NORTH WEST COLORADO BLM MANAGEMENT ACTIONS AND FOREST SERVICE PLAN COMPONENTS – A CROSSWALK

BLM Management Actions	Forest Service Plan Components
General	
Objective: Maintain and enhance populations and distribution of GRSG by protecting and improving sagebrush habitats and ecosystems that sustain GRSG populations.	**GRSG-GEN-DC-001-Desired Condition** – The landscape for GRSG encompasses large contiguous areas, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush community compositions exist, with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for GRSG. **GRSG-GEN-DC-003-Desired Condition** – In GRSG management areas, including all seasonal habitats, 70 percent of lands capable of producing sagebrush have 10 to 30 percent sagebrush canopy cover and less than 10 percent conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for GRSG during this seasonal period. Specific desired conditions for GRSG based on seasonal habitat requirements are in Table 2.3, GRSG Seasonal Habitat Desired Conditions.
Travel and Transportation	
Objective: Manage travel and transportation to 1) reduce mortality from vehicle collisions, 2) limit change in GRSG behavior, 3) avoid,	**GRSG-RT-DC-001-Desired Condition** – In PHMA and GHMA, within the travel management system, GRSG experience minimal

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minimize, and mitigate habitat fragmentation, 4) limit the spread of noxious weeds, and 5) limit disruptive activity associated with human access.	disturbance during breeding and nesting (March 1 to June 15) and wintering periods (November 1 to February 28).
(PHMA) limit motorized travel to existing roads, primitive roads, and trails at a minimum.	(ADH) The FS 2007 Motor Vehicle Use Map limits motorized travel to designated roads and motorized trails. Additional Forest Plan Standards include: • Limit roads and other disturbed sites to the minimum feasible number, width, and total length consistent with the purpose of specific operations, local topography, and climate (Forestwide Soils Standard, p. 1-6). • Prohibit motorized use with wheeled vehicles on lands outside designated travel ways unless a forest order indicates that such use is specifically allowed (Forestwide Infrastructure – Travelways Standard 4). Prohibit motorized access from private land where access for the general public is not available, except by special permit (Forestwide Infrastructure – Travelways Standard 6, p. 1-23).
(PHMA) Evaluate and consider permanent or seasonal road or area closures as needed to address a current threat.	(ADH) Manage motorized use by seasonal use restriction if use causes unacceptable wildlife conflict or habitat degradation (Forestwide Infrastructure – Travelways Guideline 3b, p. 1-23)
(PHMA) Complete activity level travel plans as soon as possible, subject to funding. During activity level planning, where appropriate, designate routes with current administrative/agency purpose or need to administrative access only.	(ADH) The 2007 Motor Vehicle Use Map limits motorized travel to designated roads and motorized trails. **GRSG-RT-ST-003-Standard** – In PHMA, do not allow public access on temporary energy development roads, unless consistent with all other terms and conditions included in the LUP.
(PHMA) Complete activity level travel plans as soon as possible, subject to funding. Limit route construction to routes that will not adversely affect GRSG populations due to habitat loss or disruptive activities.	(ADH) The 2007 Motor Vehicle Use Map limits motorized travel to designated roads and motorized trails. **GRSG-RT-ST-001-Standard** – In PHMA and GHMA, do not construct or allow new road or trail construction (does not apply to realignments for resource protection) except when necessary for administrative access, public safety, or to access valid existing rights. If necessary to construct new roads and trails for one of these purposes,

BLM Management Actions	Forest Service Plan Components
	construct them to the minimum standard, length, and number and avoid, minimize, and mitigate impacts. **GRSG-RT-GL-001-Guideline** – In PHMA, new roads and road realignments should be designed and administered to reduce collisions with GRSG.
(PHMA) Use existing roads or realignments whenever possible. If it is necessary to build a new road, and the use of existing roads would cause adverse impacts to GRSG, construct new roads to the appropriate minimum Gold Book standard and add the surface disturbance to the total disturbance in the PHMA if it meets the criteria in Appendix H, Guidelines for Implementation. Construct no new roads if the biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) is over the 3 percent disturbance cap, unless there is an immediate health and safety need, or to support valid existing rights that cannot be avoided. Evaluate and implement additional, effective mitigation necessary to offset the resulting loss of GRSG habitat.	**GRSG-RT-ST-001-Standard** – In PHMA and GHMA, do not construct or allow new road or trail construction (does not apply to realignments for resource protection) except when necessary for administrative access, public safety, or to access valid existing rights. If necessary to construct new roads and trails for one of these purposes, construct them to the minimum standard, length, and number and avoid, minimize, and mitigate impacts. **GRSG-RT-GL-001-Guideline** – In PHMA, new roads and road realignments should be designed and administered to reduce collisions with GRSG. **GRSG-RT-GL-002-Guideline** – In PHMA, road construction within riparian areas and mesic meadows should be restricted. If not possible to avoid construction within riparian areas and mesic meadows, roads should be designed and constructed at right angles to ephemeral drainages and stream crossings, unless topography prevents doing so.
(PHMA) Allow upgrades to existing routes after documenting that the upgrade will not adversely affect GRSG populations due to habitat loss or disruptive activities.	(ADH) The 2007 Motor Vehicle Use Map limits motorized travel to designated roads and motorized trails. Retain existing access rights, where needed, to meet Forest Plan goals and objectives (Forestwide Real Estate-Rights-of-way Standard 1, p.1-25). **GRSG-RT-ST-002-Standard** – Do not conduct or allow road and trail maintenance activities within 2 miles from the perimeter of active leks during lekking (March 1 to April 30) from 6 pm to 9 am.
(PHMA) Conduct restoration of roads, primitive roads and trails not designated in travel management plans. This also includes primitive route/roads that were not designated in WSAs and within lands with	**GRSG-RT-GL-003-Guideline** – In PHMA and GHMA, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions (Table

BLM Management Actions	Forest Service Plan Components
wilderness characteristics that have been selected for protection in previous LUPs.	2.3, GRSG Seasonal Habitat Desired Conditions).
(PHMA) When reseeding roads, primitive roads and trails, use appropriate seed mixes and consider the use of transplanted sagebrush.	**GRSG-RT-GL-005-Guideline** – In PHMA and GHMA, road and road- way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive plants. Such activities include but are not limited to the removal or mowing of vegetation a car-width off the edge of roads; use of weed-free earth-moving equipment, gravel, fill, or other materials; and blading or pulling roadsides and ditches that are infested with noxious weeds only if required for public safety or protection of the roadway.
Required design feature.	**GRSG-RT-GL-004-Guideline** – In PHMA and GHMA, dust abatement terms and conditions should be included in road use permits when dust has the potential to impact GRSG.
Recreation	
Objective: Manage Recreation to avoid activities that 1) disrupt GRSG, 2) fragment GRSG habitat, or 3) spread noxious weeds.	**GRSG-R-DC-001-Desired Condition** – In PHMA, existing and new recreation special use authorizations and expansion of special use authorizations avoids effects to GRSG and its habitats.
(PHMA) Do not allow SRPs/SUAs with the potential to adversely affect GRSG or GRSG habitat.	**GRSG-R-ST-001-Standard** – In PHMA and GHMA, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (greater than 5 years) negative impacts on GRSG or its habitats. **GRSG-R-GL-001-Guideline** – In PHMA and GHMA, terms and conditions that protect and/or restore GRSG habitat within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, terms and conditions in existing permits and operating plans should be modified to protect and/or restore GRSG habitat. **GRSG-R-GL-002-Guideline** – In PHMA, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a

BLM Management Actions	Forest Service Plan Components
	net conservation gain to GRSG and/or its habitats or the development is required for visitor safety.
Lands and Realty Management	
Objective: Manage the Lands and Realty program to avoid, minimize, and mitigate the loss of habitat and habitat connectivity through the authorizations of ROWs, land tenure adjustments, proposed land withdrawals, agreements with partners, and incentive programs.	**GRSG-GEN-DC-002-Desired Condition** – Anthropogenic disturbance is focused in nonhabitat areas outside of PHMA and GHMA2. Disturbance in GHMA is limited, and there is little to no disturbance in PHMA, except for valid existing rights and existing authorized uses. **GRSG-GEN-ST-001-Standard** – In PHMA, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3 percent of the total GRSG habitat within the biologically significant unit and the proposed project analysis area, regardless of ownership, and the new use will not cause exceedance of the 3 percent cap (Appendix E, Methodology for Calculating Disturbance Caps).
Rights-of-Way (ROW)	
Manage areas within PHMA as avoidance areas for BLM ROW permits. (See Special Stipulations applicable to GRSG PHMA ROW Avoidance, Proposed LUPA.) Manage areas within GHMA as avoidance areas for major (transmission lines greater than 100 kilovolts and pipelines greater than 24 inches) and minor BLM ROW permits or Forest Service SUA permits. (See Special Stipulations applicable to GRSG PHMA ROW Avoidance, Proposed LUPA.) No new roads or above-ground structures would be authorized within 1 mile of an active lek. Above-ground structures are defined as structures that are located on or above the surface of the ground, including but not limited to: roads, fences, communication towers, and/or any structure that would provide perches. Above ground structures would only be authorized if:	**GRSG-GEN-ST-001-Standard** – In PHMA, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3 percent of the total GRSG habitat within the biologically significant unit and the proposed project analysis area, regardless of ownership, and the new use will not cause exceedance of the 3 percent cap (Appendix E, Methodology for Calculating Disturbance Caps). **GRSG-GEN-ST-002-Standard** – In PHMA and GHMA, only allow new authorized land uses if the residual impacts to GRSG or its habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Greater Sage-Grouse

BLM Management Actions	Forest Service Plan Components
1. It is consistent with the overall objective of the RMP Amendment; 2. The effect on GRSG populations or habitat is nominal or incidental; 3. Allowing the exception prevents implementation of an alternative more detrimental to GRSG or similar environmental concern, and; 4. Rigid adherence to the restriction would be the only reason for denying the action. PHMA and GHMA are designated as avoidance areas for high-voltage transmission line ROWs, except for the transmission projects specifically identified below. All authorizations in these areas, other than the excepted projects, must comply with the conservation measures outlined in this Proposed LUPA, including the RDFs and avoidance criteria presented in this document. The BLM is currently processing applications for the TransWest and Energy Gateway South Transmission Line projects, and the NEPA review for these projects is well underway. The BLM is analyzing GRSG mitigation measures through these projects' NEPA review processes. GRSG PHMA ROW Avoidance, Proposed LUPA. ROWs/SUAs may be issued after documenting that the ROWs/SUAs would not adversely affect GRSG populations based on the following criteria: • Location of proposed activities in relation to critical GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat. • An evaluation of the potential threats from proposed activities that may affect the local population as compared to benefits that could be accomplished through compensatory or offsite mitigation (see Section 2.6.3, Regional Mitigation) • An evaluation of the proposed activities in relation to the site-specific terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.	Mitigation Strategy (Appendix G). **GRSG-GEN-GL-001-Guideline** – During lekking (March 1 to April 30) restrict surface disturbing and disruptive activities, including noise at 10dB above ambient (not to exceed 20-24 dB) measured at the perimeter of an occupied lek, to lekking birds from 6 pm to 9 am within a buffer distance3 of 3.1 miles. **GRSG-GEN-GL-002-Guideline** – During breeding and nesting (March 1 to June 15), surface disturbing and disruptive activities to nesting birds should be avoided. **GRSG-GEN-GL-004-Guideline** – Development of tall structures within 2.0 miles from the perimeter of occupied leks, as determined by local conditions (such as vegetation or topography), with the potential to disrupt breeding or nesting by creating new perching/nesting opportunities for avian predators or by decreasing the use of an area, should be restricted within nesting habitat. **GRSG-LR-SUA-O-001-Objective** – In brood reading and nesting habitats, retrofit existing tall structures (e.g., power poles, cellular towers) with perch deterrents or other anti-perching devices within 2 years of signing the Record of Decision. **GRSG-LR-SUA-ST-001-Standard** – In PHMA and GHMA, restrict issuance of new lands special use authorizations that authorize infrastructure, such as high-voltage transmission lines, major pipelines, hydropower, distribution lines, and cellular towers. Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to GRSG will be avoided by the exception. **GRSG-LR-SUA-ST-002-Standard** – In PHMA and GHMA, do not authorize temporary lands special uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on GRSG or its habitats. **GRSG-LR-SUA-ST-003-Standard** – In PHMA and GHMA, require

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Any new projects within PHMA would be subject to the 3 percent disturbance cap as described in Appendix H, Guidelines for Implementation. If the 3 percent disturbance cap is exceeded in PHMA in any Colorado MZ, no new ROW would be authorized in PHMA within that biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ), unless site-specific analysis documents no impact to GRSG. **GRSG PHMA ROW TL, Proposed LUPA:** Prohibit surface occupancy and surface-disturbing activities associated with BLM ROW or Forest Service SUA permits within 4 miles from active leks during lekking, nesting, and early brood-rearing (March 1 to July 15). (See Special Stipulations applicable to GRSG PHMA ROW TL, Proposed LUPA). Same as Alternative D, except special stipulations described in Appendix D, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations, would apply. (PHMA) Only issue ROWs/SUAs after documenting that the ROWs/SUAs will not adversely affect GRSG populations due to habitat loss or disruptive activities (independent of disturbance cap), except where such limitation would make accessing valid existing rights impracticable. Construct new roads to the appropriate Gold Book standard and add the surface disturbance to the total disturbance in the PHMA. Any new ROW/SUA authorizations would be subject to the 3 percent disturbance cap, and would be evaluated based on an analysis of the following: • Location of proposed activities in relation to critical GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat. • An evaluation of the potential threats from proposed activities that may affect the local population as compared to benefits that could	protective stipulations (e.g., noise, tall structure, guy wire removal, perch deterrent installation) when issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers). **GRSG-LR-SUA-ST-004-Standard** – In PHMA and GHMA, locate upgrades to existing transmission lines within the existing designated corridors unless an alternate route would benefit GRSG or its habitats. **GRSG-LR-SUA-ST-005-Standard** – In PHMA and GHMA, when a lands special use authorization is revoked or terminated and no future use is contemplated, the authorization holder must remove overhead lines and other surface infrastructure in compliance with 36 CFR 251.60(i). **GRSG-LR-SUA-ST-006-Standard** – In PHMA and GHMA, if the potential long-term (greater than 5 years) impacts of mitigation (e.g., relocation or burying) to GRSG or its habitats are greater than the potential impacts from new lands special use authorizations, do not pursue the mitigation. If mitigation is not feasible or would result in short-term (less than 5 years) or long-term impacts, incorporate additional terms and conditions in the special use authorization for protection of GRSG or its habitats. **GRSG-LR-SUA-ST-007-Standard** – In PHMA and GHMA, co-locate new infrastructure (e.g., high voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers) with existing infrastructure to limit disturbance to the smallest footprint, or where it best limits impacts to GRSG or its habitats. When co-location of new infrastructure cannot be accomplished, locate it adjacent to existing infrastructure, roads, or already disturbed areas. New communication tower sites may be authorized for public safety. **GRSG-LR-SUA-GL-001-Guideline** – In PHMA, outside of existing designated corridors, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit

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be accomplished through compensatory or offsite mitigation (see Section 2.6.3, Regional Mitigation). • An evaluation of the proposed activities in relation to the site-specific terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors. **GRSG PHMA ROW TL, Proposed LUPA:** Prohibit surface occupancy and surface-disturbing activities associated with BLM ROW or Forest Service SUA permits within 4 miles from active leks during lekking, nesting, and early brood-rearing (March 1 to July 15).	rationale is provided that the biological impacts to GRSG are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.
(PHMA) In PHMA, or within 4 miles of an active lek, for ROW/SUA renewals, where existing facilities cannot be removed, buried, or modified, require perch deterrents.	**GRSG-LR-SUA-O-001-Objective** – In brood reading and nesting habitats, retrofit existing tall structures (e.g., power poles, cellular towers) with perch deterrents or other anti-perching devices within 2 years of signing the Record of Decision. **GRSG-LR-SUA-ST-003-Standard** – In PHMA and GHMA, require protective stipulations (e.g., noise, tall structure, guy wire removal, perch deterrent installation) when issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers).
(PHMA) Reclaim and restore ROWs per regulatory requirements (43 CFR 2805.12(i)(1); 43 CFR 2885.11(b)(9)(i)). (PHMA) Designate new ROW corridors in GRSG PHMA only where there is a compelling reason to do so and location of the corridor within PHMA will not adversely affect GRSG populations due to habitat loss or disruptive activities.	**GRSG-LR-SUA-ST-003-Standard** – In PHMA and GHMA, require protective stipulations (e.g., noise, tall structure, guy wire removal, perch deterrent installation) when issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers). **GRSG-LR-SUA-GL-001-Guideline** – In PHMA, outside of existing designated corridors, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit rationale is provided that the biological impacts to GRSG are being

BLM Management Actions	Forest Service Plan Components
	avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.
Land Tenure Adjustment	
(PHMA) Retain public ownership of GRSG PHMA. Consider exceptions where: (PHMA) 1) The agency can demonstrate that disposal of the lands will provide a net conservation gain to the GRSG, or 2) the agency can demonstrate that the disposal of the lands will have no direct or indirect adverse impact on GRSG conservation.	**GRSG-LR-LOA-ST-001-Standard** – In PHMA, do not approve landownership adjustments unless the action results in a net conservation gain to GRSG or it will not directly or indirectly adversely impact GRSG conservation.
(PHMA) Consider land ownership adjustments when there is mixed ownership, and land exchanges would allow for additional or more contiguous federal ownership patterns within the GRSG PHMA.	**GRSG-LR-LOA-GL-001-Guideline** – In PHMA and GHMA with minority federal ownership, consider landownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved GRSG population trends and habitats.
(PHMA) In isolated federal parcels, only allow tract disposals that are beneficial or neutral to long-term management of GRSG populations. (GHMA) For lands in GHMA that are identified for disposal, the BLM would only dispose of such lands consistent with the goals and objectives of this LUPA, including, but not limited to, the LUPA objective to maintain or increase GRSG abundance and distribution.	**GRSG-LR-LOA-ST-001-Standard** – In PHMA, do not approve landownership adjustments unless the action results in a net conservation gain to GRSG or it will not directly or indirectly adversely impact GRSG conservation. **GRSG-LR-LOA-ST-002-Standard** – In GHMA, do not approve landownership adjustments unless the action maintains or increases GRSG abundance and distribution.
(ADH) Consider GRSG habitat values in acquisitions. For example: Identify key GRSG habitats on private or state land, adjacent to existing BLM/Forest Service land, where acquisition and protection by BLM/Forest Service could substantially benefit the local GRSG population. This could be accomplished via purchase, exchange, or donation to satisfy mitigation requirements.	**GRSG-LR-LOA-GL-001-Guideline** – In PHMA and GHMA with minority federal ownership, consider landownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved GRSG population trends and habitats.

BLM Management Actions	Forest Service Plan Components
Proposed Land Withdrawals	
(PHMA) Consider petitioning for withdrawal on a case-by-case basis from mineral entry based on risk to GRSG and its habitat.	**GRSG-LR-LW-GL-001-Guideline** – In PHMA, utilize land withdrawals as a tool, where appropriate and subject to valid existing rights, to prevent activities that will be detrimental to GRSG or its habitats.
Wind Energy Development	
(PHMA) Manage PHMA as exclusion areas for wind energy development. (GHMA) Manage GHMA as avoidance areas for wind energy development.	**GRSG-WS-ST-001-Standard** – In PHMA, do not authorize new solar and wind utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site). **GRSG-WS-GL-001-Guideline** – In GHMA, new solar and wind energy utility-scale and/or commercial development should be restricted. If development cannot be restricted due to existing authorized use, adjacent developments, or split estate issues, then ensure that stipulations are incorporated into the authorization to protect GRSG and its habitats.
Industrial Solar	
(PHMA) Manage PHMA as exclusion areas for industrial solar projects. (GHMA) Manage GHMA as avoidance areas for industrial solar projects.	**GRSG-WS-ST-001-Standard** – In PHMA, do not authorize new solar and wind utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site). **GRSG-WS-GL-001-Guideline** – In GHMA, new solar and wind energy utility-scale and/or commercial development should be restricted. If development cannot be restricted due to existing authorized use, adjacent developments, or split estate issues, then ensure that stipulations are incorporated into the authorization to protect GRSG and its habitats.
Range Management	
Objectives: GRSG objectives and well-managed livestock operations are compatible because forage availability for livestock and hiding cover	**GRSG-LG-DC-001-Desired Condition** – In PHMA and GHMA, livestock grazing is managed to ensure for adequate nesting cover and

BLM Management Actions	Forest Service Plan Components
for GRSG are both dependent on healthy plant communities. Agreements with partners that promote sustainable GRSG populations concurrent with sustainable ranch operations offer long-term stability. In the context of sustainable range operations, manage the range program to: 1) maintain or enhance vigorous and productive plant communities; 2) maintain residual herbaceous cover to reduce predation during GRSG nesting and early brood-rearing; 3) avoid direct adverse impacts to GRSG-associated range project infrastructure; and 4) employ grazing management strategies that avoid concentrating animals on key GRSG habitats during key seasons.	do not conflict with the attainment of other vegetative attributes (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
(ADH) Within ADH, incorporate GRSG habitat objectives and management considerations into all BLM grazing allotments through Allotment Management Plans or permit renewals.	**GRSG-LG-ST-001-Standard** – In PHMA, do not approve construction of water developments unless beneficial to GRSG habitat.
(ADH) Work cooperatively on integrated ranch planning within GRSG habitat. Develop management strategies that are seamless with respect to actions on public and private lands within BLM grazing allotments.	No similar management direction.
(PHMA) The BLM will prioritize: 1. the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and 2. the processing of grazing permits/leases in PHMA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.	Forest Service will be modifying grazing permits as a result of this decision. A transition period will be identified in the Record of Decision.
(ADH) Conduct land health assessments that include (at a minimum) indicators and measurements of vegetation structure/condition/composition specific to achieving GRSG habitat objectives (Doherty et al. 2011b). If local/state seasonal habitat objectives are not available, use GRSG habitat recommendations from Connelly et al. 2000a and Hagen et al. 2007.	**GRSG-LG-GL-001-Guideline** – Grazing guidelines should be applied in each of the seasonal habitats in Table 2.5, Grazing Guidelines for GRSG Seasonal Habitat. If values in Table 2.5 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table 2.3, GRSG Seasonal Habitat Desired

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	Conditions, consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in Table 2.5 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat.
Implementing Management Actions after Land Health and Habitat Evaluations	
(ADH) Develop specific objectives—through NEPA analysis conducted in accordance with the permit/lease renewal process—to conserve, enhance, or restore GRSG habitat. Base benchmarks on Ecological Site/Range Site Descriptions. When existing on Ecological Site/Range Site Descriptions have not been developed, or are too general to serve adequately as benchmarks, identify and document local reference sites for areas of similar potential that exemplify achievement of GRSG habitat objectives and use these sites as the benchmark reference. Establish measurable objectives related to GRSG habitat from baseline monitoring data, ecological site descriptions, or land health assessments/evaluations, or other habitat and successional stage objectives.	**GRSG-LG-GL-001-Guideline** – Grazing guidelines should be applied in each of the seasonal habitats in Table 2.5, Grazing Guidelines for GRSG Seasonal Habitat. If values in Table 2.5 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table 2.3, GRSG Seasonal Habitat Desired Conditions, consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in Table 2.5 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat.
(ADH) Manage for vegetation composition and structure consistent with ecological site potential and within the reference state subject to habitat objectives, including successional stages.	**GRSG-GRSGH-ST-001-Standard** – Design habitat restoration projects to move towards desired conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-006-Guideline** – In PHMA, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-LG-GL-001-Guideline** – Grazing guidelines should be applied in each of the seasonal habitats in Table 2.5, Grazing Guidelines for GRSG Seasonal Habitat. If values in Table 2.5 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table 2.3, GRSG Seasonal Habitat Desired Conditions, consistent with the ecological site capability. Do not use

BLM Management Actions	Forest Service Plan Components
	drought and degraded habitat condition to adjust values. Grazing guidelines in Table 2.5 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat.
(ADH) Include terms and conditions on grazing permits and leases that address disruptive activities that affect GRSG and assure plant growth requirements are met and residual forage remains available for GRSG hiding cover. Specify as necessary: 1. Season or timing of use 2. Numbers of livestock (include temporary non-use or livestock removal) 3. Distributions of livestock use 4. Intensity of use (utilization or stubble height objectives) 5. Kind of livestock (e.g., cattle, sheep, horse, llama, alpaca, and goat) 6. Class of livestock (e.g., yearlings versus cow/calf pairs) 7. Locations of bed grounds, sheep camps, trail routes, and the like	**GRSG-LG-DC-001-Desired Condition** – In PHMA and GHMA, livestock grazing is managed to ensure for adequate nesting cover and do not conflict with the attainment of other vegetative attributes (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-LG-GL-001-Guideline** – Grazing guidelines should be applied in each of the seasonal habitats in Table 2.5, Grazing Guidelines for GRSG Seasonal Habitat. If values in Table 2.5 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table 2.3, GRSG Seasonal Habitat Desired Conditions, consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in Table 2.5 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat. **GRSG-LG-GL-003-Guideline** – Bedding sheep and locating camps within 1.2 miles from the perimeter of a lek during lekking (March 1 to April 30) should be restricted. **GRSG-LG-GL-004-Guideline** – During breeding and nesting season (March 1 to June 15), trailing livestock through breeding and nesting habitat should be minimized. Specific routes should be identified, existing trails should be used, and stopovers on active leks should be avoided.
(ADH) Develop drought contingency plans at the appropriate landscape unit that provide for a consistent/appropriate BLM/Forest Service response. Plans should establish policy for addressing ongoing drought and post-drought recovery for GRSG habitat objectives.	No similar management direction.
The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within PHMA would include specific	Standard operating procedure.

BLM Management Actions	Forest Service Plan Components
management thresholds based on Table 2.3, GRSG Seasonal Habitat Desired Conditions, Land Health Standards (43 CFR 4180.2) (Appendix K), ecological site potential, and one or more defined responses that would allow the authorizing officer to make adjustments to livestock grazing that have already been subject to NEPA analysis.	
Allotments within PHMA, focusing on those containing riparian areas, including wet meadows, would be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks could include monitoring for actual use, utilization, and use supervision.	**GRSG-LG-GL-001-Guideline** – Grazing guidelines should be applied in each of the seasonal habitats in Table 2.5, Grazing Guidelines for GRSG Seasonal Habitat. If values in Table 2.5 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table 2.3, GRSG Seasonal Habitat Desired Conditions, consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in Table 2.5 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat.
Riparian Areas and Wet Meadows	
(ADH) Manage riparian areas and wet meadows for proper functioning condition or other similar methodology within ADH.	**GRSG-GEN-DC-003-Desired Condition** – In GRSG management areas, including all seasonal habitats, 70 percent of lands capable of producing sagebrush have 10 to 30 percent sagebrush canopy cover and less than 10 percent conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for GRSG during this seasonal period. Specific desired conditions for GRSG based on seasonal habitat requirements are in Table 2.3, GRSG Seasonal Habitat Desired Conditions. **GRSG-LG-GL-001-Guideline** – Grazing guidelines should be applied in each of the seasonal habitats in Table 2.5, Grazing Guidelines for

BLM Management Actions	Forest Service Plan Components
	GRSG Seasonal Habitat. If values in Table 2.5 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in Table 2.3, GRSG Seasonal Habitat Desired Conditions, consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in Table 2.5 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of GRSG habitat.
(ADH) Within ADH, manage wet meadows to maintain diverse species richness, including a component of perennial forbs, relative to site potential (i.e., reference state).	**GRSG-GEN-DC-003-Desired Condition** – In GRSG management areas, including all seasonal habitats, 70 percent of lands capable of producing sagebrush have 10 to 30 percent sagebrush canopy cover and less than 10 percent conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for GRSG during this seasonal period. Specific desired conditions for GRSG based on seasonal habitat requirements are in Table 2.3, GRSG Seasonal Habitat Desired Conditions.
(ADH) Establish permit/lease terms and conditions in conjunction with grazing strategies to ensure that the timing and level of utilization results in wet meadows with diverse species richness, including a component of perennial forbs, relative to site potential (i.e., reference state).	**GRSG-RT-GL-002-Guideline** – In PHMA, road construction within riparian areas and mesic meadows should be restricted. If not possible to restrict construction within riparian areas and mesic meadows, roads should be designed and constructed at right angles to ephemeral drainages and stream crossings, unless topography prevents doing so.
(ADH) Authorize new water development only after determining that the project will not adversely impact GRSG from habitat loss. Ensure that adequate long-term grazing management is in effect before authorizing water developments that may increase levels of use or change season of use. Give specific consideration to adjacent or downstream wetland habitat when a project entails a diversion from a spring or seep.	**GRSG-LG-ST-001-Standard** – In PHMA, do not approve construction of water developments unless beneficial to GRSG habitat. **GRSG-LG-GL-006-Guideline** – New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.

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(ADH) Analyze springs, seeps and associated pipelines to determine if modifications are necessary to maintain the continuity of the predevelopment riparian area. If necessary to maintain GRSG populations or reverse a downward population trend caused by habitat loss, modify the project as necessary to restore the applicable wetland habitat.	**GRSG-LG-ST-001-Standard** – In PHMA, do not approve construction of water developments unless beneficial to GRSG habitat. **GRSG-LG-GL-006-Guideline** – New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.
Treatments to Increase Forage for Livestock/Wild ungulates	
(ADH) Manage for a habitat objective that is primarily sagebrush with a mosaic of seral stages and sagebrush in all age classes. On a site-by-site basis, do not allow treatments that would adversely affect GRSG populations. See Appendix H, Guidelines for Implementation.	**GRSG-GRSGH-ST-001-Standard** – Design habitat restoration projects to move towards desired conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-001-Guideline** – Sagebrush removal in GRSG breeding and nesting and wintering habitats should be restricted unless necessary to support attainment of desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-002-Guideline** – When removing conifers that are encroaching into GRSG habitat, avoid persistent woodlands (old growth relative to the site or more than 100 years old). **GRSG-GRSGH-GL-005-Guideline** – In PHMA and GHMA, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
(PHMA) Evaluate the role of existing seedings that are currently composed of primarily introduced perennial grasses in and adjacent to GRSG PHMA to determine if they should be restored to sagebrush or habitat of higher quality for GRSG. If these seedings are part of an Allotment Management Plan/Conservation Plan or if they provide value in conserving or enhancing the rest of PHMA, then no restoration would be necessary. Assess the compatibility of these seedings for GRSG habitat or as a component of a grazing system during the land health assessments (Davies et al. 2011).	**GRSG-GRSGH-ST-001-Standard** – Design habitat restoration projects to move towards desired conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-005-Guideline** – In PHMA and GHMA, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-006-Guideline** – In PHMA, vegetation treatment projects should only be conducted if they restore, enhance,

BLM Management Actions	Forest Service Plan Components
	or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
Structural Range Improvements and Livestock Management Tools	
(ADH) Design new range improvement projects to enhance livestock distribution and to control the timing and intensity of utilization. Examples of structural range improvement projects are cattle guards, fences, corrals, pipelines, troughs, storage tanks, windmills, ponds/reservoirs, solar panels, and spring developments. Include a plan to monitor and control invasive plant species following any related ground disturbance. Place mineral or salt supplements away from water sources and leks in locations that enhance livestock distribution.	**GRSG-GRSGH-GL-003-Guideline** – In PHMA and GHMA, actions and authorizations should include design features to limit the spread and effect of undesirable non-native plant species. **GRSG-LG-ST-001-Standard** – In PHMA, do not approve construction of water developments unless beneficial to GRSG habitat. **GRSG-LG-GL-006-Guideline** – New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.
(PHMA) Where conditions create the potential for impacts from West Nile virus from developments or modification of water developments, use PDFs/RDFs to mitigate the potential impacts. See Appendix I (Required Design Features, Preferred Design Features, and Suggested Design Features).	**GRSG-M-FMO-GL-003-Guideline** – In PHMA and GHMA, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include: • Increase the depth of ponds to accommodate a greater volume of water than is discharged. • Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments to reduce breeding habitat for mosquitoes. • Maintain the water level below that of rooted aquatic and upland vegetation. Avoid flooding terrestrial vegetation in flat terrain or low-lying areas. • Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated. • Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water. • Line the overflow spillway with crushed rock and construct the

BLM Management Actions	Forest Service Plan Components
	spillway with steep sides. • Fence pond sites to restrict access by livestock and other wild ungulates. • Remove or reinject produced water. • Treat waters with larvicides to reduce mosquito production where water occurs on the surface.
(PHMA) Evaluate existing structural range improvements to determine if modifications are necessary to maintain GRSG populations or reverse a downward population trend caused by habitat loss. Modify, relocate, or remove projects as necessary. Place mineral and salt supplements away from water sources and leks in locations that enhance livestock distribution.	**GRSG-LG-ST-001-Standard** – In PHMA, do not approve construction of water developments unless beneficial to GRSG habitat. **GRSG-LG-GL-003-Guideline** – Bedding sheep and locating camps within 1.2 miles from the perimeter of a lek during lekking (March 1 to April 30) should be restricted. **GRSG-LG-GL-004-Guideline** – During breeding and nesting season (March 1 to June 15), trailing livestock through breeding and nesting habitat should be minimized. Specific routes should be identified, existing trails should be used, and stopovers on active leks should be avoided. **GRSG-LG-GL-005-Guideline** – Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, and design). **GRSG-LG-GL-006-Guideline** – New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.
(ADH) Mark fences in high risk areas (Christiansen 2009; Stevens 2011). (PHMA) Where marking fences does not reduce fence-related GRSG mortality, modify fences. Where modification does not reduce GRSG mortality and the fence-related mortality is sufficient to adversely affect GRSG populations, remove fences.	**GRSG-LG-GL-005-Guideline** – Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, and design).
(ADH) Monitor for and treat invasive species associated with existing range improvements (Gelbard and Belnap 2003; Bergquist et al. 2007).	**GRSG-GRSGH-GL-003-Guideline** – In PHMA and GHMA, actions and authorizations should include design features to limit the spread and effect of undesirable non-native plant species.

BLM Management Actions	Forest Service Plan Components
Retirement of Grazing Privileges	
(ADH) At the time a permittee or lessee voluntarily relinquishes a permit or lease, the BLM will consider whether the public lands where that permitted use was authorized should remain available for livestock grazing or be used for other resource management objectives, such as grass banks or fire breaks. When a permittee or lessee voluntarily relinquishes grazing preference, consider conversion of the allotment to a Reserve Conservation Allotment that will remain available for use on a temporary, nonrenewable basis for the benefit of GRSG habitat. Authorize temporary nonrenewal permits in Reserve Conservation Allotments to meet resource objectives elsewhere such as rest or deferment due to fire or vegetation treatments. Temporary use of Reserve Conservation Allotments would not be allowed due to drought or overuse of customary allotments.	**GRSG-LG-GL-002-Guideline** – In PHMA, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve as opportunities arise under applicable regulations, where removal of livestock grazing would enhance the ability to achieve desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
Wild Horse Management	
Objective: Manage wild horses in a manner designed to 1) avoid reductions in grass, forb, and shrub cover, and 2) avoid increasing unpalatable forbs and invasive plants such as cheatgrass.	There are no Forest Service Wild Horse Territories within the Routt National Forest.
(ADH) Manage wild horse and burro population levels within established appropriate management levels.	There are no Forest Service Wild Horse Territories within the Routt National Forest.
(ADH) Same as Alternative B, but consider GRSG habitat requirements in conjunction with all resource values managed by the BLM, and give preference to GRSG habitat unless site-specific circumstances warrant an exemption.	There are no Forest Service Wild Horse Territories within the Routt National Forest.
(PHMA) Within PHMA, develop or amend BLM HMA plans and Forest Service Wild Horse Territory Plans to incorporate GRSG habitat objectives and management considerations for all BLM HMAs and Forest Service Wild Horse Territories. When developing HMA plans, apply all appropriate conservation measures from the range program, including, but not limited to, utilization of forage and structural range improvements.	There are no Forest Service Wild Horse Territories within the Routt National Forest.

BLM Management Actions	Forest Service Plan Components
(PHMA) For all BLM HMAs and Forest Service Wild Horse Territories within PHMA, prioritize the evaluation of all appropriate management levels based on indicators that address vegetation structure/condition/composition and measurements specific to achieving GRSG habitat objectives. Consider GRSG habitat requirements in conjunction with all resource values managed by the BLM, and give preference to GRSG habitat unless site-specific circumstances warrant an exemption.	There are no Forest Service Wild Horse Territories within the Routt National Forest.
(ADH) Coordinate with other resources (range, wildlife, and riparian) to conduct land health assessments to determine existing vegetation structure/condition/composition within all BLM HMAs and Forest Service Wild Horse Territories.	There are no Forest Service Wild Horse Territories within the Routt National Forest.
(PHMA) When conducting NEPA analysis for wild horse and burro management activities, water developments, or other rangeland improvements for wild horses in PHMA, address the direct and indirect effects to GRSG populations and habitat. Implement any water developments or rangeland improvements using the criteria identified for domestic livestock identified above in PHMA.	There are no Forest Service Wild Horse Territories within the Routt National Forest.
Fluid Minerals Management	
Objective: Manage fluid minerals to avoid, minimize, and mitigate: 1) direct disturbance, displacement, or mortality of GRSG; 2) direct loss of habitat or loss of effective habitat through fragmentation; and 3) cumulative landscape-level impacts. Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside PHMA and GHMA. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in PHMA and GHMA, and subject to applicable stipulations for the conservation of GRSG, priority will be given to development in nonhabitat areas first and then in the least suitable habitat for GRSG. The implementation of these priorities will be subject to valid existing rights and any applicable law or regulation, including, but not limited to, 30 USC 226(p) and 43 CFR 3162.3-1(h).	No similar management direction.

BLM Management Actions	Forest Service Plan Components
Unleased Fluid Minerals	
No new leasing 1 mile from active leks in ADH (Blickley et al. 2012; Harju 2012). NSO without waiver or modification in PHMA. See Appendix D (Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations) for exceptions. In GHMA, any new leases would include appropriate TL stipulations to protect GRSG and its habitat. In addition, in GHMA, NSO with waivers, exceptions, and modification within 2 miles of active leks (Appendix D, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations). 3 percent disturbance cap in PHMA (by biologically significant unit) with disturbances limited to 1 disturbance per 640 acres density calculated by Colorado MZ and proposed project analysis area would apply to new lease activities. No new leasing in PHMA if disturbance cap exceeds 3 percent calculated by biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) or 1 disturbance per 640 acres density is exceeded. The following stipulations would apply (Appendix D, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations): **GRSG NSO-46e:** See Appendix D, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations, for waiver, modification, and exception criteria. **GRSG TL-46e:** No activity associated with construction, drilling, or completions within 4 miles from active leks during lekking, nesting, and early brood-rearing (March 1 to July 15). Authorized Officer could grant an exception, modification, or waiver in consultation with the State of Colorado (Appendix F, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations).	**GRSG-M-FMUL-ST-001-Standard** – In PHMA, any new oil and gas leases must include an NSO stipulation. There will be no waivers or modifications. An exception could be granted by the authorized officer with unanimous concurrence from a team of agency GRSG experts from the Fish and Wildlife Service, Forest Service, and State wildlife agency if: • There would be no direct, indirect, or cumulative effects to GRSG or its habitats or • Granting the exception provides an alternative to a similar action occurring on a nearby parcel and • The exception provides a clear net conservation gain to GRSG. **GRSG-M-FMUL-ST-002-Standard** – In GHMA, any new leases must include appropriate controlled surface use and timing limitation stipulations to protect GRSG and its habitat.

BLM Management Actions	Forest Service Plan Components
GRSG LN-46e: Any lands leased in PHMA are subject to the restrictions of 1 disturbance per 640 acres calculated by biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) to allow clustered development (Appendix F, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations).	
(PHMA) Allow geophysical exploration within PHMA to obtain information for existing federal fluid mineral leases or areas adjacent to state or fee lands within PHMA. Allow geophysical operations only using helicopter-portable drilling, wheeled or tracked vehicles on existing roads, or other approved methods conducted in accordance with seasonal TLs and other restrictions that may apply. Geophysical exploration shall be subject to seasonal restrictions that preclude activities in breeding, nesting, brood-rearing, and winter habitats during their season of use by GRSG.	No similar management direction.
Leased Fluid Minerals	
Objective: Where a proposed fluid mineral development project on an existing lease could adversely affect GRSG populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, reduce, and mitigate adverse impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator or project proponent in developing an Application for Permit to Drill for the lease to avoid and minimize impacts to GRSG or its habitat and will ensure that the best information about GRSG and its habitat informs and helps guide development of such federal leases.	**GRSG-M-FML-ST-001-Standard** – In PHMA, when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, require that leaseholders avoid and minimize surface disturbing and disruptive activities consistent with the rights granted in the lease. **GRSG-M-FML-ST-005-Standard** – In PHMA and GHMA, when authorizing development of fluid mineral resources, work with the operator to minimize impacts to GRSG and its habitat, such as locating facilities in nonhabitat areas first and then in the least suitable habitat, subject to valid existing rights, law, and regulations. **GRSG-M-FML-GL-002-Guideline** – On federal leases in PHMA, when surface occupancy cannot be restricted due to valid existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to GRSG based on vegetation, topography, or other habitat features.

BLM Management Actions	Forest Service Plan Components
Within 1 mile of active leks, disturbance, disruptive activities, and occupancy are precluded. If it is determined that this restriction would render the recovery of fluid minerals infeasible or uneconomic, considering the lease as a whole, or where development of existing leases requires that disturbance density exceeds 1 disturbance per 640 acres and/or the 3 percent disturbance cap, use the criteria below to site proposed lease activities to meet GRSG habitat objectives and require mitigation as described in Appendix G (Greater Sage-Grouse Mitigation Strategy). In PHMA and within 4 miles of an active lek, the criteria below would be applied to guide development of the lease or unit that would result in the fewest impacts possible to GRSG. Based on site-specific conditions, prohibit construction, drilling, and completion within PHMA within 4 miles of a lek during lekking, nesting, and early brood-rearing (March 1 to July 15). In consultation with the State of Colorado, this TL may be adjusted based on application of the criteria below. Criteria: • Location of proposed lease activities in relation to critical GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat • An evaluation of the potential threats from proposed lease activities that may affect the local population as compared to benefits that could be accomplished through compensatory or offsite mitigation (see Section 2.6.3, Regional Mitigation) • An evaluation of the proposed lease activities, including design features, in relation to the site specific terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors. This is particularly likely in Colorado MZ 17, which has an atypical GRSG habitat featuring benches with GRSG habitat interspersed with steep ravines	**GRSG-M-FML-ST-003-Standard** – In GHMA, authorize new transmission line corridors, transmission line right-of-ways, transmission line construction, or transmission line-facility construction associated with fluid mineral leases with stipulations necessary to protect GRSG and its habitats, consistent with the terms and conditions of the permit. **GRSG-M-FML-ST-004-Standard** – Locate compressor stations on portions of a lease that are nonhabitat and are not used by GRSG, and if there would be no direct, indirect, or cumulative effects on GRSG or its habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise. **GRSG-M-FML-GL-003-Guideline** - In PHMA and GHMA, where the federal government owns the surface and the mineral estate is in non-federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities. **GRSG-M-FMO-ST-001-Standard** – In PHMA, do not authorize employee camps. **GRSG-M-FMO-ST-002-Standard** – In PHMA, when feasible, do not locate tanks or other structures that may be used as raptor perches. If this is not feasible, use perch deterrents. **GRSG-M-FMO-GL-001-Guideline** – In PHMA, closed loop systems should be used for drilling operations with no reserve pits, where feasible. **GRSG-M-FMO-GL-002-Guideline** – In PHMA and GHMA, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

BLM Management Actions	Forest Service Plan Components
To authorize an activity based on the criteria above, the environmental record of review must show no significant direct disturbance, displacement, or mortality of GRSG.	**GRSG-M-FMO-GL-003-Guideline** – In PHMA and GHMA, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include: • Increase the depth of ponds to accommodate a greater volume of water than is discharged. • Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments to reduce breeding habitat for mosquitoes. • Maintain the water level below that of rooted aquatic and upland vegetation. Avoid flooding terrestrial vegetation in flat terrain or low-lying areas. • Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated. • Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water. • Line the overflow spillway with crushed rock and construct the spillway with steep sides. • Fence pond sites to restrict access by livestock and other wild ungulates. • Remove or reinject produced water. • Treat waters with larvicides to reduce mosquito production where water occurs on the surface.
(PHMA) BLM/Forest Service should closely examine the applicability of categorical exclusions in PHMA. If extraordinary circumstances review is applicable, the BLM/Forest Service should determine whether those circumstances exist.	No similar management direction.

BLM Management Actions	Forest Service Plan Components
GRSG PHMA Notice to Lessees-54e. Within PHMA, operators would be encouraged to complete Master Development Plans in consultation with the State of Colorado, instead of single-well Applications for Permit to Drill for all but exploratory wells. (Refer to Appendix D, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations.)	Forest Service will work with the BLM to complete Master Development Plans.
(PHMA) When necessary, conduct effective mitigation in 1) GRSG PHMA or—less preferably—2) GHMA (dependent upon the area-specific ability to increase GRSG populations and in consultation with the State of Colorado).	**GRSG-GEN-ST-002-Standard** – In PHMA and GHMA, only allow new authorized land uses if the residual impacts to GRSG or its habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Greater Sage-Grouse Mitigation Strategy (Appendix G).
(PHMA) Conduct effective mitigation first within the same Colorado MZ where the impact is realized; if not possible, then conduct mitigation within the same population as the impact, or in other Colorado GRSG populations, in consultation with the State of Colorado.	**GRSG-GEN-ST-002-Standard** – In PHMA and GHMA, only allow new authorized land uses if the residual impacts to GRSG or its habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Greater Sage-Grouse Mitigation Strategy (Appendix G).
(PHMA) Allow applicants and partners to offset impacts from development and disruption with conservation easements.	**GRSG-GEN-ST-002-Standard** – In PHMA and GHMA, only allow new authorized land uses if the residual impacts to GRSG or its habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Greater Sage-Grouse Mitigation Strategy (Appendix G).

BLM Management Actions	Forest Service Plan Components
(ADH) For future actions, require a full reclamation bond specific to the site in accordance with 43 CFR 3104.2, 3104.3, and 3104.5. Ensure bonds are sufficient for costs relative to reclamation (Connelly et al. 2000a; Hagen et al. 2007) that would result in full restoration of the lands to the condition it was found prior to disturbance. Base the reclamation costs on the assumption that contractors for the BLM and Forest Service will perform the work.	**GRSG-M-FML-ST-002-Standard** – In PHMA, when facilities are no longer needed or leases are relinquished, require reclamation plans to include terms and conditions to restore habitat to desired conditions as described in Table 2.3, GRSG Seasonal Habitat Desired Conditions. **GRSG-M-FMO-GL-004-Guideline** – In PHMA and GHMA, to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.
Solid Minerals	
Objective: Manage solid mineral programs to avoid, minimize, and mitigate adverse impacts to GRSG habitat to the extent practical under the law and BLM/Forest Service jurisdiction.	**GRSG-GEN-DC-001-Desired Condition** – The landscape for GRSG encompasses large contiguous areas, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush community compositions exist, with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for GRSG. **GRSG-GEN-DC-002-Desired Condition** – Anthropogenic disturbance is focused in nonhabitat areas outside of PHMA and GHMA2. Disturbance in GHMA is limited, and there is little to no disturbance in PHMA, except for valid existing rights and existing authorized uses
Coal	
(ADH) Existing Coal Leases: During the term of the lease, encourage the lessee to voluntarily follow PDFs (Appendix I, Required Design Features, Preferred Design Features, and Suggested Design Features) to reduce and mitigate any adverse impacts to GRSG. At the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM will determine whether the lease	**GRSG-M-CML-GL-001-Guideline** – In PHMA and GHMA, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to protect and reduce threats to GRSG and its habitats to conserve, enhance, and restore habitat for long-term viability.

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application area is "unsuitable" for all or certain coal mining methods pursuant to 43 CFR 3461.5. PHMA is essential habitat for maintaining GRSG for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1). To authorize expansion of existing leases, the environmental record of review must show no significant direct disturbance, displacement, or mortality of GRSG based on these criteria: • Critical GRSG habitat areas as identified by factors, including, but not limited to, average male lek attendance and/or important seasonal habitat • An evaluation of the threats affecting the local population as compared to benefits that could be accomplished through compensatory or off-site mitigation (see Section 2.6.3, Regional Mitigation) • An evaluation of terrain and habitat features. For example, within 4 miles from a lek, local terrain features such as ridges and ravines may reduce the habitat importance and shield nearby habitat from disruptive factors.	
(PHMA) No new surface coal mine leases would be allowed in PHMA. At the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM would determine whether the lease application area is "unsuitable" for all or certain coal mining methods pursuant to 43 CFR 3461.5. PHMA is essential habitat for maintaining GRSG for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).	**GRSG-GEN-ST-001-Standard** – In PHMA, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3 percent of the total GRSG habitat within the biologically significant unit and the proposed project analysis area, regardless of ownership, and the new use will not cause exceedance of the 3 percent cap (Appendix E, Methodology for Calculating Disturbance Caps).
New Underground Coal Mine Leases would be subject to: Special Stipulations: • All surfaces disturbances will be placed more than 2 miles from active leks. • No surface disturbance on remainder of PHMA subject to the following conditions:	**GRSG-M-CMUL-ST-001-Standard** – In PHMA, do not authorize surface disturbances (e.g., appurtenant facilities) for new underground coalmines. **GRSG-M-CML-ST-001-Standard** – In PHMA, do not authorize new appurtenant surface facilities for existing underground mines unless no technical feasible alternative exists. If new appurtenant surface facilities associated with existing mine leases cannot be located

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If, after consultation with the State of Colorado, and in consideration of the following criteria, there is no significant direct disturbance, displacement, or mortality of GRSG or impact to GRSG habitat; • 3 percent disturbance cap in PHMA with disturbances limited to 1 disturbance per 640 acres density calculated by Colorado MZ and proposed project analysis area would apply to new lease activities • No new leasing in PHMA if disturbance cap exceeds 3 percent for the biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ) or 1 disturbance per 640 acres is exceeded	outside of PHMA, co-locate them with any existing disturbed areas, if possible. If co-location is not possible, then construct new facilities to minimize disturbed areas while meeting mine safety standards and requirements, as identified by MSHA mine-plan approval process, and locate the facilities in an area least harmful to GRSG habitats based on vegetation, topography, or other habitat features.
(ADH) Underground mining exemption criteria for new leases: 1. Federal lands with coal deposits that would be mined by underground mining methods shall not be assessed as unsuitable where there would be no surface coal mining operations, as defined in 43 CFR 3400.0-5(mm) of this title, on any lease, if issued. 2. Where underground mining will include surface operations and surface impacts on federal lands to which a criterion applies, the lands shall be assessed as unsuitable unless the surface management agency find that a relevant exception or exemption applies. See 43 CFR 3461.1(b). Where practicable, limit permitted disturbances as defined in Appendix H, Guidelines for Implementation, to 3 percent in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ). Where disturbance exceeds 3 percent in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ), make additional, effective mitigation necessary to offset the resulting loss of GRSG habitat.	**GRSG-GEN-ST-001-Standard** – In PHMA, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3 percent of the total GRSG habitat within the biologically significant unit and the proposed project analysis area, regardless of ownership, and the new use will not cause exceedance of the 3 percent cap (Appendix E, Methodology for Calculating Disturbance Caps).
(PHMA) See 43 CFR 3461.4 (a) and (b), Exploration. Authorized exploration activities may be conducted only if the Authorized Officer reviews any application for an exploration license on such lands to ensure that any exploration does not harm any value for which the area has been assessed as unsuitable and determines that the	**GRSG-GEN-ST-001-Standard** – In PHMA, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3 percent of the total GRSG habitat within the biologically significant unit and the proposed project analysis area, regardless of ownership, and the new use will not

BLM Management Actions	Forest Service Plan Components
exploration will not adversely affect GRSG populations due to habitat loss or disruptive activities or that the impact can be fully mitigated. Where practicable, limit permitted disturbances as defined in Appendix H, Guidelines for Implementation, to 3 percent in PHMA any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ). Where disturbance exceeds 3 percent in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ), make additional, effective mitigation necessary to offset the resulting loss of GRSG habitat.	cause exceedance of the 3 percent cap (Appendix E, Methodology for Calculating Disturbance Caps). **GRSG-GEN-ST-002-Standard** – In PHMA and GHMA, only allow new authorized land uses if the residual impacts to GRSG or its habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Greater Sage-Grouse Mitigation Strategy (Appendix G).
(PHMA) *Underground mining – lease renewals:* • Require that all surface mining appurtenant facilities for underground mining be located outside of PHMA (unless the lessee establishes that that such location is not technically feasible). • If surface mining facilities must be located in PHMA, require the facilities be located in areas of existing disturbance and to have the smallest footprint possible utilizing design strategies to minimize disturbance, such as those identified in the PDF section of this table. • Apply as conditions of lease renewal all appropriate conservation measures, PDFs, and mitigation designed to avoid or minimize impacts to GRSG. (ADH) *Surface mining – lease renewals/ readjustments:* Apply as conditions of lease renewal all appropriate conservation measures, PDFs, and mitigation designed to avoid or minimize impacts to GRSG.	**GRSG-M-CML-GL-001-Guideline** – In PHMA and GHMA, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to protect and reduce threats to GRSG and its habitats to conserve, enhance, and restore habitat for long-term viability.
(ADH) Recommend or require as appropriate during all relevant points of the coal leasing and authorization process, minimization of surface-disturbing or disrupting activities (including operations and maintenance) where needed to reduce the impacts of human activities on important seasonal GRSG habitats. Apply these measures during activity-level planning (jurisdiction is managed by the State). The Office	**GRSG-GEN-ST-002-Standard** – In PHMA and GHMA, only allow new authorized land uses if the residual impacts to GRSG or its habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be

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of Surface Mining or a delegated State Regulatory authority under the Surface Mining Control and Reclamation Act of 1977 authorizes surface-disturbing activities of active coal mining operations on federal mineral estate. The BLM/Forest Service coordinates with the Surface Mining Control and Reclamation Act of 1977 in overseeing coal leasing and permitting on federal lands. The resource recovery and protection plan for which BLM/Forest Service recommends approval to the Secretary integrates the reclamation plan recommended by the Surface Mining Control and Reclamation Act of 1977 for active coal mines on federal mineral estate. Approval of coal mining plans on lands containing leased federal coal is reserved to the Secretary of the Interior (30 CFR 740.4). BLM and Forest Service issue coal leases and exploration licenses for right of entry to promote development of minerals on federal lands. See the following in regards to BLM exploration: 43 CFR 3461.4, Exploration. States with delegated authority on federal lands from the Office of Surface Mining may have their own GRSG guidance in association with state wildlife agencies and such guidance may differ from state to state.	durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Greater Sage-Grouse Mitigation Strategy (Appendix G). **GRSG-M-LM-GL-002-Guideline** – In PHMA and GHMA, abandoned mine sites should be closed or mitigated, subject to valid or existing rights, to reduce predation of GRSG by eliminating tall structures that could provide nesting opportunities and perching sites for predators.
(ADH) (a) Assessment of any area as unsuitable for all or certain stipulated methods of coal mining operations pursuant to Section 522 of the Surface Mining Control and Reclamation Act of 1977 (30 USC 1272) and the regulations of this subpart does not prohibit exploration of such area under 43 CFR 3410 and 43 CFR 3480. 43 CFR 3461.4(a)	**GRSG-M-CMUL-ST-001-Standard** – In PHMA, do not authorize surface disturbances (e.g., appurtenant facilities) for new underground coalmines.
(ADH) (b) An application for an exploration license on any lands assessed as unsuitable for all or certain stipulated methods of coal mining shall be reviewed by the BLM/Forest Service to ensure that exploration does not harm any value for which the area has been assessed as unsuitable (43 CFR 3461.4(b))	**GRSG-M-CMUL-ST-001-Standard** – In PHMA, do not authorize surface disturbances (e.g., appurtenant facilities) for new underground coalmines.
Locatable Minerals	
(PHMA) Consider petitioning for withdrawal on a case-by-case basis from mineral entry based on risk to GRSG and its habitat from conflicting locatable mineral potential and development.	No similar action

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(PHMA) In plans of operations required prior to any proposed surface-disturbing activities include as appropriate effective mitigation for conservation in accordance with existing policy (BLM Washington Office Instruction Memorandum 2008-204).	**GRSG-M-LM-ST-001-Standard** – In PHMA, approve Plans of Operation with mitigation to protect GRSG and its habitats, consistent with the rights of the mining claimant as granted by the General Mining Act of 1872, as amended.
(PHMA) Apply seasonal restrictions if deemed necessary to prevent unnecessary or undue degradation.	**GRSG-M-LM-GL-001-Guideline** – In PHMA and GHMA to keep habitat disturbance at a minimum, a phased development approach should be applied to operations consistent with the rights granted under the General Mining Act of 1872, as amended. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.
Nonenergy Leasable Minerals	
New nonenergy mineral leases: No new nonenergy mineral leasing in PHMA. Existing nonenergy mineral leases: Apply the following conservation measures as COAs where applicable and feasible: Preclude new surface occupancy on existing leases within 1 mile of active leks (Blickley et al. 2012; Harju 2012). If the lease is entirely within 1 mile of an active lek, require any development to be placed in the area of the lease least harmful to GRSG based on vegetation, topography, or other habitat features (Appendix D, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations). Preclude new surface disturbance on existing leases within 2 miles of active leks within PHMA. If the lease is entirely within 2 miles of an active lek, require any development to be placed in the area of the lease least harmful to GRSG based on vegetation, topography, or other habitat features (Appendix D, Stipulations Applicable to Fluid Mineral Leasing and Land Use Authorizations).	**GRSG-M-NEL-GL-001-Guideline** – In PHMA and GHMA, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases, the Forest Service should provide recommendations to the Bureau of Land Management for the protection of GRSG and its habitats. **GRSG-M-NEL-GL-002-Guideline** – In PHMA and GHMA, the Forest Service should recommend to the Bureau of Land Management that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to GRSG and its habitat.

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Limit permitted disturbances to 1 disturbance per 640 acres average across the landscape in PHMA. Disturbances may not exceed 3 percent in PHMA in any biologically significant unit (Colorado populations) and proposed project analysis area (Colorado MZ). **GRSG TL-47-51** – Based on site-specific conditions, prohibit surface occupancy or disturbance within PHMA within 4 miles of a lek during lekking, nesting, and early brood-rearing (March 1 to July 15).	
Salable Mineral Materials	
(PHMA) Close PHMA to new mineral material sales. However, these areas would remain open to free use permits and the expansion of existing active pits, only if the following criteria are met: • The activity is within the biologically significant unit and the project area disturbance cap • The activity is subject to the provisions set forth in the mitigation strategy (Appendix G) • All applicable required/preferred design features are applied; and [if applicable] the activity is permissible under the regional screening criteria (Appendix H, Guidelines for Implementation).	**GRSG-M-MM-ST-001-Standard** – In PHMA, do not authorize new mineral material disposal or development. **GRSG-M-MM-ST-002-Standard** – In PHMA, free-use mineral material collection permits may be issued and expansion of existing active pits may be allowed, except from March 1 to April 30 between 6 pm and 9 am within 2 miles from the perimeter of occupied leks, if doing so is within the biologically significant unit and does not exceed the disturbance cap.
(ADH) Restore salable mineral pits no longer in use to meet GRSG habitat conservation objectives. Require reclamation/restoration of GRSG habitat as a viable long-term goal to improve the GRSG habitat (Appendix H, Guidelines for Implementation)	**GRSG-M-MM-ST-003-Standard** - In PHMA and GHMA, any existing permit for mineral material operations must include appropriate requirements for operation and reclamation of the site to restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
Mineral Split Estate	
Objective: Utilize federal authority to protect GRSG habitat on split-estate lands to the extent provided by law.	No similar management action.
(PHMA/GHMA) Where the federal government owns the mineral estate in PHMA and GHMA, and the surface is in nonfederal ownership, apply the same stipulations, COAs, and/or conservation measures and RDFs/PDFs applied if the mineral estate is developed on	No similar management action.

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BLM-administered lands in that management area, to the maximum extent permissible under existing authorities, and in coordination with the landowner.	
(PHMA/GHMA) Where the federal government owns the surface and the mineral estate is in nonfederal ownership in PHMA and GHMA, apply appropriate surface use COAs, stipulations, and mineral RDFs/PDFs through ROW grants or other surface management instruments, to the maximum extent permissible under existing authorities, in coordination with the mineral estate owner/lessee.	**GRSG-M-FML-GL-082-Guideline** - In priority and general habitat management areas, where the federal government owns the surface and the mineral estate is in non-federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.
Wildfire Suppression, Fuels Management, and Fire Rehabilitation	
Fuels Management	
Objective: Manage the fuels program to avoid GRSG habitat loss and restore damaged habitat.	**GRSG-FM-GL-003-Guideline** – In PHMA and GHMA, fuel treatments should be designed to restore, enhance, or maintain GRSG habitat. **GRSG-GRSGH-GL-004-Guideline** – To facilitate safe and effective fire management actions, in PHMA and GHMA, fuels treatments should be designed to reduce the spread and intensity of wildfire in high-risk areas (i.e., areas of increased potential for ignition and in areas where there is a potential for wildfire that would be difficult for suppression resources to contain and control). **GRSG-FM-GL-007-Guideline** – In PHMA and GHMA, prescribed fire prescriptions should minimize undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).
(PHMA) Do not reduce sagebrush canopy cover to less than 15 percent (Connelly et al. 2000a; Hagen et al. 2007) in a project area unless a vegetation management objective requires additional reduction in sagebrush cover to meet strategic protection of GRSG PHMA and conserve habitat quality for the species, in consultation with the State of Colorado.	**GRSG-GEN-DC-003-Desired Condition** – In GRSG management areas, including all seasonal habitats, 70 percent of lands capable of producing sagebrush have 10 to 30 percent sagebrush canopy cover and less than 10 percent conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet

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	meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for GRSG during this seasonal period. Specific desired conditions for GRSG based on seasonal habitat requirements are in Table 2.3, GRSG Seasonal Habitat Desired Conditions. **GRSG-GRSGH-GL-001-Guideline** – Sagebrush removal in GRSG breeding and nesting and wintering habitats should be restricted unless necessary to support attainment of desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-FM-GL-008-Guideline** – In PHMA and GHMA, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.
(PHMA) Apply appropriate seasonal restrictions for implementing vegetation management treatments according to the type of seasonal habitats present in a Colorado MZ.	**GRSG-FM-GL-001-Guideline** – In wintering or breeding and nesting habitat, sagebrush removal or manipulation, including prescribed fire, should be restricted unless the removal strategically reduces the potential impacts from wildfire.
(PHMA) Allow no treatments in known winter range unless the treatments are designed to strategically reduce wildfire risk around or in the winter range and will maintain winter range habitat quality, unless in consultation with the State of Colorado it is deemed necessary to reduce risk to life and property.	**GRSG-GRSGH-GL-001-Guideline** – Sagebrush removal in GRSG breeding and nesting and wintering habitats should be restricted unless necessary to support attainment of desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
(ADH) Do not use fire to treat sagebrush in less than 12-inch precipitation zones (e.g., Wyoming big sagebrush or other xeric sagebrush species) (Connelly et al. 2000a; Hagen et al. 2007; Beck et al. 2009). However, if as a last resort and after all other treatment opportunities have been explored, and site-specific variables allow, the use of prescribed fire or natural ignition fire for fuels breaks that would disrupt fuel continuity or enhance land health could be considered where cheatgrass is deemed a minor threat. If prescribed fire is used in GRSG habitat, the NEPA analysis for the burn plan will address:	**GRSG-FM-ST-001-Standard** – In PHMA and GHMA, do not use prescribed fire, except for pile burning, in 12-inch or less precipitation zones unless necessary to facilitate site preparation for restoration of GRSG habitat consistent with desired conditions in Table 2.3, GRSG Seasonal Habitat Desired Conditions. **GRSG-FM-ST-002-Standard** – In PHMA and GHMA, if it is necessary to use prescribed fire to facilitate site preparation for restoration of GRSG habitat consistent with desired conditions in Table 2.3, GRSG Seasonal Habitat Desired Conditions, the associated NEPA analysis must identify how GRSG desired conditions would be

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• why alternative techniques were not selected as viable options • how GRSG goals and objectives would be met by its use • how the COT report objectives would be addressed and met • a risk assessment to address how potential threats to GRSG habitat would be minimized Prescribed fire as a vegetation or fuels treatment shall only be considered after the NEPA analysis for the burn plan has addressed the four bullets outlined above. Prescribed fire could be used to meet specific fuels objectives that would protect GRSG habitat in PHMA (e.g., creating fuel breaks that would disrupt the fuel continuity across the landscape in stands where annual invasive grasses are a minor component in the understory, burning slash piles from conifer-reduction treatments, or being used as a component with other treatment methods to combat annual grasses and restore native plant communities). Prescribed fire in known winter range shall only be considered after the NEPA analysis for the burn plan has addressed the four bullets outlined above. Any prescribed fire in winter habitat would need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality.	met, why alternative techniques were not selected, and how potential threats to GRSG habitat would be minimized. **GRSG-FM-GL-001-Guideline** – In wintering or breeding and nesting habitat, sagebrush removal or manipulation, including prescribed fire, should be restricted unless the removal strategically reduces the potential impacts from wildfire. **GRSG-FM-GL-003-Guideline** – In PHMA and GHMA, fuel treatments should be designed to restore, enhance, or maintain GRSG habitat.
(ADH) Monitor and control invasive vegetation post treatment.	**GRSG-FM-GL-002-Guideline** – In PHMA and GHMA, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives. **GRSG-FM-GL-009-Guideline** – In PHMA and GHMA, all fire-associated vehicles and equipment should be power-washed before entering and exiting the area to minimize the introduction of undesirable invasive plant species.
(ADH) Rest treated areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (Wyoming Game and Fish Department 2011).	Direction will be included in the Record of Decision.

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(ADH) Require use of native plant seeds for vegetation treatments based on availability, adaptation (site potential), probability for success (Richards et al. 1998), and the vegetation management objectives for the area covered by the treatment. Where probability of success or native seed availability is low, use species that meet soil stability and hydrologic function objectives as well as vegetation and GRSG habitat objectives (Pyke 2011).	**GRSG-FM-GL-002-Guideline** – In PHMA and GHMA, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives.
(PHMA) Design post fuels management to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse and burro, travel management, and other uses, to achieve and maintain the desired condition of ESR projects to benefit GRSG (Eiswerth and Shonkwiler 2006).	**GRSG-FM-GL-045-Guideline** – In priority and general habitat management areas, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives, if analysis demonstrated that non-native plants will not damage greater sage-grouse habitat in the long-term. **GRSG-GRSGH-GL-031-Guideline** - In priority and general habitat management areas, native plant species should be used, when possible, to restore, enhance, or maintain desired conditions (table 1).
(ADH) Design vegetation treatments in GRSG habitats to strategically facilitate firefighter safety, reduce wildfire threats, and extreme fire behavior. This may involve spatially arranging new vegetation treatments with past treatments, vegetation with fire-resistant serial stages, natural barriers, and roads in order to constrain fire spread and growth. This may require vegetation treatments to be implemented in a more linear versus block design (Launchbaugh et al. 2007).	**GRSG-GRSGH-GL-004-Guideline** – To facilitate safe and effective fire management actions, in PHMA and GHMA, fuels treatments should be designed to reduce the spread and intensity of wildfire in high-risk areas (i.e., areas of increased potential for ignition and in areas where there is a potential for wildfire that would be difficult for suppression resources to contain and control).
(PHMA) During fuels management project design, consider the utility of using livestock to strategically reduce fine fuels (Diamond at al. 2009), and implement grazing management that will accomplish this objective (Davies et al. 2011; Launchbaugh et al 2007). Consult with ecologists to minimize impacts to native perennial grasses consistent with the objectives and conservation measures of the grazing section.	No similar management direction.
Fire Operations	
Objective: Manage fire to maintain and enhance large blocks of contiguous sagebrush.	**GRSG-GEN-DC-001-Desired Condition** – The landscape for GRSG encompasses large contiguous areas, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life

BLM Management Actions	Forest Service Plan Components
	requirements. Within these landscapes, a variety of sagebrush community compositions exist, with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for GRSG.
(PHMA) Prioritize suppression immediately after firefighter and public safety. Consider GRSG habitat requirements commensurate with all resource values at risk managed by the BLM and Forest Service. See Appendix O, Greater Sage-Grouse Wildfire and Invasive Species Habitat Assessment.	**GRSG-FM-GL-013-Guideline** – On critical fire weather days, available fire suppression resources should be pre-positioned to optimize a quick and efficient response into PHMA and GHMA. **GRSG-FM-GL-014-Guideline** – During periods of multiple fires, line officers should be involved in setting priorities to help protect PHMA and GHMA.
(GHMA) Prioritize suppression immediately after firefighter and public safety. Consider GRSG habitat requirements commensurate with all resource values at risk managed by the BLM and Forest Service. See Appendix O, Greater Sage-Grouse Wildfire and Invasive Species Habitat Assessment.	**GRSG-FM-GL-006-Guideline** – In PHMA and GHMA, burnout operation areas should be avoided by constructing direct fire lines, whenever safe and practical to do so, to improve suppression effectiveness and minimize loss of existing sagebrush habitat as determined by fireline leadership, incident commanders, etc.
(PHMA/GHMA) Temporary closures would be considered in accordance with 43 CFR subparts 8364, 8351, 6302 and 8341.	Standard operating procedure.
Required design feature.	**GRSG-FM-GL-005-Guideline** – In PHMA and GHMA, cross-country vehicle travel during fire operations should be restricted, whenever safe and practical to do so as determined by fireline leadership, incident commanders, etc. **GRSG-FM-GL-010-Guideline** – Unit-specific GRSG fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed. **GRSG-FM-GL-011-Guideline** – Localized maps of PHMA and GHMA should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.

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	GRSG-FM-GL-012-Guideline – In or near PHMA and GHMA, a GRSG resource advisor should be assigned to all extended attack fires. **GRSG-FM-GL-013-Guideline** – On critical fire weather days, available fire suppression resources should be pre-positioned to optimize a quick and efficient response into PHMA and GHMA. **GRSG-FM-GL-014-Guideline** – During periods of multiple fires, line officers should be involved in setting priorities to help protect PHMA and GHMA. **GRSG-FM-GL-015-Guideline** – In PHMA and GHMA, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage. **GRSG-FM-GL-016-Guideline** – In PHMA and GHMA, to minimize sagebrush loss, mop□up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available resources allows.
Emergency Stabilization and Rehabilitation (ESR)	
Objective: Use ESR to address post-wildfire threats to GRSG habitat.	No similar management direction.
(ADH) Require use of native plant seeds that are beneficial for GRSG for vegetation treatments based on availability, adaptation (site potential), probability for success (Richards et al. 1998), and the vegetation management objectives for the area covered by the treatment. Where attempts to use native seeds have failed, or native seed availability is low, use species that meet soil stability and hydrologic function objectives, as well as vegetation and GRSG habitat objectives (Pyke 2011).	**GRSG-GRSGH-GL-031-Guideline** - In priority and general habitat management areas, native plant species should be used, when possible, to restore, enhance, or maintain desired conditions (table 1). **GRSG-FM-GL-002-Guideline** – In PHMA and GHMA, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives.
(ADH) Design post-fire ESR and Burn Area Emergency Rehabilitation management to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse and burro, travel management, and other uses to achieve and maintain the desired condition of ESR and Burn	**GRSG-FM-GL-003-Guideline** – In PHMA and GHMA, fuel treatments should be designed to restore, enhance, or maintain GRSG habitat.

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Area Emergency Rehabilitation projects to benefit GRSG (Eiswerth and Shonkwiler 2006).	
(ADH) Rest burned areas from grazing for two full growing seasons unless vegetation recovery dictates otherwise (Wyoming Game and Fish Department 2011).	Direction will be included in the Record of Decision.
Habitat Restoration	
Objective: (1) Use habitat restoration as a tool to create and/or maintain landscapes that benefit GRSG; (2) Use Integrated Vegetation Management to control, suppress, and eradicate, where possible, noxious and invasive species per BLM Handbook H-1740-2; and (3) In PHMA, the desired condition is to maintain a minimum of 70 percent of lands capable of producing sagebrush with 10 to 30 percent sagebrush canopy cover. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Technical Reference 1734-6).	**GRSG-GEN-DC-003-Desired Condition** – In GRSG management areas, including all seasonal habitats, 70 percent of lands capable of producing sagebrush have 10 to 30 percent sagebrush canopy cover and less than 10 percent conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for GRSG during this seasonal period. Specific desired conditions for GRSG based on seasonal habitat requirements are in Table 2.3, GRSG Seasonal Habitat Desired Conditions. **GRSG-GRSGH-GL-003-Guideline** – In PHMA and GHMA, actions and authorizations should include design features to limit the spread and effect of undesirable non-native plant species.
(ADH) When planning restoration treatments in GRSG habitat, identify seasonal habitat availability, and prioritize treatments in areas that are thought to be limiting GRSG distribution and/or abundance, in accordance with the Prioritization section of the narrative for Alternative D. The habitat objectives for GRSG (Table 2.3, GRSG Seasonal Habitat Desired Conditions) are a list of indicators and values that describe GRSG seasonal habitat conditions. The values for the indicators were derived using a synthesis of current local and regional GRSG habitat research and data and reflect variability of ecological sites. The habitat	**GRSG-GRSGH-ST-001-Standard** – Design habitat restoration projects to move towards desired conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-006-Guideline** – In PHMA, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).

BLM Management Actions	Forest Service Plan Components
cover indicators are consistent with existing indicators used by the BLM. When determining if a site is meeting habitat objectives, the measurements from that particular site would be assessed based on the range of values for the indicators in Table 2.3. Table 2.3 is one component of GRSG multi-scale habitat assessment (see Appendix F, Greater Sage-Grouse Monitoring Framework). The results of the habitat assessment would be used during the land health evaluation to ascertain if the land health standard applicable to GRSG habitat (e.g., special status species habitat standard) is being met. When authorizing activities in GRSG habitat, the BLM would consider if habitat objectives are being achieved. If the habitat objectives are not being achieved, and the site has the potential for achieving these objectives, the BLM would determine the causal factor(s) and make the necessary management adjustments to address the causal factor(s), following current BLM regulations and policy.	
(PHMA) Include GRSG habitat parameters as defined by Connelly et al. (2000b), Hagen et al. (2007), or, if available, state GRSG conservation plans and appropriate local information in habitat restoration objectives. Make meeting these objectives within GRSG PHMA areas a high restoration priority.	**GRSG-GRSGH-GL-001-Guideline** – Sagebrush removal in GRSG breeding and nesting and wintering habitats should be restricted unless necessary to support attainment of desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-006-Guideline** – In PHMA, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
(ADH) Require use of native plant seeds that are beneficial for GRSG for vegetation treatments based on availability, adaptation (site potential), probability for success (Richards et al. 1998), and the vegetation management objectives for the area covered by the treatment. Where probability of success or native seed availability is low, use species that meet soil stability and hydrologic function objectives as well as vegetation and GRSG habitat objectives (Pyke 2011).	**GRSG-GRSGH-GL-003-Guideline** – In PHMA and GHMA, actions and authorizations should include design features to limit the spread and effect of undesirable non-native plant species. **GRSG-GRSGH-GL-005-Guideline** – In PHMA and GHMA, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).

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(PHMA) Design post restoration management to ensure long-term persistence of seeded or pre-burn native plants. This may require temporary or long-term changes in livestock grazing, wild horse and burro, travel management, and other uses, to achieve and maintain the desired condition of ESR projects to benefit GRSG (Eiswerth and Shonkwiler 2006).	**GRSG-GRSGH-GL-005-Guideline** – In PHMA and GHMA, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-006-Guideline** – In PHMA, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
(ADH) Manage for a habitat objective that is primarily sagebrush with a mosaic of seral stages and sagebrush in all age classes. On a site-by-site basis, do not allow treatments that would adversely affect GRSG populations. Remove conifers encroaching into sagebrush habitats. Prioritize treatments closest to occupied GRSG habitats and near occupied leks, and where juniper encroachment is phase 1 or phase 2. Use of site-specific analysis and principles like those included in the Fire and Invasives Assessment Team report (Chambers et. al., 2014) and other ongoing modeling efforts to address conifer encroachment will help refine the location for specific priority areas to be treated. See Appendix H, Guidelines for Implementation.	**GRSG-GRSGH-ST-001-Standard** – Design habitat restoration projects to move towards desired conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-001-Guideline** – Sagebrush removal in GRSG breeding and nesting and wintering habitats should be restricted unless necessary to support attainment of desired habitat conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions). **GRSG-GRSGH-GL-002-Guideline** – When removing conifers that are encroaching into GRSG habitat, avoid persistent woodlands (old growth relative to the site or more than 100 years old).
(ADH) Make reestablishment of sagebrush and desirable understory plant cover (relative to ecological site potential) the highest priority for restoration efforts. Consider GRSG habitat requirements in conjunction with all resource values managed by the BLM/Forest Service, and give preference to GRSG habitat unless site-specific circumstances warrant an exemption.	**GRSG-GRSGH-ST-001-Standard** – Design habitat restoration projects to move towards desired conditions (Table 2.3, GRSG Seasonal Habitat Desired Conditions).
(ADH) Authorize local sagebrush seed collection to support local restoration efforts.	No similar management direction.
Adaptive Management	
The hard trigger is intentionally set at or below the normal range of variation to provide a threshold of last resort should either chronic degradation or a catastrophic 2. Proposed Action and Alternatives 2-	**GRSG-AM-ST-001-Standard** – If a hard trigger is identified, immediate action is necessary to stop a severe deviation from GRSG conservation objectives. The hard trigger response will be an entire

BLM Management Actions	Forest Service Plan Components
46 Northwest Colorado Greater Sage-Grouse Proposed LUPA/Final EIS June 2015 event occur. The hard trigger is not intended to be an on-again/off-again toggle that would be exceeded periodically throughout the life of the LUPA. Colorado GRSG occur in six distinct populations. Two of these populations (Northwest Colorado and North Park) account for about 88 percent of the males in Colorado. Northwest Colorado includes Colorado MZs 1 through 10. North Park includes Colorado MZ 11. The remaining four populations are smaller by an order of magnitude, and, even in the aggregate, do not provide the significant numbers of GRSG necessary to contribute meaningfully to the hard trigger, and, in some cases, lack the long-term population trend information necessary to support trigger implementation. All six populations are important to GRSG conservation in Colorado; however, only the Northwest Colorado and North Park populations are large enough to reliably indicate the level of severe decline intended by this hard trigger. While the hard triggers focus on the two largest populations, all six populations should be rigorously managed via the soft triggers. If soft triggers work as intended, a hard trigger should never be breached.	restrictive alternative, or one or more appropriate components of a more restrictive alternative, such as the immediate cessation of authorizing land use authorizations. An interagency team will conduct an assessment to determine the causal factor(s) and recommend corrective strategies.
Soft triggers represent an intermediate threshold indicating that management changes are needed at the LUPA implementation level to address habitat or population losses. If a soft trigger is tripped, the BLM/Forest Service would change management to a more conservative or restrictive implementation conservation measure to mitigate for the specific causal factor in the decline of populations and/or habitats, with consideration of local knowledge and conditions. These adjustments should be made to preclude tripping a "hard" trigger (which signals more severe habitat loss or population declines). During implementation of this LUPA, population trends would be monitored by the Northwest Colorado Sage-Grouse Statewide Implementation Team, which would be made up of existing local population GRSG working groups (e.g., Northwest Colorado, Parachute-Piceance-Roan, Middle Park, and North Park), BLM/Forest Service biologists, and CPW biologists. This group would meet annually and would evaluate the	**GRSG-AM-ST-002-Standard** – If a soft trigger is identified, apply more conservative or restrictive implementation measures (e.g., extending seasonal restrictions for seasonal surface disturbing activities, modifying seasons of use for livestock grazing, and applying additional restrictions on discretionary activities) for the specific causal factor in the decline of populations and/or habitats, with consideration of local knowledge and conditions.

BLM Management Actions	Forest Service Plan Components
health of each population and make recommendations to the BLM/Forest Service on any changes to fine site management. This statewide implementation team would also evaluate the effects to GRSG habitat and populations due to BLM/Forest Service permitted activities throughout the previous year(s) and make recommendations for changes in management or locations that should be avoided, for example. This group would also evaluate the effectiveness of mitigation and make recommendations on alternative mitigation strategies and locations, such as the Colorado Habitat Exchange. This team would also evaluate important locations each year, such as lek sites. 2. Proposed Action and Alternatives June 2015 Northwest Colorado Greater Sage-Grouse Proposed LUPA/Final EIS 2-45 Restrictive management prescriptions would help ensure a greater degree of certainty of effectiveness in ameliorating a targeted threat so that there is less of a need to prescribe a detailed adaptive management decision strategy within the Proposed LUPA to demonstrate certainty of effectiveness. The Northwest Colorado LUPA includes conditions under which activities could be permitted in GRSG habitat and criteria for granting exceptions, modifications, or waivers for lease stipulations. Soft triggers for restrictive management actions would include evaluation of the effectiveness of the minimization, mitigation, and location of permitted activities in the context of the PAC.	

Table 2.3
Seasonal Habitat Desired Conditions for Greater Sage-grouse

Attribute	Indicators	Desired Condition
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1-June 15) Apply 4 miles from active leks. [4]		
Lek Security	Proximity of trees [5]	Trees or other tall structures are none to uncommon within 1.86 miles of leks [6,7]
	Proximity of sagebrush to leks [6]	Adjacent protective sagebrush cover within 328 feet of lek [6]
Cover	Seasonal habitat extent [7] (Percent of seasonal habitat meeting desired conditions.)	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [6,7,8]	15 to 25%
	Sagebrush height [7]	
	Arid sites [6,7,9]	12 to 32 inches
	Mesic sites [6,7,10]	16 to 32 inches
	Predominant sagebrush shape [6]	>50% in spreading [11]
	Perennial grass canopy cover [6,7]	
	Arid sites[7,9]	≥10%
	Mesic sites [710]	≥15%
	Perennial grass height [6,7,8]	Provide overhead and lateral concealment from predators [7, 15]
	Perennial forb canopy cover [6,7,8]	
	Arid sites [9]	≥5%[6,7]
	Mesic sites [10]	≥10%[6,7]
BROOD-REARING/SUMMER[1] (Seasonal Use Period June 16-October 31)		
Cover	Seasonal habitat extent [7] (Percent of seasonal habitat meeting desired conditions.)	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [6,7,8]	10 to 25%
	Sagebrush height [7,8]	16 to 32 inches
	Perennial grass canopy cover and forbs [7,8]	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition [12]
	Upland and riparian perennial forb availability[6,7]	Preferred forbs are common with several preferred species present [13]

Table 2.3
Seasonal Habitat Desired Conditions for Greater Sage-grouse

Attribute	Indicators	Desired Condition
WINTER[1] (Seasonal Use Period November 1-February 28)		
Cover and Food	Seasonal habitat extent [6,7,8] (Percent of seasonal habitat meeting desired conditions.)	>80% of the winter habitat
	Sagebrush canopy cover above snow [6,7,8]	>10%
	Sagebrush height above snow [6,7,8]	>10 inches [14]

[1]Seasonal dates can be adjusted; that is, start and end dates may be shifted either earlier or later, but the amount of days cannot be shortened or lengthened by the local unit.
[2] Doherty, K. 2008. *Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts*. University of Montana. Missoula, MT.
[3] Holloran and Anderson. 2005. *Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats*. Condor 107:742-752.
[4] Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 4 miles is not appropriate.
[5] Baruch-Mordo, S. J.S. Evans, J.P Severson, D.E. Naugle, J. D. Maestas, J.M. Kiesecker, M.J. Falkowski. C.A. Hagen, and K.P. Reese. . 2013. *Saving sage-grouse from trees*: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167: 233-241.
[6] Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl, eds. [In press]. Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool. Technical Reference 6710-1. Bureau of Land Management and Western Association of Fish and Wildlife Agencies, Denver, Colorado.
[7] Connelly, J. M. A. Schroweder, A.R. Sands, and C.E. Braun.2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28 (4): 967-985.
[8] Connelly, J. K. Reese, and M. Schroder. 2003. *Monitoring of Greater sage-grouse habitats and populations*. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.
[9] 10–12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (Stiver et al. 2015).
[10] ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (Stiver et al. 2015).
[11] Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (Stiver et al. 2015).
[12] Existing land management plan desired conditions for riparian areas/wet meadows (spring seeps) may be used in place of properly functioning conditions, if appropriate for meeting greater sage-grouse habitat requirements.
[13] Preferred forbs are listed in Table III-2 (Stiver et al. 2015). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2.
[14] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands.
[15]Projects will be designed to provide overhead and lateral concealment of nests on a site specific basis.

Table 2.5
Grazing Guidelines for Greater Sage-grouse Seasonal Habitat

Seasonal Habitat	Grazing Guidelines
Breeding and nesting [1] within 4 miles of occupied leks	Perennial grass height: [2] When grazing occurs during breeding and nesting season (March 1 to June 15) manage for upland perennial grass height of 7 inches [3,4,5] When grazing occurs post breeding and nesting season (June 16 to October 30) manage for 4 inches [4,5,6] of perennial grass height.
Brood rearing and summer [1]	Retain an average stubble height of 4 inches for herbaceous riparian/mesic meadow vegetation [7,8]
Winter [1]	≤35% use of sagebrush utilization of sagebrush

[1] For descriptions of Seasonal Habitat and Seasonal Periods of greater sage-grouse see table 1.
[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.
[3] Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming*.
[4] Average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly et al., 2000).
[5] Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. *A meta-analysis of greater sage-grouse Centrocercus urophasianus nesting and brood-rearing habitats*. Wildlife Biology 13(1): 42-50.
[6] Stubble height to be measured at the end of the growing season.
[7] In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5–15 cm vs. 30–50 cm; Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing (Neel 1980, Evans 1986); moderate use equates to a 10-cm residual stubble height for most grasses and sedges and 5-cm for Kentucky bluegrass (Mosley et al. 1997, Clary and Leininger 2000) (Crawford et al. 2004. Ecology and Management of sage-grouse grouse habitat).
[8] Stubble height to be measured in the meadow areas used by greater sage-grouse for brood-rearing (not on the hydric greenline).