093 acres (1%)	2,093 acres (1%)	0 acres (0%)	0 acres (0%)
Non-habitat	194 acres (0%)	194 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	182,213 acres	182,213 acres	182,213 acres	182,213 acres	182,213 acres	182,213 acres	190,800 acres

This section details the effects of the alternatives on these areas considered for ACEC designation.

Solar, Wind, Major Rights of Way, Saleable Minerals/Material Management, and Locatable Minerals

The Proposed RMP Amendment and Alternatives 3 and 6 would all provide additional protections to the potential ACECs by excluding solar, wind, and non-energy leasable mineral development. While all three alternatives also exclude major rights of way and close the area to saleable minerals/material management, Alternative 3 provides the greatest protection as Alternative 3 provides no exceptions to the rights of way exclusion or to the saleable closure. In addition, under Alternative 3, the areas would be recommended for locatable mineral withdrawal. Under both Alternative 3 and 6, a plan of operations and BLM approval would be required before beginning any locatable mineral operations causing surface disturbance greater than casual use. Under the Proposed RMP Amendment, as PHMA with limited exceptions, these nine areas would be managed as exclusion for utility-scale solar and wind development and exclusion for major rights of way with no exceptions, providing additional protections to GRSG habitat.

Under Alternatives 1, 2, and 4, the areas would be exclusion for solar and wind in PHMA and avoidance in GHMA and avoidance for major rights of way in PHMA and GHMA, which would provide similar but slightly less protections than afforded under the Proposed RMP Amendment and Alternatives 3 and 6. The portions of these potential ACEC areas that would be managed as OHMA and non-habitat would be open for utility-scale solar and utility-scale wind testing and development, with applicable minimization measures and compensatory mitigation. Under Alternative 5, the areas would be avoidance for solar and wind in PHMA and open with minimization measures in GHMA and would be avoidance for major rights-of-way in PHMA and open with minimization measures in GHMA. Therefore, Alternative 5 provides the least amount of protections from solar and wind development and Alternatives 1, 2, 4, and 5 would provide the least amount of protections from rights of way development. Under Alternatives 1, 2, 4, 5, and the Proposed RMP Amendment, the areas would be open to locatable mineral development and notice level exploration would be allowed without a plan of operations.

Fluid Mineral Development

Under the Proposed RMP Amendment these nine potential ACECs would be managed under the PHMA with limited exceptions, and the No Surface Occupancy (NSO) with no exceptions management direction identified for that designation would protect the potential ACECs from potential fluid mineral development.

Under Alternative 6, the area would also be subject to NSO but development could occur if an exception for the entire ACEC area could be met. Alternative 3 would close the areas to fluid mineral development without exception.

Alternatives 1 and 2 would manage fluid minerals to avoid, minimize, and compensate for direct disturbance, displacement, or mortality of GRSG, direct loss of habitat and cumulative landscape level impacts and would prioritize fluid mineral development outside of PHMA and GHMA areas in non-habitat areas first and then in the least suitable habitat for GRSG, subject to valid existing rights. Under Alternative 1, the PHMA within the potential ACECs would be managed as NSO without waiver or modification and within GHMA, any new leases would include stipulations to protect GRSG. Alternative 2 would be the same as Alternative 1, but additional exceptions to stipulations may be granted. Under Alternative 4, there would be an NSO stipulation within .6 miles of active leks in PHMA unless it could be demonstrated that it meets either a non-habitat, topographic, or co-location exception. Under Alternative 5, the NSO stipulation would be the same as under Alternative 4, but an exception could only be applied within 1 mile of active leks.

Alternative 3 provide the greatest protections from fluid mineral development by prohibiting fluid mineral development. The second highest protections would occur under the Proposed RMP Amendment and Alternative 6 followed by Alternative 5. Alternative 4 would provide the least protections to the potential ACEC from fluid mineral development.

Disturbance Cap

In these areas managed as PHMA, the Proposed RMP Amendment sets a disturbance cap if direct habitat disturbance from existing and proposed infrastructure developments exceeds either 3% the project scale or 3% at the HAF Fine Scale selection area, with exceptions and conditions. In Nevada, the Authorized Officer may grant an exception to the disturbance cap at the HAF fine scale if the project meets criteria associated with the project-scale assessment (including requirements for exceptions and conditions), is in compliance with the Nevada Greater Sage-grouse Conservation Plan and Conservation Credit System (CCS) as required by Nevada regulation (Nevada Revised Statutes (NRS) Chapter 232.16 and Nevada Administrative Code (NAC) 232.162-232.480), and the offsetting compensatory mitigation (or credits per the Nevada CCS Manual) occur within the HAF fine scale where the project occurs. Alternative 6 sets the same disturbance cap for the area but there are no exceptions and Alternative 3 closes the area to new infrastructure projects and sets a 3% disturbance cap for existing developments. Alternatives 1 and 2 set a 3% disturbance cap in PHMA and the cap applies at both BSU-scale and at the project scale. Under Alternatives 4 and 5, in PHMA the disturbance cap is 3% the project scale or 3% at the HAF Fine Scale selection area and projects would be deferred until disturbance in the areas has been reduced below the cap threshold or the projects could be redesigned to not result in additional surface disturbance or moved outside of PHMA. Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to disturbance.

Livestock Grazing

Under Alternative 3, GRSG habitat would be unavailable to livestock grazing. Under Alternatives 1 and 2, in PHMA, thresholds and responses that would allow the authorized officer to make adjustments to livestock grazing are required. Under Alternatives 4, 5, 6, and the Proposed RMP Amendment, thresholds and responses are also addressed but under these alternatives, more comprehensive guidance is provided for addressing areas not meeting the special status species land health standard due to livestock grazing and for addressing livestock improvements and fencing in a manner to reduce impacts to GRSG. Alternative 3 provides the greatest protections to the ACEC by removing any potential disturbance associated with livestock grazing.

Summary of Effects

Considered comprehensively, the management direction provided under Alternatives 3 and the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the potential Warm Springs, North Fork O'Neil, Owyhee East, Grass-Kobeh Valley, South Fork Dixie Flats, Idaho Border, Hays Canyon, Vya Massacre, and Buffalo Skedaddle ACECs. Alternative 3 provides the greatest amount of protection, as these areas would be closed to utility-scale solar, utility-scale wind, saleable minerals/materials management, non-energy leasable minerals, and major rights of way, with no exemptions. The Proposed RMP Amendment would protect and prevent irreparable damage to GRSG habitat in these areas by excluding utility scale solar and wind, and removing exceptions to the NSO occupancy requirement for fluid mineral development. The Proposed RMP also provides minimal exceptions to the major rights of way exclusion, prohibits non-energy mineral leasing, and provides only limited allowances for saleable mineral/material management. Alternative 6 provides the next highest level of protection, with slightly more exceptions to closures to mineral development and major rights of way and would also protect and prevent irreparable damage to the relevant and important values of the potential ACEC areas.

Alternatives 1, 2, 4, and 5 provide a relatively high degree of protection with PHMA management direction, which guides management of the majority of these potential ACECs. However, as major rights of way, renewable energy, and mineral development are more likely to occur under these alternatives, associated disturbances could negatively impact the relevant and important values of the potential ACECs.

Effects of the Alternatives on the Potential Montana Mountain, Butte Long Valley, Eureka North and South, Monitor Valley, Reese River, Utah Border, and Owyhee West Potential ACECs

Seven areas that are proposed for ACEC designation under Alternative 3 and 6 would be managed consistent with applicable HMA direction (and not as PHMA with limited exceptions) under the Proposed RMP Amendment. These are:

- Montana Mountain: 314,370 acres, increased from 92,727 acres in Draft RMPA/EIS
- Butte Long Valley: 606,239 acres, reduced 793,353 acres in Draft RMPA/EIS
- Eureka North and South: 66,905 acres, increased from 66,904 acres in Draft RMPA/EIS
- Monitor Valley: 173,507 acres, reduced from 267,325 acres in Draft RMPA/EIS
- Reese River: 85,000 acres, increased from 81,193 acres in Draft RMPA/EIS
- Utah Border: 58,659 acres, unchanged from Draft RMPA/EIS
- Owyhee West: 704,650 acres

These areas provide important regional genetic connectivity, high-quality brood-rearing habitat, and/or are highly valuable for GRSG habitat and population persistence, as detailed in the above evaluations.

Table 5-9 displays the HMA allocations for these seven areas under each alternative. Under the Proposed RMP Amendment, the areas within the potential Montana Mountain, Butte Long Valley, Eureka North and South, Monitor Valley, Reese River, Utah Border, and Owyhee West ACECs would be managed mostly as PHMA, with smaller percentages managed as GHMA, OHMA, and non-habitat.

Under Alternative 3 and 6, all seven areas would also be designated as ACECs. Under Alternatives 3 and 6, these seven areas would be managed entirely as PHMA, with direction varying consistent with PHMA direction in each alternative including the additional protections that are identified under each of these alternatives for ACECs. Under Alternatives 1, 2, 4, and 5 these areas would all be managed mostly as PHMA, with relatively small portions managed as GHMA, OHMA, and non-habitat, with the exception of Butte Long

Valley potential ACEC area (which is managed as 47% PHMA, 38% GHMA, 6% OHMA, and 9% non-habitat in Alternatives 1 and 2 and as 79% PHMA, 19% GHMA, 2% OHMA in Alternatives 4 and 5), Alternatives 4 and 5 have higher percents managed as PHMA in the Montana Mountain, Eureka North and South, Reese River, Utah Border potential ACEC areas. Alternative 1 and 2 have more acreage managed as PHMA in the Monitor Valley potential ACEC area. The Owyhee West potential ACEC area would receive 96% PHMA management under Alternatives 1, 2, 4, and 5.

Table 5-9. HMA Allocations in the Nevada Potential ACECs by Alternative^{12,13}

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ¹⁴
Montana Mountain							
PHMA	288,005 acres (92%)	288,005 acres (92%)	314,370 acres (100%)	295,742 acres (94%)	303,711 acres (97%)	314,370 acres (100%)	278,660 acres (89%)
GHMA	3,626 acres (1%)	3,626 acres (1%)	0 acres (0%)	18,528 acres (6%)	10,565 acres (3%)	0 acres (0%)	10,565 acres (3%)
OHMA	14,737 acres (5%)	14,737 acres (5%)	0 acres (0%)	100 acres (0%)	94 acres (0%)	0 acres (0%)	94 acres (0%)
Non-habitat	8,002 acres (3%)	8,002 acres (3%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	25,051 acres (8%)
Total	314,370 acres	314,370 acres	314,370 acres	314,370 acres	314,370 acres	314,370 acres	314,370 acres
Butte Long Valley							
PHMA	284,728 acres (47%)	284,728 acres (47%)	606,293 acres (100%)	478,214 acres (79%)	478,501 acres (79%)	606,293 acres (100%)	478,531 acres (79%)
GHMA	230,096 acres (38%)	230,096 acres (38%)	0 acres (0%)	113,018 acres (19%)	112,845 acres (19%)	0 acres (0%)	112,845 acres (19%)
OHMA	38,884 acres (6%)	38,884 acres (6%)	0 acres (0%)	15,061 acres (2%)	14,917 acres (2%)	0 acres (0%)	14,917 acres (2%)
Non-habitat	52,585 acres (9%)	52,585 acres (9%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres
Total	606,293 acres	606,293 acres	606,293 acres	606,293 acres	606,293 acres	606,293 acres	606,293 acres
Eureka North and South							
PHMA	47,109 acres (70%)	47,109 acres (70%)	66,905 acres (100%)	59,035 acres (88%)	59,035 acres (88%)	66,905 acres (100%)	59,035 acres (88%)
GHMA	13,871 acres (21%)	13,871 acres (21%)	0 acres (0%)	5,606 acres (8%)	5,606 acres (8%)	0 acres (0%)	5,606 acres (8%)
OHMA	4,867 acres (7%)	4,867 acres (7%)	0 acres (0%)	2,264 acres (3%)	2,264 acres (3%)	0 acres (0%)	2,264 acres (3%)
Non-habitat	1,058 acres (2%)	1,058 acres (2%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	66,905 acres	66,905 acres	66,905 acres	66,905 acres	66,905 acres	66,905 acres	66,905 acres

¹² Unlike the areas identified in **Table 5-8**, these areas were not identified as PHMA with limited exception areas in the Proposed RMP Amendment.

¹³ Acreage calculated utilizing the USGS HMA model for NV/CA (Milligan et al. 2024) (refer to Appendix 3).

¹⁴ HMA with limited exceptions are areas within PHMA where additional protections to support conservation of GRSG habitat would reduce impacts from highly probable resource threats. These acreages are therefore included in both PHMA and PHMA with limited exceptions.

Appendix 5. Evaluation of Areas of Critical Environmental Concern for Greater Sage-Grouse Habitat

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ¹⁴
Monitor Valley							
PHMA	168,404 acres (97%)	168,404 acres (97%)	173,507 acres (100%)	152,676 acres (88%)	162,582 acres (94%)	173,507 acres (100%)	162,582 acres (94%)
GHMA	3,553 acres (2%)	3,553 acres (2%)	0 acres (0%)	10,831 acres (6%)	10,831 acres (6%)	0 acres (0%)	10,831 acres (6%)
OHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	10,000 acres (6%)	94 acres (0%)	0 acres (0%)	94 acres (0%)
Non-habitat	1,550 acres (1%)	1,550 acres (1%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	173,507 acres	173,507 acres	173,507 acres	173,507 acres	173,507 acres	173,507 acres	173,507 acres
Reese River							
PHMA	76,577 acres (90%)	76,577 acres (90%)	85,000 acres (100%)	84,005 acres (99%)	84,005 acres (99%)	85,000 acres (100%)	84,005 acres (99%)
GHMA	7,671 acres (9%)	7,671 acres (9%)	0 acres (0%)	938 acres (1%)	938 acres (1%)	0 acres (0%)	938 acres (1%)
OHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	57 acres (0%)	57 acres (0%)	0 acres (0%)	57 acres (0%)
Non-habitat	752 acres (1%)	752 acres (1%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	85,000 acres	85,000 acres	85,000 acres	85,000 acres	85,000 acres	85,000 acres	85,000 acres
Utah Border							
PHMA	35,029 acres (60%)	35,029 acres (60%)	58,650 acres (100%)	46,645 acres (80%)	46,645 acres (80%)	58,650 acres (100%)	46,645 acres (80%)
GHMA	17,454 acres (30%)	17,454 acres (30%)	0 acres (0%)	4,041 acres (7%)	4,041 acres (7%)	0 acres (0%)	4,041 acres (7%)
OHMA	5,916 acres (10%)	5,916 acres (10%)	0 acres (0%)	1,161 acres (2%)	1,161 acres (2%)	0 acres (0%)	1,161 acres (2%)
Non-habitat	251 acres (0%)	251 acres (0%)	0 acres (0%)	6,803 acres (12%)	6,803 acres (12%)	0 acres (0%)	6,803 acres (12%)
Total	58,650 acres	58,650 acres	58,650 acres	58,650 acres	58,650 acres	58,650 acres	58,650 acres
Owyhee West							
PHMA	677,552 acres (96%)	677,552 acres (96%)	704,650 acres (100%)	676,814 acres (96%)	676,833 acres (96%)	704,650 acres (100%)	676,833 acres (96%)
GHMA	25,303 acres (4%)	25,303 acres (4%)	0 acres (0%)	13,492 acres (2%)	13,485 acres (2%)	0 acres (0%)	13,485 acres (2%)
OHMA	605 acres (0%)	605 acres (0%)	0 acres (0%)	14,344 acres (2%)	14,332 acres (2%)	0 acres (0%)	14,332 acres (2%)
Non-habitat	1,190 acres (0%)	1,190 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	704,650 acres	704,650 acres	704,650 acres	704,650 acres	704,650 acres	704,650 acres	704,650 acres

This section details the effects of the alternatives on these areas considered for ACEC designation.

Solar, Wind, Major Rights of Way, Saleable Minerals/Material Management, and Locatable Minerals

The Proposed RMP Amendment and Alternatives 3 and 6 would all provide additional protections to GRSG habitat in the potential ACECs by excluding solar, wind, and non-energy leasable mineral development. While all three alternatives also exclude major rights of way and close the area to saleable minerals/material management, Alternative 3 provides the greatest protection as Alternative 3 provides no exceptions to the rights of way exclusion or to the saleable closure. In addition, under Alternative 3, the area would be recommended for locatable mineral withdrawal. Under both Alternative 3 and 6, a plan of operations and BLM approval would be required before beginning any locatable mineral operations causing surface disturbance greater than casual use.

Under Alternatives 1, 2, and 4, the area would be exclusion for solar and wind in PHMA and avoidance in GHMA and avoidance for major rights of way in PHMA and GHMA, which would provide similar but slightly less protections than afforded under the Proposed RMP Amendment and Alternatives 3 and 6. The portions of these potential ACEC areas that would be managed as OHMA and non-habitat would be open for utility-scale solar and utility-scale wind testing and development, with applicable minimization measures and compensatory mitigation. Under Alternative 5, the area would be avoidance for solar and wind in PHMA and open with minimization measures in GHMA and would be avoidance for major rights-of-way in PHMA and open with minimization measures in GHMA. Therefore, Alternative 5 provides the least amount of protections from solar, wind, and rights of way development. Under Alternatives 1, 2, 4, 5, and the Proposed RMP Amendment, the areas would be open to locatable mineral development and notice level exploration would be allowed without a plan of operations.

Fluid Mineral Development

Fluid mineral development and associated potential impacts to GRSG habitat is least likely under Alternative 3, which closes the areas to fluid mineral development with no exception. Under the Proposed RMP Amendment and Alternative 6, PHMA management direction applies in most of these areas. Under the Proposed RMP Amendment, as PHMA, the majority of these ACEC areas would be managed as NSO for fluid mineral development within .6 miles of leks and season limitations (breeding, nesting, early brood-rearing and winter habitat) and Controlled Surface Use (CSU) (density and disturbance) outside of the 0.6-mi NSO buffer with exceptions. In the smaller portions managed as GHMA, OHMA, and non-habitat in the Proposed RMP Amendment, these areas would be open to fluid minerals development, with minor stipulations (including CSU for lek buffers and seasonal limitations). Under Alternative 6, the area would also be subject to NSO but development could occur if an exception for the entire ACEC area could be met.

Alternatives 1 and 2 would management fluid minerals to avoid, minimize, and compensate for direct disturbance, displacement, or mortality of GRSG, direct loss of habitat and cumulative landscape level impacts and would prioritize fluid mineral development outside of PHMA and GHMA areas in non-habitat areas first and then in the least suitable habitat for GRSG, subject to valid existing rights. Under Alternative 1, the PHMA within the potential ACEC would be managed as NSO without waiver or modification and within GHMA, any new leases would include TL stipulations to protect GRSG. Alternative 2 would be the same as Alternative 1, but additional exceptions to stipulations may be granted. Under Alternative 4, there would be an NSO stipulation within .6 miles of active leks in PHMA unless it could be demonstrated that it meets either a non-habitat, topographic, or co-location exception. Under Alternative 5, the NSO stipulation would be the same as under Alternative 4, but an exception could only be applied within 1 mile of active leks.

Alternative 3 provide the greatest protections from fluid mineral development by prohibiting fluid mineral development. The next highest protections would occur under the Proposed RMP Amendment and Alternative 6, followed by Alternative 5. Alternative 4 would provide the least protections to the potential ACEC from fluid mineral development.

Disturbance Cap

In these areas managed as PHMA, the Proposed RMP Amendment sets a disturbance cap if direct habitat disturbance from existing and proposed infrastructure developments exceeds either 3% the project scale or 3% at the HAF Fine Scale selection area, with exceptions and conditions. In Nevada, the Authorized Officer may grant an exception to the disturbance cap at the HAF fine scale if the project meets criteria associated with the project-scale assessment (including requirements for exceptions and conditions), is in compliance with the Nevada Greater Sage-grouse Conservation Plan and Conservation Credit System (CCS) as required by Nevada regulation (Nevada Revised Statutes (NRS) Chapter 232.16 and Nevada Administrative Code (NAC) 232.162-232.480), and the offsetting compensatory mitigation (or credits per the Nevada CCS Manual) occur within the HAF fine scale where the project occurs. Alternative 6 sets the same disturbance cap for the areas but there are no exceptions and Alternative 3 closes the areas to new infrastructure projects and sets a 3% disturbance cap for existing developments. Alternatives 1 and 2 set a 3% disturbance cap in PHMA and the cap applies at both BSU-scale and at the project scale. Under Alternatives 4 and 5, in PHMA the disturbance cap is 3% the project scale or 3% at the HAF Fine Scale selection area and projects would be deferred until disturbance in the areas has been reduced below the cap threshold or the projects could be redesigned to not result in additional surface disturbance or moved outside of PHMA. Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to disturbance.

Areas under GHMA, OHMA, and non-habitat would not be subject to the disturbance cap, potentially allowing more development and associated impacts to GRSG habitat. Overall, Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to disturbance.

Livestock Grazing

Under Alternative 3, GRSG habitat would be unavailable to livestock grazing. Under Alternatives 1 and 2, in PHMA, thresholds and responses that would allow the authorized officer to make adjustments to livestock grazing are required. Under Alternatives 4, 5, 6, and the Proposed RMP Amendment, thresholds and responses are also addressed but under these alternatives, more comprehensive guidance is provided for addressing areas not meeting the special status species land health standard due to livestock grazing and for addressing livestock improvements and fencing in a manner to reduce impacts to GRSG. In the portions of the Proposed RMP Amendment managed as GHMA, management direction is the same as in PHMA, except RM-3, which requires evaluation of all livestock management range improvement projects during the grazing renewal process, does not apply.

Alternative 3 provides the greatest protections to the ACEC by removing any potential disturbance associated with livestock grazing.

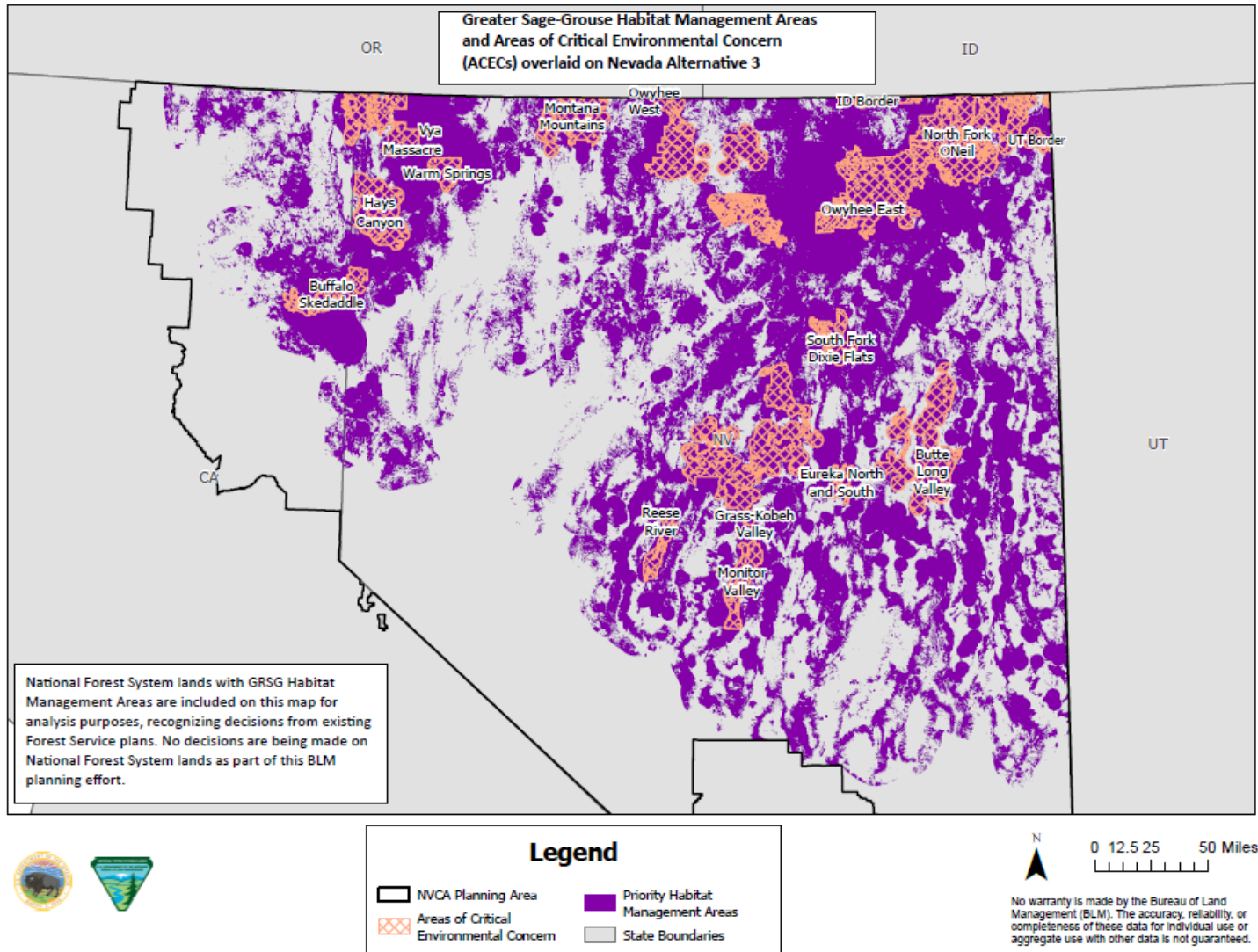
Summary of Effects

Considered comprehensively, Alternative 3 provides the greatest protection to the Potential Montana Mountain, Butte Long Valley, Eureka North and South, Monitor Valley, Reese River, Utah Border, Owyhee West ACECs by prohibiting utility-scale solar, utility-scale wind, major rights of way, non-energy leasable minerals leasing, saleable minerals/ material management, and fluid mineral development with no exceptions. The Proposed RMP Amendment and Alternative 6 would also protect and prevent irreparable damage to

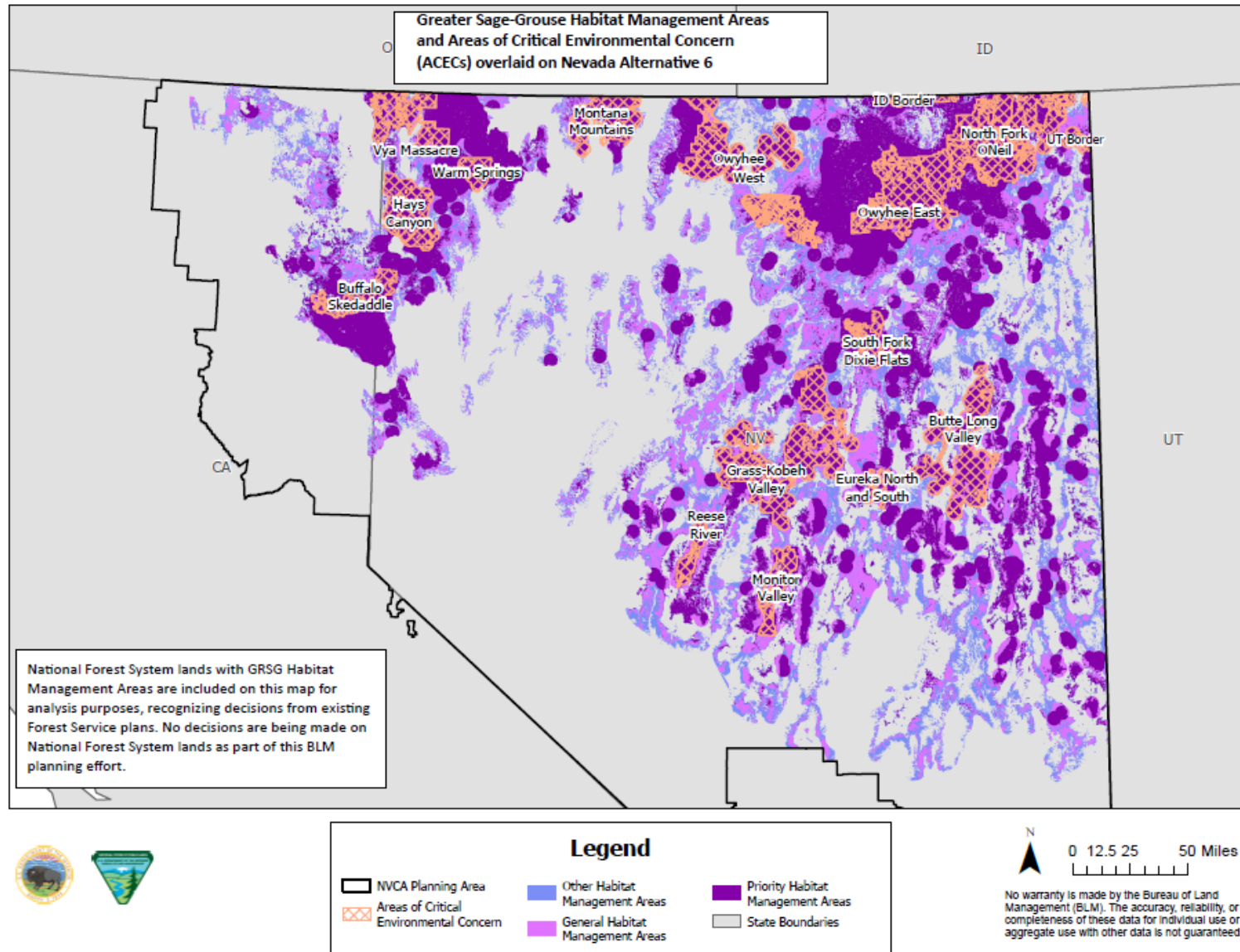
the relevant and important values of the potential ACEC areas with protective PHMA management direction in most of these areas, limiting the risk of from the threats of major rights of way, renewable energy development, and mineral development.

Alternatives 1, 2, 4, and 5 provide a relatively high degree of protection with these alternatives' PHMA management direction, which guides management of the majority of these potential ACECs. However, as major rights of way, renewable energy, and mineral development are more likely to occur under these alternatives, and associated disturbances could negatively impact the relevant and important values of the potential ACECs.

Map 5.7: Nevada Alternative 3 Potential ACECs



Map 5.8: Nevada Alternative 6 Potential ACECs



OREGON

The BLM's evaluation of rangewide datasets in Oregon did not result in the identification of any areas that met the ACEC importance criteria. Oregon is unique compared to the other states in that there are several existing ACECs and Research Natural Area/ACECs (RNAs) that are already designated (through previous BLM RMP efforts) inside the 2013 PACs and 2015 SFAs. These areas were designated in RMPs that predated the 2015 and 2019 GRSG amendment efforts. These previously designated areas, with GRSG and GRSG plant community relevant and important values, include the following two ACECs and five RNAs:

- High Lakes ACEC,
- Red Knoll ACEC,
- Lake Ridge RNA,
- North Ridge Bully Creek RNA,
- Rahilly-Gravelly RNA,
- South Ridge Bully Creek RNA, and
- Toppin Creek Butte RNA.

In addition, the 2015 GRSG ARMPA added special management considerations for several ACECs/RNAs relative to livestock grazing (refer to **Appendix 17**, Proposed RMP Amendment and Analysis for Key Research Natural Areas in Oregon).

Beyond considering the existing ACECs and RNAs, the BLM Oregon State Office staff examined areas identified as PHMA in Oregon as well previously identified Sagebrush Focal Areas (SFAs) and Priority Areas of Conservation (PACs) in order to determine if any areas within Oregon that were either newly nominated or previously nominated and evaluated in the 2015 RMP Amendment met the relevance and importance criteria. BLM Oregon's ACEC review, assessment, and evaluation process focused on the new GRSG scientific information on 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). Oregon BLM also coordinated with state wildlife authorities to identify and update GRSG habitat management areas (HMA) and consider potential ACEC areas.

The majority of the SFAs were determined to not contain multiple lines of evidence supporting a conclusion that the habitat was of more than local significance. The BLM state and district staff coordinated with the Oregon Department of Fish and Wildlife staff to identify characteristics that may meet the importance criteria and to identify potential ACEC locations/areas using their population and habitat criteria. An assessment of existing and proposed PHMA, new genetic information, and lek density clusters were all important components of the evaluation. The BLM Oregon also reviewed the McDermitt Caldera ACEC nomination received during the scoping period.

As a result of their comprehensive assessment, BLM Oregon found two areas that could potentially meet both the ACEC relevance and importance criteria for greater sage-grouse: Louse Canyon and Soldier Creek. After evaluating the two areas, the team concluded that both areas met the relevance criteria for fish and wildlife resource (specific to GRSG and the new science), but that neither area met the importance criteria (more than locally significant). Because none of the internally considered or externally nominated areas were identified as having relevance and importance, the BLM did not identify any new ACECs in Oregon in the Draft EIS or in the Final EIS.

The BLM Oregon ACEC review, assessment, and evaluation process did not consider or consider in detail potential historic, cultural, scenic, or non-GRSG fish and wildlife values in accordance with the purpose and need for this planning effort. ACEC nominations that addressed resource values beyond greater sage-grouse will be considered by the BLM during future planning efforts.

Importance Evaluations

Oregon GRSG ACEC Importance Evaluation: Soldier Creek Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	No	<p>Greater sage-grouse are distributed throughout appropriate habitat in the western United States. This portion of the distribution located in Oregon (and Idaho) is designated as Management Zone IV (Stiver et al. 2006). Management zones are delineations of greater sage-grouse populations and subpopulations within floristic zones. Within Management Zone IV, Oregon has designated core areas, and in 2015 BLM designated Priority and General Habitat Management Areas.</p> <p>Since the 2015 BLM plans, new science addressing GRSG genetics, density, and habitats has provided additional information about areas that may contain special worth, consequence, or distinctiveness.</p> <p>OSO staff examined the genetic pathways data and connectivity (i.e., >80% cumulative connectivity) with GRSG priority areas for conservation in Idaho and that overlap with the very high lek density areas. In the Soldier Creek area south of Jordan Valley/Hwy 95, the Ecostate GIS shows fairly intact habitat and there are multiple areas of overlapping lek density. It's approximately 15 miles to a >95% genetic cumulative connectivity pathway in Idaho. The Soldier Creek area is mostly in the 80 to 85% cumulative connectivity genetic pathway range (Cross et al., 2023) and is similar to cumulative connectivity of the surrounding area (e.g. Cow Lakes) in Oregon.</p> <p>While high density lek/population areas and genetic connectivity are considered important to greater sage-grouse conservation, the connectivity areas are dispersed throughout Oregon and are not substantially unique to one specific region or planning unit. Greater sage-grouse habitat in the Soldier Creek area is not substantially distinct from habitat managed by other nearby BLM lands that have similar cumulative genetic connectivity values.</p> <p>Although a portion of the area contains medium relative abundance (Doherty et al. 2016), the size of the area is smaller than and not substantially distinct compared to other areas in Management Zone IV (e.g. Cow Lakes). There is a much larger, higher relative lek abundance area south and east (in Idaho) of the Soldier Creek area. See background notes and maps below.</p>

Oregon GRSG ACEC Importance Evaluation: Soldier Creek Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Qualities or circumstances that make it: <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	No	<p>The area is not particularly fragile or sensitive to change when compared to other similar sites in the Oregon-Idaho region. The habitat is not rare, irreplaceable, exemplary, or unique. The area is vulnerable to adverse change, particularly wildfire and invasive annual grasses, but not more so than the surrounding habitat. The habitat is neither threatened or endangered.</p> <p>Cumulative connectivity pathways mapped in the Soldier Creek potential ACEC are thresholded below 85%, indicating low impedances to sage-grouse movements (Cross et al., 2023). Higher connectivity pathways are mapped >10 miles east of the Oregon border.</p> <p>The area does not contain key or clusters of genetic nodes,.</p>
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	<p>The BLM 2015, 2019, and current initiatives to conserve, enhance, and restore greater sage-grouse habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that 2010 finding, the USFWS concluded that greater sage grouse was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species.</p> <p>Without multiple lines of evidence, including reasonably foreseeable development, valid existing rights, land ownership, and crucial GRSG habitat characteristics from multiple science-based models, on-the-ground conditions/evidence for this area does not currently need protection requirements beyond the standard approaches to implemented FLPMA and national priorities. In addition, the area currently has Priority Habitat Management Area designation and management under the 2015 ARMPA. Habitat loss and degradation due to wildfires and invasive annual grasses are primary threats to sage-grouse in this area. Significant amounts of high quality habitat in Oregon and Idaho has burned near this area.</p>
Other Items		
Boundaries	Nomination boundaries have been provided to the NOC (see also notes below).	
Additional Notes	We reviewed and then ruled out the Cow Lakes PAC area due to the high proportion of private lands mixed in with BLM lands, low amount of suitable habitat, and degraded seasonal habitat, as shown in the 2019-2021 Ecostate spatial data provided by SageCon/INR and reported in the Cow Lakes Habitat Assessment Framework Summary.	
Conclusion		
This potential ACEC provides important lekking, nesting, and early brood-rearing habitat for a high abundance of sage-grouse. However, the habitat, density of birds, and connectivity to sage-grouse priority habitat is not unique. Multiple pathways of potential gene flow connecting sage-grouse priority areas for conservation in southeast Oregon and southwest Idaho coalesce approximately 10 miles east of the Oregon border to form the high concentration gene flow pathway depicted in Cross et al. (2023 figure 4). Cumulative connectivity pathways coalesce here due to cultivation and tree cover impeding sage-grouse movements (Cross et al 2013 figure 7b).		

Conclusion
<p>These impedences decrease approaching the Oregon state border, and once inside Oregon, the cumulative connectivity pathways are more diffuse and non-distinct. In other words, the proposed ACEC does not appear to be vital to maintenance of range-wide connectivity. Moreover, the habitat is not unique, rare, irreplaceable, or exemplary. There are many areas of similar sage-grouse habitat in SE Oregon with similar genetic pathways depicted in Cross et al. 2023 intersecting areas of high lek density. BLM is actively managing juniper encroachment and other threats to GRSG in Oregon (e.g., fire, and invasive annual grasses). Thus, the Soldier Creek potential ACEC does not meet the criteria for special worth or importance with more than locally significant qualities of consequence, meaning, distinctiveness, or cause for concern due to its similarity, proximity, and connectedness with similar habitat, lek density areas, and modeled genetic pathways.</p> <p>References Cross TB, Schwartz MK, Naugle DE, Fedy BC, Row JR, Oyler-McCance SJ. 2018 The genetic network of greater sage-grouse: range-wide identification of keystone hubs of connectivity. <i>Ecol. Evol.</i> 8, 5394–5412. Cross TB, Tack JD, Naugle DE, Schwartz MK, Doherty KE, Oyler-McCance SJ, Pritchert RD, Fedy BC. 2023 The ties that bind the sagebrush biome: integrating genetic connectivity into range-wide conservation of greater sage-grouse. <i>R. Soc. Open Sci.</i> 10:220437.</p>

Oregon GRSG ACEC Importance Evaluation: Upper West Little Owyhee Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	No	<p>Greater sage-grouse are distributed throughout the western United States. This portion of the distribution located in Oregon (and Idaho) is designated as Management Zone IV (Stiver et al. 2006). Management zones are delineations of greater sage-grouse populations and subpopulations within floristic zones with similar management issues. Within Management Zone IV, Oregon has designated core areas, and in 2015 BLM designated Priority and General Habitat Management Areas.</p> <p>Since the 2015 BLM plans, new science addressing GRSG genetics, density, and habitats has provided additional information about the locations that may contain special worth, consequence, or distinctiveness.</p> <p>OSO staff examined the genetic pathways data and connectivity (i.e., >80% cumulative connectivity) with GRSG populations in Nevada and that overlap with the high lek density areas.</p> <p>Greater sage-grouse habitat in the Upper West Little Owyhee area is not substantially distinct from habitat managed by other nearby BLM lands that have similar cumulative connectivity pathway values (Cross et al. 2013).</p> <p>Although a portion of the area contains medium relative abundance (Doherty et al. 2016), the area is not substantially distinct compared to other areas in Management Zone IV and does not show strong nodes/networks to other areas (Cross 2018). In addition, the area shows a “very low” relative abundance (Doherty 2015, T25) breeding population index.</p> <p>While higher density areas and genetic connectivity are considered important to greater sage-grouse conservation, the areas are dispersed throughout the region and are not significantly unique to a specific region or planning unit; not to this potential ACEC nomination area.</p>

Oregon GRSG ACEC Importance Evaluation: Upper West Little Owyhee Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Qualities or circumstances that make it: <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	No	<p>The area is no more fragile or sensitive to change than other sites in southeast Oregon. The area does not contain a key genetic node nor strong networks (Cross et al 2018). Similarly the area does not show substantially important cumulative connectivity pathways to other PHMA areas in Oregon and Nevada.</p> <p>The area is similar to much of the intact GRSG habitat in the area and has the same vulnerability to change as the surrounding area. The habitat is not irreplaceable, exemplary, unique, rare, endangered, threatened, nor vulnerable to adverse change when compared to other intact GRSG habitat in southeast Oregon.</p>
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	<p>The BLM 2015, 2019, and current initiatives to conserve, enhance, and restore greater sage-grouse habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that 2010 finding, the USFWS concluded that greater sage grouse was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species.</p> <p>Without multiple lines of evidence, including reasonably foreseeable development, valid existing rights, land ownership, and crucial GRSG habitat characteristics from multiple science based models, on-the-ground conditions/evidence this area has not been identified for protection to implement FLPMA and national priorities.</p>
Other Items		
Boundaries	Contiguous with a Nevada potential ACEC. An area of genetic connectivity to the north is disconnected from the Upper West Little Owyhee potential ACEC by lower quality habitat and that the southern area, contiguous with Nevada to the south, had more connectivity, although threshold cumulative values are moderate.	
Additional Notes	—	
Conclusion		
<p>This potential ACEC provides important lekking, nesting, and early brood-rearing habitat for a high abundance of GRSG. However, the habitat, bird density, and connectivity to GRSG priority areas of conservation are not unique in Oregon. The thresholded cumulative connectivity pathways in the potential ACEC are between 75 and 80 percent (Cross et al. 2013). GRSG movements are not impeded by tree cover or cultivation within the potential ACEC and in the surrounding landscape. There are no distinctive cumulative connectivity pathways intersecting areas of high lek density in this area. In other words, the proposed ACEC does not appear to be vital to maintenance of range-wide connectivity. Thus, the Upper West Little Owyhee potential ACEC does not meet the criteria for special worth or importance with more than locally significant qualities of consequence, meaning, distinctiveness, or cause for concern due to its similarity, proximity, and connectedness with similar habitat, lek density areas, and genetic considerations.</p> <p>References Cross TB, Schwartz MK, Naugle DE, Fedy BC, Row JR, Oyler-McCance SJ. 2018 The genetic network of greater sage-grouse: range-wide identification of keystone hubs of connectivity. <i>Ecol. Evol.</i> 8, 5394–5412.</p>		

Conclusion

Cross TB, Tack JD, Naugle DE, Schwartz MK, Doherty KE, Oyler-McCance SJ, Pritchert RD, Fedy BC. 2023 The ties that bind the sagebrush biome: integrating genetic connectivity into range-wide conservation of greater sage-grouse. *R. Soc. Open Sci.* 10:220437.

Consideration of ACECs nominated during the public comment period

During the comment period on the Draft EIS, 33 ACEC nominations were received in Oregon. BLM Oregon reviewed the nominations using the same criteria as described above during the development of the Draft EIS and discussed and coordinated cross border issues and locations with the BLM Nevada and the BLM Idaho, including discussions regarding three ACEC nominations that share acreage with those states: Table Mountain, Juniper Ridge, aa-Tiipi Flat areas. As a result of these reviews the BLM did not identify any of the nominated ACECs as having relevant and important values and did not identify them for inclusion in the Final EIS.

During the comment period on the Draft EIS, the BLM also received a comment that called for 23 existing ACECs in Oregon to receive additional GRSG protections. BLM Oregon, in reviewing potential areas for nomination as ACECs in the Draft EIS, had already considered whether existing ACECs should receive additional levels of protection than already afforded by their existing RMP decisions. As described above, two of the existing ACECs and five of the existing RNAs have relevant and important values that are specific to GRSG and GRSG plant communities (High Lakes ACEC, Red Knoll ACEC, Lake Ridge RNA, North Ridge Bully Creek RNA, Rahilly-Gravelly RNA, South Ridge Bully Creek RNA, and Toppin Creek Butte RNA).

During the assessment process for this EIS the team noted that the existing ACECs and the potential ACECs evaluated in the 2015 ARMPA ACECs/RNAs are in appropriate locations relative to the new science data. Through this evaluation process the BLM did not identify any increased level of protections needed for any of the identified ACECs due to the protections provided by the Priority Habitat Management Areas they are within. The only exception was in the High Lakes ACEC. Between the Draft and Final EIS, the BLM determined that the High Lakes ACEC warranted additional protections and the RMP Amendment identifies the area as receiving PHMA with limited exceptions management direction (refer to analysis that follows).

Effects of the Alternatives on the Existing High Lakes ACEC

The existing 38,952-acre High Lakes ACEC, which was designated as an ACEC in the 2003 Lakeview Resource Management Plan and Record of Decision, was, between Draft and Final EIS, identified as requiring PHMA with limited exception direction. The area was identified as requiring the additional PHMA with limited exceptions direction due primarily to the threats from major rights of way and renewable energy development. The effects of the alternatives on this area would be the same as the effects described throughout **Chapter 4** regarding the effects of the PHMA with limited protections but are also summarized below.

The additional restrictions in the High Lakes ACEC for GRSG that are provided by the PHMA with limited exceptions designation will help maintain the sagebrush landscape integrity in that area which supports dense populations of GRSG and other sagebrush associates such as pronghorn elk. Under the Proposed RMP Amendment, the PHMA with limited exceptions management direction:

- closes the area to utility-scale solar and utility-scale wind development;
- provides no exceptions to the no surface occupancy fluid mineral development (including geothermal) direction;

- closes the area to saleable minerals/materials management but are open to free use permits and the expansion of existing active pits only if the activity is with the Oregon PAC and project are disturbance cap and all applicable design features are applied in accordance with SSSI3 from the 2015 GRSR RMPA for Oregon;
- excludes major rights of way with stringent exceptions; and
- closes the area to new leases including fringe acreage leasing (i.e., no expansion of existing leases).

The additional protections afforded by PHMA in the Proposed RMP Amendment in that area for the adaptive management, disturbance cap, predation, livestock grazing, wild horse and burro, and mitigation will, in combination with the PHMA with limited exceptions management direction, protect and prevent the irreparable damage to the relevant and important values of the High Lakes ACEC. The protective management direction provided under Alternatives 3 would also protect and prevent irreparable damage to the relevant and important values of the High Lakes ACEC. The lower levels of protection provided under Alternatives 1, 2, 4, and 5, particularly as it relates to major rights of way and solar and wind development could result in could result in negative impacts to the relevant and important values of the High Lakes ACEC.

For additional information and a map of the High Lakes ACEC please refer to the Lakeview RMP and Record of Decision that can be accessed on the BLM National NEPA Register: https://eplanning.blm.gov/public_projects/lup/36322/174268/211780/Lakeview_RMP_Map_Packet.pdf.

UTAH

The 2015 GRSG ARMPA designated two Sagebrush Focal Areas (SFAs) in northern Utah, one on the eastern side of the state in Rich County bordering Wyoming and one on the western side of the state in Box Elder County, bordering Nevada. Both areas were evaluated by the Utah State office to determine if they met the ACEC relevance and importance criteria. In addition, the rangewide evaluation identified Parker Mountain as an area with characteristics that could result in meeting the importance criteria.

The Rich County area provides habitat for GRSG, a BLM sensitive species, and the area has also been identified as a Sage-Grouse Management Area (SGMA) in the State of Utah's state plan. The Rich population area is one of the strongholds for GRSG populations in Utah and is one of the largest populations in Utah connecting with larger populations in Idaho and Wyoming. The area also meets the criterion for a natural system or process because of the sagebrush habitat conditions in the area. The majority of intact sagebrush habitat is within a core area (Doherty et al. 2022). The Rich population area includes some of the largest core sagebrush habitat in Utah, which is why this area was identified as a focal landscape area.

The area in Box Elder County has also been identified as an SGMA by the State of Utah. The Box Elder population area is one of the largest of the GRSG populations in Utah connecting with larger populations in Idaho and Nevada. It is part of the Northern Great Basin sub-population (Utah, Idaho, and Nevada).

The Parker Mountain area is in Central Utah and provides one of the strongholds for GRSG populations in Utah and is one of the largest populations in the Great Basin. The area has also been identified as a SGMA by the State of Utah. The majority of the area is intact sagebrush habitat within a core area (USGS SEI) with minimal development.

Importance Evaluations

Utah GRSG ACEC Importance Evaluation: Rich GRSG Habitat Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<p>Since the 2015 GRSG ARMPA, new science addressing GRSG density and habitats has provided additional information about the locations areas that may contain special worth, consequence, or distinctiveness. The area is not particularly fragile or sensitive to change as compared to other sites in the State of Utah. It consists of a largely intact contiguous mid to high elevation sagebrush habitat with large mesic meadow complexes. The area is largely undeveloped and threats from development are low. Oil and gas development is low, as well as other minor infrastructure for roads, pipelines, and transmission lines. Primary land uses are livestock grazing, agriculture, and recreation. Mechanical sagebrush treatments that have occurred to promote livestock grazing have reduced the quantity of winter sagebrush habitat. The area is mostly core and growth opportunity areas within the sagebrush (Doherty 2022) Sagebrush Conservation Design with a significantly large core relative to other areas in the state. Much of the core habitat including diverse mesic habitat occurs on private lands with a mix of BLM jurisdiction. Similarly, the USU seasonal habitat model identifies much of the area as summer, winter, and nesting habitat. There are two key genetic nodes and other nodes (Cross et al. 2018), and the area covers an area where genetic connections exist between the northern (into Idaho) and western (into Wyoming) portions of management Zone II (Stiver et al 2006). There is a key genetic node to the south of the Rich population area in Morgan-Summit; however, no detailed telemetry studies are available in the Morgan-Summit area to understand sage-grouse movements and connectivity in this area. Climate change models (Palmquist 2021) show that the Rich population area has the highest value for retention of sagebrush biomass.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	<p>The Upper Bear River Watershed has been identified as a focal landscape area in Utah with a goal of improving the ecological health in the region. Bear Lake and the Bear River are large contributors to the Great Salt Lake. The area is largely undeveloped and threats from development are low, including oil and gas. The area is mostly core sagebrush (Doherty 2022) with a proportionally large core relative to other areas in the state. Much of the core habitat occurs on private lands and BLM jurisdiction within the core is fairly limited to the periphery. Similarly, the USU seasonal habitat model identifies much of the area as summer, winter, and nesting habitat. Climate change models (Palmquist 2021) show that the Rich population area has the highest value for retention of sagebrush biomass.</p>

Utah GRSG ACEC Importance Evaluation: Rich GRSG Habitat Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	Yes	<p>The Upper Bear River Watershed has been identified as a focal landscape area in Utah with a goal of improving the ecological health in the region. Bear Lake and the Bear River are large contributors to the Great Salt Lake.</p> <p>The BLM 2015, 2019, and current land use planning initiatives to conserve, enhance, and restore GRSG habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that finding, the USFWS concluded that GRSG was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species.</p> <p>The identification of the Upper Bear River Watershed as a focal landscape area acknowledges at least in part the importance of this area and recognition as a national priority.</p>
Other Items		
Boundaries		Focus boundaries on the core, connectivity, genetic nodes, climate in relation to the BLM jurisdiction. Consider the Dingell Act Exchange and transfer of BLM lands. Also considered the existing Laketown ACEC in the boundary.
Additional Notes		<p>Connectivity is with the larger subpopulations within Wyoming and Idaho. Since the 2015 GRSG ARMPA Utah BLM’s PHMA has not lined up with PHMA in Wyoming as their populations are generally GHMA along the border as these areas are not part of their core.</p> <p>The Sagebrush Focal Area (SFA) boundary in the Rich population area included portions of the relevant and important values; consider the potential for an ACEC to include portions of this area which overlaps with the new science. Boundary adjustments would need to remove large portions of non-habitat on Monte Cristo.</p> <p>Other genetic nodes in checkerboarded land jurisdiction in the southern portion (south of Neponset Reservoir) were excluded from the boundary. This area is highly checkerboarded (BLM/private land jurisdictions) and the majority of the BLM parcels have authorized leases and were part of the Dingell Act Exchange.</p>
Conclusion		
<p>Due to meeting the relevance and importance criteria, this area, with a revised boundary, was identified as a potential ACEC in Alternatives 3 and 6. Refer to Utah - ACEC Maps for Alternatives 3 and 6 that follow. Focusing boundaries on BLM jurisdiction, core, probability of breeding habitat, and climate sagebrush biomass. Items listed above provide multiple lines of evidence that these areas are more than locally significant to Utah and may provide importance to Management Zone II. Data most influential justifying the consideration as an ACEC and having more than local significance: high density breeding (Doherty et al. 2016); genetic connectivity (Cross et al. 2023); and genetic mixing (i.e., important area for connectivity well beyond the region being considered; Oyler-McCance et al. 2022).</p>		

Utah GRSG ACEC Importance Evaluation: Box Elder GRSG Habitat Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<p>Since the 2015 GRSG ARMPA, new science addressing GRSG density and habitats has provided additional information about the locations areas that may contain special worth, consequence, or distinctiveness. The area has experienced a relatively large wildfire since the 2015 ARMPA (Goose Creek Fire, 2018) increasing cheatgrass risk and sagebrush loss within the sagebrush habitat making it somewhat fragile or sensitive to change as compared to other sites in the State of Utah. Fire within management zone IV has been a significant threat in Idaho and Nevada. It boasts a relatively large diverse low elevation salt desert shrub to high elevation mountain sagebrush, mountain mahogany and aspen habitat. The Box Elder Population Area supports the southeastern extent of a larger population that extends beyond state boundaries into Nevada and Idaho and is primarily influenced by fire risk, especially in dry, dense juniper areas or in areas dominated by nonnatives. The area is largely undeveloped and threats from development are low. Oil and gas development is low, as well as other minor infrastructure for rock quarries, roads and transmission lines. Primary land uses are livestock grazing, agriculture, and recreation. The area largely contains core sagebrush with growth opportunity areas as identified in Doherty (2022) Sagebrush Conservation Design. Much of the core habitat occurs on private lands with a mix of BLM jurisdiction. Similarly, the USU seasonal habitat model identifies much of the area as summer, winter, and nesting habitat. There are two key genetic nodes and other minor nodes (Cross et al. 2018), and the area covers an area where genetic connections exist between the northern and western portions of management zone IV connecting to populations to the west in Nevada and north into Idaho. Climate change models (Palmquist 2021) show that the Box Elder population area has the highest value for retention of sagebrush biomass especially in the higher elevations. Box Elder has been a source population for greater sage-grouse translocations within the state and neighboring states. This source population may be attributing to some of the importance that shows up in the genetic connectivity models based on the new science.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	<p>The area is largely undeveloped and threats from development are low. Ongoing disturbance in portions of the area are primarily due to livestock grazing infrastructure for wells and pipelines, rock quarries, and railroads. Similarly, the USU seasonal habitat model identifies much of the area as summer, winter, and nesting. Climate change models (Palmquist 2021) show that the population area has the highest value for retention of sagebrush biomass. Area has two key genetic nodes and several others. The key nodes are connected with populations in Idaho and eastern NV, while other nodes are connected with southern UT populations and NE UT.</p>

Utah GRSG ACEC Importance Evaluation: Box Elder GRSG Habitat Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	<p>The BLM 2015, 2019, and current land use planning initiatives to conserve, enhance, and restore GRSG habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that finding, the USFWS concluded that GRSG was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species.</p> <p>Without multiple lines of evidence, including reasonably foreseeable development, valid existing rights, land ownership, crucial GRSG habitat characteristics from multiple science-based models, and on-the-ground conditions provide evidence this area has not been identified as warranting protection beyond the standard approaches to implemented FLPMA and national priorities.</p>
Other Items		
Boundaries	Focus boundaries on the core, connectivity, genetic nodes, climate in relation to the BLM jurisdiction.	
Additional Notes	<p>Connectivity is with the larger subpopulations within Nevada and Idaho. Utah since the 2015 GRSG ARMPA has not lined up with PHMA in Nevada as their populations are generally Other Habitat Management Area (OHMA)/GHMA along the border as these areas are not part of their core. PHMA in Utah lines up fairly well with PHMA in Idaho.</p> <p>The SFA boundary in the Box Elder population area included portions of the relevant and important values; consider the potential for an ACEC to include portions of this area which overlaps with the new science. Boundary adjustments would need to include other relevant/important values based on the new science within BLM jurisdiction.</p>	
Conclusion		
<p>Due to meeting the relevance and importance criteria, this area, with a revised boundary, was identified as a potential ACEC in Alternatives 3 and 6. Refer to BLM Utah - ACEC Maps for Alternatives 3 and 6 that follow. Focusing boundaries on BLM jurisdiction, genetic nodes, core, probability of breeding habitat, and climate sagebrush biomass. Items listed above provide multiple lines of evidence that these areas are important in review of the new science/data sets. From BLM Headquarters’ proposed boundary, consider larger tracts of BLM land jurisdiction within the northwestern portion of the PHMA area largely lining up with the 2015 SFA boundaries. Items listed above provide multiple lines of evidence that these areas are more than locally significant to Utah and may provide importance to Management Zone IV. Data most influential justifying the consideration as an ACEC and having more than local significance: high density breeding (Doherty et al. 2016); genetic connectivity (Cross et al. 2023); and genetic mixing (i.e., important area for connectivity well beyond the region being considered; Oyler-McCance et al. 2022).</p>		

Utah GRSG ACEC Importance Evaluation: Parker Mountain Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	No	<p>Since the 2015 GRSG ARMPA, new science addressing GRSG density and habitats has provided additional information about the locations areas that may contain special worth, consequence, or distinctiveness. A portion of the area contains high relative abundance (Doherty et al. 2016), there is a key genetic node (Cross et al. 2018), and the area covers an area where genetic connections between the northern and western portions of management Zone III may be constricted (Row et al 2018, Cross et al. 2023). Based on further coordination and review of the new science, the Parker Mountain Population has been a source population for translocations throughout Utah; therefore, the genetic connectivity may not demonstrate that this population is more than locally significant and that these are natural dispersals. Per conversations with the State of Utah, they have indicated that natural dispersal may be limited based on the nature of the habitat in the area and that the genetic connectivity may be more likely attributed to the translocations.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	No	<p>The area is not particularly fragile or sensitive to change and threats from land uses/authorizations are low as compared to other sites in the State of Utah, providing opportunity for retention of a relatively large expanse of intact sagebrush habitat. The area is largely undeveloped and threats from development are low. Oil and gas potential is low. Ongoing disturbance in the area is limited to a few minor rights-of-way (i.e., roads and small transmission lines), livestock grazing, and recreation. The area is mostly core sagebrush as identified in Doherty (2022) Sagebrush Conservation Design with a proportionally large core relative to other areas in the state. Much of the core habitat occurs on School and Institutional Trust Lands Administration (SITLA) lands and BLM jurisdiction within the core is fairly limited to the periphery. Similarly, the USU seasonal habitat model identifies much of the area as summer, winter, and nesting habitat. The core has a high probability of lek persistence; however, the majority of occupied leks are on SITLA administered lands. Uncertainty on SITLA administered lands could make the population vulnerable to adverse changes should SITLA management priorities change. Parker Mountain has been a source population for GRSG translocations within the state. This source population may be attributing to some of the importance that shows up in the genetic connectivity models based on the new science. The nature of the habitat in the area may limit natural dispersal to the north and west of the area. This area contains one of the largest populations of GRSG within the southernmost extent of the GRSG range and although it provides importance to those smaller populations that surround it, its importance to the larger overall range of GRSG within Management Zone III is relatively minor and therefore not more than locally significant.</p>

Utah GRSG ACEC Importance Evaluation: Parker Mountain Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	<p>The BLM 2015, 2019, and current land use planning initiatives to conserve, enhance, and restore GRSG habitat is the result of the March 2010, US Fish and Wildlife Service (USFWS) 12 Month Finding for Petitions to List the Greater Sage-grouse (<i>Centrocercus urophasianus</i>) as Threatened or Endangered. In that finding, the USFWS concluded that GRSG was “warranted, but precluded” for listing as a threatened or endangered species.</p> <p>However, in the 2015 listing decision, the USFWS concluded in part that existing regulatory mechanisms, (i.e., “specific direction regarding sage grouse habitat, conservation, or management”) in the BLM’s Land Use Plans, were adequate to protect the species.</p> <p>Without multiple lines of evidence, including reasonably foreseeable development, valid existing rights, land ownership, crucial GRSG habitat characteristics from multiple science-based models, on-the-ground conditions/evidence this area has not been identified for protection beyond those implemented through FLPMA and national priorities.</p>
Other Items		
Boundaries	No proposed changes to boundaries.	
Additional Notes	No maps provided due to no ACEC boundary identified.	
Conclusion		
<p>The area meets relevance criteria but does not meet importance criteria. Items in bold listed above provide some lines of evidence that warranted a closer review of these areas to determine if Parker Mountain may be important and more than locally significant. In our review of the new science/data sets and coordination with the State of Utah, the lack of information particularly with the genetic connectivity suggests this area is not more than locally significant and does not have greater than local importance to the greater sage-grouse population within Management Zone III.</p>		

Effects of the Alternatives on the Potential Rich and Box Elder ACECs

BLM identified two potential ACECs in Utah: the 132,924-acre Rich ACEC and the 232,258-acre Box Elder ACEC. The Rich population area is a stronghold for GRSG populations in Utah and connects larger populations in Idaho and Wyoming. Here, the majority of intact sagebrush habitat is within a core area; the Rich population area also includes some of the largest core sagebrush habitat in Utah. The Box Elder population area, part of the Northern Great Basin sub-population (Utah, Idaho, and Nevada), is one of the largest of the GRSG populations in Utah and connects larger populations in Idaho and Nevada. Box Elder has been a source population for greater sage-grouse translocations within the state and neighboring states. The areas were both determined to have more than local significance given their high-density breeding, genetic connectivity, and genetic mixing considerations in Rich County and Box Elder County, respectively.

Table 5-10 displays the HMA allocation for these areas under each alternative. Under Alternatives 1 through 6 and the Proposed RMP Amendment, these two areas would be managed as PHMA. Under Alternative 3 and 6, the areas would also be designated as ACECs.

Table 5-10. HMA Allocations in the Utah Potential ACECs by Alternative

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment
Rich							
PHMA	132,924 acres (100%)	132,924 acres (100%)	132,924 acres (100%)	132,924 acres (100%)	132,924 acres (100%)	132,924 acres (100%)	132,924 acres (100%)
GHMA	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	132,924 acres	132,924 acres	132,924 acres	132,924 acres	132,924 acres	132,924 acres	132,924 acres
Box Elder							
PHMA	232,258 acres (100%)	232,258 acres (100%)	232,258 acres (100%)	232,258 acres (100%)	232,258 acres (100%)	232,258 acres (100%)	232,258 acres (100%)
GHMA	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	232,258 acres	232,258 acres	232,258 acres	232,258 acres	232,258 acres	232,258 acres	232,258 acres

This section details the effects of the alternatives on these areas considered for ACEC designation.

Solar, Wind, Major Rights of Way, Saleable Minerals/Material Management, and Locatable Minerals

The Proposed RMP Amendment and Alternatives 3 and 6 would all provide additional protections to the potential ACEC by excluding solar, wind, and non-energy leasable mineral development, with exceptions. While all three alternatives also exclude major rights of way and close the area to saleable minerals/material management, Alternative 3 provides the greatest protection as Alternative 3 provides no exceptions to the rights of way exclusion or to the saleable closure. In addition, under Alternative 3, the area would be recommended for locatable mineral withdrawal. Under both Alternative 3 and 6, a plan of operations and BLM approval would be required before beginning any locatable mineral operations causing surface disturbance greater than casual use.

Under Alternatives 1, 2, and 4, as PHMA, the area would be exclusion for solar and wind and avoidance for major rights of way in PHMA, both with exceptions, which would provide similar but slightly less protections than afforded under the Proposed RMP Amendment and Alternatives 3 and 6. Under Alternative 5, as PHMA, the areas would be avoidance for solar and wind and avoidance for major rights-of-way. Therefore, alternative 5 provides the least amount of protections from solar, wind, and rights of way development. Under Alternatives 1, 2, 4, and 5 the area would be open to locatable mineral development and notice level exploration would be allowed without a plan of operation which is the same as under the Proposed RMP Amendment.

Fluid Mineral Development

Under the Proposed RMP Amendment, these two potential ACEC area would be managed as PHMA. As PHMA, under the Proposed RMP Amendment and Alternatives 4, 5, and 6, these areas would be open to new fluid mineral leasing subject to NSO with Waivers, Exceptions, and Modifications. Under Alternative 4, a revised objective specified, “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.”. Alternatives 5 and 6 do not specify any objectives or specific leasing prioritization language or a leasing strategy but maintain the desired condition to manage public lands to provide suitable GRSG habitat at the HAF mid-, fine- and site-scales. Under Alternative 3, all PHMA would be closed to new leasing. Under Alternatives 1 and 2, these areas would be managed as open

to new leasing, with NSO stipulations w/ Waivers, Exceptions, and Modifications. Alternative 1 additionally establishes an objective of “Priority will be given to leasing and development outside of PHMAs and GHMAs, or within the least impactful areas within PHMA and GHMA if avoidance is not possible.”.

By closing all PHMA to new leasing, Alternative 3 would provide the greatest amount of protections from fluid mineral development.

Disturbance Cap

In these areas managed as PHMA, the Proposed RMP Amendment sets a disturbance cap if direct habitat disturbance from existing and proposed infrastructure developments exceeds either 3% the project scale or 3% at the HAF Fine Scale selection area, with exceptions and conditions, Alternative 6 sets the same disturbance cap for the area but there are no exceptions and Alternative 3 closes the area to new infrastructure projects and sets a 3% disturbance cap for existing developments. Alternatives 1 and 2 set a 3% disturbance cap in PHMA and the cap applies at both BSU-scale and at the project scale. Under Alternative 2, the cap can be exceeded in Utah if it will benefit GRSG. Under Alternatives 4 and 5, in PHMA the disturbance cap is 3% the project scale or 3% at the HAF Fine Scale selection area and projects would be deferred until disturbance in the areas has been reduced below the cap threshold or the projects could be redesigned to not result in additional surface disturbance or moved outside of PHMA. Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to disturbance.

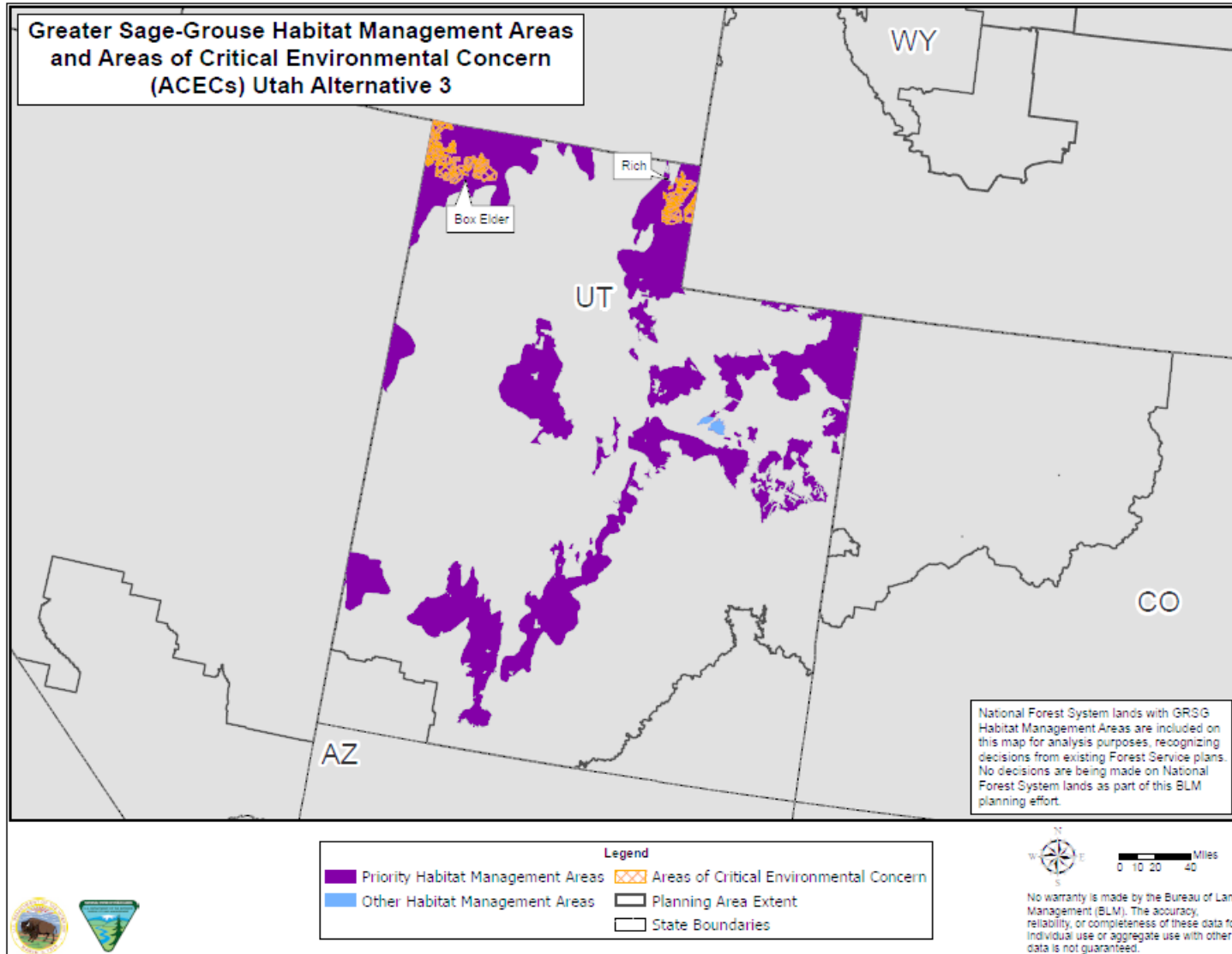
Livestock Grazing

Under Alternative 3, GRSG habitat would be unavailable to livestock grazing. Under Alternatives 1 and 2, in PHMA, thresholds and responses that would allow the authorized officer to make adjustments to livestock grazing are required. Under Alternatives 4, 5, 6, and the Proposed RMP Amendment, thresholds and responses are also addressed but under these alternatives, more comprehensive guidance is provided for addressing areas not meeting the special status species land health standard due to livestock grazing and for addressing livestock improvements and fencing in a manner to reduce impacts to GRSG. Alternative 3 provides the greatest protections to the potential ACECs by removing any potential disturbance associated with livestock grazing.

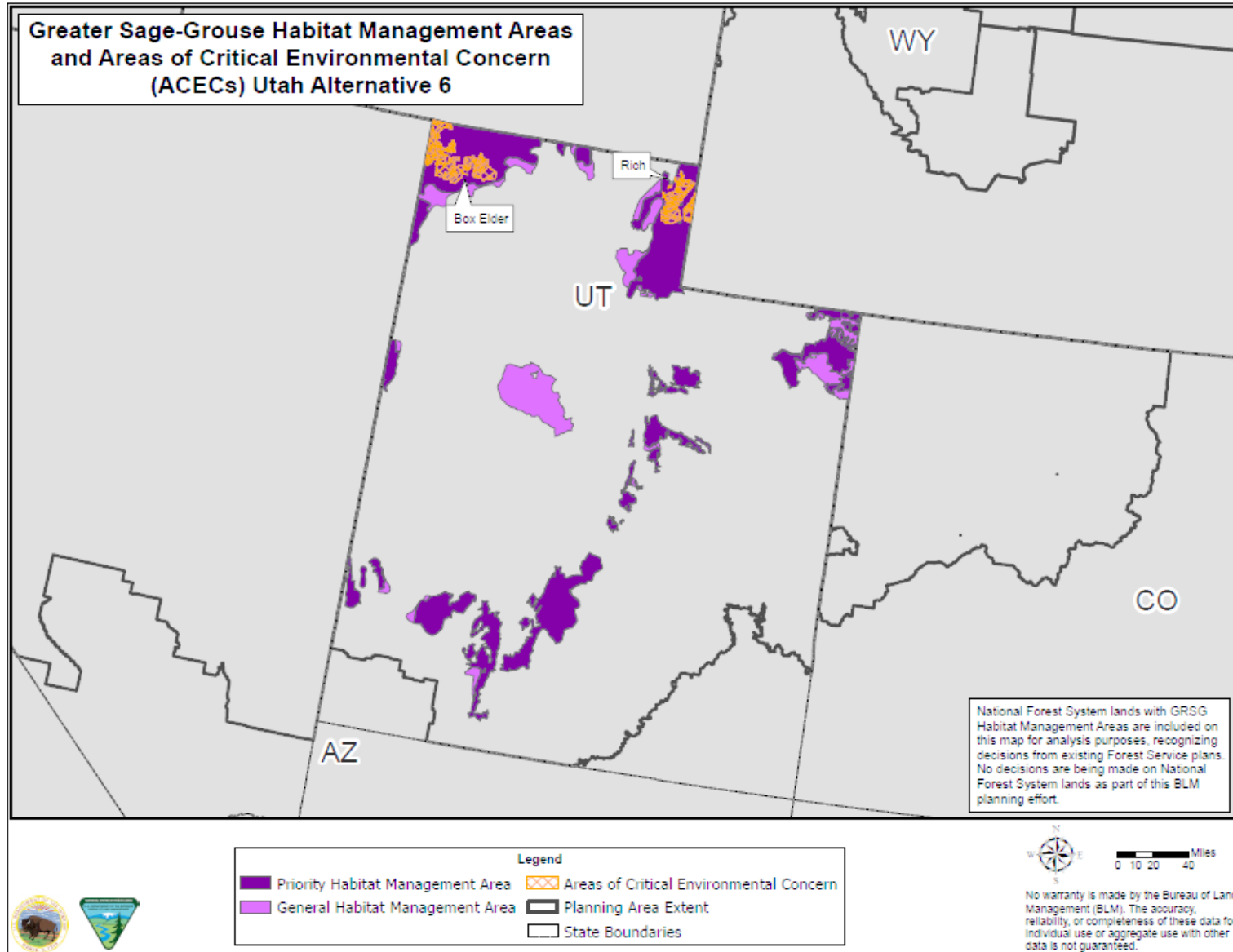
Summary of Effects

Considered comprehensively, the management direction provided under Alternatives 3 and 6 and the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the potential Rich and Box Elder ACECs; with Alternative 3 providing the highest level of protection. Alternatives 1, 2, 4, and 5 provide a relatively high degree of protection with PHMA management direction. However, as major rights of way and renewable energy development are more likely to occur under these alternatives, associated disturbances could negatively impact the relevant and important values of the potential ACECs.

Map 5.9: Utah Alternative 3 Potential ACECs



Map 5.10: Utah Alternative 6 Potential ACECs



WYOMING

BLM Wyoming considered the results of the rangewide assessment and evaluated the Carbon-Moffat, Little Sandy, Carter Crook, the Sagebrush Focal Areas (SFAs) in South-Central and Southwestern Wyoming, and the Greater South Pass and Upper Green River Basin areas to determine if they met the relevance and importance criteria. The Little Sandy area was both internally identified and nominated by an external group during the scoping period. The BLM also evaluated the Red Desert area that was nominated by an external group during the scoping period. Through the evaluation process, Wyoming BLM identified the Little Sandy, Carter Crook, Sagebrush Focal Areas in South Central and Southwestern Wyoming, and the Greater South Pass and Upper Green River Basin as meeting the relevance and importance criteria. These areas were identified as potential ACECs in the Draft EIS in Alternatives 3 and 6.

Between the Draft and Final EIS, the BLM refined the acreage of the Little Sandy ACEC (which is also commonly referred to as the Golden Triangle) to align more closely with the boundaries that had been identified for the area in the concurrent plan revision for the Rock Springs RMP. This resulted in a change from 475,284 acres in the Draft EIS to 272,557 acres in the Final EIS. The selection of this ACEC boundary alignment for both planning efforts was in response to the proposed management direction in the Rock Springs RMP that would provide oil and gas leasing restrictions and viewshed protections for the 202,727 acres that were removed from the potential ACEC identified in the GRSG Draft RMPA/EIS. The change in boundary also responds to the special recreation management area direction proposed in the Rock Springs RMP.

Importance Evaluations

Wyoming GRSG ACEC Importance Evaluation: Carbon-Moffat GRSG Connectivity Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	No	<ul style="list-style-type: none"> • The nominated area provides a genetic linkage between GRSG populations in NW CO with populations in central and western portions of the species’ range (Cross et al. 2023). • However, models of potential movement among PHMA throughout the range of GRSG suggest additional movement pathways from CO populations in this region to population strongholds in WY (Crist et al. 2017; Oyler-McCance et al. 2022; Cross et al. 2023). • The nominated area contains several genetic nodes (i.e., leks most important to the overall genetic connectivity of GRSG populations across their range; Fig. 6; Cross et al. 2018 and 2023). • GRSG population density is high in much of the nominated area with portions of the nominated area modeled as having the highest densities of breeding GRSG in WAFWA MZ 2; MZ 2 has the highest proportion of breeding GRSG in the range of the species (Doherty et al. 2016). • Lek densities are higher in this area than most other areas in WY, although many of the documented leks are currently unoccupied (as defined by the WGFD; Whitford and Bish 2022), especially those more closely associated with energy development. <p>The data most likely to suggest the nominated area has more than locally significant qualities are the genetic linkage data. These data suggest the nominated area is a likely corridor for the functional movement of GRSG from habitats in NW CO to the rest of the species’ range via population strongholds in WY. But the preponderance of evidence suggests other movement corridors between CO and WY likely exist (see Crist et al. 2017; Oyler-McCance et al. 2022) suggesting the nominated area does not have greater than local-level significance.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	No	<p>GRSG population linkage (i.e., the functional movement of individuals between CO and WY) in this area may establish the area as being more than locally significant to the sustainability of GRSG populations in the broader region. However, other likely corridors exist allowing movement of individual GRSG between WY and CO so the nominated area is not unique, rare or irreplaceable.</p>

Wyoming GRSG ACEC Importance Evaluation: Carbon-Moffat GRSG Connectivity Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	The nominated area meets relevance criteria but does not meet importance criteria. Therefore, it is not recommended that the nominated area as nominated nor as modified be considered a potential ACEC for GRSG for analysis in the Draft EIS in the current range-wide planning effort.
Conclusion		
This area did not meet importance criterion and was not identified as a potential ACEC in Alternatives 3 and 6.		

Wyoming GRSG ACEC Importance Evaluation: Little Sandy Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
More than locally significant qualities, especially compared to any similar resource, that give it: <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<ul style="list-style-type: none"> • GRSG population density is very high especially in northern portions of the nominated area with most of the nominated area modeled as having the highest densities of breeding GRSG in WAFWA MZ 2; MZ 2 has the highest proportion of breeding GRSG in the range of the species (Doherty et al. 2016). • The nominated area contains a genetic node (i.e., leks most important to the overall genetic connectivity of GRSG populations across their range) and includes portions of the most likely genetic linkage between GRSG populations in eastern and central WY with populations in southwestern portions of the State (Fig. 6; Cross et al. 2023). • However, models of potential movement among PHMA throughout the range of GRSG suggest east-west movement pathways are more likely to occur across southern portions of the State (Crist et al. 2017). <p>The data most likely to suggest the nominated area has more than locally significant qualities are the GRSG breeding density data. These data suggest the nominated area, especially northern portions of the area, has some of the highest densities of breeding GRSG in the range of the species establishing the nominated area is more than locally important with special worth and is distinctive.</p>
Qualities or circumstances that make it: <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	High densities of breeding GRSG relative to the rest of the species' range establish the area as exemplary, rare, unique, and irreplaceable. The potential expansion of liquid and renewable energy development in the nominated area establishes the area as vulnerable to adverse change.

Wyoming GRSG ACEC Importance Evaluation: Little Sandy Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	The proposed ACEC includes multiple lines of evidence identifying the area as valuable for the long-term population sustainability of GRSG. Because (1) the area has relatively (compared to the rest of the species' range) robust populations, (2) includes portions of the most likely genetic corridor between populations to the east and west of this region, (3) the loss of the ability of GRSG to move through this area could isolate GRSG populations in eastern and western portions of the species' range and the isolation of populations increases the probability of regional-level extirpation (Knick et al. 2013) and conserving habitat connectivity is a national priority for managing bureau sensitive status species (Manual 6840 and IM 2023-005), and (4) the area has high potential for energy development in the future, it is recommended that the nominated area as modified be considered a potential ACEC for GRSG for analysis under at least one alternative in the current range-wide planning effort.
Conclusion		
Due to meeting the relevance and importance criteria, this area was identified as a potential ACEC in Alternatives 3 and 6. Refer to Wyoming - ACEC Maps for Alternatives 3 and 6 that follow.		

Wyoming GRSG ACEC Importance Evaluation: Carter-Cook GRSG Connectivity Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
More than locally significant qualities, especially compared to any similar resource, that give it: <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<ul style="list-style-type: none"> • The nominated area provides the primary genetic linkage between GRSG populations in the entirety of northeastern portions of the species' range with populations in central and western portions of the species' range (Crist et al. 2017; Oylar- McCance et al. 2022; Cross et al. 2023). • The nominated area contains at least 2 genetic nodes (i.e., leks most important to the overall genetic connectivity of GRSG populations across their range; Cross et al. 2018 and 2023). <p>The data most likely to suggest the nominated area has more than locally significant qualities are the genetic linkage data. The nominated area is the most likely corridor and a bottleneck to functional movement of GRSG from habitats in most of Management Zone 1 to the rest of the species' range establishing that the nominated area is more than locally important with special worth and is distinctive.</p>

Wyoming GRSG ACEC Importance Evaluation: Carter-Cook GRSG Connectivity Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Qualities or circumstances that make it: <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	Potential genetic bottleneck of the most likely movement corridor between populations in northeastern portions of the GRSG range and the rest of the species' range establish the area as rare, unique, and irreplaceable. Energy development and mining (and the likely expansion of bentonite mining in the area) and invasive annual grass (and the increased risk of fire eliminating the sagebrush overstory) establishes the area as vulnerable to adverse change.
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	The proposed ACEC includes multiple lines of evidence identifying the area as valuable for the long-term population sustainability of GRSG, especially populations in MZ I. Because (1) the area is the most likely genetic corridor between populations in eastern portions of the species range, (2) the loss of the ability of GRSG to move through this area could isolate MZ I populations, (3) the isolation of populations increases the probability of regional-level extirpation (Knick et al. 2013), and (4) conserving habitat connectivity is a national priority for managing bureau sensitive status species (Manual 6840 and IM 2023-005), it is recommended that the nominated area as modified be considered a potential ACEC for GRSG for analysis under at least one alternative in the current range-wide planning effort.
Other Items		
Additional Notes	While the New Castle FO (NFO) agrees with the premise of the rationale of regional-level extirpation (Knicks et al. 2013), the NFO believes that the added protection of an ACEC is not necessary to meet goals of the area. The NFO believes that goals can be met with the current Core Area strategy as the proposed ACEC area is located in a PHMA Connectivity Area. The protections include a 5% disturbance density threshold and associated NSOs and TLSs, which should allow existing GRSG populations to persist and maintain genetic connectivity between populations.	
Conclusion		
Due to meeting the relevance and importance criteria, this area was identified as a potential ACEC in Alternatives 3 and 6. Refer to Wyoming - ACEC Maps for Alternatives 3 and 6 that follow.		

Wyoming GRSG ACEC Importance Evaluation: Red Desert Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
More than locally significant qualities, especially compared to any similar resource, that give it: <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	No	<ul style="list-style-type: none"> • The nominated area does not contain high density GRSG populations, and only portions of the area provide suitable habitats for the species. • The nominated area is not important for genetic connectivity. <p>Data suggest the nominated area does not have more than locally significant qualities for GRSG.</p>

Wyoming GRSG ACEC Importance Evaluation: Red Desert Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Qualities or circumstances that make it: <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	No	None of the data considered establish the nominated area as having rare, unique, or irreplaceable values for GRSG. Energy development (and the likely expansion of this development in the area) establishes the area as vulnerable to adverse change, but these potential threats are not likely to directly impact substantial numbers of GRSG.
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	The proposed ACEC does not include habitat conditions that meet relevance and importance criteria for GRSG. Therefore, it is not recommended that the nominated area be considered a potential ACEC for GRSG for analysis in the Draft EIS for the current range-wide planning effort.
Conclusion		
This area did not meet importance criterion and was not identified as a potential ACEC in Alternatives 3 and 6.		

Wyoming GRSG ACEC Importance Evaluation: Sagebrush Focal Areas in South-Central and Southwestern Wyoming Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
<p>More than locally significant qualities, especially compared to any similar resource, that give it:</p> <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<ul style="list-style-type: none"> • GRSG population density is high in far western and far eastern portions of the SFA area with these areas modeled as having the highest densities of breeding GRSG in WAFWA MZ 2; MZ 2 has the highest proportion of breeding GRSG in the range of the species (Doherty et al. 2016). • The SFA area contains several genetic nodes (i.e., leks most important to the overall genetic connectivity of GRSG populations across their range; Fig. 6; Cross et al. 2018 and 2023). • The general area in far western portions of the SFA area additionally appears to be a genetic mixing zone for populations farther to the south in UT, populations in CO and southern WY, and populations in eastern ID (Oyler-McCance et al. 2022). • The SFA area includes portions of the most likely genetic linkage between GRSG populations in eastern and central WY with populations in southwestern portions of the State (Cross et al. 2023). • However, models of potential movement among PHMA throughout the range of GRSG suggest east-west movement pathways are more likely to occur across southern portions of the State (Crist et al. 2017). • Models of climate impacts on sagebrush habitat integrity suggest that some of the habitats throughout the SFA area will not maintain high value conditions for GRSG into the near future (2030-2060; Doherty et al. 2022). <p>The data most likely to suggest the SFA-designated area being considered has more than locally significant qualities are the GRSG breeding density data, the genetic mixing data, and the genetic connectivity data. These data suggest far western portions of the SFA area are more than locally important with special worth and are distinctive.</p>
<p>Qualities or circumstances that make it:</p> <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	<p>High densities of breeding GRSG relative to the rest of the species' range, GRSG population linkage (i.e., the functional movement of individuals between UT and WY), and genetic mixing which appears to be relatively unique to the species' range establish far western portions of the SFA area as exemplary, rare, unique, and irreplaceable. Models of habitat response to climate change in the far western region establish the area as vulnerable to adverse change.</p>

Wyoming GRSG ACEC Importance Evaluation: Sagebrush Focal Areas in South-Central and Southwestern Wyoming Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	N/A	Far western portions of the SFA-designated area being considered includes multiple lines of evidence identifying the area as valuable for the long-term population sustainability of GRSG. Because (1) the area has relatively (compared to the rest of the species' range) robust populations, (2) is the most likely genetic corridor between populations to the east and west of this region, (3) the loss of the ability of GRSG to move through this area could isolate GRSG populations in eastern and western portions of the species' range and the isolation of populations increases the probability of regional-level extirpation (Knick et al. 2013), and (4) conserving habitat connectivity is a national priority for managing bureau sensitive status species (Manual 6840 and IM 2023-005), it is recommended that the SFA- designated area being considered as modified be considered a potential ACEC for GRSG for analysis under at least one alternative in the current range-wide planning effort.
Conclusion		
Due to meeting the relevance and importance criteria, this area was identified as a potential ACEC in Alternatives 3 and 6. Refer to Wyoming - ACEC Maps for Alternatives 3 and 6 that follow.		

Wyoming GRSG ACEC Importance Evaluation: Greater South Pass and Upper Green River Basin GRSG Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
More than locally significant qualities, especially compared to any similar resource, that give it: <ul style="list-style-type: none"> • Special worth: • Consequence • Meaning • Distinctiveness • Cause for concern 	Yes	<ul style="list-style-type: none"> • GRSG population density is very high especially in western portions of the nominated area with most of the nominated area modeled as having the highest densities of breeding GRSG in WAFWA MZ 2; MZ 2 has the highest proportion of breeding GRSG in the range of the species (Doherty et al. 2016). • The nominated area contains several genetic nodes (i.e., leks most important to the overall genetic connectivity of GRSG populations across their range; Cross et al. 2018 and 2023). • The nominated area provides the most likely genetic linkage between GRSG populations in eastern and central WY with populations in southwestern portions of the State (Cross et al. 2023). • However, models of potential movement among PHMA throughout the range of GRSG suggest east-west movement pathways are more likely to occur across southern portions of the State (Crist et al. 2017). <p>The data most likely to suggest the nominated area has more than locally significant qualities are the GRSG breeding density data. These data suggest the nominated area, especially central and western portions of the area, has the highest densities of breeding GRSG in the range of the species establishing the nominated area is more than locally important with special worth and is distinctive.</p>

Wyoming GRSG ACEC Importance Evaluation: Greater South Pass and Upper Green River Basin GRSG Proposed ACEC		
Importance Consideration	Yes/No	Rationale for Determination
Qualities or circumstances that make it: <ul style="list-style-type: none"> • Fragile • Sensitive • Rare • Irreplaceable: • Exemplary • Unique: • Endangered • Threatened • Vulnerable to adverse change 	Yes	High densities of breeding GRSG relative to the rest of the species' range establish the area as exemplary, rare, unique, and irreplaceable. Energy development (and the potential expansion of liquid and renewable energy development in the nominated area) establishes the area as vulnerable to adverse change.
Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA	No	The proposed ACEC includes multiple lines of evidence identifying the area as valuable for the long-term population sustainability of GRSG. Because (1) the area has relatively (compared to the rest of the species' range) robust populations, (2) is the most likely genetic corridor between populations to the east and west of this region, (3) the loss of the ability of GRSG to move through this area could isolate GRSG populations in eastern and western portions of the species' range and the isolation of populations increases the probability of regional- level extirpation (Knick et al. 2013), and conserving habitat connectivity is a national priority for managing bureau sensitive status species (Manual 6840 and IM 2023-005), it is recommended that the nominated area as modified be considered a potential ACEC for GRSG for analysis under at least one alternative 4 in the current range-wide planning effort.
Conclusion		
Due to meeting the relevance and importance criteria, this area was identified as a potential ACEC in Alternatives 3 and 6. Refer to Wyoming - ACEC Maps for Alternatives 3 and 6 that follow.		

Effects of the Alternatives on the Potential Little Sandy/Golden Triangle, Carter Crook, Sagebrush Focal Areas in South Central and Southwestern Wyoming, and Greater South Pass and Upper Green River Basin ACECs

In Wyoming, the Little Sandy/Golden Triangle area was identified in the Draft EIS as a potential ACEC in Alternatives 3 and 6 and totaled 475,284 acres. Between Draft and Final EIS, the acreage was refined as described above and totals 272,557 acres in Alternatives 3 and 6 in the Final EIS. Under the Proposed RMP Amendment the 272,557 acre area would receive PHMA with limited exceptions protections. The Little Sandy/Golden Triangle is a large expanse of intact sagebrush that supports portions of the densest population of GRSG across its entire range, has limited invasive annual grasses and anthropogenic infrastructure, and faces potential threats from fluid mineral development.

The potential Carter Crook ACEC, totaling 19,400 acres is identified for potential ACEC designation under Alternatives 3 and 6. The area contains at least 2 genetic nodes (i.e., leks most important to the overall genetic connectivity of GRSG populations across their range; Cross et al. 2018 and 2023) and is the most likely genetic corridor between populations in eastern portions of the species range. The potential Sagebrush Focal Areas in South Central and Southwestern Wyoming ACEC, totaling 33,166 acres is identified for potential ACEC designation under Alternatives 3 and 6. The area has: high densities of breeding GRSG relative to the rest of the species' range; GRSG population linkage (i.e., the functional movement of

individuals between UT and WY); and genetic mixing which appears to be relatively unique to the species’ range. The far western portions of the SFA area as exemplary, rare, unique, and irreplaceable. Models of habitat response to climate change in the far western region establish the area as vulnerable to adverse change.

The potential Greater South Pass and Upper Green River Basin ACEC, totaling 311,229 acres is identified for potential ACEC designation under Alternatives 3 and 6. The area’s high densities of breeding GRSG relative to the rest of the species’ range establish the area as exemplary, rare, unique, and irreplaceable. Energy development, and the potential expansion of liquid and renewable energy development in the nominated area, establishes the area as vulnerable to adverse change.

Table 5-11 displays the HMA allocation for these areas under each alternative. Under the Proposed RMP Amendment, the Little Sandy/Golden Triangle area would be managed as PHMA with limited exceptions, and Carter Crook, Sagebrush Focal Areas in South Central and Southwestern Wyoming, and Greater South Pass and Upper Green River Basin would be managed entirely as PHMA. Under Alternatives 1 through 6, the Little Sandy/Golden Triangle, Carter Crook, Sagebrush Focal Areas in South Central and Southwestern Wyoming areas would be managed entirely as PHMA. Under Alternatives 1 and 2, 96% of the Greater South Pass and Upper Green River Basin area would be managed as PHMA and 4% of the area would be managed as GHMA. Under Alternatives 3 through 6, the Greater South Pass and Upper Green River Basin area would be managed entirely as PHMA. Under Alternative 3 and 6, all four areas would also be proposed for designation as ACECs and would receive the additional management protections identified for ACECs under those alternatives.

Table 5-11. HMA Allocations in the Wyoming Potential ACECs by Alternative

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ¹⁵
Little Sandy/Golden Triangle							
PHMA with limited exceptions	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	272,557 acres (100%)
PHMA	272,557 acres (100%)	272,557 acres (100%)	272,557 acres (100%)	272,557 acres (100%)	272,557 acres (100%)	272,557 acres (100%)	272,557 acres (100%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	272,557 acres	272,557 acres	272,557 acres	272,557 acres	272,557 acres	272,557 acres	272,557 acres
Carter Crook							
PHMA	19,400 acres (100%)	19,400 acres (100%)	19,400 acres (100%)	19,400 acres (100%)	19,400 acres (100%)	19,400 acres (100%)	19,400 acres (100%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	19,400 acres	19,400 acres	19,400 acres	19,400 acres	19,400 acres	19,400 acres	19,400 acres

¹⁵ HMA with limited exceptions are areas within PHMA where additional protections to support conservation of GRSG habitat would reduce impacts from highly probable resource threats. These acreages are therefore included in both PHMA and PHMA with limited exceptions.

Potential ACEC	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Proposed RMP Amendment ¹⁵
Sagebrush Focal Areas in South Central and Southwestern Wyoming							
PHMA	33,166 acres (100%)	33,166 acres (100%)	33,166 acres (100%)	33,166 acres (100%)	33,166 acres (100%)	33,166 acres (100%)	33,166 acres (100%)
GHMA	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	33,166 acres	33,166 acres	33,166 acres	33,166 acres	33,166 acres	33,166 acres	33,166 acres
Greater South Pass and Upper Green River Basin							
PHMA	299,929 acres (96%)	299,929 acres (96%)	311,229 acres (100%)	311,229 acres (100%)	311,229 acres (100%)	311,229 acres (100%)	311,229 acres (100%)
GHMA	11,300 acres (4%)	11,300 acres (4%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)	0 acres (0%)
Total	311,229 acres	311,229 acres	311,229 acres	311,229 acres	311,229 acres	311,229 acres	311,229 acres

This section details the effects of the alternatives on these areas considered for ACEC designation.

Fluid Mineral Development

Under the Proposed RMP Amendment the Little Sandy/Golden Triangle potential ACEC would be wholly managed under the PHMA with limited exceptions designation. The No Surface Occupancy (NSO) with no exceptions management direction identified for these limited exception areas would protect the potential ACEC from the threat of fluid mineral development. Under the Proposed RMP Amendment the other three potential ACECs would be managed as NSO for fluid mineral development within .6 miles of leks and seasonal limitations (breeding, nesting, early brood-rearing and winter habitat) and Controlled Surface Use (CSU) (density and disturbance) in PHMA outside of the 0.6-mi NSO buffer. Under Alternative 3, all of the potential ACECs would be closed to fluid mineral development without exception. Under Alternative 6, the areas would also be subject to NSO but development could occur if an exception for the entire ACEC area could be met. Under Alternatives 1, 2, and 5, in PHMA, which includes the vast majority of areas within these potential ACECs, NSO would be allowed within .6 miles of leks. PHMA outside .6 miles has season limitations (breeding, nesting, early brood-rearing and winter habitat) and CSU (density and disturbance). Under Alternative 4, there would be NSO in the potential ACEC areas. The Proposed RMP Amendment and Alternative 3 provide the greatest amount of protections from fluid mineral development. The second highest protections would occur under Alternative 6. Alternatives 1, 2, and 4 would provide the least amount of protections to the potential ACEC from fluid mineral development.

The Carter Crook, Sagebrush Focal Areas in South Central and Southwestern Wyoming, and Greater South Pass and Upper Green River Basin potential ACECs would not receive PHMA with limited protections under the Proposed RMP Amendment. Under the Proposed RMP Amendment, these areas would be managed as PHMA, there would be NSO for fluid mineral development within .6 miles of leks and season limitations (breeding, nesting, early brood-rearing and winter habitat) and Controlled Surface Use (CSU) (density and disturbance) outside of the 0.6-mi NSO buffer with exceptions. The fluid mineral management direction identified for the Little Sandy/Golden Triangle described above for Alternatives 1, 2, 3, 4, 5, and 6 would be the same for these three potential ACECs. As such, the greatest amount of protections from fluid mineral development for these three areas would occur under Alternatives 3. Alternative 6 and the Proposed RMP

Amendment provide the next highest level of protection. Alternatives 1, 2, and 4 would provide the least amount of protections to the potential ACECs from fluid mineral development.

Solar, Wind, Major Rights of Way, Saleable Minerals/Material Management, and Locatable Minerals

Alternatives 3 and 6 would provide additional protections to all of the potential ACECs by excluding solar, wind, and non-energy leasable mineral development. While these alternatives also exclude major rights of way and close the area to saleable minerals/material management, Alternative 3 provides the greatest protection as Alternative 3 provides no exceptions to the rights of way exclusion or to the saleable mineral closure. In addition, under Alternative 3, the areas would be recommended for locatable mineral withdrawal. Under both Alternative 3 and 6, a plan of operations and BLM approval would be required before beginning any locatable mineral operations causing surface disturbance greater than casual use in these areas.

Under the Proposed RMP Amendment, the Little Sandy/Golden Triangle ACEC would be managed as exclusion for solar, wind, and non-energy leasable mineral development and exclusion with exceptions to major rights of way. Under the Proposed RMP Amendment, the other three potential ACECs would be managed as PHMA, and would be exclusion with exceptions for solar and wind. Under the Proposed RMP Amendment these three ACECs would be open to expansion of existing non-energy leasable minerals subject to occupancy, seasonal limitations, disturbance, and density, but closed to new leases except in situations required for human health and safety. Under the Proposed RMP Amendment these three ACECs would be avoidance areas for new major rights of way with criteria that must be met to authorize the right of way. Therefore, under the Proposed RMP Amendment, the protections resulting from the PHMA with limited exceptions management direction related to solar, wind, non-energy minerals, and major rights of way would provide greater protections for the Little Sandy/Golden Triangle than the protections provided by the PHMA management direction that would apply to the Carter Crook, Sagebrush Focal Areas in South Central and Southwestern Wyoming, and Greater South Pass and Upper Green River Basin potential ACECs.

Under Alternatives 1 and 2, all four potential ACEC would be managed as avoidance areas for wind in PHMA. Alternatives 1 and 2 do not provide management direction for solar development in PHMA. General surface disturbance limits would exclude solar development near leks (0.6 miles) and minimize solar development disturbance through disturbance cap and mitigation requirements elsewhere in PHMA. The 4% of the potential Greater South Pass and Upper Green River Basin ACEC managed as GHMA under Alternatives 1 and 2 would be open for wind and solar. Under Alternatives 4, the four areas would be managed as exclusion areas for wind and solar as PHMA. Under Alternative 5, in PHMA, the areas would be managed as avoidance for solar and wind with criteria that would need to be met for development to occur. Under Alternatives 4 and 5, these areas would be avoidance areas for major rights of way.

Under Alternative 3, all four potential ACECs would be recommended for locatable mineral withdrawal. Under both Alternative 3 and 6, a plan of operations and BLM approval would be required before beginning any locatable mineral operations causing surface disturbance greater than casual use. Under Alternatives 1, 2, 4, 5, and the Proposed RMP Amendment, all four potential ACEC areas would be open to locatable mineral development and notice level exploration would be allowed without a plan of operations.

Disturbance Cap

In Wyoming, the Proposed RMP Amendment sets a 5% disturbance cap at the project scale with exceptions that would apply to all four of the potential ACEC areas. Alternative 6 sets the same disturbance cap for the areas but there are no exceptions. Alternative 3 affords the most protections relative to the disturbance cap

by closing the areas to new infrastructure projects and setting a 3% disturbance cap for existing developments. Similar to the Proposed RMP Amendment, Alternatives 1 and 2 set a 5% disturbance cap in PHMA. Alternative 3, followed by Alternative 6, provide the highest degree of protection relative to disturbance.

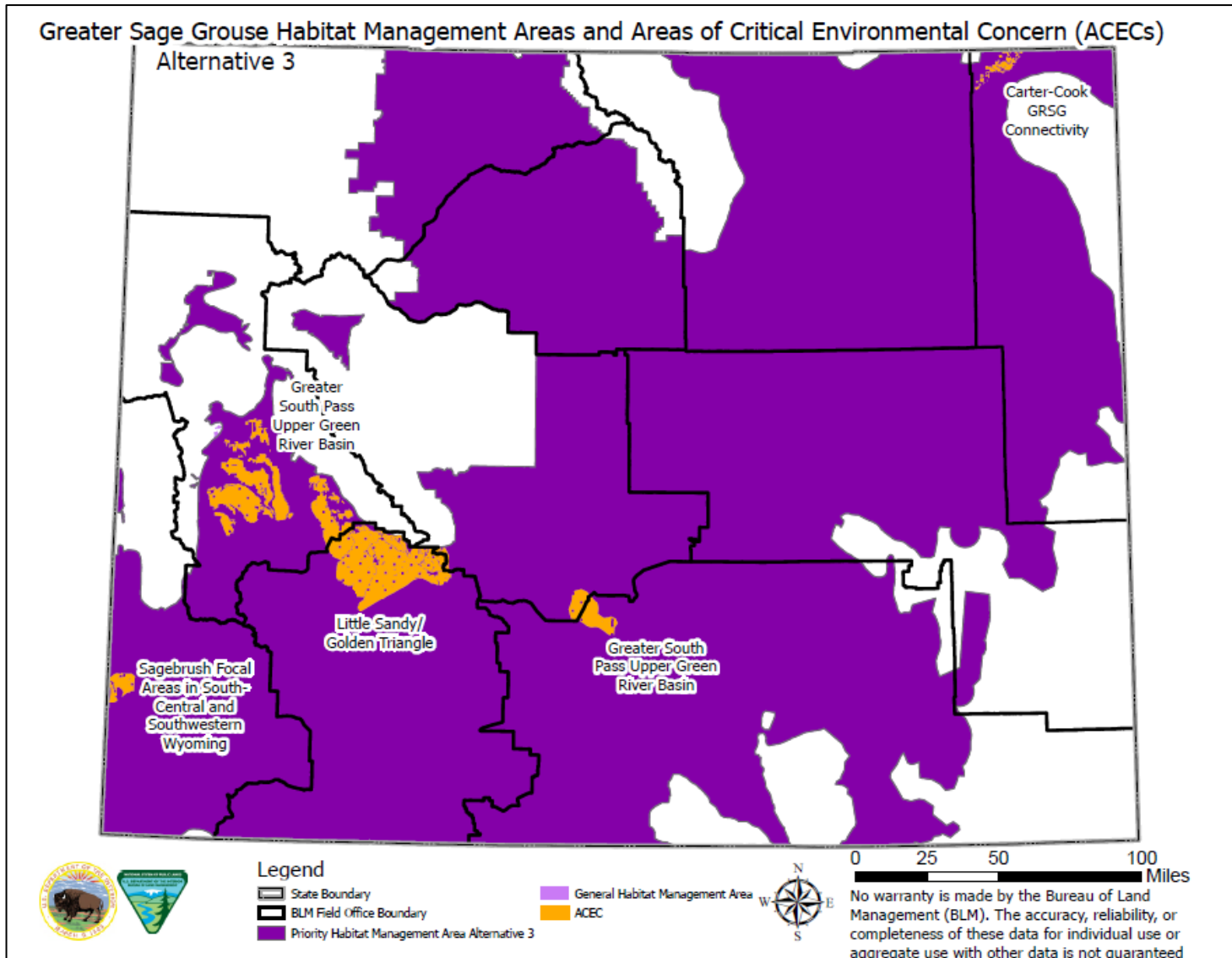
Livestock Grazing

Under Alternative 3, GRSG habitat would be unavailable to livestock grazing. Under Alternatives 1 and 2, in PHMA, thresholds and responses that would allow the authorized officer to make adjustments to livestock grazing are required. Under Alternatives 4, 5, 6, and the Proposed RMP Amendment, thresholds and responses are also addressed but under these alternatives, more comprehensive guidance is provided for addressing areas not meeting the special status species land health standard due to livestock grazing and for addressing livestock improvements and fencing in a manner to reduce impacts to GRSG. Alternative 3 provides the greatest protections to the potential ACECs by removing any potential disturbance associated with livestock grazing.

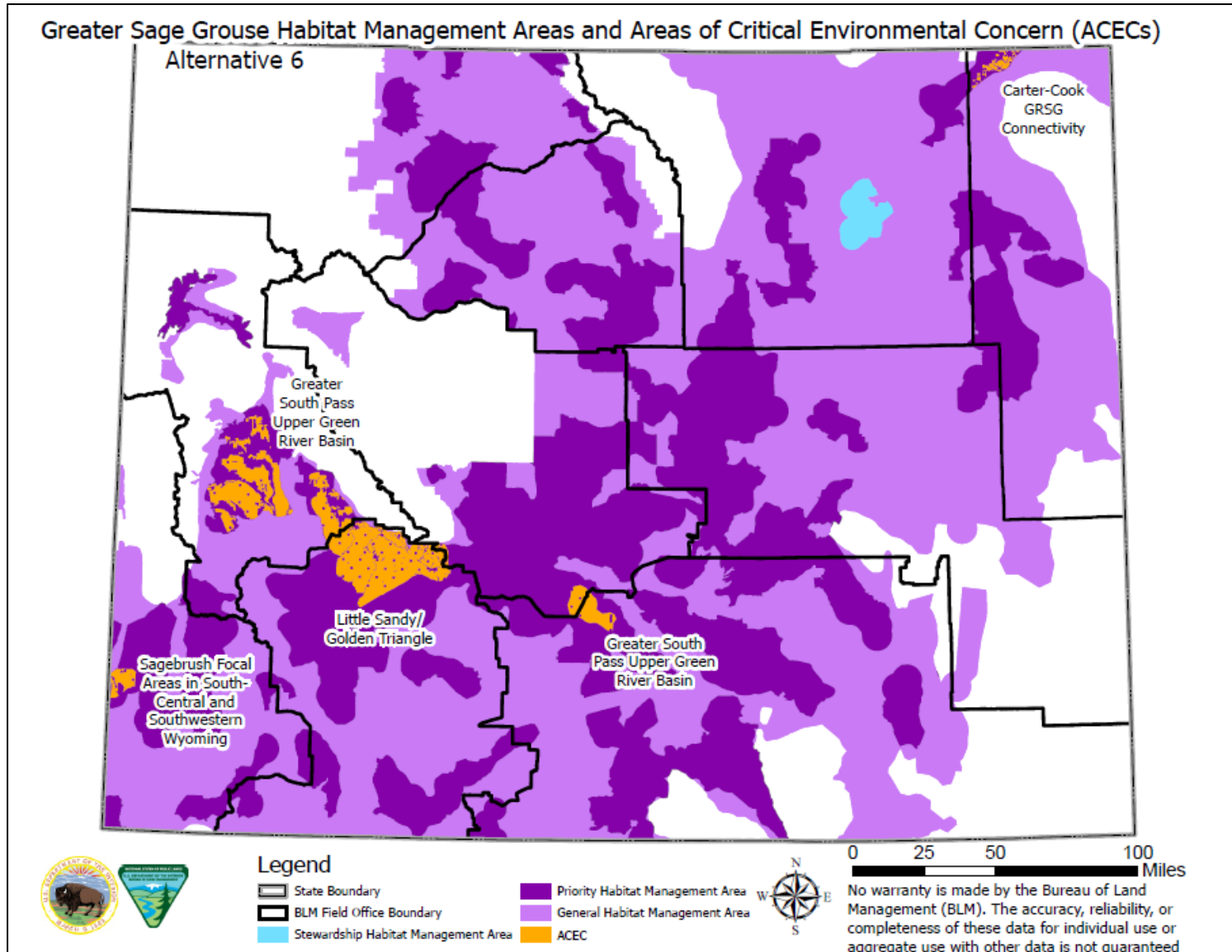
Summary of Effects

Considered comprehensively, Alternatives 3 and 6 would protect and prevent irreparable damage to the relevant and important values of all four of the potential ACECs. The application of PHMA with limited exceptions management direction under the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the Little Sandy/Golden Triangle ACEC and the application of the PHMA management direction in the Proposed RMP Amendment would protect and prevent irreparable damage to the relevant and important values of the Carter Crook, Sagebrush Focal Areas in South Central and Southwestern Wyoming, and Greater South Pass and Upper Green River Basin potential ACECs. Alternative 4 provides a high degree of protection from development and would also protect and prevent irreparable damage to the relevant and important values of all four of the ACECs. Although Alternatives 1, 2, and 5 provide a relatively high degree of protection within PHMA within these potential ACEC areas, fluid mineral, solar, wind, and major rights of way development under these alternatives are more likely to occur and could negatively impact the relative and important values of all four of the potential ACECs. As 4% of the potential Greater South Pass and Upper Green River Basin ACEC would be open to wind and solar as GHMA, the likelihood of these potential disturbances and associated impacts to GRSG is slightly increased in this potential ACEC under Alternatives 1 and 2.

Map 5.11: Wyoming Alternative 3 Potential ACECs



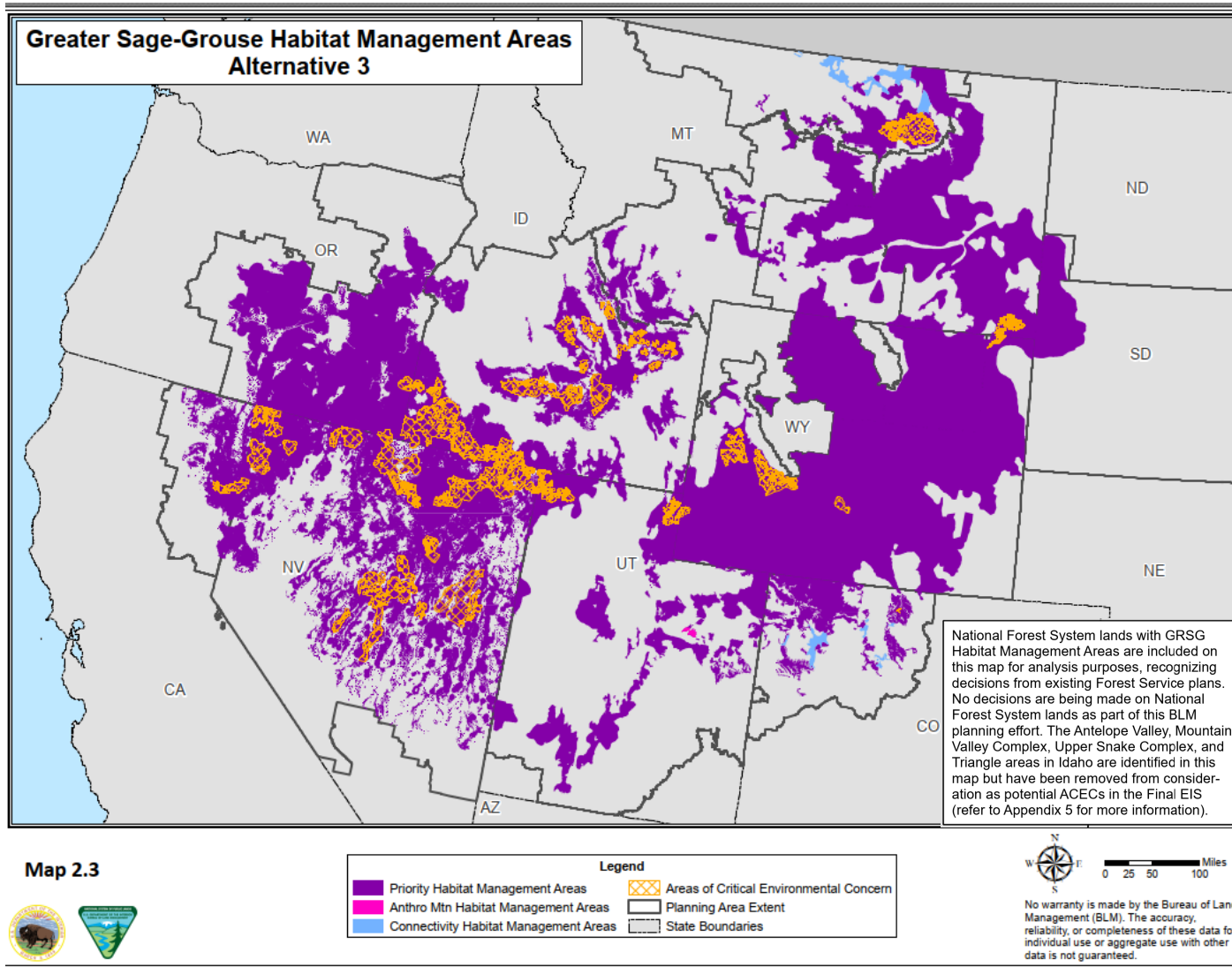
Map 5.12: Wyoming Alternative 3 Potential ACECs



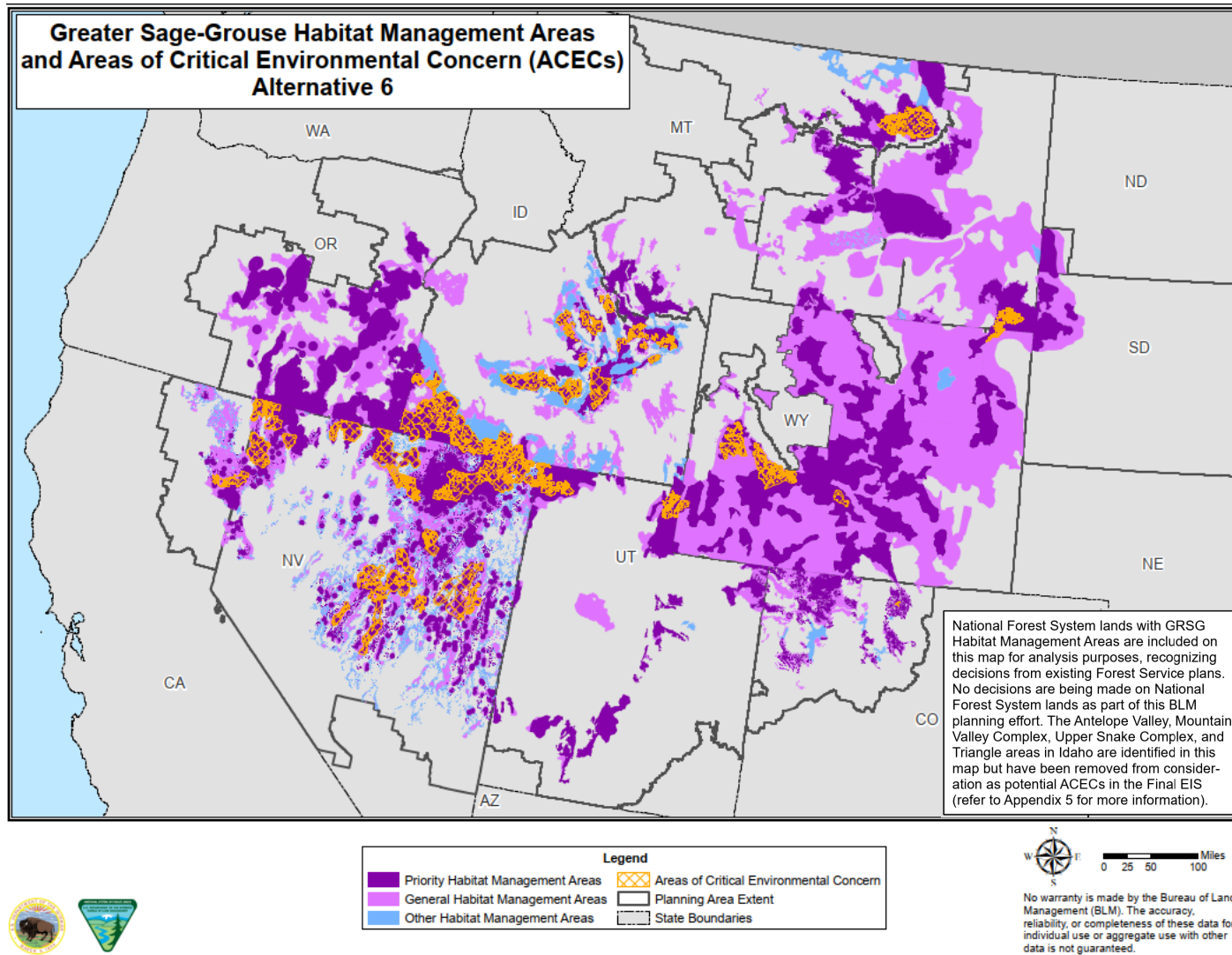
5.5 RANGEWIDE MAPS

Map 5.13 depicts the potential ACEC areas in relation to the Alternative 3 habitat management area boundaries. **Map 5.14** depicts the potential ACEC areas in relation to the Alternative 6 habitat management area boundaries. **Map 5.15** depicts the Priority Habitat Management Areas with limited exceptions identified in the Proposed RMP Amendment.

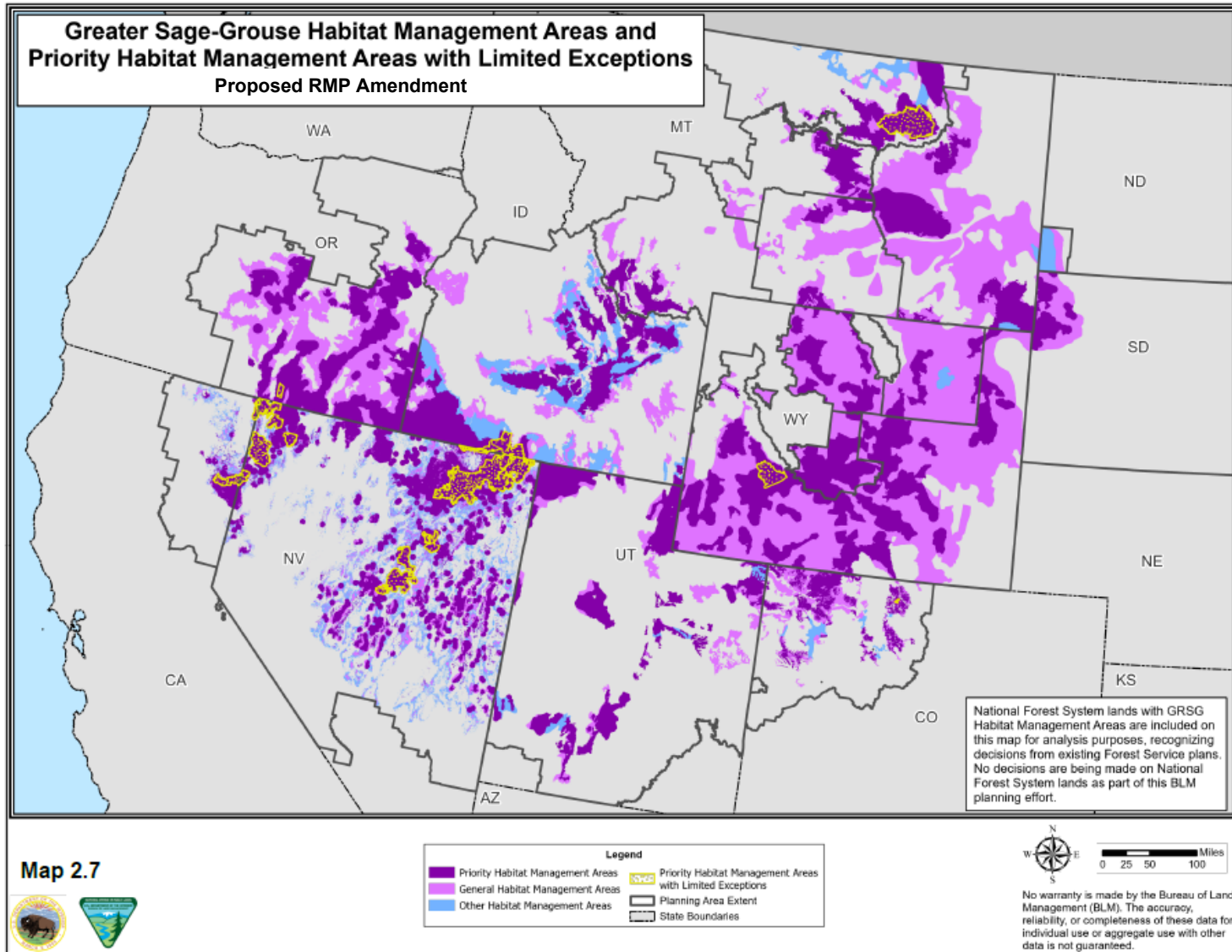
Map 5.13: Potential ACECs in relation to Alternative 3 Habitat Management Areas



Map 5.14: Potential ACECs in relation to Alternative 5 and 6 Habitat Management Areas



Map 5.15: Priority Habitat Management Areas with limited exceptions in the Proposed RMP Amendment



5.6 CUMULATIVE EFFECTS

This section presents an assessment of the cumulative effects on the ACECs proposed for designation under Alternatives 3 and 6. These potential ACECs were identified for their GRSG relevant and important values and, therefore, the cumulative effects to these areas will be similar to those identified for GRSG in **Chapter 4, Section 4.2.3**. This analysis considers the past, present, and reasonably foreseeable actions that may impact the ACECs and their relevant and important values. The cumulative effects analysis covers a 20-year timeframe, corresponding to the duration of the GRSG RMPA. The spatial scope encompasses the the 32 potential ACECs considered in this RMP Amendment and their immediate surroundings.

Surface-disturbing activities such as mining, renewable and fluid mineral energy development, rights of way, improper grazing, wild horses and burros, wildfires, and fuels management activities are examples of past and ongoing actions and conditions that have affected and could continue to affect the relevant and important values of the ACECs considered in this RMP amendment. Wildfires can impact relevant and important values due to the removal of vegetation, which can increase the risk of erosion. Fuels management projects, while aiming to reduce wildfire risk, can also help maintain soil stability by preventing large-scale vegetation removal that might lead to soil erosion. These projects can also contribute to preserving habitats for fish, wildlife, and other natural resources. Projects focused on managing vegetation and GRSG habitat can impact relevant and important values. Strategies like prescribed burns can help restore ecosystems, but they might also impact wildlife habitat temporarily.

The cumulative impacts of climate change could also negatively impact the potential ACECs' relevant and important values. Climate change is expected to impact temperatures and precipitation, which will have a number of cascading impacts on the ACECs' relevant and important values. These habitat impacts could include the loss of important plant species and the degradation of GRSG habitat.

Considering the different threats to these potential ACECs in combination with the management direction proposed under the Alternatives, the management protections identified under Alternatives 3, 6, and the Proposed RMP Amendment would provide the highest levels of protection to the potential ACECs and would protect and prevent irreparable damage to the relevant and important values of all 32 of the potential ACECs considered in this RMP amendment. Under Alternatives 1, 2, 4, and 5, the protections are not as strong as under Alternatives 3, 6, and Proposed RMP Amendment. However, because under these alternatives the areas are predominately managed as PHMA, these areas would receive a high degree of protection. Under alternatives 1,2, 4, and 5, there is just a higher likelihood that development activities (e.g., rights of way and renewable and fluid mineral energy development) could occur and these could result in negative impacts to the ACECs relevant and important values.

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