

Utah

Greater Sage-Grouse

Draft

Land Use Plan Amendment and Environmental Impact Statement

Volume III: Appendices A - F

US Department of the Interior
Bureau of Land Management

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Forest Service

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Forest Service

BLM



The Bureau of Land Management's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

The Forest Service mission is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.

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Appendix B

Draft Forest Service Standards and Guidelines for
the GRSG Amendment to the LRMPs in Utah for
the Preferred Alternative – Alternative D

APPENDIX B

DRAFT FOREST SERVICE STANDARDS AND GUIDELINES FOR THE GRSG AMENDMENT TO THE LRMPs IN UTAH FOR THE PREFERRED ALTERNATIVE – ALTERNATIVE D

MA-GRSG-1 - IDENTIFICATION OF PPMA AND PGMA STANDARD

Identify PPMAs and PGMAs as shown on Map 2.3.

MA-GRSG-4 - ANTHROPOGENIC DISTURBANCE STANDARD

Protect PPMAs from fragmentation by anthropogenic disturbances that will reduce distribution or abundance of GRSG by managing PPMAs so that discrete anthropogenic disturbances cover less than 5 percent of the area within the PPMA used by a population of GRSG, regardless of ownership.

MA-GRSG-5 - SEASONAL RESTRICTIONS STANDARD

Do not allow discrete anthropogenic disturbances or activities disruptive to GRSG (including scheduled maintenance activities) within PPMAs and PGMAs in seasonal GRSG habitats during the corresponding seasonal use periods (Map 3.2-3):

- In breeding and nesting habitat from Feb 15 – Jun 15
- In brood rearing habitat from Apr 15 – Jul 15
- In winter habitat from Nov 15 – Mar 15

Exceptions to the seasonal restrictions could be granted by the Authorized Officer under the following conditions:

- if surveys determine that the lek is not active that year (based on UDWR lek survey protocol), and the proposed activity will not result in a permanent disturbance in PPMA and will not take place beyond the season being excepted;

- if surveys determine that the lek is no longer occupied, and the proposed activity will not take place beyond the season being excepted;
- if the project plan and NEPA document demonstrate the project would not impair the function of seasonal habitat, life-history, or behavioral needs of GRSG;
- if the potential short-term impacts from vegetation treatment are off-set by long-term improvement to the quantity or quality of habitat (e.g., seedings, juniper reduction).

Additionally, the Authorized Officer may modify the seasonal restrictions under the following conditions:

- if portions of the area do not include habitat (lacking the principle habitat components of GRSG habitat) or are outside the current defined area, as determined by the BLM/ Forest Service in discussion with the State of Utah, and indirect impacts would be mitigated;
- if documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter) reflect a need to change the given dates in order to better protect when GRSG use a given area, and the proposed activity will not take place beyond the season being excepted.

Application of the above use restrictions and meeting objectives within PGMAs may be waived by the Authorized Officer if off-site mitigation is successfully completed in PPMAs, following discussion with BLM/Forest Service and the State of Utah. Even in situations where use restrictions are waived in PGMAs, to avoid direct disturbance and/or mortality of birds, disturbances would not be approved during the sensitive seasons.

MA-GRSG-5B - NOISE RESTRICTION STANDARD

Do not allow activities within PPMAs and PGMAs that create noise at occupied leks that exceeds 10 decibels above ambient sound levels from two hours before to two hours after sunrise and sunset during breeding season.

MA-GRSG-5C - STRUCTURE RESTRICTION STANDARD

Do not allow permanent tall structures in PPMAs and PGMAs (structures that persist through subsequent breeding season).

MA-GRSG-8 - DISTURBANCE LOCATION RESTRICTION STANDARD

Do not authorize discrete anthropogenic disturbances in areas that have been previously treated with the intent of improving or creating new GRSG habitat.

MA-LAR-2A - LOCATION RESTRICTION STANDARD FOR ABOVE-GROUND LINEAR ROWs/SUAs (E.G., TRANSMISSION LINES, DISTRIBUTION LINES, TELEPHONE LINES)

PPMAs within 4 miles of an occupied lek, if the lek is located within a PPMA, would be designated as an exclusion area for new above-ground linear ROWs/SUAs, unless there is a designated corridor present.

PPMAs beyond 4 miles of an occupied lek, if the lek is located within a PPMA, would be designated as an avoidance area for new above-ground linear ROWs/SUAs. Development within the avoidance areas could occur if:

- the GRSG population trend within the disturbance calculation area is stable;
- the development meets noise restrictions;
- the development meets tall structure restrictions;
- the development does not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter);
- mitigation is implemented to offset impacts to GRSG and their habitats (see mitigation decision in the GRSG section); and
- the development does not exceed the 5 percent disturbance limit.

Areas outside PPMAs but within 1 mile of an occupied lek, if the lek is located within a PPMA would be designated as an exclusion area for new above-ground linear ROWs/SUAs.

Areas outside PPMAs and between 1 and 4 miles of an occupied lek, if the lek is located within a PPMA, would require surveys for GRSG habitat in areas that ecologically could provide GRSG habitat. If the area is determined to provide habitat that contributes to GRSG life-cycle, the area would be designated as an exclusion area. If inventories do not identify GRSG habitat, the area would be designated as an avoidance area (to address indirect impacts) for new ROWs/SUAs. Development within the avoidance areas could occur if:

- the development meets noise restrictions; and
- the development meets tall structure restrictions.

See Maps 2.10 and 2.11.

MA-LAR-2B - LOCATION RESTRICTION STANDARD FOR ABOVE-GROUND SITE-TYPE ROWs/SUAs (NOT WIND/SOLAR) (E.G., COMMUNICATION TOWERS, CELL TOWERS)

Areas outside PPMAs but within 1 mile of an occupied lek that is located within a PPMA would be designated as an exclusion area for new above-ground site-type ROWs/SUAs (excluding wind or solar).

PPMAs beyond 1 mile of an occupied lek, if the lek is located within a PPMA, would be designated as an avoidance area for new above-ground site-type ROWs/SUAs. Development within the avoidance areas could occur if:

- the development meets noise restrictions;
- the development meets tall structure restrictions;
- the development does not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter);

- mitigation is implemented to offset impacts to GRSG and their habitats (see mitigation decision in the GRSG section); and
- the development does not exceed the 5 percent disturbance limit.

Exceptions to the avoidance area could be granted by the Authorized Officer if the new ROW/SUA were constructed entirely within the footprint of an existing site-type ROW/SUA or an existing designated communication site, if the new development meets noise restrictions, and if the development does not occur during sensitive seasonal periods.

See Maps 2.10 and 2.11.

MA-LAR-2C - LOCATION RESTRICTION STANDARD FOR UNDERGROUND/ON-GROUND ROWs/SUAs (E.G., BURIED AND SURFACE PIPELINES, ROADS)

PPMAs would be designated as an avoidance area for new permanent underground and on-ground linear ROWs/SUAs. Development within the avoidance areas could occur if:

- the GRSG population trend within the disturbance calculation area is stable;
- the long-term development meets noise restrictions;
- there are no above ground structures or operational facilities associated with the ROW/SUA;
- the construction of the development does not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter);
- mitigation is implemented to offset impacts to GRSG and their habitats (see mitigation decision in the GRSG section); and
- the surface disturbance from the development does not exceed the 5 percent disturbance limit.

See Maps 2.10 and 2.11.

MA-LAR-7 - ROW, EASEMENT, AND LANDS SPECIAL USE AUTHORIZATION LOCATION RESTRICTION STANDARD

PGMAs within 1 mile of an occupied lek, if the lek is located within a PGMA, would be designated as an avoidance area for new ROWs (Maps 2.10, 2.11, and 2.12). Development within the avoidance areas could occur if:

- the development (during construction and after) meets noise restrictions;
- the structures remaining after development meet tall structure restrictions;
- mitigation is implemented to offset impacts to GRSG and their habitats (see mitigation decision in the GRSG section); and
- the development does not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter).

PGMAs within and beyond the 1.0 mile avoidance area would require discussion with the State of Utah during project implementation, and implementation of BMPs (e.g., anti-perch devices for raptors, etc.).

The avoidance area could be waived, except for the seasonal restrictions, if off-site mitigation coordinated with BLM/Forest Service and the State of Utah is successfully completed in PPMAs.

MA-LAR-13 - WIND ENERGY DEVELOPMENT LOCATION RESTRICTION STANDARD

Do not allow wind energy development in PPMAs (Map 2.25) or in areas outside PPMAs but within 1.0 mile of an occupied lek, if the lek is located within a PPMA. Avoid allowing wind energy development outside PPMAs but within 4 miles of an occupied lek located within a PPMA (not including the 1.0 mile exclusion). Development within the avoidance areas can occur if:

- the development meets noise restrictions; and
- the development meets tall structure restrictions;

Do not allow wind energy development within 1.0 mile of an occupied lek located in PGMA, whether mapped occupied GRSG habitat or not. The exclusion could be waived outside of PGMA if applicable seasonal restrictions are implemented (breeding and nesting, brood rearing, winter) and if off-site mitigation coordinated with BLM/Forest Service and the State of Utah is successfully completed in PPMAs.

Development within PGMAs beyond the 1.0 mile exclusion area would require discussion with the State of Utah during project implementation, and implementation of BMPs, including potential off-site mitigation in PPMAs.

MA-VEG-9 - SAGEBRUSH HABITAT GUIDELINE

Manage GRSG seasonal habitats to meet guidelines for desired cover percentages and heights for sagebrush, grasses, and forbs described in scientific literature (e.g., Connelly et al. 2000, Hagen et al. 2007), where such standards can be met. Adjustments from the guidelines may be made, but must be based on documented regional variation of habitat characteristics (e.g., sagebrush type, ecological site potential), quantitative data from population and habitat monitoring, and evaluation of local research.

MA-FIRE-3 - FUELS MANAGEMENT TIMING RESTRICTION STANDARD

Apply seasonal restrictions for implementing fuels management treatments according to the type of seasonal habitats present.

MA-MIN-2 - GEOPHYSICAL EXPLORATION TIMING RESTRICTION STANDARD

Apply seasonal restrictions geophysical exploration that preclude activities in breeding, nesting, brood rearing and winter habitats during their season of use by GRSG.

MA-MIN-3 - NON-ENERGY LEASABLE MINERALS CONSTRUCTION AND OPERATION RESTRICTION STANDARD

Close PPMAs to new leasing or lease modification of surface non-energy leasable minerals. This includes not issuing or modifying leases to expand existing mines that would result in surface mining. Apply use stipulations to new or modified leases in areas outside PPMAs and within 4

miles of an occupied lek located within a PPMA (see Map 2.29.) Development within these areas could occur if:

- the development meets noise restrictions both during development and after development; and
- the structures remaining after development meet tall structure restrictions.

Require the following stipulations, as applicable, as part of any new mining leases or lease modification for underground non-energy mines:

- Appurtenant facilities would not be placed within PPMAs, where technically feasible.
- If placement of facilities outside of PPMAs is not technically feasible while still protecting GRSG habitat, surface disturbances associated with the lease can be allowed if they meet the following criteria:
 - No surface facilities (e.g., mine entrances, vent shafts, etc.) would be located within 1 mile of an occupied lek that is located within a PPMA.
 - The long-term development must meet noise restrictions, including from supporting traffic along roads;
 - Restrictions on permanent tall structures are required to minimize increases in predation and area avoidance by GRSG;
 - Construction of the development must not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter); avoidance periods and necessary mitigation may be dependent on site specific conditions and noise levels;
 - Surface disturbance from the development must not exceed the 5 percent disturbance limit; and
 - Additional mitigation methods applicable to the specific project are conducted, including off-site mitigation.

In PGMAs, minimize surface-disturbing or disrupting activities (including operations and maintenance) where needed to reduce the impacts of human activities on GRSG habitats. Use additional, onsite or off-site mitigation to offset impacts as technically appropriate (determined by local options/needs). Determine which measures are needed to protect PGMAs during activity level planning, which may include applying the criteria identified for PPMAs. These restrictions in PGMA may be waived if off-site mitigation coordinated with BLM/Forest Service and the State of Utah is successfully completed in PPMAs.

MA-MIN-5 - NON-ENERGY LEASABLE MINERALS PROSPECTING RESTRICTION STANDARD

Require prospecting activities associated with non-energy leasable minerals to comply to the following criteria within PPMAs:

- Surface disturbance from the activity must not exceed the 5 percent disturbance limit;

- The non-casual use activity must not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter);
- Any facilities associated with prospecting activities must be removed before the next breeding season; and
- Any disturbances must be reclaimed.

MA-MIN-7 - SURFACE COAL MINING LEASE STIPULATIONS STANDARD:

Require the following stipulations as part of any new surface coal mining leases or lease modifications:

- new disturbance associated with the development must not result in total disturbance exceeding the 5 percent disturbance limit.
- the development must meet noise restrictions;
- the development must meet tall structure restrictions;
- initial activity within the development must not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter);
- where possible, the development must be located adjacent to the footprint of existing disturbances; and
- extraction or crushing operations must not occur in GRSG habitat during seasonal restriction times; however, removal of material from existing stockpiles would be allowed.

Require the following stipulations, as applicable, as part of any new underground coal mining leases or lease modifications:

- Appurtenant facilities must not be placed within PPMAs, where technically feasible.
- If placement of facilities outside of PPMAs is not technically feasible while still protecting GRSG habitat, surface disturbances associated with the lease must meet the following criteria:
 - No surface facilities (e.g., mine entrances, vent shafts, etc.) would be located within 1 mile of an occupied lek that is located within a PPMA.
 - the long-term development must meet noise restrictions, including from supporting traffic along roads;
 - restrictions on permanent tall structures are required to minimize increases in predation and area avoidance by GRSG;
 - the construction of the development must not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter); avoidance periods and necessary mitigation may be dependent on site specific conditions and noise levels;
 - Surface disturbance from the development must not exceed the 5 percent disturbance limit; and

- Additional mitigation methods applicable to the specific project must be conducted, including off-site mitigation.

In PGMAs, minimize surface-disturbing or disrupting activities (including operations and maintenance) related to underground coal mining where needed to reduce the impacts of human activities on GRSG habitats. Use additional, onsite or off-site mitigation to offset impacts as technically appropriate (determined by local options/needs). Determine which measures are needed to protect PGMAs during activity level planning, which may include applying the criteria identified for PPMAs. These restrictions may be waived if off-site mitigation coordinated with BLM/Forest Service and the State of Utah is successfully completed in PPMAs.

MA-MIN-10 - COAL LEASE PROSPECTING RESTRICTION STANDARD

Within PPMAs, require exploration activities needed to meet data adequacy standards associated with potential coal leasing to comply to the following criteria:

- Surface disturbance from the activity must not exceed the 5 percent disturbance limit;
- The activity must not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter);
- Any facilities associated with prospecting activities must be removed before the next breeding season; and
- Any disturbances must be reclaimed.

MA-MIN-11 - COAL MINE OPERATIONS ON EXISTING LEASES GUIDELINE

In PPMAs, avoid approving any new appurtenant facilities related to underground coal mining on existing leases. Where new appurtenant facilities associated with the existing lease cannot be located outside the PPMA, co-locate new facilities within existing disturbed areas. If this is not possible, then build any new appurtenant facilities to the absolute minimum standard necessary.

In PGMAs, apply 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. Use additional, effective mitigation to offset impacts as appropriate (determined by local options/needs).

MA-MIN-13 - LOCATABLE MINERALS STANDARD

To the extent allowable by law, work with claimants to apply the seasonal restrictions and use restrictions for PPMAs and PGMAs identified in the Special Status Species section above. To the extent consistent with the rights of a mining claimant under existing laws and regulations, limit surface disturbance from locatable mineral development in PPMAs within leks, nesting habitat, and early brood-rearing habitat and as possible, limit surface disturbance to under the 5 percent disturbance limit, or provide for enhancement of PPMAs through on-site and/or off-site mitigation. Regardless of whether agreements with the claimant incorporates the 5 percent disturbance limit, disturbance from locatable mineral development would be included as disturbance when calculating disturbance for other land uses.

MA-MIN-16 - MINERAL MATERIALS DEVELOPMENT RESTRICTION STANDARD

Do not allow new mineral material development within 1 mile of an occupied lek in either a PPMA or a PGMA, whether within mapped occupied habitat or not. Do not allow commercial development of mineral materials in PPMA beyond 1 mile of an occupied lek that is located within a PPMA. See Map 2.37. Non-commercial development of mineral materials (e.g., community pits, free-use permits) within PPMAs beyond 1 mile of an occupied lek, if the lek is located within a PPMA, must meet the following conditions:

- the development meets noise restrictions;
- the development meets tall structure restrictions;
- initial activity within the development does not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter);
- new disturbance associated with the development does not result in total disturbance exceeding the 5 percent disturbance limit.
- where possible, the development is located adjacent to the footprint of existing disturbances; and
- extraction or crushing operations do not occur in GRSG habitat during seasonal restriction times; however, removal of material from existing stockpiles would be allowed.
- new developments are located within 0.25 mile of existing roads.

Development of mineral materials within PGMAs beyond 1 mile of an occupied lek, if the lek is located within a PGMA, could occur if:

- the development meets noise restrictions;
- the development meets tall structure restrictions;
- initial activity within the development does not occur during sensitive seasonal periods (i.e., breeding and nesting, brood rearing, winter).

Mineral material development in PPMAs and PGMAs beyond the 1 mile closures would require discussion with the State of Utah during project implementation, and implementation of BMPs (e.g., anti-perch devices for raptors, etc.).

The stipulations within PGMAs (closure or restrictions) could be waived, except for the seasonal stipulations, if off-site mitigation coordinated with the proponent, BLM/Forest Service and the State of Utah is successfully completed in PPMAs.

MA-MIN-19 - UNLEASED FEDERAL FLUID MINERAL DEVELOPMENT RESTRICTIONS IN PPMAs

Areas outside PPMAs but within 1 mile of an occupied lek, if the lek is located within a PPMA, would be open to leasing fluid minerals, subject to NSO stipulations.

PPMAs within 4 miles of an occupied lek, if the lek is located within a PPMA, would be designated as open to oil and gas leasing subject to NSO stipulations (see Appendix H, Surface Stipulations Applicable to Oil and Gas Leasing, for modifications, waivers, and exceptions).

PPMAs beyond 4 miles of an occupied lek, if the lek is located within a PPMA, would be subject to CSU stipulations (see list below) and the following timing stipulations:

- Winter habitat from Nov 15 – Mar 15
- Brood rearing habitat from Apr 15 – Jul 15
- Breeding and nesting habitat from Feb 15 – Jun 15

Where leasing/development is allowed within PPMAs, development could occur if it adhered to the following CSU stipulations:

- the development meets noise restrictions;
- the development meets tall structure restrictions;
- operators must submit a site-specific plan of development for roads, wells, pipelines and other infrastructure prior to any development being authorized; this plan should outline how development on the lease will limit habitat fragmentation; and
- the development does not exceed the 5 percent disturbance limit.

Areas outside PPMAs and within 4 miles of an occupied lek, if the lek is located within a PPMA, would be designated as open to oil and gas leasing subject to CSU stipulations. Development in these areas could occur if it adhered to the following CSU stipulations:

- the development meets noise restrictions; and
- the development meets tall structure restrictions.

A minimum lease size of 640 contiguous acres of federal mineral estate would be applied within PPMAs. Smaller parcels may be leased only when 640 contiguous acres of federal mineral estate is not available and leasing is necessary to remain in compliance with laws, regulations and policy; for example, to protect the federal mineral estate from drainage or to commit the federal mineral estate to unit or communitization agreements.

MA-MIN-20 - UNLEASED FEDERAL FLUID MINERAL DEVELOPMENT RESTRICTIONS IN PGMAS

Any areas, whether within mapped occupied GRSG habitat or not, within 1 mile of an occupied lek, if the lek is located within a PGMA, would be open to leasing fluid minerals, subject to NSO stipulations.

PGMAs beyond 1 mile of an occupied lek, if the lek is located within a PGMA, would be designated as open to oil and gas leasing subject to CSU stipulations (see list below) and the following timing stipulations:

- Winter habitat from Nov 15 – Mar 15

- Brood rearing habitat from Apr 15-Jul 15
- Breeding and nesting habitat from Feb 15-Jun 15

Where leasing/development is allowed within PGMAs, development could occur if it adhered to the following CSU stipulations:

- the development meets noise restrictions; and
- the development meets tall structure restrictions.

PGMAs within and beyond the 1.0 mile NSO area would require coordination with the State of Utah during project implementation, and implementation of BMPs (e.g., anti-perch devices for raptors, etc.).

The stipulations within PGMAs (closure or restrictions) could be waived, except for the seasonal stipulations, if off-site mitigation coordinated with BLM/Forest Service and the State of Utah is successfully completed in PPMAs.

MA-MIN-22 - GEOPHYSICAL EXPLORATION FOR FLUID MINERALS RESTRICTION STANDARD

For geophysical exploration activities, include seasonal timing limitations and RDFs as permit COAs to eliminate or minimize surface-disturbing and disruptive activities within nesting and brood-rearing habitat and winter concentration areas.

MA-MIN-23 - FLUID MINERAL EXPLORATORY DRILLING RESTRICTION STANDARD

Apply a seasonal restriction on exploratory drilling that prohibits surface-disturbing activities during the nesting and early brood-rearing season in all PPMAs during this period.

MA-REC-1 - RECREATION SPECIAL USE PERMIT RESTRICTION STANDARD

Only allow BLM SRPs and Forest Service Recreation Special Use Permits in PPMAs that have neutral or beneficial effects to PPMAs.

MA-GRA-14 - WATER DEVELOPMENT STANDARD

Limit authorization of new water developments within PPMAs to projects that would have a neutral effect or be beneficial to GRSG habitat (such as by shifting livestock use away from critical areas). New developments that divert surface water must be designed to maintain continuity of predevelopment riparian or wet meadow vegetation and hydrology.

MA-GRA-16 - VEGETATION TREATMENT RESTRICTION STANDARD

In PPMAs, ensure that vegetation and rangeland treatments conserve, enhance or restore GRSG habitat (this includes treatments that benefit livestock).

MA-GRA-18 - STRUCTURAL RANGE IMPROVEMENT STANDARD

In PPMAs, design any new structural range improvements to conserve, enhance, or restore GRSG habitat through an improved grazing management system relative to GRSG objectives. Structural range improvements, in this context, include but are not limited to: cattleguards, fences, exclosures, corrals or other livestock handling structures; pipelines, troughs, storage

tanks (including moveable tanks used in livestock water hauling), windmills, ponds/reservoirs, solar panels and spring developments.

Appendix C

COT Report Consistency Evaluation

APPENDIX C

COT REPORT CONSISTENCY EVALUATION

BLM /Forest Service LUP Utah Sub-Region

Evaluation of How the USFWS Conservation Objectives Team (COT) Report Conservation Objectives, Measures, and Options Align with the DEIS Alternatives

Utah Sub-Region GRSB Populations:

- Management Zone II (Wyoming Basin) & VII (Colorado Plateau)
 - Wyoming Basin Population
 - Rich-Morgan-Summit PAC
 - Uintah PAC
 - Portions of the Uinta-Wasatch-Cache National Forest and the Ashley National Forest in Wyoming
- Management Zone III (Southern Great Basin)
 - Northeast Interior Population
 - Strawberry Valley PAC
 - Carbon PAC
 - Sheeprock Population and PAC (aka Tooele-Juab Counties)
 - Emery Population and PAC (aka Sanpete-Emery Counties)
 - South Central Utah Population
 - Greater Parker Mountain PAC
 - Panguitch PAC
 - Bald Hills PAC
 - Southern Great Basin Population
 - Ibapah PAC
 - Hamlin Valley PAC
- Management Zone IV (Snake River Plains)
 - Northern Great Basin Population
 - Box Elder PAC

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|-------|---|--|------------------------|--|--|---|--|---|--|
| PACs | Retain GRSG habitats within PACs | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | MA GRSG-3 MA GRSG-5 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-4 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | GL-GRSG-1 OBJ-GRSG-1 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | Under Alternative B, Gordon Creek (Carbon), the Pilot Mountains (Box Elder), and the Bald Hills Exclusions (Bald Hills) would be PGMAs not PPMAs. Under Alternative D, the Bald Hills Exclusions (Bald Hills) and Alton (Panguitch) would be PGMAs not PPMAs. |
| | If PACs are lost to catastrophic events, implement appropriate restoration efforts. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | OBJ-GRSG-2 MA VEG-12 | OBJ-GRSG-2 MA VEG-12 MA VEG-15 | OBJ-GRSG-2 MA VEG-12 | OBJ-GRSG-1 OBJ-GRSG-2 MA FIRE-3 | OBJ-GRSG-2 MA VEG-12 | Restoration is a component of all alternatives; however, Alternative C emphasizes passive restoration and Alternative E-1 emphasizes expansion of existing habitat. No alternatives specifically talk about restoration after catastrophic events except post fire rehabilitation. Under Alternative A, there is a large amount of variance between the 20 land use plans. In addition to the actions, there is a very active state/federal partnership that is involved in restoration efforts. Land use plans support restoration efforts that are multi-purpose. |
| | Restore and rehabilitate degraded GRSG habitat within PACs. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | MA GRSG-8 MA LAR-6 MA LAR-10 MA VEG-1 MA VEG-2 MA VEG-3 MA VEG-4 | MA GRSG-8 MA LAR-6 MA LAR-10 MA VEG-1 MA VEG-2 MA VEG-3 MA VEG-4 | MA GRSG-8 MA LAR-6 MA LAR-10 MA VEG-1 MA VEG-2 MA VEG-3 MA VEG-4 | MA GRSG-8 MA LAR-6 MA LAR-10 MA VEG-1 MA VEG-2 MA VEG-3 MA VEG-4 | MA GRSG-8 MA VEG-1 MA VEG-8 MA VEG-13 | MA GRSG-8 MA LAR-6 MA VEG-1 MA VEG-2 MA VEG-3 MA VEG-4 MA VEG-7 |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|-------|---|--|-------|---|---|--|------------------------|--|---|
| | | | | MA VEG-7 MA VEG-8 MA VEG-10 MA VEG-12 MA VEG-12 MA MIN-17 MA TTM-8 MA TTM-9 MA GRA-4 MA GRA-6 MA GRA-16 MA GRA-17 MA GRA-19 | MA VEG-7 MA VEG-8 MA VEG-10 MA VEG-12 MA VEG-13 MA VEG-14 MA MIN-17 MA TTM-8 MA TTM-9 MA GRA-4 MA TTM-8 MA TTM-9 MA GRA-7 MA GRA-17 MA GRA-19 | MA VEG-7 MA VEG-8 MA VEG-12 MA VEG-13 MA VEG-12 MA TTM-8 MA TTM-9 MA GRA-4 MA GRA-5 MA GRA-16 MA GRA-17 MA GRA-19 | | MA VEG-8 MA VEG-10 MA VEG-12 MA VEG-12 MA VEG-14 MA MIN-17 MA TTM-8 MA TTM-9 MA GRA-16 MA GRA-17 MA GRA-19 | <p>determining which management actions dealt with “degraded habitat.”</p> <p>As shown by the discrepancy between the numbers of management actions, Alternative E-1 includes management actions that place emphasis on restoration, but the alternative does not contain nearly as many details on how they would accomplish this.</p> <p>Under Alternative A, there is a large amount of variance between the 20 land use plans. In addition to the actions, there is a very active state/federal partnership that is involved in restoration efforts. Land use plans support restoration efforts that are multi-purpose.</p> |
| | Identify areas and habitats outside of PACs which may be necessary to maintain viability of GRSG. If development or vegetation manipulation activities outside of PACs are proposed, the project proponent should work with federal, state or local agencies and interested stakeholders to ensure consistency with GRSG habitat needs. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | OBJ-GRSG-4 MA GRSG-1 MA GRSG-7 MA GRSG-8 | MA GRSG-1 MA GRSG-7 | MA GRSG-1 MA GRSG-7 | MA GRSG-2 MA GRSG-3 | OBJ-GRSG-2 MA GRSG-3 MA GRSG-8 | <p>Alternative B-D would designate PPMAs outside of the PACs. Alternative E-1 does not include any management for areas or habitats outside of PACs.</p> <p>Under Alternative A, there is a large amount of variance between the 20 land use plans. In addition to the actions, there is a very active state/federal partnership that is involved in restoration</p> |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|-------|--|--|------------------------|--|---|---|---|---|--|
| | | | | | | | | | efforts. Land use plans support restoration efforts that are multi-purpose. |
| | Re-evaluate the status of PACs and adjacent GRSG habitat at least once every 5-years, or when important new information becomes available. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | MA GRSG-3 | | OBJ-GRSG-5 MA GRSG-3 | OBJ-GRSG-3 OBJ-GRSG-5 | MA GRSG-2 MA GRSG-3 | All alternatives meet this objective. Section 2.4 of the DEIS discusses the GRSG monitoring strategy, which applies to all alternatives. This strategy includes a commitment to monitor GRSG habitat at least once every 5 years; however, it is not accounted for in this table because there is no accompanying management action. There are numerous commitments to monitoring included in the table; however, only management actions that are specifically aimed at monitoring GRSG and habitat were included. |
| | Actively pursue opportunities to increase occupancy and connectivity between PACs. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | GL-GRSG-1 OBJ-GRSG-4 MA GRSG-1 MA GRSG-7 MA GRSG-8 | GL-GRSG-1 MA GRSG-1 MA GRSG-7 | GL-GRSG-1 MA GRSG-1 MA GRSG-3 MA GRSG-7 | GL-GRSG-1 MA GRSG-2 MA GRSG-3 | GL-GRSG-1 OBJ-GRSG-2 MA GRSG-3 MA GRSG-8 | |
| | Maintain or improve existing habitat conditions in areas adjacent to burned habitat. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | MA GRSG-3 MA GRSG-5 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-4 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | GL-GRSG-1 OBJ-GRSG-1 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | GL-GRSG-1 OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | All alternatives meet this objective; however there are no management actions that include this specific language. The decision throughout is to retain, maintain, or improve existing habitat in PH, which implies maintaining or improving habitat in areas adjacent to burned habitat. |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments | |
|-------|---|---|---|---|--|--|--|--|---|--|
| Fire | Retain and restore healthy native sagebrush plant communities within the range of GRSG. | Restrict or contain fire within the normal range of fire activity (assuming a healthy native perennial sagebrush community), including size and frequency, as defined by the best available science. | MA FIRE-3 | MA FIRE-3 MA FIRE-6 MA FIRE-7 | MA FIRE-3 MA FIRE-6 MA FIRE-7 | MA FIRE-3 MA FIRE-5 MA FIRE-6 MA FIRE-7 MA FIRE-8 | MA FIRE-3 MA FIRE-5 MA FIRE-7 | MA FIRE-3 MA FIRE-6 MA FIRE-7 | | |
| | | Eliminate intentional fires in sagebrush habitats, including prescribed burning of breeding and winter habitats. | MA FIRE-3 | MA FIRE-3 | MA FIRE-3 | MA FIRE-3 | MA FIRE-3 | MA FIRE-3 | | |
| | | Design and implement restoration of burned sagebrush habitats to allow for natural succession to healthy native sagebrush plant communities. | MA VEG-12 MA VEG-13 MA GRSG-8 | MA VEG-1 MA VEG-9 MA VEG-12 MA VEG-13 MA VEG-14 MA GRSG-8 | MA VEG-1 MA VEG-9 MA VEG-12 MA VEG-13 MA VEG-14 MA GRSG-8 | MA VEG-1 MA VEG-9 MA VEG-12 MA VEG-13 MA VEG-14 MA GRSG-8 | MA VEG-1 MA VEG-9 MA VEG-12 MA VEG-13 MA GRSG-8 | MA VEG-1 MA VEG-12 MA VEG-13 MA GRSG-8 | MA VEG-1 MA VEG-9 MA VEG-12 MA VEG-13 MA VEG-14 | |
| | | Implement monitoring programs for restoration activities. To ensure success, monitoring must continue until restoration is complete, with sufficient commitments to make adequate corrections to management efforts if needed. | | MA GRSG-3 MA FIRE-3 | | MA GRSG-3 MA GRSG-4 MA FIRE-3 | | MA GRSG-3 MA VEG-1 MA FIRE-3 | There is a monitoring framework that was developed in close coordination with the USFWS that is included as part of Chapter 2, but not directly in a numbered decision in the Chapter 2 table. The monitoring framework language would apply to all alternatives. | |
| | | Immediately suppress fire in all sagebrush habitats. | MA FIRE-7 | MA FIRE-7 | MA FIRE-7 | MA FIRE-7 | MA FIRE-7 | MA FIRE-7 | | |
| | | Prevention of fires in GRSG habitats: Which (if any) of Options 1a - d were applied? a) Manage for the maintenance and restoration of healthy perennial grass and sagebrush vegetative communities. b) Management land uses to minimize the spread of invasive species and or facilitate fire ignition. c) Address degraded sagebrush systems before fire occurs. d) Close rangelands that are highly susceptible to fire to OHV use during the fire season. | a) OBJ GRSG-2 MA VEG-2 MA VEG-12 MA VEG-17 MA VEG-18 b) MA VEG-17 MA GRA-21 c) d) | a) OBJ GRSG-2 MA VEG-2 MA VEG-7 MA VEG-9 MA VEG-12 MA VEG-17 b) MA VEG-17 MA FIRE-3 MA GRA-18 MA GRA-21 c) MA FIRE-3 MA VEG-1 MA VEG-2 d) MA TTM-3 MA TTM-4 | a) OBJ GRSG-2 MA VEG-2 MA VEG-7 MA VEG-9 MA VEG-12 MA VEG-17 MA VEG-18 MA VEG-17 MA VEG-17 MA VEG-18 MA GRA-18 MA GRA-21 c) MA FIRE-3 MA VEG-1 MA VEG-2 d) MA TTM-3 MA TTM-4 | a) OBJ GRSG-2 MA VEG-2 MA VEG-7 MA VEG-9 MA VEG-12 MA VEG-17 MA VEG-18 MA VEG-17 MA VEG-18 MA VEG-19 MA GRA-18 MA GRA-21 c) MA FIRE-3 MA VEG-1 MA VEG-2 d) MA TTM-4 | a) OBJ GRSG-2 MA GRSG-3 MA VEG-1 MA VEG-2 MA VEG-7 MA VEG-9 MA VEG-12 MA VEG-17 MA VEG-18 b) MA VEG-1 MA VEG-17 MA VEG-18 MA FIRE-1 MA FIRE-3 MA GRA-18 c) MA FIRE-1 MA FIRE-3 | a) MA VEG-1 MA VEG-18 b) MA VEG-8 MA VEG-13 MA VEG-18 MA VEG-9 MA FIRE-3 MA GRA-21 c) MA FIRE-1 MA FIRE-3 MA FIRE-5 MA VEG-1 d) MA TTM-4 | a) OBJ GRSG-2 MA VEG-1 MA VEG-2 MA VEG-7 MA VEG-9 MA VEG-12 MA VEG-17 MA FIRE-3 b) OBJ GRSG-2 MA VEG-17 MA VEG-20 MA FIRE-3 MA GRA-21 c) MA FIRE-1 MA FIRE-3 MA VEG-1 d) NA | |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|-------------------|------------------------|---|---|--|--|--|--|--|---|
| | | | | | | MA FIRE-5 MA VEG-1 MA VEG-2 d) MA TTM-3 MA TTM-4 | | | |
| | | Which (if any) of Options 2a - j were applied? Note: Only Options c, d, f, and g are appropriate for planning decisions. c) Establish defensible fire lines in areas where: (i) effectiveness is high, (ii) fire risk is likely, and (iii) negative impacts from these efforts are minimized. Avoid use of any vegetative stripping in healthy, unfragmented habitats, unless fire conditions and local ecological conditions so warrant. d) Carefully consider the use of backfires within PACs to minimize the potential for escape and further damage to GRSG and sagebrush habitats. f) Remove highly flammable pinyon-juniper stands in low-elevation sagebrush habitats. g) Reduce risk of human-caused fires by limiting activities that may result in fire during high-risk fire seasons. | c) d) f) g) | c) d) f) MA VEG-1 g) | c) d) f) MA VEG-1 g) | c) MA FIRE-3 d) MA FIRE-8 f) MA GRSG-3 MA VEG-1 g) MA FIRE-5 | c) MA FIRE-1 d) f) MA VEG-1 MA VEG-8 g) | c) d) f) MA VEG-1 g) | Decisions that address many of the conservation options are addressed during Fire Management Plans rather than Land Use Plans. As such, while the range of alternatives may not specifically address a given conservation option, the goals and objectives associated with all the alternatives excepting Alternative A would be incorporated into subsequent implementation plans to address the issues raised by the options. |
| | | Which (if any) of Options 3a - e were applied? Note: Only Options c and d are appropriate for decisions in this EIS. c) Apply available seed where it is most likely to be effective and to areas of highest need. d) Ensure GRSG habitat needs are considered in restoration activities including managing for the range of variation, as appropriate for the local areas. | c) d) | c) MA VEG-1 MA VEG-3 MA VEG-6 d) MA VEG-1 MA VEG-2 MA GRA-5 MA GRA-8 | c) MA VEG-1 MA VEG-3 MA VEG-6 d) MA VEG-1 MA VEG-2 MA GRA-5 MA GRA-8 | c) MA VEG-1 MA VEG-3 MA VEG-6 d) MA VEG-1 MA VEG-2 MA VEG-9 MA GRA-5 MA GRA-8 | c) MA VEG-3 d) OBJ GRSG-1 MA VEG-1 MA GRA-8 | c) MA VEG-1 MA VEG-3 d) MA VEG-1 MA GRA-8 | While Alt. A may not include specific decisions related to prioritization of GRSG habitat, most do include objectives and management to consider GRSG, which has occurred during implementation of existing vegetation treatments, restoration projects, and other such activities. |
| | | Was Option 4 applied? Renew and implement BLM Instructional Memorandum (IM) 2011-138 | MA VEG-8 MA FIRE-2 MA FIRE-5 MA FIRE-6 | MA VEG-8 MA FIRE-2 MA FIRE-5 MA FIRE-6 | MA VEG-8 MA FIRE-2 MA FIRE-5 MA FIRE-6 | MA VEG-8 MA FIRE-2 MA FIRE-5 MA FIRE-6 | MA VEG-8 MA FIRE-2 MA FIRE-5 MA FIRE-6 | MA VEG-8 MA FIRE-2 MA FIRE-5 MA FIRE-6 | |
| Non-native | Maintain and restore | Retain all remaining large intact | OBJ GRSG-2 | GL-GRSG-1 | GL-GRSG-1 | GL-GRSG-1 | GL-GRSG-1 | GL-GRSG-1 | There is duplication |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|------------------------|--|--|--|--|---|---|--|---|--|
| Invasive Plant Species | healthy, native sagebrush plant communities. | sagebrush patches, particularly at low elevations. | | OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 | OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-4 | OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | OBJ-GRSG-1 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | OBJ-GRSG-1 OBJ-GRSG-2 MA GRSG-1 MA GRSG-3 MA GRSG-4 MA GRSG-5 | between the alternative actions associated with this conservation measure and those associated with the first measure under PACs. |
| | | Reduce or eliminate disturbances that promote the spread of these invasive species. | MA VEG-17 MA LAR-11 | OBJ-GRSG-1 MA GRSG-4 MA LAR-1 MA LAR-2 MA LAR-4 MA LAR-5 MA LAR-11 MA LAR-13 MA LAR-13 MA MIN-3 MA MIN-3 MA MIN-6 MA MIN-7 MA MIN-13 MA MIN-14 MA MIN-15 MA MIN-17 MA MIN-19 MA MIN-21 MA MIN-22 MA MIN-26 MA MIN-32 MA TTM-1 MA TTM-2 MA TTM-5 MA TTM-6 MA TTM-7 MA REC-1 MA VEG-17 | MA GRSG-4 MA LAR-1 MA LAR-2 MA LAR-4 MA LAR-5 MA LAR-11 MA LAR-13 MA MIN-3 MA MIN-3 MA MIN-6 MA MIN-7 MA MIN-13 MA MIN-14 MA MIN-15 MA MIN-17 MA MIN-19 MA MIN-21 MA MIN-22 MA MIN-26 MA MIN-32 MA TTM-1 MA TTM-2 MA TTM-5 MA TTM-6 MA TTM-7 MA REC-1 MA VEG-17 | OBJ-GRSG-1 MA GRSG-4 MA LAR-1 MA LAR-2 MA LAR-1 MA LAR-2 MA LAR-5 MA LAR-13 MA MIN-3 MA MIN-6 MA MIN-7 MA MIN-13 MA MIN-14 MA MIN-15 MA MIN-16 MA MIN-19 MA MIN-19 MA MIN-21 MA MIN-22 MA MIN-26 MA MIN-32 MA TTM-1 MA TTM-2 MA TTM-5 MA TTM-6 MA REC-1 MA VEG-17 | MA GRSG-3 MA GRSG-4 MA GRSG-5 MA LAR-1 MA LAR-2 MA LAR-13 MA MIN-3 MA MIN-7 MA MIN-13 MA MIN-14 MA MIN-16 MA MIN-19 MA TTM-1 MA TTM-2 MA REC-1 | MA GRSG-3 MA GRSG-4 MA LAR-1 MA LAR-2 MA LAR-13 MA MIN-3 MA MIN-7 MA MIN-13 MA MIN-14 MA MIN-16 MA MIN-19 MA TTM-1 MA MIN-32 MA TTM-1 MA TTM-2 MA TTM-5 MA TTM-6 MA TTM-7 MA VEG-17 | This list does not include all management actions that reduce or eliminate disturbance. Some judgment was used to determine which actions best meets this objective. |
| | | Monitor and control invasive vegetation post-wildfire for at least three years. | | MA FIRE-3 | | MA VEG-13 MA GRSG-3 MA FIRE-3 | | MA GRSG-3 MA FIRE-3 | ES&R/BAER policies include consideration of stabilization and rehabilitation for at least three years. Therefore, while not explicitly noted in several alternatives, existing policies are consistent with this option. |
| | | Require best management practices for construction projects in and adjacent to sagebrush habitats to prevent invasion. | MA VEG-8 MA MIN-6 MA MIN-30 MA MIN-33 | MA VEG-8 MA MIN-6 MA MIN-14 MA MIN-30 MA MIN-33 | MA VEG-8 MA MIN-6 MA MIN-14 MA MIN-30 MA MIN-33 | MA VEG-8 MA MIN-6 MA MIN-14 MA MIN-30 MA MIN-33 | MA VEG-8 MA MIN-6 MA MIN-14 MA MIN-19 MA MIN-30 | MA LAR-2 MA LAR-13 | MA GRSG-3 MA MIN-6 MA MIN-14 MA MIN-30 |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments | |
|--------------------|---|---|-------|--|--|--|--|---|---|--|
| Energy Development | Energy development should be designed to insure that it will not impinge upon stable or increasing GRSG population trends | Avoid energy development in PACs. | | MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-18 MA MIN-19 MA MIN-21 MA MIN-22 MA LAR-13 | MA MIN-2 MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-18 MA MIN-19 MA MIN-21 MA MIN-22 MA LAR-13 | MA MIN-33 MA MIN-7 MA MIN-8 MA MIN-18 MA MIN-19 MA MIN-20 MA MIN-21 MA MIN-22 MA LAR-13 | MA MIN-7 MA MIN-8 MA MIN-18 MA MIN-19 MA LAR-13 | MA MIN-7 MA MIN-13 MA MIN-18 MA MIN-19 MA MIN-20 MA LAR-13 | Under Alternative A, the degree of avoidance of energy development varies between the 20 existing plans, with some plans including up to 3.1 mile NSO buffers on leks while other plans limited to seasonal stipulations. | |
| | | If avoidance is not possible in PACs due to pre-existing valid rights, adjacent development, or split estate issues, development should only occur in non-habitat areas, including all appurtenant structures, with an adequate buffer that is sufficient to preclude impacts to GRSG habitat from noise, and other human activities. | | MA MIN-11 MA MIN-22 | MA MIN-11 MA MIN-22 | MA MIN-11 MA MIN-22 | MA MIN-22 | MA MIN-22 | MA MIN-22 | Under Alternative E2, the language in the Governor's Executive Order includes additional language regarding this COT measure that is not explicitly noted in the alternatives table. |
| | | If development must occur in GRSG habitats due to existing rights and lack of reasonable alternative avoidance measures, the development should occur in the least suitable habitat for GRSG and be designed to ensure at a minimum that there are no detectable declines in GRSG population trends by implementing the following: a) Reduce and maintain the density of energy structures below which there are not impacts to the function of the GRSG habitats and do not result in decline in GRSG populations within the PACs. b) Design development outside PACs to maintain populations within adjacent PACs and allow for connectivity among PACs. c) Consolidate structures and infrastructure associated with energy development. d) Reclamation of disturbance resulting from a proposed project | | MA MIN-11 MA MIN-22 MA MIN-23 MA MIN-26 MA MIN-30 a) MA GRSG-4 MA MIN-22 b) MA LAR-7 c) MA GRSG-4 MA LAR-3 MA TTM-5 MA TTM-6 MA TTM-7 d) MA GRSG-4 e) MA MIN-7 MA MIN-8 MA MIN 19 MA LAR-13 | MA MIN-11 MA MIN-22 MA MIN-23 MA MIN-26 MA MIN-30 a) MA GRSG-4 MA MIN-22 b) All GRSG habitat would be PPMA MA LAR-13 c) MA GRSG-4 MA LAR-3 MA TTM-5 MA TTM-6 MA TTM-7 d) MA GRSG-4 MA MIN-8 MA MIN 19 MA LAR-13 | MA MIN-11 MA MIN-22 MA MIN-23 MA MIN-26 MA MIN-30 MA GRSG-2 a) MA GRSG-4 MA MIN-19 MA MIN-22 b) MA GRSG-7 MA LAR-7 MA MIN-9 MA MIN-20 c) MA GRSG-4 MA LAR-3 MA TTM-5 MA TTM-6 MA TTM-7 d) MA GRSG-4 e) MA GRSG-5 MA GRSG-7 MA MIN-7 MA MIN-8 MA MIN 19 MA LAR-13 | MA MIN-11 MA MIN-22 MA MIN-23 MA MIN-26 MA MIN-30 MA GRSG-2 a) MA MIN-19 b) MA GRSG-4 MA LAR-3 d) MA GRSG-5 MA MIN-7 MA MIN-8 MA MIN 19 MA LAR-13 | MA MIN-11 MA MIN-21 MA MIN-22 a) MA GRSG-4 MA MIN-19 MA MIN-22 b) MA GRSG-7 MA MIN-20 c) MA GRSG-4 MA LAR-4 MA TTM-5 MA TTM-6 MA TTM-7 d) MA GRSG-4 e) MA GRSG-5 MA GRSG-7 MA MIN 19 MA LAR-13 | | |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|--|---|--|--|--|---|---|---|--|--|
| | | should only be considered mitigation and not portrayed as minimization. e) Design development to minimize tall structures or other features associated with the development. | | | | | | | |
| Sagebrush Removal / Elimination | Avoid SB removal or manipulation in GRSG breeding or wintering habitats. Exceptions can be considered where minor habitat losses are sustained while implementing other habitat improvement or maintenance efforts and in areas used as late summer brood habitat. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | OBJ-GRSG-2 | OBJ-GRSG-2 MA VEG-3 MA FIRE-3 | OBJ-GRSG-2 MA VEG-3 MA FIRE-3 MA VEG-11 | OBJ-GRSG-2 MA GRSG-3 MA VEG-3 MA FIRE-3 | MA VEG-1 MA FIRE-3 | OBJ-GRSG-2 | |
| Grazing | Conduct grazing management for all ungulates in a manner consistent with local ecological conditions that maintains or restores healthy sagebrush shrub and native perennial grass and forb communities and conserves the essential habitat components for GRSG (shrub and nesting cover). Areas which do not currently meet this standard should be managed to restore these components. Adequate monitoring of grazing strategies and their results, with necessary changes in strategies, is essential to ensuring that desired ecological conditions and GRSG response are achieved. Livestock and wild ungulate numbers must be managed at levels that allow native sagebrush vegetative communities | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | MA GRA-1 MA GRA-4 | MA GRA-1 MA GRA-2 MA GRA-3 MA GRA-4 MA GRA-5 MA GRA-6 MA GRA-8 MA GRA-9 MA GRA-10 MA GRA-11 MA GRA-12 MA GRA-13 | MA GRA-1 MA GRA-2 MA GRA-3 MA GRA-4 MA GRA-5 MA GRA-8 MA GRA-9 MA GRA-10 MA GRA-11 MA GRA-12 | MA GRA-1 MA GRA-2 MA GRA-3 MA GRA-4 MA GRA-5 MA GRA-6 MA GRA-8 MA GRA-9 MA GRA-10 MA GRA-11 MA GRA-13 | MA GRA-1 MA GRA-6 MA GRA-8 MA GRA-10 MA GRA-11 MA GRA-13 | MA GRA-1 MA GRA-2 MA GRA-3 MA GRA-6 MA GRA-8 MA GRA-10 MA GRA-11 | |
| | | Which (if any) of Options 1 - 5 were applied? Note: Only Option 1 and 3-5 are appropriate for decisions in this LUP amendment process and associated EIS. 1) Ensure that allotments meet ecological potential and wildlife habitat requirements, and that the health and diversity of the native perennial grass community is consistent with the ecological site. 3) Incorporate GRSG habitat needs or habitat characteristics into relevant resource and allotment management plans, including the desired conditions. 4) Conduct habitat assessments | 1) MA GRA-4 3) 4) MA GRA-1 5) | 1) MA GRA-4 MA GRA-5 MA GRA-6 3) MA GRA-2 MA GRA-5 4) MA GRA-1 MA GRA-8 5) MA GRA-4 MA GRA-9 | 1) MA GRA-4 MA GRA-5 3) MA GRA-2 MA GRA-5 4) MA GRA-1 MA GRA-8 5) MA GRA-4 MA GRA-9 | 1) MA GRA-4 MA GRA-5 MA GRA-6 3) MA GRA-2 MA GRA-5 4) MA GRA-1 MA GRA-8 5) MA GRA-4 MA GRA-9 | 1) 3) MA GRA-6 4) MA GRA-1 MA GRA-8 5) | 1) MA GRA-6 3) MA GRA-2 4) MA GRA-1 MA GRA-8 5) | Alternative C1 closes all GRSG habitat to livestock grazing for the life of the plan. As such, it removes any potential threat from livestock grazing for the life of the plan. Alternative C referred to in the evaluation to the left is in reference to Alternative C2. |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|--------------------------------------|--|--|----------|--|--|--|---|--|---|
| | to minimally achieve Proper Functioning Conditions (PFC; for riparian areas) or Rangeland Health Standards (RHS; uplands). | and, where necessary, determine factors causing any failure to achieve the habitat characteristics. Make adjustments as appropriate. 5) Given limited agency resources, priority should be given to PACs and then GRSG habitats adjacent to PACs | | | | | | | |
| Range Management Structures | Avoid or reduce the impact of range management structures on GRSG. | Range management structures should be designed and placed to be neutral or beneficial to GRSG. | | MA GRA-18 MA GRA-19 | MA GRA-18 MA GRA-19 | MA GRSG-5 MA GRA-18 MA GRA-19 | MA GRSG-5 MA GRA-18 | MA GRA-18 MA GRA-19 | |
| | | Structures that are currently contributing to negative impacts to either GRSG or their habitats should be removed or modified to remove the threat. | | MA GRA-19 | MA GRA-19 | MA GRA-19 | | MA GRA-19 | |
| Free-Roaming Equid Management | Protect GRSG from the negative influences of grazing by free roaming equids. | Develop, implement, and enforce adequate regulatory mechanisms to protect GRSG habitat from negative influences of grazing by free-roaming equids. | MA WHB-1 | MA WHB-1 MA WHB-2 MA WHB-3 MA WHB-4 MA WHB-5 MA WHB-6 | MA WHB-1 MA WHB-2 MA WHB-3 MA WHB-5 MA WHB-6 | MA WHB-1 MA WHB-2 MA WHB-3 MA WHB-4 MA WHB-5 MA WHB-6 | MA WHB-1 | NA | |
| | | Manage free-roaming equids at levels that allow native sagebrush vegetative communities to minimally achieve PFC (for riparian areas) or RHS (for uplands). | MA WHB-1 | MA WHB-1 MA WHB-2 MA WHB-3 MA WHB-4 MA WHB-5 MA WHB-6 | MA WHB-1 MA WHB-2 MA WHB-3 MA WHB-5 MA WHB-6 | MA WHB-1 MA WHB-2 MA WHB-3 MA WHB-4 MA WHB-5 MA WHB-6 | MA WHB-1 | NA | |
| Pinyon-Juniper Expansion | Remove pinyon-juniper from areas of sagebrush that are most likely to support GRSG (post-removal) at a rate at least equal to the rate of pinyon-juniper incursion | No conservation measures specified. Is conservation objective addressed applying locally-derived measures? | MA VEG-1 | MA VEG-1 | MA VEG-1 | MA GRSG-3 MA VEG-1 | MA VEG-1 | MA VEG-1 | Only a few existing plans specifically address reducing juniper encroachment. |
| | | Which (if any) of Options 1 - 4 were applied? 1) Prioritize the use of mechanical treatments for removing pinyon and/or juniper. 2) Use caution when planning use of prescribed fire 3) Reduce juniper cover in GRSG habitats to less than 5%, but preferably eliminate entirely. 4) Employ management actions to maintain the benefit of pinyon and/or juniper removal, including long-term monitoring (greater than 30 years). | | 1) 2) MA FIRE-3 3) 4) MA GRSG-3 MA FIRE-3 | 1) 2) MA FIRE-3 3) 4) | 1)MA VEG-1 2) MA FIRE-3 3) 4) MA GRSG-3 MA FIRE-3 | 1) MA VEG-1 2) MA FIRE-3 3) MA GRSG-9 4) | 1) 2) MA FIRE-3 3) 4) MA GRSG-3 | |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|--------------------------------|--|--|--|---|---|--|--|--|----------|
| Agricultural Conversion | Avoid further loss of sagebrush habitat for agricultural activities (both animal and plant production) and prioritize restoration. In areas where taking agricultural lands out of production has benefited GRSG, the programs supporting these actions should be targeted and continued (e.g., CRP/SAFE). Threat amelioration activities should, at a minimum, be prioritized within PACS, but should be considered in all GRSG habitats. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | | | | | | |
| | | Which (if any) of Options 1 - 4 were applied? | These options are outside the scope of this EIS. The BLM and FS do not have authority to conduct these actions. Though not within BLM or FS jurisdiction, and therefore not included in Alternatives E1 or E2, the state plans include language that either provides incentives to private land owners (E1) or places management on private lands, where legally possible (E2). | | | | | | |
| Mining | Maintain stable to increasing GRSG populations and no net loss of GRSG habitats in areas affected by mining | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | MA GRSG-4 MA MIN-3 MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-16 | MA GRSG-4 MA MIN-3 MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-16 | MA GRSG-4 MA GRSG-9 MA MIN-3 MA MIN-3 MA MIN-7 MA MIN-8 MA MIN 9 MA MIN-13 MA MIN-16 | MA GRSG-4 MA GRSG-9 MA MIN-1 MA MIN-3 MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-16 | MA GRSG-4 MA GRSG-9 MA MIN-3 MA MIN-13 MA MIN-16 | |
| | | Which (if any) of Options 1 - 4 were applied? 1) Avoid new mining activities and/or any associated facilities within occupied habitats, including seasonal habitats. 2) Avoid leasing in GRSG habitats until other suitable habitats can be restored to habitats used by GRSG. 3) Reclamation plans should focus on restoring areas disturbed by mining and associated facilities to healthy sagebrush ecosystems, including evidence of use by GRSG. 4) Reclamation of abandoned mine lands should focus on restoring areas to healthy sagebrush ecosystems where possible. | 1) MA MIN-3 2) 3) 4) | 1) MA MIN-3 MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-16 2) MA GRSG-4 3) MA GRSG-4 4) MA GRSG-4 | 1) MA MIN-3 MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-16 2) MA GRSG-4 3) MA GRSG-4 4) MA GRSG-4 | 1) MA MIN-3 MA MIN-4 MA MIN-7 MA MIN-8 MA MIN-9 MA MIN-13 MA MIN-16 2) MA GRSG-4 3) MA GRSG-4 4) MA GRSG-4 MA GRSG-9 | 1) MA MIN-3 MA MIN-7 MA MIN-8 MA MIN-13 MA MIN-16 2) MA GRSG-9 3) MA GRSG-4 4) MA GRSG-4 MA GRSG-9 | 1) MA GRSG-5 MA MIN-3 MA MIN-13 MA MIN-16 2) MA GRSG-4 3) MA GRSG-4 4) MA GRSG-4 | |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|---|---|---|----------|--|--|--|--|--|--|
| Recreation | In areas subjected to recreational activities, maintain healthy native sagebrush communities based on local ecological conditions and with consideration of drought conditions, and manage direct and indirect human disturbance (including noise) to avoid interruption of normal GRSG behavior. | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? Which (if any) of Options 1 - 2 were applied? 1) Close important GRSG use areas to off-road vehicle use. 2) Avoid development of recreational facilities (e.g., new roads and trails, campgrounds) in GRSG habitats. | | MA REC-1 MA TTM-2 MA GRSG-4 | MA REC-1 MA TTM-2 MA GRSG-4 | MA REC-1 MA TTM-2 MA GRSG-4 MA GRSG-5 | MA REC-1 MA TTM-2 MA GRSG-4 MA GRSG-5 | MA REC-1 MA GRSG-4 MA GRSG-5 | |
| Ex-Urban Development /Urbanization | Limit urban and exurban development in GRSG habitats and maintain intact native sagebrush communities | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? Which (if any) of Options 1 - 5 were applied? 2) Acquire and manage GRSG habitat to maintain intact ecosystems. 3) Consolidate infrastructure that supports urban and exurban development. 5) Do not relinquish public lands for the purpose of urban development in GRSG habitat. | MA LAR-9 | MA LAR-9 MA LAR-10 MA LAR-2 MA LAR-3 MA LAR-4 MA TTM-5 MA TTM-6 MA TTM-7 MA GRSG-4 | MA LAR-9 MA LAR-10 MA LAR-2 MA LAR-3 MA LAR-4 MA TTM-5 MA TTM-6 MA TTM-7 MA GRSG-4 | MA LAR-9 MA LAR-10 MA LAR-2 MA LAR-3 MA LAR-4 MA TTM-5 MA TTM-6 MA TTM-7 MA GRSG-4 | MA LAR-2 MA LAR-3 MA LAR-4 MA GRSG-4 | MA LAR-9 MA LAR-10 MA LAR-2 MA LAR-3 MA LAR-4 MA TTM-5 MA TTM-6 MA TTM-7 MA GRSG-4 | All existing BLM LUPs have language to consider retaining special status species habitat. Only Options 2, 3, and 5 are applicable to development of landscape-level management plans for the BLM and FS. Though not within BLM or FS jurisdiction, and therefore not included in Alternatives E1 or E2, the state plans include language that either provides incentives to private land owners (E1) or places management on private lands, where legally possible (E2). |
| Infrastructure | Avoid development of infrastructure within PAC. | No new development of infrastructure within PACs. Designated, but not yet developed infrastructure corridors should be re-located outside of PACs unless it can be demonstrated that these corridors will have no impacts on the maintenance of neutral or | MA LAR-1 | MA LAR-2 MA LAR-3 MA LAR-4 MA LAR-7 MA LAR-8 MA TTM-5 MA TTM-6 MA TTM-7 | MA LAR-2 MA LAR-3 MA LAR-4 MA TTM-5 MA TTM-6 MA TTM-7 | MA LAR-2 MA LAR-3 MA LAR-4 MA LAR-7 MA LAR-8 MA TTM-5 MA TTM-6 MA TTM-7 | MA LAR-2 MA LAR-3 | MA LAR-2 MA LAR-3 MA LAR-4 MA LAR-7 MA LAR-8 MA TTM-5 MA TTM-6 MA TTM-7 | Some existing LUPs include direction for avoiding tall structures associated with infrastructure. |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|-------|------------------------|--|--|--|--|---|---|---|----------|
| | | <p>positive GRSG population trends or habitats. New infrastructure should be avoided where individual state plans have identified key connectivity corridors outside of PACs.</p> <p>Where state GRSG management plans provide an effective strategy for infrastructure those strategies should be implemented. In all other situations the conservation options in the COT report should be considered.</p> <p>Which (if any) of Options 1 - 10 were applied?</p> <p>1) Avoid construction of these features in GRSG habitat, both within and outside of PACs.</p> <p>2) Power transmission corridors which cannot avoid PACs should be buried (if technically feasible) and disturbed habitat should be restored.</p> <p>a. If avoidance is not possible, consolidate new structures with existing features and/or preclude development of new structures within locally important GRSG habitats.</p> <p>i. Consolidation with existing features should not result in a cumulative corridor width of greater than 200m.</p> <p>ii. Habitat function lost from placement of infrastructure should be replaced.</p> <p>3) Infrastructure corridors should be designed and maintained to preclude introduction of invasive plant species.</p> <p>4. Restrictions limiting use of roads should be enforced.</p> <p>5. Remove transmission lines and roads that are duplicative or are not functional.</p> <p>6. Transmission line towers should be constructed to severely reduce or eliminate nesting and perching by avian</p> | <p>1) MA LAR-1 2) 3) MA VEG-12 4) 5) 6) 7) 8) 9) 10)</p> | <p>1) MA LAR-2 MA LAR-3 MA LAR-7 2) MA LAR-4 MA LAR-5 3) MA VEG-12 4) MA TTM-1 MA TTM-2 MA TTM-4 5) MA TTM-3 MA TTM-8 MA TTM-9 6) MA LAR-5 7) MA LAR-2 MA LAR-13 8) MA LAR-2 MA VEG-12 9) MA LAR-3 10) MA TTM-8 MA TTM-9</p> | <p>1) MA LAR-2 MA LAR-3 2) MA LAR-4 MA LAR-5 3) MA VEG-12 MA VEG-13 4) MA TTM-1 MA TTM-2 MA TTM-4 5) MA TTM-8 MA ACEC-2 MA TTM-9 6) MA LAR-5 7) MA LAR-2 MA LAR-13 8) MA LAR-2 MA GRSG-4 MA VEG-12 MA VEG-13 MA VEG-14 9) MA LAR-3 10) MA TTM-8 MA TTM-9</p> | <p>1) MA LAR-2 MA LAR-3 MA LAR-7 2) MA LAR-2 MA LAR-4 MA LAR-5 MA GRSG-9 3) MA VEG-12 MA VEG-13 4) MA TTM-1 MA GRSG-9 MA TTM-2 3) MA VEG-12 MA VEG-13 4) MA TTM-1 MA TTM-2 5) MA GRSG-6 MA LAR-2 6) MA TTM-1 MA TTM-2 MA TTM-4 7) MA GRSG-2 MA GRSG-5 MA LAR-2 MA LAR-13 8) MA LAR-2 MA VEG-13 9) MA GRSG-3 MA GRSG-9 MA LAR-3 10) 7) MA GRSG-5 MA GRSG-7 MA LAR-2 MA LAR-7 MA LAR-13 8) MA LAR-2 MA GRSG-4 MA VEG-12 MA VEG-13 9) MA GRSG-2 MA GRSG-9 MA LAR-3 10) MA TTM-8 MA TTM-9</p> | <p>1) MA LAR-2 MA LAR-3 2) MA LAR-3 MA GRSG-9 3) MA VEG-13 4) MA TTM-1 MA TTM-2 MA TTM-4 5) MA GRSG-6 6) MA LAR-2 7) MA GRSG-2 MA GRSG-5 MA LAR-2 MA LAR-13 8) MA LAR-2 MA VEG-13 9) MA GRSG-3 MA GRSG-9 MA LAR-3 10)</p> | <p>1) MA LAR-2 MA LAR-3 2) MA LAR-3 MA LAR-4 MA GRSG-9 3) MA VEG-12 4) MA TTM-1 MA TTM-2 MA TTM-4 5) MA TTM-8 MA TTM-9 6) MA GRSG-6 MA LAR-5 7) MA GRSG-5 MA LAR-2 8) MA LAR-2 MA VEG-12 9) MA GRSG-2 MA GRSG-3 MA GRSG-9 10) MA TTM-8 MA TTM-9</p> | |

| Issue | Conservation Objective | Conservation Measures and Conservation Options | Alt A | Alt B | Alt C | Alt D | Alt E-1 | Alt E-2 | Comments |
|---------------|---|---|-------|---|--|---|---|-------------------------------------|----------|
| | | <p>predators.</p> <p>7. Avoid installation of compressor stations in PACs or other GRSG habitats where GRSG would be affected by noise and operation activities.</p> <p>8. All commercial pipelines should be buried and habitat that is disturbed needs to be reclaimed with current and future emphasis placed on suppression of non-native invasive plant species.</p> <p>9. Mitigate impacts to habitat from development of these features.</p> <p>10. Remove (or decommission) non-designated roads within sagebrush habitats.</p> | | | | | | | |
| Fences | Minimize the impact of fences on GRSG populations | No conservation measures specified. Are locally derived actions/measures consistent with conservation objective? | | MA GRA-18 MA GRA-19 MA GRA-20 | MA GRA-18 MA GRA-19 MA GRA-20 | MA GRA-18 MA GRA-19 MA GRA-20 | MA GRA-18 MA GRA-20 | MA GRA-18 MA GRA-19 MA GRA-20 | |
| | | <p>Which (if any) of Options 1 - 3 were applied?</p> <p>1) Mark fences that are in high risk areas for collision.</p> <p>2) Identify and remove unnecessary fences.</p> <p>3) Placement of new fences and livestock management facilities (including corrals, loading facilities, water tanks and windmills) should consider their impact on GRSG and, to the extent practicable, be placed at least 1 km from occupied leks.</p> | | 1) MA GRA-20 2) MA GRA-19 3) MA GRA 18 MA GRA 20 | 1) MA GRA-20 2) MA GRA-19 MA ACEC-2 3) MA GRA 18 MA GRA 20 | 1) MA GRA-20 2) MA GRA-19 3) MA GRA 18 MA GRA 20 | 1) MA GRA-20 2) MA GRA-19 3) MA GRA 18 MA GRA 20 | | |

Actions as Labeled in Table 2-1 of DEIS

| |
|---|
| GRSG = Greater Sage-Grouse |
| FIRE- Fire Management |
| VEG- Vegetation Management (Including non-native, invasive plant species) |
| MIN- Minerals |
| GRA- Livestock Grazing |
| WHB- Wild Horse and Burro |
| LAR- Lands and Realty |
| TTM-Trails and Travel Management |
| REC- Recreation |

Appendix D

Methodology for Calculating a Substantial Livestock
Grazing Reduction under Alternative C2

APPENDIX D

METHODOLOGY FOR CALCULATING A SUBSTANTIAL LIVESTOCK GRAZING REDUCTION UNDER ALTERNATIVE C2

Under Alternative C2, which reduces livestock grazing, the BLM utilized the Desired Stocking level formula found in BLM Technical Reference 4400-7, page 54, to analyze a reduced AUM amount. The formula uses actual use over key management area utilization that equals the desired actual use over the desired key management area utilization. The formula is:

$$\frac{\text{Actual Use}}{\text{Key Management Area Utilization}} = \frac{\text{Desired Actual Use}}{\text{Desired Key Management Area Utilization}}$$

The key management area utilization selected was 50 percent. This number was derived from the take half leave half rule of thumb that began with work by Franklin J. Crider in 1955, which considered root growth stoppage resulting from grass defoliation. He states, “Removals during the growing season of half or more of the foliage of grasses—cool- and warm-season species including bunch, rhizomatous, and stoloniferous types—caused root growth to stop for a time after each removal...” This rule of thumb has been employed over time and, from a general perspective, is the limit of utilization set as a management tool by many BLM field offices. This level is reflected in several allotment decisions in the Randolph Management Framework Plan in Rich County, as well as the Vernal and Moab RMPs. The 50 percent utilization limit has been interpreted by some to also mean “moderate use” or “proper use,” with the same idea of leaving half the plant for regrowth and site protection. Current literature is providing more information on moderate use and its relation to specific species on specific sites and geographic locations. Moderate grazing has been defined as low as 35 percent and as high as 65 percent on rare occasions, specifically for crested wheatgrass (Holecheck et al. 2004). The 41- to 60-percent class interval found in the key species method (formerly the modified key forage plant method) is used by BLM field offices throughout Utah (BLM Technical Reference 1734-03, Utilization studies and residual measurements). This 41 to 60 percent class interval has been interpreted as moderate, and its description states: “Half the available forage (by weight) on key species appears to have been utilized.” Schmutz et al. (1963) also shows that moderate use is

40 to 60 percent with a mid-point of 50 percent. At this level of planning, the general rule is to take half leave half. Most, if not all, BLM field offices are managing for a 50 percent or less utilization limit, so the 50 percent key management area utilization level was used at the base assumption. It is also assumed that all key management areas across the planning area have a 50 percent utilization limit. There may be situations in which site-specific key management areas have a utilization limit higher or lower than 50 percent that benefits ecological processes.

The formula was used to determine a reduced AUM allocation for Alternative C2. A desired key management area utilization of 30 percent was selected to determine the desired active use (AUM) number for this LUPA. In Pellant et al. (2005), 30 percent is the mid-point of the class interval sometimes referred to as light (21 to 40 percent).

Conservation stocking is a term commonly used by range researchers to define a level of grazing between light and moderate, generally involving about 35 percent use of forage (Holecheck et al. 2004). Holecheck et al. (2004) continues that, "Conservation stocking involves using about 35 percent of forage resources on arid and semiarid rangelands. There appears to be little biological benefit from lighter use levels." Schmutz et al. (1963) shows that light use is 20 to 40 percent with a mid-point of 30 percent. Given the slight variation within the light or conservative use levels as outlined in the literature, the BLM used the 30 percent mid-point of the Pellant et al. (2005) class interval, which is more conservative than Holecheck et al. (2004) or Schmutz et al. (1963).

Because actual use is not collected by every BLM field office on every allotment every year, active use, as shown on current grazing permits, was used in its place. Average billed use was not used in the formula because the amount billed may be limited by other factors such as permittees' livestock operational requirements and fire rehabilitation efforts. The average billed use may also have resulted in lower utilization levels not reflected in the 50 percent utilization level assumption. Active use should more closely reflect a relationship between the active use and the average utilization of 50 percent throughout the planning area because of LUP limitations and existing permit terms and conditions.

The use of 50 percent to 30 percent utilization provides a reduction of 329,521 active AUMs (labeled as "actual use" in the formula) in the calculation for a desired actual use of 197,713 AUMs. This would result in a reduction of active AUMs as well as a reduction of the average billed use and is used for analysis purposes in Alternative C2. Site-specific limits of utilization and the application of the reduction will be determined at the field office level where site-specific information about true actual use, ecological condition, and achievement of applicable habitat requirements can be addressed.

The 50 percent and 30 percent utilization limits used in the formula are not intended to suggest a utilization limit or objective in this planning effort.

REFERENCES

- Crider, F. J. 1955. Root growth stoppage resulting from defoliation of grass. US Department of Agriculture, Natural Resources Conservation Service (formerly Soil Conservation Service) Technical Bulletin 1102.
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Appendix E

Greater Sage-Grouse Draft Monitoring Framework

APPENDIX E

GREATER SAGE-GROUSE DRAFT MONITORING FRAMEWORK

The purpose of this Draft US Bureau of Land Management (BLM) and US Forest Service (Forest Service) Greater Sage-grouse Monitoring Framework (hereafter, draft monitoring framework) is to evaluate the implementation and success of the BLM and Forest Service land use plans in maintaining and restoring habitat conditions necessary to support sustainable Greater Sage-Grouse (also referred to as sage-grouse or GRSG) populations. Monitoring data will also be used to help inform adaptive management under these plans.

This draft framework outlines the general monitoring approach, consisting of implementation monitoring and effectiveness monitoring. Implementation monitoring will evaluate whether (and to what extent) the BLM Resource Management Plan (RMP) and Forest Service land management plan (LMP) management to ameliorate threats to sage-grouse have been implemented. Effectiveness monitoring will consist of a multi-scale analysis of our habitat and disturbance monitoring data. Best available population data, provided by the states, will be used to supplement effectiveness analysis.

This draft monitoring framework establishes the use of measurable quantitative indicators for habitat availability and maintenance of habitat types (e.g., priority and general habitats) to ensure each agency's ability to make broad (yet consistent) generalizations about habitat across the range of the species. Monitoring methods and indicators are derived from the best available science. Corporate data-sets will be established or acquired so that data can easily be "rolled up" for reporting monitoring results across the range of sage-grouse, as defined by Schroeder et al. (2004); by populations and subpopulations as defined by Connelly et al. (2004); by RMP/LMP area; by the six Western Association of Fish and Wildlife Agencies (WAFWA) Sage-grouse Management Zones (Stiver et al. 2006) covered by the planning efforts; by BLM and Forest Service priority and general habitat; and by Priority Areas for Conservation (PACs) as defined in the sage-grouse Conservation Objectives Team (COT) Report (US Fish and Wildlife Service [USFWS] 2013). Funding support and dedicated personnel for broad and mid scale monitoring will be renewed annually through the normal budget process.

Sage-grouse are a landscape species, and conservation is a scale-dependent process whereby priority landscapes are identified across the species range and appropriate conservation actions are implemented within seasonal habitats to benefit populations. Following guidelines established by multiple agencies in the Sage-grouse Habitat Assessment Framework (HAF; Stiver et al. 2010), this approach uses the four orders of sage-grouse habitat selection (Johnson 1980): first order (broad scale), second order (mid scale), third order (fine scale), and fourth order (site scale). Because RMP/LMP management are made largely at the broad and mid scale, this draft monitoring framework focuses on these two larger spatial scales. The need for fine and site scale habitat monitoring may vary by area depending on existing conditions, habitat variability, threats, and land health; however indicators at these scales will be consistent with the HAF. Thus, this draft monitoring framework includes methods, data standards, and intervals of monitoring at the broad and mid scales, while outlining indicators to be measured at all scales.

E.1 BROAD AND MID-SCALES

First order habitat selection at the broad scale describes the selection of physical or geographical range of a species. There is one first order habitat, the range of the species defined by populations of sage-grouse associated with sagebrush landscapes (Schroeder et al. 2004; Connelly et al. 2004). Additionally, an intermediate scale between the broad and mid scales was delineated from floristic provinces within which similar environmental factors influence vegetation communities. This scale was developed by WAFWA and is referred to as the WAFWA Sage-grouse Management Zone.

Second order habitat selection at the mid scale includes sage-grouse populations, subpopulations, and PACs. The second order includes at least 40 discrete populations and subpopulations (Connelly et al. 2004). Subpopulations range in area from 300 to 22,400 square miles, while populations range in area from 150 to 54,600 square miles. PACs range from 20 to 20,400 square miles.

Broad and mid scale monitoring results will be reported at the appropriate and applicable geographic scale (**Table E.1; Figure E.1**).

E.1.1 Implementation (Decision/Direction) Monitoring

The regulations for the BLM (43 CFR 1610.4-9) and Forest Service (36 CFR 219.12) require that land use plans establish intervals and standards for monitoring and evaluations, based on the sensitivity of the resource decisions involved. Implementation monitoring is the process of tracking and documenting the implementation (or the progress toward implementation) of land use plan management. A Utah Greater Sage-Grouse LUPA/EIS Implementation Workbook will be completed within one year of the Record of Decision to track the number and type of applicable implementation actions related to each LUP management action for each resource program, and maintained as actions occur. The BLM and Forest Service will be documenting progress annually toward full implementation of the land use plan.

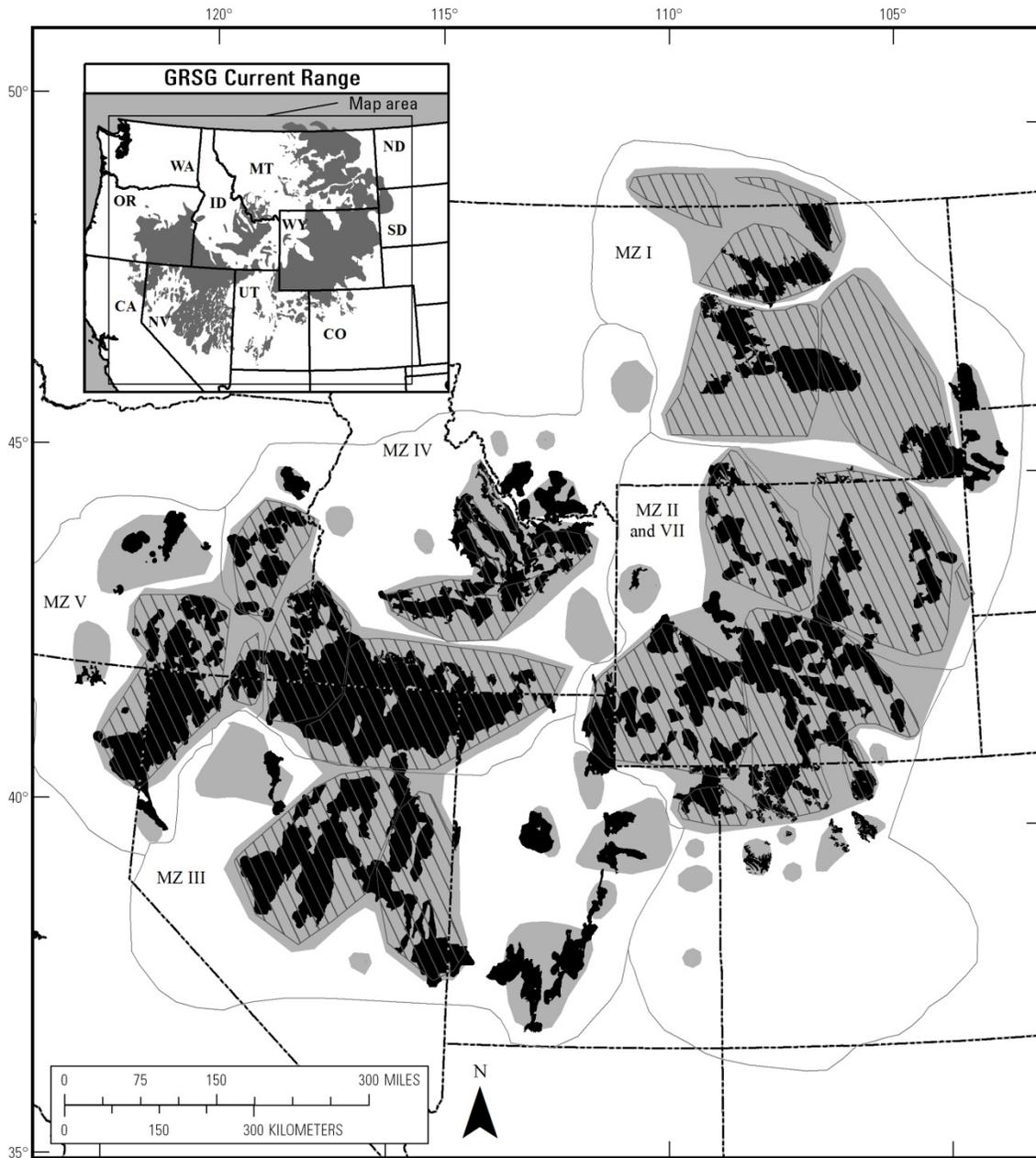
Table E.1
Indicators for Monitoring Implementation of Management, Sage-Grouse Habitat, and Sage-Grouse Populations at the Broad and Mid Scales

| Geographic Scales | Implementation | Habitat | | Population (States) |
|---|--|--|---|--|
| | Management | Disturbance | Vegetation | Demographics |
| Broad Scale: From the range of sage-grouse to WAFWA Management Zones | RMP/LMP objectives, thresholds and management actions | Distribution of sagebrush within occupied habitat | | WAFWA Management Zone population level and population trends |
| Mid Scale: From WAFWA Management Zone scale, subpopulation, and PAC scale | RMP/LMP management, vegetation/ mid scale management direction | Percent of sagebrush per unit area, anthropogenic footprint, density of energy development | Sagebrush patch characteristics, sage-grouse habitat indicators | Subpopulation scale, dispersal and lek complex trends |

E.1.2 Habitat (Vegetation) Monitoring

The current geographic extent of sagebrush vegetation within the range-wide distribution of sage-grouse populations will be ascertained using the most recent version of the Existing Vegetation Type (EVT) layer in LANDFIRE (2006). LANDFIRE EVT was selected to serve as the base sagebrush layer for five reasons: 1) it is the only nationally consistent vegetation layer that has been updated since 2001; 2) the ecological systems classification includes multiple sagebrush type classes that, when aggregated, provide more accurate (compared to individual classes) and seamless sagebrush base layer across jurisdictional boundaries; 3) LANDFIRE performed a vigorous spatial accuracy assessment from which to derive the range-wide uncertainty of the base map 4) LANDFIRE EVT can be compared against the geographic extent of land that has the capability to support sagebrush vegetation using LANDFIRE Biophysical Setting (BpS) to provide a reference point for understanding how much sagebrush can be supported in a defined geographic area, and 5) LANDFIRE is consistently used in several recent analyses of sagebrush habitats (Knick et al, 2011; Leu and Hanser 2011; Knick and Hanser 2011). The BLM has determined that LANDFIRE provides the best available data at broad and mid scales to serve as an initial base layer for monitoring habitat characteristics and by which disturbance changes are measured, incorporated, and reported. Along with the aggregated sagebrush base map, the BLM will aggregate the accuracy assessment reports from LANDFIRE to document the cumulative accuracy for our final base map. The BLM, through its AIM program and specifically the Landscape Monitoring Framework, will provide field data to the LANDFIRE program to support overall accuracy improvements in their products over the long term.

Figure E.I
Map of Greater Sage-Grouse Range, Populations, Subpopulations and Priority Areas for Conservation (PACs).



GRSG PACs, Subpopulations and Populations

LEGEND

-  Subpopulations
-  COT PACs
-  Populations

Sources:

- Current Range: Schroeder et al., 2004
- Populations: Connelly et al., 2004
- Subpopulations: Connelly et al., 2004
- PACs: USFWS COT Report, 2013

Within National Forest System land and isolated areas of BLM-administered land, forest-wide and field office-wide existing vegetation classification mapping and inventories are available that provide a much finer level of data than provided through LANDFIRE. Where available, these products are useful below the mid scale for establishing baseline conditions for monitoring. The fact that they are not available everywhere however limits their utility for monitoring at the broad and mid scale where consistency of data products is necessary regardless of land ownership.

The BLM is improving the quality of vegetation map products for broad and mid scale analyses through the Grass/Shrub mapping effort in partnership with the Multi-Resolution Land Characteristics Consortium (MRLC). The Grass/Shrub mapping effort applies the Homer et al. (2009) methodology to spatially depict fractional percent cover estimates for four components range and west-wide. These four components are the percent cover of sagebrush vegetation, percent bare ground, percent herbaceous vegetation (grass and forbs combined), and percent shrubs. One of the benefits of the design of these fractional cover maps is that they facilitate monitoring “with-in” class variation. This “with-in” class variation can serve as one indicator of sagebrush quality that we cannot derive from vegetation type information from LANDFIRE.

The base sagebrush layer, whether derived from LANDFIRE or Grass/Shrub, will allow for estimation of mid scale indicators, e.g. patch size and number, patch connectivity, linkage areas, and landscape matrix and edge effects (Stiver et al. 2010). The actual methods used to calculate these metric will be derived from existing literature (Knick et al, 2011, Leu and Hanser 2011, and Knick and Hanser 2011). Disturbance updates, generated annually, will be included into the base layer and the landscape metrics will be recalculated to examine changes in pattern and abundance of sagebrush at the various geographic boundaries. The appropriate geographic boundaries for this base layer include the range, management zone, population, subpopulation, and PAC. Other data sources would need to be used to report landscape metrics any finer than the PAC.

The sagebrush base layer and disturbance data provide the ability to calculate landscape metrics as one element of habitat monitoring at the broad and mid scales. Habitat quality, however, will be monitored using field data collected with a statistically valid sampling design (e.g., Landscape Monitoring Framework, a collaborative effort with NRCS on BLM lands (USDI-BLM 2011); AIM monitoring data (Toevs et al. 2011); and see “II. Fine and Site Scales”). These efforts can quantify indices such as percent annual grasses, species composition, sagebrush height, and bare ground at the PAC scale with known error estimates that are continually reduced as more data are collected. Point data will also be used to enhance the accuracy and precision of the Shrub/Grass mapping product. This product can in turn provide additional information about habitat quality at the mid scale. Long-term, BLM will be able to provide a suite of monitoring metrics for the PACs and larger scales that will provide a comprehensive view of sagebrush and sage-grouse habitat condition when combined with population data supplied by the states.

E.1.3 Habitat (Disturbance) Monitoring

Most of the management actions in this land use plan are in response to “Factor A: The Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range” in the USFWS’s 2010 listing decision for GRS (75 *Federal Register* 13910 2010). The USFWS identified several

“threats” affecting Factor A. The BLM and Forest Service will monitor the relative extent of these threats on sagebrush, both spatially and temporally, to report on conditions at the appropriate and applicable geographic scales and boundaries.

Disturbance data will include:

- Agriculture
- Urbanization
- Habitat treatments
- Wildfire
- Invasive plants
- Conifer encroachment
- Energy (oil and gas wells and development facilities)
- Energy (coal mines)
- Energy (wind towers)
- Energy (solar fields)
- Energy (geothermal)
- Mining (active developments; locatable, leasable, saleable)
- Infrastructure (roads)
- Infrastructure (railroads)
- Infrastructure (power lines)
- Infrastructure (communication towers)
- Infrastructure (other vertical structures)
- Other developed rights-of-way

Cumulative disturbance monitoring will aggregate these 18 threats into the following three general measures (see Attachment A):

- Percent of sagebrush per unit area
- Percent of non-habitat (human footprint) per unit area
- Number of energy facilities and mining locations per unit area (density)

To accomplish disturbance monitoring, the BLM and the Forest Service will begin with a base layer of sagebrush described previously in **Section E.1.2, Habitat (Vegetation) Monitoring**. Restored areas will also be considered when evaluating the percentage of sagebrush on the landscape.

Next, the BLM and Forest Service will use the best available range-wide data (external and/or internal data) to evaluate anthropogenic and natural disturbances (direct physical footprint) of

sage-grouse habitat based on threats listed in Factor A. The Sage-Grouse Baseline Environmental Report (BER; Manier et al. 2013) essentially provided a baseline collection of datasets across jurisdictions where available, however for some threats, the data were for federal lands only. Most of the data used in the BER were from external data sources. The BLM will use the most currently available versions to evaluate changes (additional footprints) from the baseline dataset. A subset of these data (e.g. fire perimeters, mine and energy sites), provided by BLM field and state offices and Forest Service forests and regional offices, will be updated and reported to agency headquarters annually. The BLM will report the change in footprints for each of the 18 threats as well as cumulatively for the three general measures described previously.

E.1.4 Population (Demographics) Monitoring

State wildlife management agencies are responsible for monitoring sage-grouse populations within their respective states. The BLM and Forest Service have initiated a process to establish that WAFWA will coordinate collection of annual population data by state agencies. To establish certainty that the data will be provided to the BLM and the Forest Service, the existing memorandum of understanding signed by WAFWA, the BLM, the Forest Service, the Natural Resources Conservation Service, and the USFWS (http://www.blm.gov/pgdata/etc/medialib/blm/wo/Planning_and_Renewable_Resources/fish_wildlife_and/sage-grouse.Par.6386.File.dat/MOU%20on%20Greater%20Sage-Grouse.pdf) could be revised to outline collaboration, process, and responsibilities for data analysis and transfer related to management of sage-grouse. These population data will be used for analysis at the applicable scale to supplement habitat effectiveness monitoring of management actions.

E.1.5 Effectiveness Monitoring

The BLM and the Forest Service will analyze the monitoring data to characterize the relationship among the disturbance, implementation actions, and habitat condition at the appropriate and applicable geographic scale or boundary to accomplish effectiveness monitoring for the Utah Greater Sage-Grouse LUPA/EIS. This will involve evaluating the change in habitat conditions from the baseline conditions in relation to the goals and objectives of the plan and other rangewide conservation strategies (DOI 2004; Stiver et al. 2006; USFWS 2013). When available from WAFWA and/or state wildlife agencies, effectiveness monitoring can be supplemented with population trends (taking into consideration the lag effect response of populations to habitat changes [Garton et al. 2011]). The compilation of broad and mid scale data (and population trends as available) will be on a 5-year reporting schedule or as needed to respond to emerging issues. In addition, effectiveness monitoring will be used to identify emerging issues and research needs and will be consistent with and inform the BLM and the Forest Service adaptive management strategy (see **Section 2.3**, Adaptive Management).

E.2 FINE AND SITE SCALES

Third order habitat selection at the fine scale describes the physical and geographic area within home ranges. At this level, maps of seasonal habitats (breeding, summer, and winter) and the connectivity between these seasonal use areas can be examined to determine limiting factors for populations, subpopulations, and PACs.

Fourth order habitat selection at the site scale is based on physical conditions and the geographic area within seasonal ranges to meet life requisite needs (e.g., nesting and brood rearing). Specific habitat measures are used at this scale as microsite conditions within the seasonal range to determine distribution and use. These measures are typically sampled across a defined area to inform third order habitat selection.

Details and application of monitoring at these two scales will be determined during implementation of the Utah Greater Sage-Grouse LUPA/EIS. The need for fine- and site-scale specific habitat monitoring will vary by area depending on proposed projects, existing conditions, habitat variability, threats, and land health. For example, implementation monitoring will track management in priority habitat; habitat vegetation monitoring will be conducted to evaluate projects targeting sage-grouse habitat enhancement and/or restoration; habitat disturbance monitoring will be conducted where mid-scale monitoring indicates the need for fine-scaled anthropogenic disturbance footprints; and population monitoring (in cooperation with state wildlife agencies) will be analyzed below the subpopulation/PAC level where needed for more specific effectiveness monitoring (e.g., some RMP/LMP objectives, activity plans, development plans, and leasing plans).

Habitat indicator data collected at the fine and site scales will be consistent with the HAF and information provided in the sage-grouse guidelines (Connelly et al. 2000) as well as the core indicators in the assessment, inventory and monitoring (AIM) strategy (Toevs et al. 2011), and applicable Forest Service monitoring techniques. However the metrics for quantifying the indicators can be adjusted for local conditions. If local adjustments to metrics are made, the adjustments will be appropriate to the floristic province/sage-grouse management zone where the data were collected and reflect local plant productivity and sage-grouse habitat data collected within the area. In short, adjustments will be science-based (i.e., predicated on data collected locally and published in a peer-review outlet) and ecologically defensible (i.e., generally supported by the broad base of knowledge on sagebrush and sage-grouse provided in the peer-review literature). When evaluating the land health habitat standard in designated sage-grouse habitats, the BLM will analyze core indicators and other supplemental site scale sage-grouse habitat indicators (see HAF) as appropriate for the seasonal habitat. The activity level plans will describe a sampling scheme for collecting indicators with a non-biased sampling design for vegetation treatments or management actions implemented at the site scale. In addition, the consistent collection of these data will be used to inform the classification and interpretation of imagery and habitat quality at the mid scale as described above.

For examples of current applications of disturbance and reclamation monitoring at the fine scale, see the BLM Wyoming Density and Disturbance Calculation Tool (<http://ddct.wygisc.org/>) and the BLM White River Data Management System (WRDMS) in development with the USGS.

E.3 FINAL MONITORING PLAN

This draft monitoring framework was developed for draft EISs to describe the proposed monitoring activities for this plan. The BLM and Forest Service will consider public comments and collaborate with other agencies to finalize the Utah Greater Sage-Grouse LUPA/EIS Sage-grouse Monitoring Plan.

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ATTACHMENT A. Geospatial data layers used to determine three factors for greater sage-grouse habitat disturbance monitoring at the broad and mid scales.

| Geospatial Data Layer | Percent of Sagebrush | Percent of Non-habitat (Human Footprint) | Number of Energy and Mining Facilities |
|---|-----------------------------|---|---|
| Sagebrush | X | | |
| Areas with biotic potential for sagebrush | X | | |
| Agriculture | X | | |
| Urbanization | X | | |
| Habitat treatments | X | | |
| Wildfire | X | | |
| Invasive plants | X | | |
| Conifer encroachment | X | | |
| Energy (oil and gas wells and development facilities) | | X | X |
| Energy (coal mines) | | X | X |
| Energy (wind towers) | | X | X |
| Energy (solar fields) | | X | X |
| Energy (geothermal) | | X | X |
| Mining (active locatable, leasable, and salable developments) | | X | |
| Infrastructure (roads) | | X | |
| Infrastructure (railroads) | | X | |
| Infrastructure (power lines) | | X | |
| Infrastructure (communication towers) | | X | |
| Infrastructure (other vertical structures) | | X | |
| Other developed rights-of-way | | X | |

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Appendix F

Regional Mitigation Strategy

APPENDIX F

REGIONAL MITIGATION STRATEGY

Mitigation strategies, which take into account the mitigation hierarchy (avoid, minimize, restore, offset), are an important tool for ensuring the BLM and Forest Service meet their GRSG resource objectives while continuing to honor the multiple-use mission. The BLM and Forest Service priority is to mitigate impacts to an acceptable level onsite, to the extent practical, through avoidance (not taking a certain action or parts of an action), minimization (limiting the degree or magnitude of the action and its implementation), rectification (repairing, rehabilitating, or restoring the affected environment), or reduction of impacts over time (preservation and maintenance operations during the life of the action). While mitigating impacts for proposed projects to an acceptable level onsite is typically analyzed and determined through site-specific, implementation-level NEPA documents and their commensurate decision documents, the analysis and mitigation for project level activities will be tiered to the analysis and mitigation proposed throughout each of the action alternatives in this LUPA.

For those impacts that cannot be sufficiently avoided or minimized onsite, the BLM and Forest Service must ensure implementation of effective measures to offset (or compensate for) such impacts and to maintain or improve the viability of sage-grouse habitat and populations over time, as described in the USFWS's COT Report. Regional mitigation may be a necessary component for many large renewable and nonrenewable energy development projects as well as many smaller projects with cumulative effects on the sage-grouse and its habitat.

Any regional mitigation strategy for BLM-administered lands will comply with BLM's **Regional Mitigation** Manual Section 1794, which provides policies, procedures, and instructions for:

1. Adopting a regional approach to planning and implementing mitigation, including pre-identifying potential mitigation sites, projects, and measures
2. Identifying the type of mitigation that is needed to compensate for impacts on resources or values caused by a land use authorization.

It is important to note that any mitigation strategy must include the cooperation and coordination of appropriate and pertinent federal, state, and local land and resource

management agencies across the landscape. The final strategy adopted and implemented within a landscape will be dependent on the unique resources and values of the regional landscape and the mitigation strategies and resources contributed by the regional partners. It is important to acknowledge that the State government working with the BLM and Forest Service as a Cooperating Agency on this land use plan amendment may have already completed, or is currently working on, statewide mitigation strategies. The BLM and Forest Service will continue to work with and support those State government efforts.

The BLM will establish a Mitigation Implementation Team for each of the six WAFWA Management Zones in the West, following the completion of each of the 15 sub-regional EISs that are associated with the National Greater Sage-Grouse Planning Strategy. The planning area presented in this sub-regional EIS lies within WAFWA Management Zones II, III, IV, and VII. The teams are responsible for developing a Mitigation Strategy consistent with BLM Manual Section 1794, as appropriate. The teams will coordinate recommended mitigation strategies between RMP planning areas, WAFWA management zones, and local and state jurisdictions for mitigation consistency, where appropriate.

These implementation teams will be responsible for implementing BLM Manual Section 1794, and making recommendations regarding the following items related to compensatory mitigation:

1. A structure for determining appropriate mitigation, including impact (debit) and benefit (credit) calculation methods, mitigation ratios, mitigation “currency” (e.g., numbers of birds or acres), location, and performance standards options by considering local and regional mitigation options
2. How to resolve mitigation oriented discrepancies that arise within the WAFWA Management Zone or between Zones
3. The application and the holding and disposition of any mitigation funds
4. The most appropriate mitigation for impacts from a given land use authorization and type of seasonal habitat impacted
5. Prioritization of potential mitigation sites, projects, and measures, as guided by conservation strategies (e.g., priority areas for conservation and priority habitat areas)
6. Review mitigation monitoring reports and analyzing and reporting on project effectiveness, corrective measures/adaptive management (where required), and cumulative effects of mitigation actions at the priority areas for conservation and the WAFWA zone.

These WAFWA Management Zone Implementation Teams will function as inter-disciplinary teams composed of BLM, Forest Service, USFWS and state fish and game agencies. The Mitigation Implementation Team will make recommendations to the BLM Authorized Officer. If the recommendations are rejected for any reason, the Mitigation Implementation Team will be re-convened to develop additional recommendations.