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Subject:	FS review information
Date:	Tuesday, March 31, 2015 5:50:16 PM
Attachments:	Utah Draft Proposed Planning Language V25.docx WY9 Draft Proposed Planning Language V39.docx Nevada Draft Proposed Planning Language V20.docx NWCO Draft Proposed Planning Language V19.docx

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Hello all -

In addition to the BLM review information we've sent out over the past few weeks attached is the FS information for those of you lucky enough to have both!

For use in your reviews.

pat

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got leks?

Utah Forest Service Proposed Plan Amendment

Forest Service Plan Components

Desired conditions - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates. (36 CFR 219.7(e)(1)(i)) FSH 1909.12, Chapter 20)

Guideline – A constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. (§ 219.15(d)(3)). Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1)(iv); FSH 1909.12, Chapter 20)

Objective - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets. (36 CFR 219.9(e)(1)(ii)) FSH 1909.12, Chapter 20)

Standard - A mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1) (iii)) FSH 1909.12, Chapter 20).

General Greater Sage-grouse

GRSG-GEN-DC-001-Desired Condition – The landscape for greater sage-grouse encompasses large contiguous areas, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush-community compositions exist, with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for greater sage-grouse.

GRSG-GEN-DC-002-Desired Condition – Anthropogenic disturbance is focused in non-habitat areas outside of priority and general habitat management areas and sagebrush focal areas[1]. Disturbance in general management areas is limited, and there is little to no disturbance in priority habitat management areas and sagebrush focal areas except for valid existing rights and existing authorized uses.

GRSG-GEN-DC-003-Desired Condition – In all greater sage-grouse seasonal habitats, 70% of lands capable of producing sagebrush have 10 to 30% sagebrush canopy cover and less than 10% conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat,

[1] Suitable greater sage-grouse habitat within polygons identified as priority or general habitat management areas. Areas of non-habitat within a polygon are not included as part of any priority or general habitat management area. Sagebrush focal areas may include areas of non-habitat.

sufficient sagebrush height and density provides food and cover for greater sage-grouse during this seasonal period. Specific desired conditions for greater sage-grouse based on seasonal habitat requirements are in table 1.

Table 1. Seasonal Habitat Desired Conditions for Greater Sage-grouse.

ATTRIBUTE	INDICATORS	DESIRED CONDTION
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1-June 15) Apply 4 miles from active leks. [4]		
Lek Security	Proximity of trees [5]	Trees or other tall structures are none to uncommon within 1.86 miles of leks [6,7]
	Proximity of sagebrush to leks [6]	Adjacent protective sagebrush cover within 328 feet of lek [6]
Cover	Seasonal habitat extent [7]	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [6,7,8]	15 to 25%
	Sagebrush height [7] Arid sites [6,7,9] Mesic sites [6,7,10]	 12 to 32 inches 16 to 32 inches
	Predominant sagebrush shape [6]	>50% in spreading [11]
	Perennial grass canopy cover [6,7] Arid sites [7,9] Mesic sites [7,10]	 ≥10% ≥15%
	Perennial grass height [6,7,8]	Provide overhead and lateral concealment from predators [7]
	Perennial forb canopy cover [6,7,8] Arid sites [9] Mesic sites [10]	 ≥5% [6,7] ≥10% [6,7]
BROOD-REARING/SUMMER [1] (Seasonal Use Period June 16-October 31)		
Cover	Seasonal habitat extent [7]	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [6,7,8]	10 to 25%
	Sagebrush height [7,8]	16 to 32 inches
	Perennial grass canopy cover and forbs [7,8]	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition [12]
	Upland and riparian perennial forb availability [6,7]	Preferred forbs are common with several preferred species present [13]
WINTER [1] (Seasonal Use Period November 1-February 28)		
Cover and Food	Seasonal habitat extent [6,7,8]	>80% of the winter habitat
	Sagebrush canopy cover above snow [6,7,8]	>10%
	Sagebrush height above snow [6,7,8]	>10 inches [14]

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

[2] Doherty, K. 2008. *Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts*. University of Montana. Missoula, MT.

[3] Holloran and Anderson. 2005. *Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats*. Condor 107:742-752.

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

[5] Baruch-Mordo, S. J.S. Evans, J.P Severson, D.E. Naugle, J. D. Maestas, J.M. Kiesecker, M.J. Falkowski. C.A. Hagen, and K.P. Reese. . 2013. *Saving sage-grouse from trees*: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167: 233-241.

[6] Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl, eds. 2015. Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool. Technical Reference 6710-1. Bureau of Land Management and Western Association of Fish and Wildlife Agencies, Denver, Colorado.

[7] Connelly, J. M. A. Schroweder, A.R. Sands, and C.E. Braun.2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28 (4): 967-985.

[8] Connelly, J. K. Reese, and M. Schroder. 2003. *Monitoring of Greater sage-grouse habitats and populations*. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.

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

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

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

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

[13] Preferred forbs are listed in HAF Table III-2 (HAF 2014). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2.

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

GRSG-GEN-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3% of the total greater sage-grouse habitat within the Biologically Significant Unit and the proposed project analysis area, regardless of ownership, and the new use will not cause exceedance of the 3% cap (Appendix Z – Disturbance Cap Guidance).

GRSG-GEN-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, only allow new authorized land uses if the residual impacts to greater sage-grouse or their habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Mitigation Framework (Appendix X)

GRSG-GEN-ST-003-Standard – A 3.1 mile buffer around existing and future leks in the Anthro Mountain will be managed as a priority habitat management area, with the remaining area managed as a general habitat manage area.

GRSG-GEN-GL-001-Guideline –During lekking (March 1 to April 30) surface disturbing and disruptive activities, including noise at 10 dB above ambient (not to exceed 20-24 dB) to lekking birds should be restricted from 6 pm to 9 am at a distance of 3.1 miles from the perimeter of an occupied lek.

GRSG-GEN-GL-002-Guideline – During breeding and nesting (March 1 to June 15), surface disturbing and disruptive activities to nesting birds should be restricted.

GRSG-GEN-GL-003-Guideline - When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired habitat conditions displayed in table 1.

GRSG-GEN-GL-004-Guideline – Development of tall structures within 2.0 miles from the perimeter of occupied leks, as determined by local conditions (such as vegetation or topography), with the potential to disrupt breeding or nesting by creating new perching/nesting opportunities for avian predators or by decreasing the use of an area, should be restricted in nesting habitat.

Adaptive Management

GRSG-AM-ST-001-Standard – If a hard trigger is met, immediate action is necessary to stop a severe deviation from greater sage-grouse conservation objectives. The larger deviation from natural variation associated with a hard trigger would necessarily correspond with a greater change in management. Upon reaching a hard trigger, a more restrictive alternative, or an appropriate component of a more restrictive alternative analyzed in the environmental impact statement will be implemented without further action by the Forest Service. The Forest Service will review available and pertinent data, in coordination greater sage-grouse biologists from multiple agencies. (Appendix Z - Adaptive Management Guidance and Sideboards)

GRSG-AM-ST-002-Standard – If a soft trigger is met, the Forest Service will determine the specific cause or causes that are contributing to the decline. In completing this evaluation, the Forest Service will coordinate with greater sage-grouse biologists from multiple agencies. If it is determined that the decline is related to a natural variation in

the population, no specific management actions would be required. However, if Forest Service management actions are determined to be the cause or contribute to the decline, the Forest Service would apply measures within their implementation-level discretion to mitigate the decline of populations and /or habitat. These measures would apply more conservative or restrictive implementation-level conservation conditions, terms, or decisions within the agency's discretion to mitigate the decline. (Appendix Z - Adaptive Management Guidance and Sideboards)

Lands and Realty

Special Use Authorizations (non recreation)

GRSG-LR-SUA-O-001-Objective - In brood rearing and nesting habitats, retrofit existing tall structures (e.g., power poles, cellular towers) with perch deterrents or other anti-perching devices within 2 years of signing the Record of Decision.

GRSG-LR-SUA-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, restrict issuance of new lands special use authorizations that authorize infrastructure, such as high-voltage transmission lines, major pipelines, distribution lines, hydropower, and cellular towers. Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to greater sage-grouse will be avoided by the exception.

GRSG-LR-SUA-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary lands special uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-003-Standard – In priority and general habitat management areas and sagebrush focal areas, require protective stipulations (e.g., noise, tall structure, guy wire removal, perch deterrent installation) when issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers).

GRSG-LR-SUA-ST-004-Standard – In priority and general habitat management areas and sagebrush focal areas, locate upgrades to existing transmission lines within the existing designated corridors unless an alternate route would benefit greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-005-Standard - In priority and general habitat management areas and sagebrush focal areas, when a lands special use authorization is revoked or terminated and no future use is contemplated the authorization holder must remove overhead lines and other surface infrastructure in compliance with 36 CFR 251.60(i).

GRSG-LR-SUA-ST-006-Standard - In priority and general habitat management areas and sagebrush focal areas, if the potential long-term (greater than 5 years) impacts of mitigation (e.g., relocation or burying) to greater sage-grouse or their habitats are greater than the potential impacts from new lands special use authorizations, do not pursue the mitigation. If mitigation is not feasible or would result in short-term (less than 5 years) or long-term impacts, incorporate additional terms and conditions in the special use authorization for protection of greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-007-Standard – In priority and general habitat management areas and sagebrush focal areas, co-locate new infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers) with existing infrastructure to limit disturbance to the smallest footprint, or where it best limits impacts to greater sage-grouse or their habitats. When co-location of new infrastructure cannot be accomplished, locate it adjacent to existing infrastructure, roads, or already disturbed areas. New communication tower sites may be authorized for public safety.

GRSG-LR-SUA-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, outside of existing designated corridors, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit rationale is provided that the biological impacts to greater sage-grouse are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

Land Ownership Adjustments

GRSG-LR-LOA-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit land ownership adjustments unless the action results in a net conservation gain to greater sage-grouse or it will not directly or indirectly adversely impact greater sage-grouse conservation.

GRSG-LR-LOA-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas with minority Federal ownership, consider land ownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved greater sage-grouse population trends and habitats.

Land Withdrawal

GRSG-LR-LW-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, utilize land withdrawals as a tool, where appropriate and subject to valid existing rights, to prevent activities that will be detrimental to greater sage-grouse or their habitats.

Wind and Solar

GRSG-WS-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit new solar utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

Greater Sage-grouse Habitat

GRSG-GRSGH-O-001-Objective – Every 10 years for the next 50 years, improve greater sage-grouse habitat by removing invading conifers and other undesirable species within the number of acres shown in table 2.

Table 2. Treatment Acres per Decade.[1]

	ACRES		
FOREST	**MECHANICAL**[2]	**PRESCRIBED FIRE3**	**GRASS RESTORATION**[4]
Ashley	10000	0	2000
Dixie	13000	1000	7000
Fishlake	7000	0	1000
Manti-Lasal	3000	0	4000
Uinta-Wasatch-Cache	9000	0	0

[1]These are estimates of treatments required to achieve and/or maintain desired habitat conditions over a period of ten years. There are many dynamic and highly variable disturbances that may happen over that period of time that could have a significant effect on the amount, type, and timing of treatment needed. Those disturbances are factored into the ten-year simulation using stochastic, not predictive, techniques. Probabilities of events such as large wildfires are used in the model to make the simulation as realistic as possible, given empirical data about such events in the past, but the results of the simulation cannot be used to predict the future occurrence of such events, including their timing, size, or location, which are essentially random.
[2]Removal of conifers that have invaded sagebrush including phase one juniper that is 10% or less and reducing sagebrush cover in areas over 30% canopy cover
[3]Acres are those that are greater than 30% sagebrush canopy cover and/or invaded by 10% or greater conifer.
[4]Acres presently dominated by annual grasses that could be improved by herbicide application and seeding of perennial vegetatio[4] Acres presently dominated by annual grasses that could be improved by herbicide application and seeding of perennial vegetation.

GRSG-GRSGH-ST-001-Standard – Design habitat restoration projects to move towards desired conditions (table 1) and incorporate the concepts outlined in Appendix Y - *Using resistance and resilience concepts to reduce impacts of invasive annual grasses and altered fire regimes on the sagebrush ecosystem and greater sage-grouse: A strategic multi-scale approach*.

GRSG-GRSGH-GL-001-Guideline – Sagebrush removal in greater sage-grouse breeding and nesting and wintering habitats should be restricted unless necessary to support attainment of desired habitat conditions (table 1).

GRSG-GRSGH-GL-002-Guideline – When removing conifers that are encroaching into greater sage-grouse habitat, avoid persistent woodlands (old growth relative to the site or more than 100 years old).

GRSG-GRSGH-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, actions and authorizations should include design features to limit the spread and effect of undesirable non-native plant species.

GRSG-GRSGH-GL-004-Guideline - To facilitate safe and effective fire management actions, in priority, sagebrush focal, and general management areas, fuels treatments should be designed to reduce the spread and intensity of wildfire in high-risk areas (i.e., areas of increased potential for ignition and in areas where there is a potential for wildfire that would be difficult for suppression resources to contain and control).

GRSG-GRSGH-GL-005-Guideline - In priority and general habitat management areas and sagebrush focal areas, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (table 1).

GRSG-GRSGH-GL-006-Guideline – In priority habitat management areas and sagebrush focal areas, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired habitat conditions (table 1).

Livestock Grazing

GRSG-LG-DC-001-Desired Condition – In priority and general habitat management areas and sagebrush focal areas, livestock grazing is managed to ensure adequate nesting cover and does not conflict with attainment of other vegetative attributes (table 1).

GRSG-LG-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, prohibit construction of water developments unless beneficial to greater sage-grouse habitat.

GRSG-LG-GL-001-Guideline - Grazing guidelines should be applied in each of the seasonal habitats in table 3. If values in table 3 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards

desired habitat conditions in table 1 consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in table 3 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of greater sage-grouse habitat.

Table 3. Grazing Guidelines for Greater Sage-grouse Seasonal Habitat.

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

[1] For descriptions of Seasonal Habitat and Seasonal Periods of greater sage-grouse see table 1.
[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.
[3] Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming*.
[4] Average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly, 2000).
[5] Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. *A meta-analysis of greater sage-grouse Centrocercus urophasianus nesting and brood-rearing habitats*. Wildlife Biology 13(1): 42-50.
[6] Stubble height to be measured at the end of the growing season.
[7] Crawford et al. 2004. Ecology and Management of sage-grouse and sage-grouse habitat. "In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5-15 cm (2-6 in) vs. 30-50 cm (12-20 in); Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing (Neel 1980, Evans 1986). "Moderate use equates to a 10-cm residual stubble height for most grasses and sedges."
[8] Stubble height to be measured in the meadow areas used by greater sage-grouse for brood-rearing (not on the hydric greenline).

GRSG-LG-GL-002-Guideline – In priority habitat management areas and sagebrush focal areas, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve as opportunities arise under applicable regulations, where removal of livestock grazing would enhance the ability to achieve desired habitat conditions (table 1).

GRSG-LG-GL-003-Guideline – Bedding sheep and placing camps within 1.2 miles from the perimeter of a lek during lekking (March 1 to April 30) should be restricted.

GRSG-LG-GL-004-Guideline – During breeding and nesting season (March 1 to June 15), trailing livestock through breeding and nesting habitat should be minimized. Specific routes should be identified, existing trails should be used, and stopovers on active leks should be restricted.

GRSG-LG-GL-005-Guideline – Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, and design).

GRSG-LG-GL-006-Guideline –New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.

Fire Management

GRSG-FM-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, do not use prescribed fire, except for pile burning, in 12-inch or less precipitation zones unless necessary to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1.

GRSG-FM-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, if it is necessary to use prescribed fire to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1, the associated NEPA analysis must identify how greater sage-grouse desired conditions would be met, why alternative techniques were not selected, and how potential threats to greater sage-grouse habitat would be minimized

GRSG-FM-GL-001-Guideline – In wintering or breeding and nesting habitat, sagebrush removal or manipulation should be restricted unless the removal strategically reduces the potential impacts from wildfire.

GRSG-FM-GL-002-Guideline – In priority and general habitat management areas and sagebrush focal areas, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives.

GRSG-FM-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, fuel treatments should be designed to restore, enhance, or maintain greater sage-grouse habitat.

GRSG-FM-GL-004-Guideline – Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, mobile retardant plants) in priority and general habitat management areas and sagebrush focal areas should be restricted.

GRSG-FM-GL-005-Guideline - In priority and general habitat management areas and sagebrush focal areas, cross-country vehicle travel during fire operations should be restricted whenever safe and practical to do so, as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-006-Guideline – In priority and general habitat management areas and sagebrush focal areas, burnout operation areas should be avoided by constructing direct fire lines, whenever safe and practical to do so, to improve suppression effectiveness and minimize loss of existing sagebrush habitat as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-007-Guideline – In priority and general habitat management areas and sagebrush focal areas, prescribed fire prescriptions should minimize undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).

GRSG-FM-GL-008-Guideline - In priority and general habitat management areas and sagebrush focal areas, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.

GRSG-FM-GL-009-Guideline - In priority and general habitat management areas and sagebrush focal areas, all fire associated vehicles and equipment should be power-washed before entering and exiting the area to minimize the introduction of undesirable invasive plant species.

GRSG-FM-GL-010-Guideline - Unit-specific greater sage-grouse fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed.

GRSG-FM-GL-011-Guideline – Localized maps of priority and general habitat management areas and sagebrush focal areas should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.

GRSG-FM-GL-012-Guideline - In or near priority and general habitat management areas and sagebrush focal areas, a greater sage-grouse resource advisor should be assigned to all extended attack fires.

GRSG-FM-GL-013-Guideline – On critical fire weather days, available fire suppression resources should be pre-positioned to optimize a quick and efficient response into priority and general habitat management areas and sagebrush focal areas.

GRSG-FM-GL-014-Guideline - During periods of multiple fires, line officers should be involved in setting priorities to help protect priority and general habitat management areas and sagebrush focal areas.

GRSG-FM-GL-015-Guideline – In priority and general habitat management areas and sagebrush focal areas, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.

GRSG-FM-GL-016-Guideline – In priority and general habitat management areas and sagebrush focal areas, to minimize sagebrush loss, mop-up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available resources allows.

Recreation

GRSG-R-DC-001-Desired Condition – In priority habitat management areas and sagebrush focal areas, existing and new recreation special use authorizations and expansion of special use authorizations restrict effects to greater sage-grouse and their habitats.

GRSG-R-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (greater than 5 years) negative impacts on greater sage-grouse or their habitats.

GRSG-R-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, terms and conditions that protect and/or restore greater sage-grouse habitat within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, existing permits and operating plans should also be modified.

GRSG-R-GL-002-Guideline – In priority habitat management areas and sagebrush focal areas, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to greater sage-grouse and/or their habitats or the development is required for visitor safety.

Roads/Transportation

GRSG-RT-DC-001-Desired Condition - In priority and general habitat management areas and sagebrush focal areas, within the travel management system, greater sage-grouse experience minimal disturbance during breeding and nesting (March 1 to June 15) and wintering periods (November 1 to February 28).

GRSG-RT-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit new road or trail construction (does not apply to realignments for resource protection) except when necessary for administrative access, public safety, or to access valid existing rights. If necessary to construct new roads and trails for one of these purposes, construct them to the minimum standard, length, and number and avoid, minimize, and mitigate impacts.

GRSG-RT-ST-002-Standard – Prohibit road and trail maintenance activities within 2 miles from the perimeter of active leks during lekking (March 1 to April 30) from 6pm.

GRSG-RT-ST-003-Standard – In priority habitat management areas and sagebrush focal areas, prohibit public access on temporary energy development roads, unless consistent with all other terms and conditions included in the land use management plan.

GRSG-RT-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, new roads and road realignments should be designed and administered to reduce collisions with greater sage-grouse.

GRSG-RT-GL-002-Guideline – In priority habitat management areas and sagebrush focal areas, road construction within riparian areas and mesic meadows should be restricted. If not possible to restrict construction within riparian areas and mesic meadows, roads should be designed and constructed at right angles to ephemeral drainages and stream crossings, unless topography prevents doing so.

GRSG-RT-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions (table 1).

GRSG-RT-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas, dust abatement terms and conditions should be included in road use permits when dust has the potential to impact greater sage-grouse.

GRSG-RT-GL-005-Guideline - In priority and general habitat management areas and sagebrush focal areas, road and road-way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive plants. Such activities include but are not limited to the removal or mowing of vegetation a car-width off the edge of roads; use of weed-free earth-moving equipment, gravel, fill, or other materials; and blading or pulling roadsides and ditches that are infested with noxious weeds only if required for public safety or protection of the roadway.

Minerals

Fluid Minerals – Unleased

GRSG-M-FMUL-ST-001-Standard - In priority habitat management areas, any new oil and gas leases must include a no surface occupancy stipulation. There will be no waivers or modifications. An exception could be granted by the authorized officer with unanimous concurrence from a team of agency greater sage-grouse experts from the Fish and Wildlife Service, Forest Service, and State wildlife agency if:

- There would be no direct, indirect, or cumulative effects to greater sage-grouse or their habitats or
- Granting the exception provides an alternative to a similar action occurring on a nearby parcel and
- The exception provides a clear net conservation gain to greater sage-grouse.

GRSG-M-FMUL-ST-002-Standard – In sagebrush focal habitat management areas, there will be no surface occupancy and no waivers, exceptions, or modifications for fluid mineral leasing.

GRSG-M-FMUL-ST-003-Standard – In priority and general habitat management areas and sagebrush focal areas, when analyzing leasing of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.

Fluid Minerals – Leased

GRSG-M-FML-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, require that leaseholders avoid and minimize surface disturbing and disruptive activities consistent with the rights granted in the lease.

GRSG-M-FML-ST-002-Standard – In priority habitat management areas and sagebrush focal areas, when facilities are no longer needed or leases are relinquished, require reclamation plans to include terms and conditions to restore habitat to desired conditions as described in table 1.

GRSG-M-FML-ST-003-Standard – In general management areas, authorize new transmission line corridors, transmission line right-of-ways, transmission line construction, or transmission line-facility construction associated with fluid mineral leases with stipulations necessary to protect greater sage-grouse and their habitats, consistent with the terms and conditions of the permit.

GRSG-M-FML-ST-004-Standard – Locate compressor stations on portions of a lease that are non-habitat and are not used by greater sage-grouse, and if there would be no direct, indirect, or cumulative effects on sage-grouse or their habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise.

GRSG-M-FML-ST-005-Standard – In priority and general habitat management areas and sagebrush focal areas, when authorizing development of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations

GRSG-M-FML-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, operators should be encouraged to reduce disturbance to greater sage-grouse habitat. At the time of approval of the Surface Use Plan of Operation portion of the Application for Permit to Drill, terms and conditions should be

included to reduce disturbance to greater sage-grouse habitat, where appropriate and feasible and consistent with the rights granted to the lessee.

GRSG-M-FML-GL-002-Guideline – On Federal leases in priority habitat management areas and sagebrush focal areas, when surface occupancy cannot be restricted due to valid existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to greater sage-grouse based on vegetation, topography, or other habitat features.

GRSG-M-FML-GL-003-Guideline - In priority and general habitat management areas and sagebrush focal areas, where the federal government owns the surface and the mineral estate is in non-federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

Fluid Minerals – Operations

GRSG-M-FMO-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, do not authorize employee camps.

GRSG-M-FMO-ST-002-Standard – In priority habitat management areas and sagebrush focal areas, when feasible, do not locate tanks or other structures that may be used as raptor perches. If this is not feasible, use perch deterrents.

GRSG-M-FMO-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.

GRSG-M-FMO-GL-002-Guideline – In priority and general habitat management areas and sagebrush focal areas, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

GRSG-M-FMO-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include:

- Increase the depth of ponds to accommodate a greater volume of water than is discharged.
- Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments, to reduce breeding habitat for mosquitoes.
- Maintain the water level below that of rooted aquatic and upland vegetation. Restrict flooding terrestrial vegetation in flat terrain or low-lying areas.
- Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated.
- Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water.
- Line the overflow spillway with crushed rock and construct the spillway with steep sides.
- Fence pond sites to restrict access by livestock and other wild ungulates.
- Remove or re-inject produced water.
- Treat waters with larvicides to reduce mosquito production where water occurs on the surface.

GRSG-M-FMO-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

Coal Mines - Unleased

GRSG-M-CMUL-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, prohibit surface disturbances (e.g., appurtenant facilities) for new underground coalmines.

Coal Mines – Leased

GRSG-M-CML-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, do not authorize new appurtenant surface facilities for existing underground mines unless no technically feasible alternative exists. If new appurtenant surface facilities associated with existing mine leases cannot be located outside of priority habitat management areas and sagebrush focal areas, co-locate them with any existing disturbed areas, if possible. If co-location is not possible, then construct new facilities to minimize disturbed areas while meeting mine safety standards and requirements, as identified by MSHA mine-plan approval process, and locate the facilities in an area least harmful to greater sage-grouse habitats based on vegetation, topography, or other habitat features.

GRSG-M-CML-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to protect and reduce threats to greater sage-grouse and their habitats to conserve, enhance, and restore habitat for long-term viability.

Locatable Minerals

GRSG-M-LM-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, approve Plans of Operation with mitigation to protect greater sage-grouse and their habitats, consistent with the rights of the mining claimant as granted by the General Mining Act of 1872, as amended.

GRSG-M-LM-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas to keep habitat disturbance at a minimum, a phased development approach should be applied to operations consistent with the rights granted under the General Mining Act of 1872, as amended. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

GRSG-M-LM-GL-002-Guideline - In priority and general habitat management areas and sagebrush focal areas, abandoned mine sites should be closed or mitigated, subject to valid or existing rights, to reduce predation of greater sage-grouse by eliminating tall structures that could provide nesting opportunities and perching sites for predators.

Non-energy Leasable Minerals

GRSG-M-NEL-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases, the Forest Service should provide recommendations to the Bureau of Land Management for the protection of greater sage-grouse and their habitats.

GRSG-M-NEL-GL-002-Guideline - In priority and general habitat management areas and sagebrush focal areas, the Forest Service should recommend to the Bureau of Land Management that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to greater sage-grouse and their habitat.

Mineral Materials

GRSG-M-MM-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, prohibit new mineral material disposal or development.

GRSG-M-MM-ST-002-Standard – In priority habitat management areas and sagebrush focal areas, free-use mineral material collection permits may be issued and expansion of existing active pits may be allowed, except from March 1 to April 30 between 6 pm and 9 am within 2 miles from the perimeter of occupied leks, if doing so is within the Biologically Significant Unit and does not exceed the disturbance cap.

GRSG-M-MM-ST-003-Standard - In priority and general habitat management areas and sagebrush focal areas, any existing permit for mineral material operations must include appropriate requirements for operation and reclamation of the site to restore, enhance, or maintain desired habitat conditions (table 1).

Glossary of Terms as Used in this Plan

Active lek - Any lek that has been attended by male greater sage-grouse during the most recent strutting season.

Adjacent – Installation of new linear improvements (e.g., equipment or facilities) parallel, near, or next to existing linear improvements.

Administrative access - Access for resource management and administrative purposes such as fire suppression, cadastral surveys, permit compliance, law enforcement, and military in the performance of their official duty, or other access needed to manage National Forest System lands or uses.

Ambient (noise level) - Sometimes called background noise level, reference sound level, or room noise level is the background sound pressure level at a given location, normally specified as a reference level to study a new intrusive sound source.

Anthropogenic disturbances – Human-created features including but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells and associated facilities, geothermal wells and associated facilities, pipelines, landfills, agricultural conversion, homes, grazing-related facilities and structures, and mines.

Appurtenant (minerals) - A piece of equipment (e.g., pump jack, separator, storage tank, compressor station, metering equipment) necessary for production.

Authorized use - An activity (i.e., resource use) occurring on the public lands that is either explicitly or implicitly recognized and legalized by law or regulation. The term may refer to activities occurring on the public lands for which the Forest Service has issued a formal authorization document (e.g., livestock grazing permit, special use authorization, approved plan of operation, etc.). Formal authorized uses can involve both commercial and noncommercial activity, facility placement, or event. These authorized uses are often spatially or temporally limited. Unless constrained or bounded by statute, regulation, or an approved land use plan decision, legal activities involving public enjoyment and use of the public lands (e.g., hiking, camping, hunting, etc.) require no formal Forest Service authorization.

Baseline condition - The pre-existing condition of a defined area and/or resource that can be quantified by an appropriate metric(s). During environmental reviews, the baseline is considered the affected environment that exists at the time of the review's initiation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

Biologically significant unit - A geographical/spatial area within greater sage-grouse habitat that contains relevant and important habitats that is used as the basis for comparative calculations to support evaluation of changes to habitat. A biologically significant unit or subset of the unit is used in the calculation of the anthropogenic disturbance threshold and in the adaptive management habitat trigger.

Co-locate - Installation of new linear improvements in or on existing linear improvements.

Communication tower site - Sites that include broadcast types of uses (e.g., television, AM/FM radio, cable television, broadcast translator) and non-broadcast uses (e.g., commercial or private mobile radio service, cellular telephone, microwave, local exchange network, passive reflector).

Compensatory mitigation - Compensating for the residual impact of a certain action or parts of an action by replacing or providing substitute resources or environments.

Compensatory mitigation projects – The restoration, creation, enhancement, and/or preservation of impacted resources, such as on-the-ground actions to improve and/or protect habitats (e.g. chemical vegetation treatments, land acquisitions, conservation easements).

Distribution line - An electrical utility line with a capacity of less than 100kV or a natural gas, hydrogen, or water pipeline less than 24" in diameter.

Diversity (species) – The number, distribution, and geographic ranges of plant and animal species including focal species and species-at-risk.

Durable (protective and ecological) - The administrative, legal, and financial assurances that secure and protect the conservation status of a compensatory mitigation site, and the ecological benefits of a compensatory mitigation project, for at least as long as the associated impacts persist.

Enhance - The improvement of habitat by increasing missing or modifying unsatisfactory components and/or attributes of the plant community to meet greater sage-grouse objectives.

Exception (minerals) - A case-by-case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria apply. The authorized officer (any employee of the Forest Service to whom has been delegated the authority to perform the duties described in the applicable Forest Service manual or handbook) may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of greater sage-grouse.

Feasible – see technically/economically feasible.

Fluid minerals - Oil, gas, coal bed natural gas, and geothermal resources.

General habitat management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as those outside of priority habitat management areas and sagebrush focal areas and occupied seasonally or year-round.

Habitat - An environment that meets a specific set of physical, biological, temporal, or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of their life cycle.

Hard triggers - Thresholds indicating that immediate action is necessary to stop a severe deviation from sage grouse conservation objectives set forth in the land and resources management plan.

High-voltage transmission line – An electrical power line that is 100 kilovolts or larger.

Holder – An individual or entity that holds a valid special use authorization.

Impact - The effect, influence, alteration, or imprint caused by an action.

Indicators - Factors that describe resource condition and change and can help the BLM and the Forest Service determine trends over time.

Isolated parcel - An individual parcel of land that may share a corner, but does not have a common border with another parcel.

Invasive species (invasives plant species, invasives) - An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. The species must cause, or be likely to cause, harm, and be exotic to the ecosystem it has infested before considered invasive.

Landscape – A distinct association of land types that exhibit a unique combination of local climate, landform, topography, geomorphic process, surficial geology, soil, biota, and human influences. Landscapes are generally of a size that the eye can comprehend in a single view.

Lease – A type of special use authorization (usually granted for uses other than linear rights-of-way) that is used when substantial capital investment is required and when conveyance of a conditional and transferable interest in National Forest System lands is necessary or desirable to serve or facilitate authorized long-term uses, and that may be revocable and compensable according to its terms.

Leasable minerals - Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. These include energy-related mineral resources such as oil, natural gas, coal, and geothermal, and some non-energy minerals, such as phosphate, sodium, potassium, and sulfur. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

Lessee - A person or entity authorized to use and occupy National Forest System land under a specific instrument identified as a lease. Forest special use leases are limited to authorize certain wireless communication uses. Leases are also used for certain mineral leasable activities.

Lek - A courtship display area attended by male greater sage-grouse in or adjacent to sagebrush dominated habitat. For management purposes, leks with less than five males observed strutting should be confirmed active for 2 years before meeting the definition of a lek (Connelly et al 2000, Connelly et al. 2003, 2004).

Locatable minerals - Mineral disposable under the General Mining Act of 1872, as amended, that was not excepted in later legislation. They include hardrock, placer, industrial minerals, and uncommon varieties of rock found on public domain lands.

Major pipeline – A pipeline that is 24 inches or more in outside-pipe diameter (Mineral Leasing Act of 1920 30 U.S.C. § 181; 36 CFR 251.54(f)(1)).

Mineral - Any naturally formed inorganic material, solid or fluid inorganic substance that can be extracted from the earth, any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained usually from the ground. Under Federal laws, considered as locatable (subject to the general mining laws), leasable (subject to the Mineral Leasing Act of 1920), and salable (subject to the Materials Act of 1947).

Mineral materials - Common varieties of mineral materials such as soil, sand and gravel, stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Materials Act of 1947, as amended.

Minimization mitigation - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

Mitigation – Specific means, measures, or practices that could reduce, avoid, or eliminate adverse impacts. Mitigation can include avoiding the impact altogether by not taking a certain action or parts of an action, minimizing the impact by limiting the degree of magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitation, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, and compensating for the impact by replacing or providing substitute resources or environments.

Modification (oil and gas) - A fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

Native plant species - Species that were found here before European settlement, and consequently are in balance with these ecosystems because they have well developed parasites, predators, and pollinators.

Net conservation gain - The actual benefit or gain above baseline conditions.

No surface occupancy (NSO) - Use or occupancy of the land surface for fluid mineral exploration or development prohibited to protect identified resource values. The NSO stipulation includes stipulations that may be worded as "No Surface Use/Occupancy," "No Surface Disturbance," "Conditional NSO," or "Surface Disturbance or Surface Occupancy Restriction (by location)."

Occupied Lek - A lek that has been active during at least one strutting season within the prior 10 years.

Opportunity (allotment closure) - A suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit.

Permit — A special use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System land or facilities for specified purposes, and which is both revocable and terminable.

Persistent woodlands – Long-lived pinyon-juniper woodlands that typically have sparse understories and occur on poor substrates in the assessment area.

Plan of Operation - A Plan of Operation is required for all mining activity conducted under the General Mining Act of 1872, as amended, if the proposed operations will likely cause significant disturbance of surface resources. The Plan of Operation describes the type of operations proposed and how they would be conducted, the type and standard of existing and proposed roads or access routes, the means of transportation to be used, the period

during which the proposed activity will take place, and measures to be taken to meet the requirements for environmental protection (36 CR 228.4).

Prescribed fire - Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist and NEPA requirements, where applicable, must be met before ignition.

Priority management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as having the highest conservation value to maintaining sustainable greater sage-grouse populations. These areas include breeding, late brood-rearing and winter concentration areas.

Prohibit – To forbid (something) by law, rule, or other authority; no authorizations will be issued.

Reclamation plans – Plans that guide the suite of actions taken within an area affected by human disturbance, the outcome of which is intended to change the condition of the disturbed area to meet pre-determined objectives and/or make it acceptable for certain defined resources (e.g., wildlife habitat, grazing, ecosystem function, etc.).

Residual impacts - Impacts from an implementation-level decision that remain after applying avoidance and minimization mitigation; also referred to as unavoidable impacts.

Restoration - Implementation of a set of actions that promotes plant community diversity and structure that allows plant communities to be more resilient to disturbance and invasive species over the long term. The long-term goal is to create functional, high quality habitat that is occupied by greater sage-grouse. Short-term goal may be to restore the landform, soils and hydrology and increase the percentage of preferred vegetation, seeding of desired species, or treatment of undesired species.

Restrict – To put a limit on; keep under control; to limit someone's actions or movement, or to limit the amount, size, etc., of something.

Right-of-way - Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project or facility passing over, upon, under or through such land.

Road or trail - A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

Sagebrush focal areas – Areas identified by the U.S. Fish and Wildlife Service that represent recognized "strongholds" for greater sage-grouse and are considered most vital to the species persistence and therefore, have the strongest levels of protection.

Soft triggers - An intermediate threshold indicating that management changes are needed at the implementation level to address habitat or population losses.

Special use authorization - A written permit, term permit, lease, or easement that authorizes use or occupancy of National Forest System lands and specifies the terms and conditions under which the use or occupancy may occur.

Stipulation (general) - A term or condition in an agreement, contract, or written authorization.

Stipulation (oil and gas) - A provision that modifies standard oil and gas lease terms and conditions in order to protect other resource values or land uses and is attached to and made a part of the lease.

Surface disturbing and disruptive activities - Actions that alter the vegetation, surface/near surface soil resources, and/or surface geologic features, beyond natural site conditions and on a scale that affects other public land values. Examples of surface disturbing activities may include operation of heavy equipment to construct well pads, roads, pits and reservoirs; installation of pipelines and power lines; maintenance activities, and several types of vegetation treatments (e.g., prescribed fire, etc.). Surface disturbing activities may be either restricted or prohibited.

Surface uses - Activities that may be present on the surface or near-surface (e.g., pipelines) of public lands. When administered as a use restriction (e.g., no surface occupancy), this phrase prohibits all but specified resource uses and activities in a certain area to protect particular sensitive resource values and property. This designation typically applies to small acreage sensitive resource sites (e.g., plant community study exclosure, etc.), and/or administrative sites (e.g., government ware-yard, etc.) where only authorized, agency personnel are admitted.

Tall structures - A wide array of infrastructures (e.g., poles that support lights, telephone and electrical distribution, communication towers, meteorological towers, high-tension transmission towers, and wind turbines) that have the potential to disrupt lekking or nesting birds by creating new perching/nesting opportunities and/or decreasing the use of an area. A determination as to whether something is considered a tall structure would be based on local conditions such as vegetation or topography.

Technically/economically feasible - Actions that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. It is the Forest Service's sole responsibility to determine what actions are technically and economically feasible. The Forest Service will consider whether implementation of the proposed action is likely given past and current practice and technology; this consideration does not necessarily require a cost-benefit analysis or speculation about an applicant's costs and profit.

Temporary special use permit – A type of permit that terminates within 1 year or less after the approval date. All other provisions applicable to permits apply fully to temporary permits. Temporary special use permits are issued for seasonal or short-duration uses involving minimal improvement and investment.

Term permit – An authorization to occupy and use National Forest System land, other than rights-of-way for a specified period that is both revocable and compensable according to its terms.

Timely - The conservation benefits from compensatory mitigation accruing as early as possible or before impacts have begun.

Transmission line - An electrical utility line with a capacity greater than or equal to 100kV or a natural gas, hydrogen, or water pipeline greater than or equal to 24" in diameter.

Travel management system – Planned and authorized roads, trails, and areas for motor vehicle use on National Forest System lands that are managed in a controlled, sustained manner.

Utility-scale and/or commercial energy development – A project that is capable of producing 20 or more megawatts of electricity for distribution to customers through the electricity-transmission-grid system.

Valid existing rights - Documented, legal rights, or interests in the land, which allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include but are not limited to fee title ownership, mineral rights, and easements. Such rights may have been reserved, acquired, granted or otherwise authorized under various statutes of law.

Vegetation treatments - Management practices that are designed to maintain current vegetation structure or change the vegetation structure to a different stage of development. Vegetation treatment methods may include managed fire, prescribed fire, chemical, mechanical, and seeding.

Viability - For purposes of the National Forest Management Act and its enabling regulations, viability is the availability of habitat that allows a species to persist on landscapes for long-periods (multi-generational) of time. It assumes that populations are abundant (sufficient numbers) and well-distributed (sufficient redundancy of populations) to provide for long-term population persistence on a landscape.

Waiver (oil and gas) - Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

West Nile virus - A virus that is found in temperate and tropical regions of the world and most commonly transmitted by mosquitoes. West Nile virus can cause flu-like symptoms in humans and can be lethal to birds, including greater sage-grouse.

Wildfire suppression - An appropriate management response to wildfire, escaped wildland fire use or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

WY9 Forest Service Proposed Plan Amendment

Forest Service Plan Components

Desired conditions - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates. (36 CFR 219.7(e)(1)(i)) FSH 1909.12, Chapter 20)

Guideline – A constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. (§ 219.15(d)(3)). Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1)(iv); FSH 1909.12, Chapter 20)

Objective - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets. (36 CFR 219.9(e)(1)(ii)) FSH 1909.12, Chapter 20)

Standard - A mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1) (iii)) FSH 1909.12, Chapter 20)

Greater Sage-grouse Habitat

GRSG-GRSGH-DC-001-Desired Condition – The landscape for greater sage-grouse encompasses large contiguous areas, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush-community compositions exist, with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for greater sage-grouse.

GRSG-GRSGH-DC-002-Desired Condition – In greater sage-grouse habitat management areas, including all seasonal habitats, 70% of lands capable of producing sagebrush have 10 to 30% sagebrush canopy cover and less than 10% conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for greater sage-grouse during this seasonal period. Specific desired conditions for greater sage-grouse based on seasonal habitat requirements are displayed in table 1.

Table 1. Seasonal Habitat Desired Conditions for Greater Sage- grouse.

ATTRIBUTE	INDICATORS	DESIRED CONDITION
AREAS MANAGED FOR BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 15-June 30) Apply 5.3 miles from occupied leks. [4]		
Lek Security	Proximity of trees[5]	Trees or other tall structures are none to uncommon within 1.86 miles of leks[6,7]
	Proximity of sagebrush to leks[6]	Adjacent protective sagebrush cover within 328 feet of lek[6]
Cover	Seasonal habitat extent[7]	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [6,7,8]	15 to 25%
	Sagebrush height[7] Arid sites[7,9] Mesic sites[7,10]	 8 to 32 inches in black sage and 12 to 32 inches in all other areas All Wyoming NFs: 16 to 32 inches
	Predominant sagebrush shape[6]	>50% in spreading[11]
	Perennial grass canopy cover [6, 7] Arid sites[6,7,9] Mesic sites[6,7,10]	 ≥10% ≥15%
	Perennial grass height[6,7,8]	Provide overhead and lateral concealment from predators[6]
	Perennial forb canopy cover [6,7,8] Arid sites[9] Mesic sites[10]	 ≥5%[6,7] ≥10%[6,7]
AREAS MANAGED FOR BROOD-REARING/SUMMER[1] (Seasonal Use Period July 1-November 30)		
Cover	Seasonal habitat extent[7]	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [6,7,8]	10 to 25%
	Sagebrush height[7,8]	8 to 20 inches in black sage and 12 to 32 inches in all other areas
	Perennial grass canopy cover and forbs [7,8]	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition [12]
	Upland and riparian perennial forb availability[6,7]	Preferred forbs are common with several preferred species present[13]
WINTER[1] (Seasonal Use Period December 1-March 14)		
Cover and Food	Seasonal habitat extent[6,7,8]	>80% of the winter habitat
	Sagebrush canopy cover above snow[6,7,8]	>10%
	Sagebrush height above snow[6,7,8]	>10 inches[14]

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

[2] Doherty, K. 2008. *Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts*. University of Montana. Missoula, MT.

[3] Holloran and Anderson. 2005. *Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats*. Condor 107:742-752.

[4] Buffer distance may be changed only if 3 out of 5 years of telemetry studies indicate the 5.3 miles is not appropriate.

[5] Baruch-Mordo, S. J.S. Evans, J.P Severson, D.E. Naugle, J. D. Maestas, J.M. Kiesecker, M.J. Falkowski. C.A. Hagen, and K.P. Reese. . 2013. *Saving sage-grouse from trees*: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167: 233-241.

[6] Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl. In Press. *Sage-Grouse Habitat Assessment Framework: Multi-scale Habitat Assessment Tool. Bureau of Land Management and Western Association of Fish and Wildlife Agencies,* Technical Reference XXXX -X. U.S. Bureau of Land Management, Denver, Colorado. Submitted for publication.

[7] Connelly, J. M. A. Schroweder, A.R. Sands, and C.E. Braun.2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28 (4): 967-985.

[8] Connelly, J. K. Reese, and M. Schroder. 2003. *Monitoring of Greater sage-grouse habitats and populations*. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.

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

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

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

ATTRIBUTE	INDICATORS	DESIRED CONDITION
[13] Existing land management plan desired conditions for riparian areas/wet meadows (spring seeps) may be used in place of properly functioning conditions, if appropriate for meeting greater sage-grouse habitat requirements. [13] Preferred forbs are listed in HAF Table III-2 (HAF 2014). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2. [14] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands.		

GRSG-GRSGH-ST-001-Standard – Design habitat restoration projects to move towards the desired conditions displayed in table 1 and incorporate the concepts outlined in Appendix C - Reclamation Plan and Appendix D - Monitoring Framework.

GRSG-GRSGH-ST-002-Standard - When 1) annual lek counts, wing counts, aerial surveys, habitat monitoring or Density Disturbance Calculation Tool evaluations show deviation from normal annual fluctuations in greater sage-grouse habitat or populations for two consecutive years that may indicate a long-term downward trend; or 2) monitoring identifies other negative population or habitat anomalies for greater sage-grouse, conduct an evaluation to determine causal factors and develop an appropriate response strategy. This strategy may include curtailment of activities that may adversely affect greater sage-grouse populations or habitat.

GRSG-GRSGH-ST-003-Standard - Variability in: 1) number of active leks, 2) acres of available greater sage-grouse habitat, or 3) greater sage-grouse population trends based on lek counts can provide catastrophic indicators that greater sage-grouse is not responding to conservation measures set forth in the plan or that large scale negative impacts to greater sage-grouse populations or habitat are occurring. If two of the preceding three indicators exceed 60% of normal variability in a year or one of the preceding three indicators exceeds 40% of normal variability for 3 out of any 5 years, desired conservation results are not being attained and within 14 days the Adaptive Management Working Group (representatives from the Bureau of Land, Forest Service, US Fish and Wildlife Service, and State of Wyoming) will convene to develop an interim response strategy and initiate an assessment to determine the causal factors.

GRSG-GRSGH-GL-001-Guideline – Sagebrush removal in priority habitat management areas and sagebrush focal areas and in wintering habitat should be restricted unless necessary to support attainment of desired habitat conditions displayed in table 1.

GRSG-GRSGH-GL-002-Guideline – Within priority habitat management areas and sagebrush focal areas in northeast Wyoming, vegetation treatments in nesting and wintering habitat that would reduce sagebrush canopy to less than 15% should be restricted.

GRSG-GRSGH-GL-003-Guideline – When removing conifers that are encroaching into greater sage-grouse habitat, avoid persistent woodlands (old growth relative to the site or more than 100 years old).

GRSG-GRSGH-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas, actions and authorizations should be designed to limit the spread and effect of undesirable non-native plant species.

GRSG-GRSGH-GL-005-Guideline - To facilitate safe and effective fire management actions, in priority and general habitat management areas and sagebrush focal areas, fuels treatments should be designed to reduce the spread

and intensity of wildfire in high-risk areas (i.e., areas of increased potential for ignition and in areas where there is a potential for wildfire that would be difficult for suppression resources to contain and control).

GRSG-GRSGH-GL-006-Guideline - In priority and general habitat management areas and sagebrush focal areas, native plant species should be emphasized to restore, enhance, or maintain desired habitat conditions displayed in table 1.

GRSG-GRSGH-GL-007-Guideline - When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired habitat conditions displayed in table 1.

Timing, Distance, Density, and Disturbance

GRSG-TDDD-ST-001-Standard - In priority habitat management areas and sagebrush focal areas, prohibit new surface occupancy or surface disturbing activities on or within a 0.6 mile radius of the perimeter of occupied leks that are located in priority and sagebrush habitat management areas.

GRSG-TDDD-ST-002-Standard – In general habitat management areas, prohibit new surface occupancy or surface disturbing activities on or within a 0.25 mile radius of the perimeter of occupied leks.

GRSG-TDDD-ST-003-Standard – In priority-core habitat management areas and sagebrush focal areas, prohibit new surface disturbing or disruptive activities from March 15 through June 30. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for the seasonal restriction, dates may be shifted by 14 days before or subsequent to the above dates.

GRSG-TDDD-ST-004-Standard – Within priority-connectivity habitat management area, prohibit new surface disturbing or disruptive activities from March 15 through June 30 within 4 miles of a lek or lek perimeter of any occupied lek within identified priority-connectivity areas. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for this seasonal restriction, dates may be shifted by 14 days before or subsequent to the above dates.

GRSG-TDDD-ST-005-Standard – In general habitat management areas, prohibit new surface disturbing or disruptive activities from March 15 to June 30 within 2 miles of the lek or lek perimeter of any occupied lek located inside general areas. Activities that meet the exception, waiver, and modification criteria may be authorized. Where credible data, based upon field analysis, support different timeframes for this restriction, dates may be shifted by 14 days before or subsequent to the above dates.

GRSG-TDDD-ST-006-Standard – Within mapped winter concentration areas in priority habitat management areas and sagebrush focal areas, prohibit new surface disturbing or disruptive activities from December 1 through March 14 to protect priority-core and sagebrush focal habitat area populations of greater sage-grouse that use these winter concentration habitats. Activities not located in suitable habitat that meet the exception, waiver, and modification criteria may be authorized.

GRSG-TDDD-ST-007-Standard – Within mapped winter concentration areas in priority-connectivity and general habitat management areas, prohibit new surface disturbing or disruptive activities from December 1 through March 14 where winter concentration areas are identified as supporting populations of greater sage-grouse that attend leks within priority-core habitat management areas and sagebrush focal areas.

GRSG-TDDD-ST-008-Standard – In priority-core habitat management areas and sagebrush focal areas, limit the density of activities related to oil and gas development or mining activities to no more than an average of one facility or mining activity per 640 acres, using the current Density Disturbance Calculation Tool process described in Appendix I or its replacement, subject to valid existing rights.

GRSG-TDDD-ST-009-Standard – In priority habitat management areas and sagebrush focal areas, prohibit surface disturbance and disruptive activities unless all existing discrete anthropogenic disturbances cover less than 5% of the suitable habitat in the surrounding area using the current Density Disturbance Calculation Tool process or its replacement, as described in Appendix I, and the new use will not cause exceedance of the 5% cap. An exception to this standard is described in the Locatable Minerals section in GRSG-M-LM-ST-003-Standard.

GRSG-TDDD-ST-010-Standard – On a case-by-case basis, and only when it can be demonstrated that the activity will not cause declines in greater sage-grouse populations, allow exceptions, modifications, and waivers for Standards GRSG-TDDD-ST-003, 004, 005, 006, 007, 008, and 009. The authorized officer may grant an exception if a review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of greater sage-grouse.

GRSG-TDDD-GL-001-Guideline – During lekking (March 1 to May 15) surface disturbance and disruptive activities, including noise at 10 dB above ambient (not to exceed 20-24 dB) to lekking birds, should be restricted from 6 pm to 9 am at a distance of 0.6 mile from the perimeter of an occupied lek.

GRSG-TDDD-GL-002-Guideline – In-kind mitigation is preferred to out-of-kind mitigation. Where in-kind mitigation no provides net conservation gain to greater sage-grouse, or where other habitat types are most limiting to populations, mitigation should focus on habitats that provide the greatest benefit to the species. When approving mitigation requests, the following hierarchy should be considered:

1. Onsite (on lease).
2. Offsite within the project's DDCT analysis area.
3. Offsite within the same priority or sagebrush focal management area boundary.
4. Adjacent to the affected priority or sagebrush focal management areas within the general habitat management area boundary.
5. Offsite within the same 2006 WAFWA Strategy determined Management Zone as the impact.
6. Other areas as identified by the local unit.

Infrastructure

GRSG-INFRA-GL-001-Guideline - In priority habitat management areas and sagebrush focal areas, impacts to greater sage-grouse and their habitats should be reduced during maintenance, replacement, and upgrades of existing structures. Impacts should also be mitigated when constructing new infrastructure.

- Existing guy wires should be removed or appropriately marked with bird flight diverters to make them more visible to greater sage-grouse in flight. Authorization of new infrastructure with guy wires should be restricted.
- Power lines (distribution and transmission) should be designed to minimize wildlife related impacts and constructed to the latest APLIC standards.
- When possible, perch deterrents should be installed on existing and new overhead facilities. Tanks and other above ground facilities should be equipped with structures or devices that discourage nesting and perching of raptors and corvids.
- Permanent structures should be designed or sited to minimize impacts to greater sage-grouse, with emphasis on locating and operating facilities that create movement (e.g., pump jacks) or attract frequent human use and vehicular traffic (e.g., fluid storage tanks) in a manner that will minimize disturbance of greater sage-grouse or interference with habitat use.
- Liquid gathering facilities should be placed outside priority habitat management areas and sagebrush focal areas. To reduce truck traffic and perching and nesting of ravens and raptors, tanks should not be placed at well locations.

Lands and Realty

Special Use Authorizations (non recreation)

GRSG-LR-SUA-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, restrict issuance of new special use authorizations for infrastructure, such as high-voltage transmission lines, major pipelines hydropower, distribution lines, and cellular towers (Map 2-13). Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to greater sage-grouse will be avoided with the exception.

GRSG-LR-SUA-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary lands special use permits (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-003-Standard - In priority and general habitat management areas and sagebrush focal areas, when a lands special use authorization is revoked or terminated and no future use is contemplated, the authorization holder must remove overhead lines and other infrastructure in compliance with 36 CFR 251.60(i).

GRSG-LR-SUA-ST-004-Standard – In priority habitat management areas and sagebrush focal areas, new power transmission projects must be located within the 2-mile wide transmission line route in south-central and southwestern Wyoming (see Map 2-15) or as close as technically feasible (within 0.5 mile) on either side of existing 115 kV or larger transmission lines or corridors (creating a route no wider than 1 mile). These projects will not be counted against the 5% disturbance cap (Wyoming Density and Disturbance Calculation Tool Manual).

GRSG-LR-SUA-ST-005-Standard - In priority habitat management areas and sagebrush focal areas, new power distribution lines must not be located within 0.6 miles from the perimeter of occupied greater sage-grouse leks. Effective mitigation to protect greater sage-grouse is required. See Standards and Guidelines in the Timing, Distance, Density, and Disturbance section and see GRSG-INFRA-GL-001-Guideline.

GRSG-LR-SUA-ST-006-Standard – In priority and general habitat management areas and sagebrush focal areas, locate upgrades to existing transmission lines within the existing designated corridors unless an alternate route would benefit greater sage-grouse or their habitats.

GRSG-LR-SUA-GL-001-Guideline - Authorization of new temporary MET towers should be restricted in priority habitat management areas and sagebrush focal areas within 2 miles of occupied greater sage-grouse leks, unless they are out of direct line of sight of an occupied lek.

GRSG-LR-SUA-GL-002-Guideline – In priority habitat management areas and sagebrush focal areas, outside of existing designated corridors, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit rationale is provided that the biological impacts to greater sage-grouse are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

Land Ownership Adjustments

GRSG-LR-LOA-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit land ownership adjustments unless the action results in a net conservation gain to greater sage-grouse or it will not directly or indirectly adversely impact greater sage-grouse conservation.

GRSG-LR-LOA-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas with minority Federal ownership, consider land ownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved greater sage-grouse population trends and habitats.

Land Withdrawal

GRSG-LR-LW-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, utilize land withdrawals as a tool, where appropriate and subject to valid existing rights, to prevent activities that will be detrimental to greater sage-grouse or their habitats.

Wind Energy Development

GRSG-WS-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, restrict authorization of wind utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

Livestock Grazing

GRSG-LG-DC-001-Desired Condition – In priority and general habitat management areas and sagebrush focal areas, livestock grazing is managed to ensure adequate nesting cover and does not conflict with the attainment of other vegetative attributes displayed in table 1.

GRSG-LG-GL-001-Guideline - Grazing guidelines in table 2 should be applied in each of the seasonal habitats as displayed. If values in table 2 cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in table 1 consistent with the ecological site capability. Do not use drought

and degraded habitat condition to adjust values. Grazing guidelines in table 2 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of greater sage-grouse habitat.

Table 2. Grazing Guidelines for Greater Sage-grouse Seasonal Habitat.

Seasonal Habitat	Grazing Guidelines
Areas managed for breeding and nesting [1] within 5.3 miles of occupied leks	Perennial grass height: [2] When grazing occurs during breeding and nesting season (March 15 to June 30) manage for upland perennial grass height of: 7 inches [3,4,5,6] When grazing occurs post breeding and nesting season (July 1 to November 30) manage for 4 inches [4,5,8] of perennial grass height.
Areas managed for brood rearing and summer habitat[1]	Retain an average stubble height of 4 inches for herbaceous riparian/mesic meadow vegetation [7,9]
Winter [1]	<35% use of sagebrush

[1] For descriptions of Seasonal Habitat and Seasonal Periods of greater sage-grouse see table 1.
[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.
[3] Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming*.
[4] Average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly, 2000).
[5] Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. *A meta-analysis of greater sage-grouse Centrocercus urophasianus nesting and brood-rearing habitats*. Wildlife Biology 13(1): 42-50.
[6] Due to variability of annual precipitation and forage production 7"stubble height may not be possible every year, even in the absence of livestock grazing.
[7] Crawford et al. 2004. Ecology and Management of sage-grouse and sage-grouse habitat. "In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5-15 cm (2-6 in) vs. 30-50 cm (12-20 in); Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing (Neel 1980, Evans 1986). "Moderate use equates to a 10-cm residual stubble height for most grasses and sedges."
[8] Stubble height to be measured at the end of the growing season.
[9] Stubble height to be measured in the meadow areas used by greater sage-grouse for brood-rearing (not on the hydric greenline).

GRSG-LG-GL-002-Guideline – On the Thunder Basin National Grassland, if 90% or more of the allotment falls within nesting or brood rearing habitat, 25% of the allotment would be exempted from the breeding/nesting residual perennial grass height guidelines in Table 2.

GRSG-LG-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, when livestock grazing permits and/or grazing preference are voluntarily relinquished, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve where removal of livestock grazing would enhance the ability to achieve desired habitat conditions displayed in table 1.

GRSG-LG-GL-004-Guideline - Domestic sheep bedding areas and herder camps should be located in areas of least conflict with greater sage-grouse seasonal uses. Bedding sheep and locating camps within 0.6 mi of a lek in priority and sagebrush focal management areas should be restricted during lekking (March 1 to May 15).

GRSG-LG-GL-005-Guideline –Trailing livestock should be routed through non-habitat, to the extent feasible or in areas that will minimize impacts to greater sage-grouse and their habitats. Specific routes and timeframes should be identified, existing trails should be used, and stopovers on occupied leks should be restricted.

GRSG-LG-GL-006-Guideline – Collision risk should be mitigated through design features or markings (e.g., mark, laydown fences, location and design) when fences are constructed or reconstructed within priority-core habitat management areas and sagebrush focal areas and within 4 miles of occupied leks in priority-connectivity habitat management area.

GRSG-LG-GL-007-Guideline – In priority habitat management areas and sagebrush focal areas, new permanent livestock facilities, except fences, should not be constructed within 0.6 miles from the perimeter of occupied leks. In general habitat management areas, new permanent livestock facilities should not be constructed within 0.25 miles of occupied leks.

GRSG-LG-GL-008-Guideline – On the Thunder Basin National Grassland, where general habitat management areas overlap with Management Area 8.4 (Mineral Production), Management Area 3.63 (Black-footed Ferret Reintroduction Habitat), or other designated areas for short-grass species, livestock grazing should be managed to meet the objectives for that Management Area.

Fire Management

GRSG-FM-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, when prescribed fire is used for fuels management or vegetation treatments, design the burn to move conditions towards those displayed in table 1. Restrict prescribed fire in areas of Wyoming big sagebrush, other xeric sagebrush species, where cheatgrass or other fire-invasive species occur, and/or within areas of less than 12-inch precipitation zones unless necessary to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1.

GRSG-FM-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, if it is necessary to use prescribed fire to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1, the associated NEPA analysis must identify how greater sage-grouse desired conditions would be met, why alternative techniques were not selected, and how potential threats to greater sage-grouse habitat would be minimized.

GRSG-FM-ST-003-Standard - In priority and general habitat management areas and sagebrush focal areas suppress wildfire that moves habitat away from desired conditions in table 1.

GRSG-FM-ST-004-Standard – On the Thunder Basin National Grassland, where general habitat management areas overlap with Management Area 3.63 (Black-footed Ferret Reintroduction Habitat), or other designated areas for short-grass species, allow prescribed fire to meet objectives for that Management Area.

GRSG-FM-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives.

GRSG-FM-GL-002-Guideline – Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, mobile retardant plants) in priority and general habitat management areas and sagebrush focal areas should be restricted. Methods to restrict impacts include location in existing disturbed areas, grasslands, near roads/trails or other areas where there is existing disturbance or minimal sagebrush cover.

GRSG-FM-GL-003-Guideline - In priority and general habitat management areas and sagebrush focal areas, cross-country vehicle travel during fire operations should be restricted whenever safe and practical to do so, as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas, burnout operation areas should be restricted by constructing direct fire lines, whenever safe and practical to do so, to improve suppression effectiveness and minimize loss of existing sagebrush habitat as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-005-Guideline – In priority and general habitat management areas and sagebrush focal areas, prescribed fire prescriptions should minimize undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).

GRSG-FM-GL-006-Guideline - In priority and general habitat management areas and sagebrush focal areas, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.

GRSG-FM-GL-007-Guideline - In priority and general habitat management areas and sagebrush focal areas, all fire-associated vehicles and equipment should be power-washed before entering and exiting the area to minimize the introduction of undesirable invasive plant species.

GRSG-FM-GL-008-Guideline - Unit-specific greater sage-grouse fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed.

GRSG-FM-GL-009-Guideline – Localized maps of priority and general habitat management areas and sagebrush focal areas should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.

GRSG-FM-GL-010-Guideline - In or near priority and general habitat management areas and sagebrush focal areas, a greater sage-grouse resource advisor should be assigned to all extended attack fires.

GRSG-FM-GL-011-Guideline – On critical fire weather days, available fire suppression resources should be pre-positioned to optimize a quick and efficient response into priority and general habitat management areas and sagebrush focal areas.

GRSG-FM-GL-012-Guideline - During periods of multiple fires, line officers should be involved in setting priorities to help protect priority and general habitat management areas and sagebrush focal areas.

GRSG-FM-GL-013-Guideline – In priority and general habitat management areas and sagebrush focal areas, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.

GRSG-FM-GL-014-Guideline – In priority and general habitat management areas and sagebrush focal areas, to minimize sagebrush loss, mop-up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available resources allows.

Recreation

GRSG-R-DC-001-Desired Condition – In priority habitat management areas and sagebrush focal areas, existing and new recreation special use authorizations and expansion of existing special use authorizations restrict impacts to greater sage-grouse and their habitats.

GRSG-R-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats.

GRSG-R-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas habitat management areas, terms and conditions that protect and restore greater sage-grouse habitats within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, existing permits and operating plans should also be modified.

GRSG-R-GL-002-Guideline – In priority habitat management areas and sagebrush focal areas, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to greater sage-grouse and/or their habitats (such as concentrating recreation, diverting use away from critical areas, etc.) or the development is required for visitor safety.

Roads/Transportation

GRSG-RT-DC-001-Desired Condition - In priority and general habitat management areas and sagebrush focal areas, within the travel management system, greater sage-grouse experience minimal disturbance during breeding and nesting (March 15 to June 30), and wintering periods (December 1 to March 15).

GRSG-RT-ST-001-Standard - Restrict construction of new category level 4 and 5 roads within 1.9 miles of the perimeter of occupied greater sage-grouse leks within priority habitat management areas and sagebrush focal areas unless construction allows decommissioning of an existing route that negatively affects greater sage-grouse.

GRSG-RT-ST-002-Standard - Prohibit any category of road construction within 0.6 miles from the perimeter of occupied leks in priority habitat management areas and sagebrush focal areas or 0.25 miles from the perimeter of occupied leks in general habitat management areas as described in GRSG-TDDD-ST-001 and 002-Standards.

GRSG-RT-ST-003-Standard - In priority habitat management areas and sagebrush focal areas, prohibit upgrades to existing routes that would change route category (level 1 through 5) or capacity unless the upgrading would have minimal impact on greater sage-grouse, is necessary for motorist safety, or eliminates the need to construct a new road.

GRSG-RT-ST-004-Standard - If necessary to construct new roads and trails in priority or sagebrush focal habitat management areas for one of the reasons listed in GRSG-RT-ST-003-Standard or to access valid existing rights, limit construction to the minimum standard, length, and number and avoid, minimize, and mitigate impacts. See the Density Disturbance Calculation information referenced in Appendix I.

GRSG-RT-ST-005-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit public access on temporary energy development roads, unless consistent with all other terms and conditions included in this land use management plan amendment.

GRSG-RT-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, new roads and road realignments should be designed and administered to reduce collisions with greater sage-grouse.

GRSG-RT-GL-002-Guideline – In priority and general habitat management areas and sagebrush focal areas, road construction within riparian areas and mesic meadows should be restricted. If not possible to restrict construction within riparian areas and mesic meadows, roads should be designed and constructed perpendicular to ephemeral drainages and stream crossings, unless topography prevents doing so.

GRSG-RT-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions displayed in table 1.

GRSG-RT-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas, dust abatement terms and conditions should be included in road-use permits when dust has the potential to impact greater sage-grouse.

GRSG-RT-GL-005-Guideline - In priority and general habitat management areas and sagebrush focal areas, road and road-way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive plants. Such activities include but are not limited to the removal or mowing of vegetation a car-width off the edge of roads; use of weed-free earth-moving equipment, gravel, fill, or other materials; and blading or pulling roadsides and ditches that are infested with noxious weeds only if required for public safety or protection of the roadway.

Minerals

Fluid Minerals – Unleased

GRSG-M-FMUL-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, new oil and gas leases may be offered consistent and subject to the leasing stipulations in the timing, distance, density and disturbance direction in section GRSG-TDDD.

GRSG-M-FMUL-ST-002-Standard – In priority habitat management areas and sagebrush focal areas, require geophysical exploration projects to be designed to minimize habitat fragmentation.

GRSG-M-FMUL-GL-001-Guideline – In priority and general habitat management areas, when analyzing leasing of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.

Fluid Minerals – Leased

GRSG-M-FML-ST-001-Standard – In priority habitat management areas and sagebrush focal areas when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet

developed, require that leaseholders avoid and minimize surface disturbances and disruptive activities. If impacts from surface disturbance and disruptive activities remain after avoidance and minimization strategies, require leaseholders to provide timely, durable compensatory mitigation projects to offset residual impacts. Valid existing rights would be recognized.

GRSG-M-FML-ST-002-Standard – In priority habitat management areas and sagebrush focal areas, when facilities are no longer needed or leases are relinquished, require reclamation plans to include terms and conditions to restore habitat to desired conditions as described in table 1.

GRSG-M-FML-ST-003-Standard – Locate compressor stations on portions of a lease that are non-habitat and are not used by greater sage-grouse, and if there would be no direct, indirect, or cumulative effects on greater sage-grouse or their habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise.

GRSG-M-FML-ST-004-Standard – In priority and general habitat management areas and sagebrush focal areas, when authorizing development of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.

GRSG-M-FML-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas on existing leases, operators should be encouraged to reduce disturbance to greater sage-grouse habitat. At the time of approval of the Surface Use Plan of Operation portion of the Application for Permit to Drill, terms and conditions should be included to reduce disturbance to greater sage-grouse habitat, where appropriate and feasible and consistent with the rights granted to the lessee. Valid existing rights would be recognized and respected.

GRSG-M-FML-GL-002-Guideline – On existing federal leases in priority and general habitat management areas and sagebrush focal areas, when surface occupancy cannot be restricted due to valid existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to greater sage-grouse, based on vegetation, topography, or other habitat features.

GRSG-M-FML-GL-003-Guideline - In priority and general habitat management areas and sagebrush focal areas, where the federal government owns the surface and the mineral estate is in non-federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

Fluid Minerals – Operations

GRSG-M-FMO-GL-001-Guideline – Employee camps should not be authorized in priority habitat management areas and sagebrush focal areas.

GRSG-M-FMO-GL-002-Guideline – In priority habitat management areas and sagebrush focal areas, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.

GRSG-M-FMO-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

GRSG-M-FMO-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include:

- Increase the depth of ponds to accommodate a greater volume of water than is discharged.
- Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments to reduce breeding habitat for mosquitoes.
- Maintain the water level below that of rooted aquatic and upland vegetation. Restrict flooding terrestrial vegetation in flat terrain or low-lying areas.
- Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated.
- Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water.
- Line the overflow spillway with crushed rock and construct the spillway with steep sides.
- Fence pond sites to restrict access by livestock and other wild ungulates.
- Remove or re-inject produced water.
- Treat waters with larvicides to reduce mosquito production where water occurs on the surface.

GRSG-M-FMO-GL-005-Guideline – In priority and general habitat management areas and sagebrush focal areas to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

Coal Mines

GRSG-M-CM-ST-001-Standard – Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to coal exploration and new coal lease projects.

GRSG-M-CM-ST-002-Standard – Priority habitat management areas and sagebrush focal areas are essential habitat for maintaining greater sage-grouse for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).

GRSG-M-CM-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to protect and reduce threats to greater sage-grouse and their habitats to conserve, enhance, and restore habitat for long-term viability.

Locatable Minerals

GRSG-M-LM-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, approve Plans of Operation with mitigation to protect greater sage-grouse and their habitats, consistent with the rights of the mining

claimant as granted by the Mining Law of 1872, as amended. Apply all restrictions listed in the Timing, Distance, Density and Disturbance section (GRSG-TDDD) to locatable minerals exploration and development.

GRSG-M-LM-ST-002-Standard – The disturbance cap described in GRSG-TDDD-ST-009-Standard will not be applied to foreclose development of locatable minerals on unpatented claims located under the General Mining Act of 1872, as amended; the disturbance from locatable mining will be accounted for in determining the percent disturbance and whether the cap has been exceeded.

Non-energy Leasable Minerals

GRSG-M-NEL-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases for non-energy leasable minerals, the Forest Service should provide recommendations to the Bureau of Land Management for the protection of greater sage-grouse and their habitats. Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to non-energy leasable minerals exploration and development.

GRSG-M-NEL-GL-002-Guideline - In priority and general habitat management areas and sagebrush focal areas, the Forest Service should recommend to the Bureau of Land Management that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to greater sage-grouse and their habitat.

Mineral Materials

GRSG-M-MM-ST-001-Standard – Apply all restrictions listed in the Timing, Distance, Density and Disturbance section to authorizations for mineral material sales and free use.

GRSG-M-MM-ST-002-Standard - Permits for mineral material operations in priority, sagebrush focal, or general sage-grouse habitat management areas, must include appropriate requirements for reclamation of the site to restore, enhance, or maintain desired habitat conditions displayed in table 1.

Predators

GRSG-PR-GL-001-Guideline – Efforts by other agencies to minimize impacts from predators on greater sage-grouse should be supported and encouraged where needs have been documented.

Glossary of Terms as Used in this Plan

Active lek - Any lek that has been attended by male greater sage-grouse during the most recent strutting season.

Adjacent – Installation of new linear improvements parallel, near, or next to existing linear improvements.

Ambient (noise level) - Sometimes called background noise level, reference sound level, or room noise level is the background sound pressure level at a given location, normally specified as a reference level to study a new intrusive sound source.

Anthropogenic disturbances – Human-created features including but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells and associated facilities, geothermal wells and associated facilities, pipelines, landfills, agricultural conversion, homes, grazing-related facilities and structures, and mines.

Baseline condition - The pre-existing condition of a defined area and/or resource that can be quantified by an appropriate metric(s). During environmental reviews, the baseline is considered the affected environment that exists at the time of the review's initiation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

Compensatory mitigation - Compensating for the (residual) impact by replacing or providing substitute resources or environments.

Compensatory mitigation projects – The restoration, creation, enhancement, and/or preservation of impacted resources, such as on-the-ground actions to improve and/or protect habitats (e.g. chemical vegetation treatments, land acquisitions, conservation easements).

Compensatory mitigation sites - The durable areas where compensatory mitigation projects will occur.

Disruptive activities: Land resource uses/activities that are likely to alter the behavior, displace, or cause excessive stress greater sage-grouse populations occurring at a specific location and/or time. Actions that alter behavior or cause the displacement of individuals such that reproductive success is negatively affected, or an individual's physiological ability to cope with environmental stress is compromised.

Distribution line - An electrical utility line with a capacity of less than 100kV or a natural gas, hydrogen, or water pipeline less than 24” in diameter.

Diversity (species) – The number, distribution, and geographic ranges of plant and animal species including focal species and species-at-risk.

Durable (protective and ecological) - The maintenance of the effectiveness of a mitigation site and project for the duration of the associated impacts, which includes resource, administrative/legal, and financial considerations.

Enhance - The improvement of habitat by increasing missing or modifying unsatisfactory components and/or attributes of the plant community to meet greater sage-grouse objectives.

Exception - A case-by-case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria apply. The authorized officer (any employee of the Forest Service to whom has been delegated the authority to perform the duties described in the applicable Forest Service manual or handbook) may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of greater sage-grouse.

Feasible – see technically/economically feasible.

Fluid minerals - Oil, gas, coal bed natural gas, and geothermal resources.

General habitat management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as those outside of priority habitat management areas and sagebrush focal areas and occupied seasonally or year-round.

Grazing system - Scheduled grazing use and non-use of an allotment to reach identified goals or objectives by improving the quality and quantity of vegetation. Include, but are not limited to, developing pastures, utilization levels, grazing rotations, timing and duration of use periods, and necessary range improvements.

Habitat - An environment that meets a specific set of physical, biological, temporal, or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of their life cycle.

High-voltage transmission line – An electrical power line that is 100 kilovolts or larger.

Holder – An individual or entity that holds a valid special use authorization.

Impact - The effect, influence, alteration, or imprint caused by an action.

Indicators - Factors that describe resource condition and change and can help the BLM and the Forest Service determine trends over time.

Isolated parcel - An individual parcel of land that may share a corner, but does not have a common border with another parcel.

Invasive species (invasives plant species, invasives) An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. The species must cause, or be likely to cause, harm, and be exotic to the ecosystem it has infested before considered invasive.

Landscape – A distinct association of land types that exhibit a unique combination of local climate, landform, topography, geomorphic process, surficial geology, soil, biota, and human influences. Landscapes are generally of a size that the eye can comprehend in a single view.

Lease – A type of special use authorization (usually granted for uses other than linear rights-of-way) that is used when substantial capital investment is required and when conveyance of a conditional and transferable interest in National Forest System lands is necessary or desirable to serve or facilitate authorized long-term uses, and that may be revocable and compensable according to its terms.

Leasable minerals - Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920, as amended. These include energy-related mineral resources such as oil, natural gas, coal, and geothermal, and some non-energy minerals, such as phosphate, sodium, potassium, and sulfur. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

Lessee - A person or entity authorized to use and occupy National Forest System land under a specific instrument identified as a lease. Forest special use leases are limited to authorize certain wireless communication uses. Leases are also used for certain mineral leasable activities.

Lek - A courtship display area attended by male greater sage-grouse in or adjacent to sagebrush dominated habitat. For management purposes, leks with less than five males observed strutting should be confirmed active for 2 years to meet the definition of a lek (Connelly et al 2000, Connelly et al. 2003, 2004).

Locatable minerals - Mineral disposable under the General Mining Act of 1872, as amended, that was not excepted in later legislation. They include hard rock, placer, industrial minerals, and uncommon varieties of rock found on public domain lands.

Major pipeline – A pipeline that is 24 inches or more in outside-pipe diameter (Mineral Leasing Act of 1920 30 U.S.C. § 181; 36 CFR 251.54(f)(1)).

Mineral - Any naturally formed inorganic material, solid or fluid inorganic substance that can be extracted from the earth, any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained usually from the ground. Under Federal laws, considered as locatable (subject to the general mining laws), leasable (subject to the Mineral Leasing Act of 1920), and salable (subject to the Materials Act of 1947).

Mineral materials - Common varieties of mineral materials such as soil, sand and gravel, stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Materials Act of 1947, as amended.

Minimization mitigation - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

Mitigation - Specific means, measures, or practices that could reduce, avoid, or eliminate adverse impacts. Mitigation can include avoiding the impact altogether by not taking a certain action or parts of an action, minimizing the impact by limiting the degree of magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitation, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, and compensating for the impact by replacing or providing substitute resources or environments.

Modification (oil and gas) - A fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

Native plant species - Species that were found here before European settlement, and consequently are in balance with these ecosystems because they have well developed parasites, predators, and pollinators.

Net conservation gain - The actual benefit or gain above baseline conditions.

No surface occupancy (NSO) - Use or occupancy of the land surface for fluid mineral exploration or development prohibited to protect identified resource values. The NSO stipulation includes stipulations that may be worded as "No Surface Use/Occupancy," "No Surface Disturbance," "Conditional NSO," or "Surface Disturbance or Surface Occupancy Restriction (by location)."

Occupied lek - A lek that has been active during at least one strutting season within the prior 10 years.

Permit — A special use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System land or facilities for specified purposes, and which is both revocable and terminable.

Persistent woodlands – Long-lived pinyon-juniper woodlands that typically have sparse understories and occur on poor substrates in the assessment area.

Permit — A special use authorization which provides permission, without conveying an interest in land, to occupy and use National Forest System land or facilities for specified purposes, and which is both revocable and terminable.

Plan of Operations - A Plan of Operation is required for all mining activity conducted under the General Mining Act of 1872, as amended, if the proposed operations will likely cause significant disturbance of surface resources. The Plan of Operation describes the type of operations proposed and how they would be conducted, the type and standard of existing and proposed roads or access routes, the means of transportation to be used, the period during which the proposed activity will take place, and measures to be taken to meet the requirements for environmental protection (36 CR 228.4).

Prescribed fire - Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements, where applicable, must be met, before ignition.

Priority habitat management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as having the highest conservation value to maintaining sustainable greater sage-grouse populations. Priority habitat management areas and sagebrush focal areas are sub-identified as either core or connectivity habitat. Priority-core habitat management areas and sagebrush focal areass are the most important breeding and nesting habitat. Priority-connectivity habitat management areas are known migration corridors that connect populations or population segments.

Prohibit – To forbid (something) by law, rule, or other authority; no authorizations will be issued.

Reclamation plans – Plans that guide the suite of actions taken within an area affected by human disturbance, the outcome of which is intended to change the condition of the disturbed area to meet pre-determined objectives and/or make it acceptable for certain defined resources (e.g., wildlife habitat, grazing, ecosystem function, etc.).

Residual impacts - Impacts from an implementation-level decision that remain after applying avoidance and minimization mitigation; also referred to as unavoidable impacts.

Restrict – To put a limit on; keep under control; to limit someone's actions or movement, or to limit the amount, size, etc., of something.

Restoration - Implementation of a set of actions that promotes plant community diversity and structure that allows plant communities to be more resilient to disturbance and invasive species over the long term. The long-term goal is to create functional, high quality habitat that is occupied by greater sage-grouse. Short-term goal may be to restore the landform, soils and hydrology and increase the percentage of preferred vegetation, seeding of desired species, or treatment of undesired species.

Right-of-way - Land authorized to be used or occupied for the construction, operation, maintenance and termination of a project or facility passing over, upon, under or through such land.

Road or trail - A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

Road category level - Defines the level of service provided by, and maintenance required for, a specific road, consistent with road management objectives and maintenance criteria. There are five maintenance levels:

- Level 1: Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period is 1 year or longer. Basic custodial maintenance is performed.
- Level 2: Assigned to roads open for use by high-clearance vehicles. Passenger car traffic is not a consideration.
- Level 3: Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.
- Level 4: Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds.
- Level 5: Assigned to roads that provide a high degree of user comfort and convenience. Normally, roads are double-laned and paved or aggregate-surfaced with dust abatement.

Sagebrush focal areas – Areas identified by the U.S. Fish and Wildlife Service that represent recognized "strongholds" for greater sage-grouse and are considered most vital to the species persistence and therefore, have the strongest levels of protection.

Special use authorization - A written permit, term permit, lease, or easement that authorizes use or occupancy of National Forest System lands and specifies the terms and conditions under which the use or occupancy may occur.

Stipulation (general) - A term or condition in an agreement, contract, or written authorization.

Stipulation (oil and gas) - A provision that modifies standard oil and gas lease terms and conditions in order to protect other resource values or land uses and is attached to and made a part of the lease.

Suitable habitat - Nesting, breeding, brood-rearing, or winter habitat within the mapped occupied range of greater sage-grouse that:

1) Has 5% or greater sagebrush canopy cover as measured by the technique developed by interagency efforts. “Sagebrush” includes all species and sub-species of the genus Artemisia except the mat-forming sub-shrub species: frigida (fringed) and pedatifida (birdfoot); or
2) Is riparian, wet meadow (native or introduced), or areas of alfalfa or other suitable forbs (brood rearing habitat) within 60 meters of sagebrush habitat with 10% or greater canopy cover and the early brood rearing habitat does not exceed 20% of the suitable sagebrush habitat present within the DDCT, Larger riparian/wet meadow, and grass/forb producing areas may be considered suitable habitat as determined on a case by case basis.

Surface disturbing and disruptive activities - Actions that alter the vegetation, surface/near surface soil resources, and/or surface geologic features, beyond natural site conditions and on a scale that affects other public land values. Examples of surface disturbing activities may include operation of heavy equipment to construct well pads, roads, pits and reservoirs; installation of pipelines and power lines; maintenance activities, and several types of vegetation treatments (e.g., prescribed fire, etc.). Surface disturbing activities may be either restricted or prohibited.

Surface occupancy - Placement or construction on the land surface of semi-permanent or permanent facilities requiring continual service or maintenance. Casual use is not included.

Surface use - Activities that may be present on the surface or near-surface (e.g., pipelines) of public lands. When administered as a use restriction (e.g., no surface occupancy), this phrase prohibits all but specified resource uses and activities in a certain area to protect particular sensitive resource values and property. This designation typically applies to small acreage sensitive resource sites (e.g., plant community study exclosure, etc.), and/or administrative sites (e.g., government ware-yard, etc.) where only authorized, agency personnel are admitted.

Tall structures - A wide array of infrastructures (e.g., poles that support lights, telephone and electrical distribution, communication towers, meteorological towers, high-tension transmission towers, and wind turbines) that have the potential to disrupt lekking or nesting birds by creating new perching/nesting opportunities and/or decreasing the use of an area. A determination as to whether something is considered a tall structure would be based on local conditions such as vegetation or topography.

Technically/economically feasible - Actions that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. It is the Forest Service’s sole responsibility to determine what actions are technically and economically feasible. The Forest Service will consider whether implementation of the proposed action is likely given past and current practice and technology; this consideration does not necessarily require a cost-benefit analysis or speculation about an applicant’s costs and profit.

Temporary special use permit – A type of permit that terminates within 1 year or less after the approval date. All other provisions applicable to permits apply fully to temporary permits. Temporary special use permits are issued for seasonal or short-duration uses involving minimal improvement and investment.

Term permit – An authorization to occupy and use National Forest System land, other than rights-of-way for a specified period that is both revocable and compensable according to its terms.

Timely - The conservation benefits from compensatory mitigation accruing as early as possible or before impacts have begun.

Transmission line - An electrical utility line with a capacity greater than or equal to 100kV or a natural gas, hydrogen, or water pipeline greater than or equal to 24" in diameter.

Travel management system – Planned and authorized roads, trails, and areas for motor vehicle use on National Forest System lands that are managed in a controlled, sustained manner.

Utility-scale and/or commercial energy development - A project that is capable of producing 20 or more megawatts of electricity for distribution to customers through the electricity-transmission-grid system.

Valid existing rights - Documented, legal rights, or interests in the land, which allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include but are not limited to fee title ownership, mineral rights, and easements. Such rights may have been reserved, acquired, granted or otherwise authorized under various statutes of law.

Vegetation treatments - Management practices that are designed to maintain current vegetation structure or change the vegetation structure to a different stage of development. Vegetation treatment methods may include managed fire, prescribed fire, chemical, mechanical, and seeding.

Viability - For purposes of the National Forest Management Act and its enabling regulations, viability is the availability of habitat that allows a species to persist on landscapes for long-periods (multi-generational) of time. It assumes that populations are abundant (sufficient numbers) and well-distributed (sufficient redundancy of populations) to provide for long-term population persistence on a landscape.

Waiver (oil and gas) - Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold. The authorized officer may waive restrictions if, in coordination with the State wildlife agency, it is determined that the site is no longer considered in the land use plan to be within greater sage-grouse priority, sagebrush focal, or general areas, or greater sage-grouse are no longer a Forest Service sensitive species and are not listed by the U.S. Fish and Wildlife Service as threatened or endangered under the Endangered Species Act.

West Nile virus - A virus that is found in temperate and tropical regions of the world and most commonly transmitted by mosquitoes. West Nile virus can cause flu-like symptoms in humans and can be lethal to birds, including greater sage-grouse.

Wildfire suppression - An appropriate management response to wildfire, escaped wildland fire use or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

Winter concentration areas - Greater sage-grouse winter habitats which are occupied annually by greater sage-grouse and provide sufficient sagebrush cover and food to support birds throughout the entire winter (especially periods with above average snow cover). Many of these areas support several different breeding populations of greater sage-grouse. Greater sage-grouse typically show high fidelity for these areas, and loss or fragmentation can result in significant population impacts.

Nevada Forest Service Proposed Plan Amendment

Forest Service Plan Components

Desired conditions - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates. (36 CFR 219.7(e)(1)(i)) FSH 1909.12, Chapter 20)

Guideline – A constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. (§ 219.15(d)(3)). Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1)(iv); FSH 1909.12, Chapter 20)

Objective - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets. (36 CFR 219.9(e)(1)(ii)) FSH 1909.12, Chapter 20)

Standard - A mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1) (iii)) FSH 1909.12, Chapter 20)

General Greater Sage-grouse

GRSG-GEN-DC-001-Desired Condition – The landscape for greater sage-grouse encompasses large contiguous areas, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush-community compositions exist, with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for greater sage-grouse.

GRSG-GEN-DC-002-Desired Condition – Anthropogenic disturbance is focused in non-habitat areas outside of priority and general habitat management areas and sagebrush focal areas[1]. Disturbance in general habitat management areas is limited, and there is little to no disturbance in priority habitat management areas and sagebrush focal areas except for valid existing rights and existing authorized uses.

GRSG-GEN-DC-003-Desired Condition – In greater sage-grouse management areas, including all seasonal habitats, 70% of lands capable of producing sagebrush have 10 to 30% sagebrush canopy cover and less than 10% conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain forbs with a rich diversity of perennial forb species relative

[1]Suitable greater sage-grouse habitat within polygons identified as priority or general habitat management areas. Areas of non-habitat within a polygon are not included as part of any priority or general habitat management areas. Sagebrush focal areas may include areas of non-habitat.

to site potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for greater sage-grouse during this seasonal period. Specific desired conditions for greater sage-grouse based on seasonal habitat requirements are in tables 1a and 1b.

Table 1a. Seasonal Habitat Desired Conditions for Greater Sage-grouse (Ecoregion 342).

ATTRIBUTE	INDICATORS	DESIRED CONDTION
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1 to June 30) Apply 4.0 miles from active leks. [4]		
Lek Security	Proximity of trees [5]	Trees to uncommon within 1.86 miles (3 km) of leks [6,7]
	Proximity of sagebrush to leks [6]	Adjacent protective sagebrush cover within 328 feet of lek [6]
Cover	Seasonal habitat extent [7]	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [6,7,8]	>15%
	Sagebrush height [7] Arid sites [,6,7,9] Mesic sites [,6,7,10]	 > 12 inches >16 inches
	Predominant sagebrush shape [6]	>50% in spreading [11]
	Perennial grass cover [,6,7] Arid sites [7,9] Mesic sites [7,10]	 ≥10% ≥15%
	Perennial grass height [,6,7,8]	Provide overhead and lateral concealment from predators [7]
	Perennial forb canopy cover [,6,7,8] Arid sites [9] Mesic sites [10]	 ≥5%[,6,7] ≥10%[,6,7]
BROOD-REARING/SUMMER[1] (Seasonal Use Period May 15 to September 15)		
Cover	Seasonal habitat extent [7]	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [6,7,8]	10 to 25%
	Sagebrush height [7,8]	> 16 inches
	Perennial grass canopy cover and forbs [6,7]	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition [12]
	Upland and riparian perennial forb availability [5,6]	Preferred forbs are common with several preferred species present [13]
Security	Riparian Area/Meadow Interspersion with adjacent sagebrush	Has adjacent sagebrush cover[5, 6]
WINTER/FALL[1] (Seasonal Use Period September 1 to February 28)		
Cover and Food	Seasonal habitat extent[6,7,8]	>80% of the winter habitat
	Sagebrush canopy cover above snow [6,7,8]	>10%
	Sagebrush height above snow [6,7,8]	>10 inches [14]

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

[2] Doherty, K. 2008. *Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts*. University of Montana. Missoula, MT.

[3] Holloran and Anderson. 2005. *Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats*. Condor 107:742-752.

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

[5] Baruch-Mordo, S. J.S. Evans, J.P Severson, D.E. Naugle, J. D. Maestas, J.M. Kiesecker, M.J. Falkowski. C.A. Hagen, and K.P. Reese. . 2013. *Saving sage-grouse from trees*: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167: 233-241.

[6]Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl, eds. 2015. Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool. Technical Reference 6710-1. Bureau of Land Management and Western Association of Fish and Wildlife Agencies, Denver, Colorado.

[7] Connelly, J. M. A. Schroweder, A.R. Sands, and C.E. Braun.2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28 (4): 967-985.

[8] Connelly, J. K. Reese, and M. Schroder. 2003. *Monitoring of Greater sage-grouse habitats and populations*. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.

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

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

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

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

[13] Preferred forbs are listed in HAF Table III-2 (HAF 2014). Overall total forb cover may be greater than that of preferred forb cover since not all forb

ATTRIBUTE	INDICATORS	DESIRED CONDTION
species are listed as preferred in Table III-2. [14] The height of sagebrush remaining above the snow depends upon snow depth in a particular year. Intent is to manage for tall, healthy, sagebrush stands.		

Table 1b. Seasonal Habitat Desired Conditions for Greater Sage-grouse (Ecoregion 341).

ATTRIBUTE	INDICATOR	DESIRED CONDITION
GENERAL/LANDSCAPE-LEVEL		
Cover (Nesting)	Seasonal Habitat Needed	>65% of the landscape in sagebrush cover[1]
	Annual Grasses	< %5[3]
Security (Nesting)	Conifer encroachment	<3% phase I (>0% to <25% cover) No phase II (25 – 50% cover) No phase III (>50% cover)
Cover and Food (Winter)	Conifer encroachment	<5% phase I (>0% to <25% cover) No phase II (25 – 50% cover) No phase III (>50% cover)
	Sagebrush extent	>85% sagebrush land cover
LEK		
Cover	Availability of sagebrush cover	Has adjacent sagebrush cover[7,15]
Security [4]	Pinyon and/or Juniper cover	<3% landscape canopy cover within 1 km of leks[2]
	Proximity of tall structures (1 meter above shrub canopy)	None within 3 miles (5 kilometers)[16]
NESTING		
Cover	Sagebrush canopy cover	≥20%[11,12]
	Residual and live perennial grass cover	≥10% if shrub cover <25%[2,6,5]
	Annual grass cover [5]	<5%[13]
	Perennial grass height	Provide overhead and lateral concealment from predators[7]
	Total shrub cover	≥30%[5,11]
Security	Proximity of tall structure (1 meter above shrub canopy)	None within 3 miles
BROOD-REARING/SUMMER		
Cover	Sagebrush canopy cover	10-25%[7]
	Perennial grass canopy cover and forbs	>15% combined perennial grass and forb canopy cover[7]
Cover and Food	Perennial forb canopy cover	≥5% arid (<10 inches precipitation) ≥15% mesic (> 10 inches or meadow system)
Food	Riparian Areas/Meadows	Proper Functioning Condition[15]
	Understory species richness (in the vicinity of riparian areas/meadows)	≥ 5% preferred forb species present[3,4]
Security	Riparian Area/Meadow Interspersion with adjacent sagebrush	Has adjacent sagebrush cover[7,15]
WINTER		
Cover and Food	Sagebrush canopy cover	≥10% above snow depth[7]
	Sagebrush height	>9.8 inches (25 centimeters) above snow depth[7]

[1]Aldridge, C. L.; Boyce, M. S. 2007. Linking occurrence and fitness to persistence: Habitat-based approach for endangered Greater Sage-Grouse. Ecological Applications, 17: 508 – 526.
[2]Baruch-Mordo, S., J. S. Evans, J. P. Severson, D. E. Naugle, J. D. Maestas, J. M. Kiesecker, M. J. Falkowski, C. a. Hagen, and K. P. Reese. 2013. Saving sage-grouse from the trees: a proactive solution to reducing a key threat to a candidate species. Biological Conservation 167:233–241.
[3]Blomberg, E.J., J.S. Sedinger, M.T. Atamian, and D.V. Nonne. 2012. Characteristics of climate and landscape disturbance influence the dynamics of greater sage-grouse populations. Ecosphere 3(6):55.
[4]Casazza, M.L., P.S. Coates, C.T. Overton. 2011. Linking habitat selection to brood success in greater sagegrouse. In: Sandercock, MK, K Martin, G Segelbacher (eds.). Ecology, Conservation, and Management of Grouse. University of California Press. Pp. 151-167.

ATTRIBUTE	INDICATOR	DESIRED CONDITION

[5]Coates, P.S., and D.J. Delehanty. 2010. Nest predation of greater sage-grouse in relation to microhabitat factors and predators. Journal of Wildlife Management 74:240-248.
[6]Coates, P. S., M. L. Casazza, E. J. Blomberg, S. C. Gardner, S. P. Espinosa, J. L. Yee, L. Wiechman, and B. J. Halstead. 2013. Evaluating greater sage-grouse seasonal space use relative to leks: implications for surface use designations in sagebrush ecosystems. Journal of Wildlife Management 77: 1598–1609.
[7]Connelly, J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.
8.Connelly, J.W., Reese, K.P., M.A. Schroeder. 2003. Monitoring of Greater Sage-Grouse Habitats and Populations. Station Bulletin 80.
[9]Doherty, K.E., Naugle, D.E., Walker, B.L., and J.M. Graham. 2008. Greater Sage-Grouse Winter Habitat Selection and Energy Development. Journal of Wildlife Management: 72(1):187-195. 2008.
[10]Hagen, C.A., Connelly, J.W. & Schroeder, M.A. 2007: A meta-analysis of greater sage-grouse (Centrocercus urophasianus) nesting and brood-rearing habitats. - Wildlife Biology: 13 (Suppl. 1): 42-50.
[11]Kolada, E.J., J.S. Sedinger, M.L. Casazza. 2009a. Nest site selection by greater sage-grouse in Mono County, California. Journal of Wildlife Management 73:1333-1340.
[12]Kolada, E.J., J.S Sedinger, M.L. Casazza. 2009b. Ecological factors influencing nest survival of greater sage-grouse in Mono County, California. Journal of Wildlife Management 73:1341-1347.
[13]Lockyer, Z., P.S. Coates, M.L. Casazza, S. Espinosa, D.L. Delehanty. In review. Linking nest site selection to nest survival in greater sage-grouse.
[14]Nevada Governor's Sage-grouse Conservation Team. 2010. Nevada energy and infrastructure development standards to conserve greater sage-grouse populations and their habitats. Pp 9-11.
[15]Stiver, S.J., E.T Rinkes, and D.E. Naugle. (in press). Sage-grouse Habitat Assessment Framework. U.S. Bureau of Land Management. Unpublished Report. U.S. Bureau of Land Management, Idaho State Office, Boise, Idaho.

GRSG-GEN-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3% of the total greater sage-grouse habitat within the Biologically Significant Unit and the proposed project analysis area, regardless of ownership, and the new use will not cause exceedance of the 3% cap (Appendix Z – Disturbance Cap Guidance). Discretionary activities that might result in disturbance above 3% at the Biologically Significant Unit or proposed project analysis scale would be prohibited unless approved by the forest supervisor with concurrence from the regional forester after review of new or site-specific information that indicates the project could occur without significant impacts to greater sage-grouse or that the project could be modified to result in a net conservation gain at the Biologically Significant Unit scale.

GRSG-GEN-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, only allow new authorized land uses if the residual impacts to greater sage-grouse or their habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Mitigation Framework (Appendix X).

GRSG-GEN-GL-001-Guideline – During lekking (March 1 to May 15) surface disturbing and disruptive activities, including noise at 10 dB above ambient (not to exceed 20-24 dB) to lekking birds should be restricted from 6 pm to 9 am at a distance of 3.1 miles from the perimeter of an occupied lek.

GRSG-GEN-GL-002-Guideline – During breeding and nesting (March 1 to June 30), surface disturbing and disruptive activities to nesting birds should be restricted.

GRSG-GEN-GL-003-Guideline - In priority and general habitat management areas and sagebrush focal areas, conduct surveys during the breeding season during pre-planning operations. Use protocols such as those established by State Fish and Wildlife agencies. The surveys should encompass all suitable greater sage-grouse habitats within 4 miles of the proposed activities.

GRSG-GEN-GL-004-Guideline - When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired habitat conditions.

GRSG-GEN-GL-005-Guideline – Development of tall structures within 3.0 miles from the perimeter of occupied leks, as determined by local conditions (such as vegetation or topography), with the potential to disrupt breeding or nesting by creating new perching/nesting opportunities for avian predators or by decreasing the use of an area, should be restricted in nesting habitat.

Adaptive Management

GRSG-AM-ST-001-Standard – When 1) an individual lek or lek cluster is 10% or more below the population trend associated with the lek cluster or biologically significant unit for 3 years; or 2) the lek or lek cluster has more than 50% attendance decline in the first year immediately after a known disturbance; or 3) at the lek or lek cluster the habitat disturbance exceeds 5% of any individual greater sage-grouse seasonal habitat component used by the local population; or 4) at the biologically significant unit-level, if there is a 2% decline in habitat in areas in the 25 - 65% range or a 5% decline in the greater than 65% landscape sagebrush cover, the causal factor(s) will be identified and management actions will be adjusted or additional mitigation will be applied to ameliorate the cause.

GRSG-AM-ST-002-Standard - When 1) an individual lek or lek cluster is 10% or more below the population trend associated with the lek cluster or biologically significant unit for 5 years; or 2) the lek or lek cluster has greater than 50% attendance decline in 2 consecutive years immediately after a known disturbance; or 3) at the lek or lek cluster the habitat disturbance exceeds 10% of any individual greater sage-grouse seasonal habitat component used by the local population; or 4) at the biologically significant unit-level, if there is a 5% decline in habitat in areas in the 25 - 65% range or if the disturbances reduces the landscape sagebrush cover below 30%; or 5) a 10% decline in the greater than 65% landscape sagebrush cover or if the disturbance reduces the landscape sagebrush cover below 70%, apply more restrictive allocations and/or management actions as identified in Appendix Z – Adaptive Management Guidance and Sideboards of the Plan for priority and general habitat management areas.

Lands and Realty

Special Use Authorizations (non recreation)

GRSG-LR-SUA-O-001-Objective - In priority and general habitat management areas and sagebrush focal areas, retrofit existing tall structures (e.g., power poles, cellular towers) with perch deterrents or other anti-perching devices within 2 years of signing the Record of Decision.

GRSG-LR-SUA-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, restrict issuance of new lands special use authorizations that authorize infrastructure, such as high-voltage transmission lines, major pipelines, hydropower, distribution lines, and cellular towers. Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to greater sage-grouse will be avoided with the exception.

GRSG-LR-SUA-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary lands special uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-003-Standard – In priority and general habitat management areas and sagebrush focal areas, require protective stipulations (e.g., noise, tall structure, guy wire removal, perch deterrent installation) when

issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers).

GRSG-LR-SUA-ST-004-Standard – In priority and general habitat management areas and sagebrush focal areas, locate upgrades to existing transmission lines within the existing designated corridors unless an alternate route would benefit greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-005-Standard - In priority and general habitat management areas and sagebrush focal areas, when a lands special use authorization is revoked or terminated, the authorization holder must remove overhead lines and other surface infrastructure in compliance with 36 CFR 251.60(i).

GRSG-LR-SUA-ST-006-Standard - In priority and general habitat management areas and sagebrush focal areas, if the potential long-term (greater than 5 years) impacts of mitigation (e.g., relocation or burying) to greater sage-grouse or their habitats are greater than the potential impacts from new lands special use authorizations, do not pursue the mitigation. If mitigation is not feasible or would result in short-term (less than 5 years) or long-term impacts, incorporate additional terms and conditions in the special use authorization for protection of greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-007-Standard – In priority and general habitat management areas and sagebrush focal areas, co-locate new infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers) within existing infrastructure to limit disturbance to the smallest footprint, or where it best limits impacts to greater sage-grouse or their habitats. When co-location of new infrastructure cannot be accomplished, locate it adjacent to existing infrastructure, roads, or already disturbed areas. New communication tower sites may be authorized for public safety.

GRSG-LR-SUA-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, outside of existing designated corridors, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit rationale is provided that the biological impacts to greater sage-grouse are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

Land Ownership Adjustments

GRSG-LR-LOA-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit land ownership adjustments unless the action results in a net conservation gain to greater sage-grouse or it will not directly or indirectly adversely impact greater sage-grouse conservation.

GRSG-LR-LOA-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas with minority Federal ownership, consider land ownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved greater sage-grouse population trends and habitats.

Land Withdrawal

GRSG-LR-LW-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, utilize land withdrawals as a tool, where appropriate and subject to valid existing rights, to prevent activities that will be detrimental to greater sage-grouse or their habitats.

Wind and Solar

GRSG-WS-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit new solar utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

GRSG-WS-ST-002-Standard - In priority habitat management areas and sagebrush focal areas, prohibit new wind energy utility-scale and/or commercial development.

GRSG-WS-GL-001- Guideline – In general habitat management areas, new wind energy utility-scale and/or commercial development should be avoided. If development cannot be avoided due to existing authorize uses, adjacent developments, or split estate issues, then ensure that stipulations are incorporated into the authorization to protect greater sage-grouse and their habitats.

Greater Sage-grouse Habitat

GRSG-GRSG-DC-001-Desired Condition -Sagebrush vegetative communities provide contiguous habitat for greater sage grouse, which is resistant and resilient to disturbances such as fire and invasives. Appendix X - *Using resistance and resilience concepts to reduce impacts of invasive annual grasses and altered fire regimes on the sagebrush ecosystem and greater sage-grouse: A strategic multi-scale approach* identifies the concepts of resistance and resilient.

GRSG-GRSGH-O-001-Objective – Every 10 years for the next 50 years, improve greater sage-grouse habitat by removing invading conifers and other undesirable species within the number of acres shown in table 2.

Table 2. Treatment Acres per Decade.[1]

ACRES			
FOREST	**MECHANICAL**[2]	**PRESCRIBED FIRE**[3]	**GRASS RESTORATION**[4]
Humboldt-Toiyabe Total	202000	0	43000
Population Area 15	200000	0	26000
Population Area 26	2000	0	17000

[1]These are estimates of treatments required to achieve and/or maintain desired habitat conditions over a period of ten years. There are many dynamic and highly variable disturbances that may happen over that period of time that could have a significant effect on the amount, type, and timing of treatment needed. Those disturbances are factored into the ten-year simulation using stochastic, not predictive, techniques. Probabilities of events such as large wildfires are used in the model to make the simulation as realistic as possible, given empirical data about such events in the past, but the results of the simulation cannot be used to predict the future occurrence of such events, including their timing, size, or location, which are essentially random.
[2]Removal of conifers that have invaded sagebrush including phase one juniper that is 10% or less and reducing sagebrush cover in areas over 30% canopy cover
[3]Acres are those that are greater than 30% sagebrush canopy cover and/or invaded by 10% or greater conifer.
[4]Acres presently dominated by annual grasses that could be improved by herbicide application and seeding of perennial vegetation.

GRSG-GRSGH-ST-001-Standard – Design habitat restoration projects to move towards desired conditions (table 1a or 1b) and incorporate the concepts outlined in Appendix X.

GRSG-GRSGH-GL-001-Guideline – Sagebrush removal in greater sage-grouse breeding and nesting and wintering habitats should be avoided unless necessary to support attainment of desired habitat conditions (table 1a or 1b).

GRSG-GRSGH-GL-002-Guideline – – When removing conifers that are encroaching into greater sage-grouse habitat, avoid persistent woodland (old growth relative to the site or more than 100 years old).

GRSG-GRSGH-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, actions and authorizations should include design features to limit the spread and effect of undesirable non-native plant species.

GRSG-GRSGH-GL-004-Guideline - To facilitate safe and effective fire management actions, in priority and general habitat management areas and sagebrush focal areas, fuels treatments should be designed to reduce the spread and intensity of wildfire in high-risk areas (i.e., areas of increased potential for ignition and in areas where there is a potential for wildfire that would be difficult for suppression resources to contain and control).

GRSG-GRSGH-GL-005-Guideline - In priority and general habitat management areas and sagebrush focal areas, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (table 1a or 1b).

GRSG-GRSGH-GL-006-Guideline – In priority habitat management areas and sagebrush focal areas, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired habitat conditions (table 1a or 1b).

GRSG-GRSGH-GL-007-Guideline - Vegetative treatment activities in lentic riparian areas (i.e., seeps, springs, and wet meadows) in priority and general habitat management areas and sagebrush focal areas, should only be authorized if they maintain or improve conditions to meet greater sage-grouse desired conditions (table 1a or 1b).

GRSG-GRSGH-GL-008-Guideline – When authorizing vegetation management treatments in priority, sagebrush focal, and general sage grouse habitat management areas, priority should be given to treatments in Phase I and early Phase II pinyon and/or juniper stands in areas with a sagebrush component. Pinyon-Juniper treatments in Phase I and Phase II condition should be designed to maintain or enhance sagebrush in the treatment areas. Treatments in late Phase II or Phase III condition should only be authorized to create movement corridors, connect habitats, or reduce the potential for catastrophic fire.

GRSG-GRSGH-GL-009-Guideline: In priority and general habitat management areas and sagebrush focal areas, treatment methodologies should be based on the treatment areas' resistance to annual invasive grasses and the resilience of native vegetation to respond after disturbance. Use mechanical treatments (i.e., do not use fire) in areas with relatively low resistance to annuals and treat areas in early- to mid-phase pinyon-juniper expansion.

Livestock Grazing

GRSG-LG-DC-001-Desired Condition – In priority and general habitat management areas and sagebrush focal areas, livestock grazing is managed to provide for adequate nesting, breeding, and winter vegetation cover (tables 1a and 1b).

GRSG-LG-ST-001-Standard – In priority, sagebrush focal, and general management areas, prohibit construction of water developments unless beneficial to greater sage-grouse habitat consistent with State approved water rights.

GRSG-LG-ST-002-Standard – When vertical embankments in water troughs or open water facilities pose a drowning risk to birds, wildlife escape ramps should be installed and maintained.

GRSG-LG-GL-001-Guideline - Grazing guidelines should be applied in each of the seasonal habitats in table 3. If values in table 3 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions,

long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in table 1a or 1b consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in table 3 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of greater sage-grouse habitat.

Table 3. Grazing Guidelines for Greater Sage-grouse Seasonal Habitat.

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

[1] For descriptions of Seasonal Habitat and Seasonal Periods of greater sage-grouse see table 1a and 1b.
[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.
[3] Holloran, M. J., B. J. Heath, A. G. Lyon, S. J. Slater, J. L. Kuipers, and S. H. Anderson. 2005. Greater sage-grouse nesting habitat selection and success in Wyoming. Journal Wildlife Management 69:638-649.
[4] Average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly, 2000).
[5] Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. *A meta-analysis of greater sage-grouse Centrocercus urophasianus nesting and brood-rearing habitats*.
[6] Stubble height to be measured at the end of the growing season.
[7] Crawford , J.A., R.A. Olson. N.E. West, J.C. Mosley, M.A. Schroeder, T.D. Whitson, R.F. Miller, M.A. Gregg, and C.S. Boyd. 2004. Ecology and Management of sage-grouse and sage-grouse habitat. Journal of Range Management 57:2-19. "In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5-15 cm (2-6 in) vs. 30-50 cm (12-20 in); Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing (Neel 1980, Evans 1986). "Moderate use equates to a 10-cm residual stubble height for most grasses and sedges."
Wildlife Biology 13(1): 42-50.
[8] Stubble height to be measured in the meadow areas used by greater sage-grouse for brood-rearing (not on the hydric greenline).

GRSG-LG-GL-002-Guideline – In priority, sagebrush focal, and general management areas, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve as opportunities arise under applicable regulations, where removal of livestock grazing would enhance the ability to achieve desired habitat conditions (table 1a or 1b).

GRSG-LG-GL-003-Guideline – Bedding sheep and locating camps within 2.0 miles from the perimeter of a lek during lekking (March 1 to May 15) should be restricted.

GRSG-LG-GL-004-Guideline – During breeding and nesting season (March 1 to June 30), trailing livestock through breeding and nesting habitat should be minimized. Specific routes should be identified, existing trails should be used, and stopovers on active leks should be restricted.

GRSG-LG-GL-005-Guideline – Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, and design).

GRSG-LG-GL-006-Guideline –New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.

Fire Management

GRSG-FM-ST-001-Standard– In priority and general habitat management areas and sagebrush focal areas, do not use prescribed fire, except for pile burning, in 12-inch or less precipitation zones unless necessary to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1a or 1b.

GRSG-FM-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, if it is necessary to use prescribed fire to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1a or 1b, the associated NEPA analysis must identify how greater sage-grouse desired conditions would be met, why alternative techniques were not selected, and how potential threats to greater sage-grouse habitat would be minimized.

GRSG-FM-GL-001-Guideline – In wintering or breeding and nesting habitat, sagebrush removal or manipulation, including prescribed fire, should be restricted unless the removal strategically reduces the potential impacts from wildfire.

GRSG-FM-GL-002-Guideline – In priority and general habitat management areas and sagebrush focal areas, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives.

GRSG-FM-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, fuel treatments should be designed to restore, enhance, or maintain greater sage-grouse habitat.

GRSG-FM-GL-004-Guideline – Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, mobile retardant plants) in priority and general habitat management areas and sagebrush focal areas should be restricted.

GRSG-FM-GL-005-Guideline - In priority and general habitat management areas and sagebrush focal areas, cross-country vehicle travel during fire operations should be restricted whenever safe and practical to do so, as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-006-Guideline – In priority and general habitat management areas and sagebrush focal areas, burnout operation areas should be avoided by constructing direct fire lines, whenever safe and practical to do so, to improve suppression effectiveness and minimize loss of existing sagebrush habitat as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-007-Guideline – In priority and general habitat management areas and sagebrush focal areas, prescribed fire prescriptions should minimize undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).

GRSG-FM-GL-008-Guideline - In priority and general habitat management areas and sagebrush focal areas, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.

GRSG-FM-GL-009-Guideline - In priority and general habitat management areas and sagebrush focal areas, all fire-associated vehicles and equipment should be power-washed before entering and exiting the area to minimize the introduction of undesirable invasive plant species.

GRSG-FM-GL-010-Guideline - Unit-specific greater sage-grouse fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed.

GRSG-FM-GL-011-Guideline – Localized maps of priority and general habitat management areas and sagebrush focal areas should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.

GRSG-FM-GL-012-Guideline - In or near priority and general habitat management areas and sagebrush focal areas, a greater sage-grouse resource advisor should be assigned to all extended attack fires.

GRSG-FM-GL-013-Guideline – On critical fire weather days, available fire suppression resources should be pre-positioned to optimize a quick and efficient response into priority and general habitat management areas and sagebrush focal areas.

GRSG-FM-GL-014-Guideline - During periods of multiple fires, line officers should be involved in setting priorities to help protect priority and general habitat management areas and sagebrush focal areas.

GRSG-FM-GL-015-Guideline – In priority and general habitat management areas and sagebrush focal areas, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.

GRSG-FM-GL-016-Guideline – In priority and general habitat management areas and sagebrush focal areas, to minimize sagebrush loss, mop-up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available allows.

Wild Horse and Burro

GRSG-HB-DC-001-Desired Condition – In priority and general habitat management areas, wild horse and burro populations are managed within established appropriate management levels to restore, enhance, or maintain greater sage-grouse desired habitat conditions (table 1a or 1b).

GRSG-HB-ST-001-Standard – In priority and general habitat, adjust established appropriate management levels if greater sage-grouse management standards are not met due to degradation that can be at least partially attributed to wild horse or burro populations.

GRSG-HB-ST-002-Standard - In priority and general management areas, remove wild horses and burros outside of a wild horse and burro territory.

GRSG-HB-GL-001-Guideline - In priority and general habitat, herd gathering should be prioritized when wild horse and burro populations exceed the upper limit of the established appropriate management level.

GRSG-HB-GL-002-Guideline - In priority and general habitat, wild horse and burro population levels should be managed at the lower limit of established appropriate management level ranges.

GRSG-HB-GL-003–Guideline - In priority and general habitat, consider removals or exclusion of wild horse or burros immediately following emergency situation (such as fire, floods, and drought).

Recreation

GRSG-R-DC-001-Desired Condition – In priority and general habitat management areas and sagebrush focal areas, existing and new recreation special use authorizations and expansion of special use authorizations restrict effects to greater sage-grouse and their habitats.

GRSG-R-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (greater than 5 years) negative impacts on greater sage-grouse or their habitats.

GRSG-R-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, terms and conditions that protect and/or restore greater sage-grouse habitat within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, terms and conditions in existing permits and operating plans should be modified to protect and/or restore greater sage-grouse habitat.

GRSG-R-GL-002-Guideline – In priority and general habitat management areas and sagebrush focal areas, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to greater sage-grouse and/or their habitats or the development is required for visitor safety.

GRSG-R-GL-003-Guideline - During breeding and nesting (March 1 to June 30), outfitter-guide activities within 0.25 mile from the perimeter of active leks should not be authorized.

Roads/Transportation

GRSG-RT-DC-001-Desired Condition - In priority and general habitat management areas and sagebrush focal areas, within the travel management system, greater sage-grouse experience minimal disturbance during breeding and nesting (March 1 to June 30) and wintering periods (November 1 to February 28).

GRSG-RT-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit new road or trail construction (does not apply to realignments for resource protection) except when necessary for administrative access, public safety, or to access valid existing rights. If necessary to construct new roads and trails for one of these purposes, construct them to the minimum standard, length, and number and avoid, minimize, and mitigate impacts.

GRSG-RT-ST-002-Standard – Prohibit road and trail maintenance activities within 2 miles from the perimeter of active leks during lekking (March 1 to May 15) from 6 pm to 9 am.

GRSG-RT-ST-003-Standard – In priority habitat management areas and sagebrush focal areas, prohibit public access on temporary energy development roads, unless consistent with all other terms and conditions included in the land use management plan.

GRSG-RT-GL-001-Guideline – In priority habitat management areas and sagebrush focal areas, new roads and road realignments should be designed and administered to reduce collisions with greater sage-grouse.

GRSG-RT-GL-002-Guideline – In priority habitat management areas and sagebrush focal areas, road construction within riparian areas and mesic meadows should be restricted. If not possible to restrict construction within riparian areas and mesic meadows, roads should be designed and constructed at right angles to ephemeral drainages and stream crossings, unless topography prevents doing so.

GRSG-RT-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions (table 1a or 1b).

GRSG-RT-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas, dust abatement terms and conditions should be included in road use permits when dust has the potential to impact greater sage-grouse.

GRSG-RT-GL-005-Guideline - In priority and general habitat management areas and sagebrush focal areas, road and road-way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive plants. Such activities include but are not limited to the removal or mowing of vegetation a car-width off the edge of roads; use of weed-free earth-moving equipment, gravel, fill, or other materials; and blading or pulling roadsides and ditches that are infested with noxious weeds only if required for public safety or protection of the roadway.

GRSG-RT-GL-006-Guideline - In priority and general habitat management areas and sagebrush focal areas, during breeding and nesting (March 1 to June 30), consider seasonal road closures on motorized travel routes with high traffic volume, speeds, or noise levels.

GRSG-RT-GL-007-Guideline – In priority and general habitat management areas and sagebrush focal areas, from November 1 to February 28, consider limiting over-snow motorized vehicles in wintering areas.

Minerals

Fluid Minerals – Unleased

GRSG-M-FMUL-ST-001-Standard - In priority habitat management areas and sagebrush focal areas, any new oil and gas leases must include a no surface occupancy stipulation. There will be no waivers or modifications. An exception could be granted by the authorized officer with unanimous concurrence from a team of agency greater sage-grouse experts from the Fish and Wildlife Service, Forest Service, and State wildlife agency if:

- There would be no direct, indirect, or cumulative effects to greater sage-grouse or their habitats or
- Granting the exception provides an alternative to a similar action occurring on a nearby parcel and
- The exception provides a clear net conservation gain to greater sage-grouse.

GRSG-M-FMUL-ST-002-Standard – In general habitat management areas, any new leases must include appropriate controlled surface use and timing limitation stipulations to protect sage-grouse and their habitat.

GRSG-M-FMUL-ST-003-Standard – In sagebrush focal habitat management areas, there will be no surface occupancy and no waivers, exceptions, or modifications for fluid mineral leasing.

GRSG-M-FMUL-ST-004-Standard – In priority habitat management areas outside of sagebrush focal areas, proposed geothermal projects may be considered if:

- A team of agency greater sage-grouse experts from the Fish and Wildlife Service, Forest Service, Bureau of Land Management, and State wildlife agency advises on project-mitigation measures, including lek buffer distances, using the best available science;
- Mitigation actions are consistent with the Mitigation Strategy; and
- The footprint of the project is consistent with the disturbance protocols identified in GRSG-GEN-ST-001.

GRSG-M-FMUL-ST-005-Standard – In priority and general habitat management areas and sagebrush focal areas, when analyzing leasing of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.

GRSG-M-FMUL-ST-006-Standard - In priority and general habitat management areas and sagebrush focal areas, only allow geophysical exploration and similar type of exploratory operations that are consistent with vegetation objectives in table 1a or 1b, achieve a net conservation gain, and include appropriate seasonal restrictions.

Fluid Minerals – Leased

GRSG-M-FML-ST-001-Standard – In priority habitat management areas and sagebrush focal areas, when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, require that leaseholders avoid and minimize surface disturbing and disruptive activities consistent with the rights granted in the lease.

GRSG-M-FML-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, when facilities are no longer needed or leases are relinquished, require reclamation plans to include terms and conditions to restore habitat to desired conditions as described in table 1a or 1b.

GRSG-M-FML-ST-003-Standard – In priority and general habitat management areas and sagebrush focal areas, authorize new transmission line corridors, transmission line right-of-ways, transmission line construction, or transmission line-facility construction associated with fluid mineral leases with stipulations necessary to protect greater sage-grouse and their habitats, consistent with the terms and conditions of the permit.

GRSG-M-FML-ST-004-Standard – Locate compressor stations on portions of a lease that are non-habitat and are not used by greater sage-grouse, and if there would be no direct, indirect, or cumulative effects on sage-grouse or their habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise.

GRSG-M-FML-ST-005-Standard – In priority and general habitat management areas and sagebrush focal areas, when authorizing development of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.

GRSG-M-FML-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, operators should be encouraged to reduce disturbance to greater sage-grouse habitat. At the time of approval of the Surface Use Plan of Operation portion of the Application for Permit to Drill, terms and conditions should be included to reduce disturbance to greater sage-grouse habitat, where appropriate and feasible and consistent with the rights granted to the lessee.

GRSG-M-FML-GL-002-Guideline – On Federal leases in priority and general habitat management areas and sagebrush focal areas, when surface occupancy cannot be restrict due to valid existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to greater sage-grouse based on vegetation, topography, or other habitat features.

GRSG-M-FML-GL-003-Guideline - In priority and general habitat management areas and sagebrush focal areas, where the federal government owns the surface and the mineral estate is in non-federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

GRSG-M-FML-GL-004-Guideline - Where the federal government owns the surface and the mineral estate is in non-federal ownership in priority and general habitat management areas and sagebrush focal areas, coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

Fluid Minerals – Operations

GRSG-M-FMO-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, prohibit employee camps.

GRSG-M-FMO-ST-002-Standard – In priority and general habitat management areas and sagebrush focal areas, when feasible, do not locate tanks or other structures that may be used as raptor perches. If this is not feasible, use perch deterrents.

GRSG-M-FMO-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.

GRSG-M-FMO-GL-002-Guideline – In priority and general habitat management areas and sagebrush focal areas, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

GRSG-M-FMO-GL-003-Guideline – In priority and general habitat management areas and sagebrush focal areas, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include:

- Increase the depth of ponds to accommodate a greater volume of water than is discharged.
- Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments to reduce breeding habitat for mosquitoes.
- Maintain the water level below that of rooted aquatic and upland vegetation. Restrict flooding terrestrial vegetation in flat terrain or low-lying areas.

- Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated.
- Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water.
- Line the overflow spillway with crushed rock and construct the spillway with steep sides.
- Fence pond sites to restrict access by livestock and other wild ungulates.
- Remove or re-inject produced water.
- Treat waters with larvicides to reduce mosquito production where water occurs on the surface.

GRSG-M-FMO-GL-004-Guideline – In priority and general habitat management areas and sagebrush focal areas to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

Locatable Minerals

GRSG-M-LM-ST-001-Standard – In priority and general habitat management areas and sagebrush focal areas, approve Plans of Operation with mitigation to protect greater sage-grouse and their habitats consistent with the rights of the mining claimant as granted by the General Mining Act of 1872, as amended.

GRSG-M-LM-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas to keep habitat disturbance at a minimum, a phased development approach should be applied to operations consistent with the rights granted under the General Mining Act of 1872, as amended. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

GRSG-M-LM-GL-002-Guideline - In priority and general habitat management areas and sagebrush focal areas, abandoned mine sites should be closed or mitigated, subject to valid or existing rights, to reduce predation of greater sage-grouse by eliminating tall structures that could provide nesting opportunities and perching sites for predators.

Non-energy Leasable Minerals

GRSG-M-NEL-GL-001-Guideline – In priority and general habitat management areas and sagebrush focal areas, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases, the Forest Service should provide recommendations to the Bureau of Land Management for the protection of greater sage-grouse and their habitats.

GRSG-M-NEL-GL-002-Guideline - In priority, sagebrush focal, and general habitat, the Forest Service should recommend to the Bureau of Land Management that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to greater sage-grouse and their habitat.

Mineral Materials

GRSG-M-MM-ST-001-Standard – In priority and sagebrush focal management areas, prohibit new mineral material disposal or development.

GRSG-M-MM-ST-002-Standard – In priority habitat management areas and sagebrush focal areas, free-use mineral material collection permits may be issued and expansion of existing active pits may be allowed, except from March 1 to May 15 between 6 pm and 9 am within 2 miles from the perimeter of occupied leks, if doing so is within the Biologically Significant Unit and does not exceed the disturbance cap.

GRSG-M-MM-ST-003-Standard - In priority and general habitat management areas and sagebrush focal areas, any permit for existing mineral material operations must include appropriate requirements for operation and reclamation of the site to restore, enhance, or maintain desired habitat conditions (table 1a or 1b).

Predation

GRSG-P-DC-001-Desired Condition - Anthropogenic uses on public lands are managed to reduce the effects of predation on greater sage-grouse.

Glossary of Terms as Used in this Plan

Active lek - Any lek that has been attended by male greater sage-grouse during the most recent strutting season.

Adjacent – Installation of new improvements (e.g., equipment or facilities) parallel, near, or next to existing improvements.

Administrative access - Access for resource management and administrative purposes such as fire suppression, cadastral surveys, permit compliance, law enforcement, and military in the performance of their official duty, or other access needed to manage National Forest System lands or uses.

Ambient (noise level) - Sometimes called background noise level, reference sound level, or room noise level is the background sound pressure level at a given location, normally specified as a reference level to study a new intrusive sound source.

Anthropogenic disturbances – Human-created features including but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells and associated facilities, geothermal wells and associated facilities, pipelines, landfills, agricultural conversion, homes, grazing-related facilities and structures, and mines.

Authorize use - An activity (i.e., resource use) occurring on the public lands that is either explicitly or implicitly recognized and legalized by law or regulation. The term may refer to activities occurring on the public lands for which the Forest Service has issued a formal authorization document (e.g., livestock grazing permit, special use authorization, approved plan of operation, etc.). Formal authorized uses can involve both commercial and noncommercial activity, facility placement, or event. These authorized uses are often spatially or temporally limited. Unless constrained or bounded by statute, regulation, or an approved land use plan decision, legal activities involving public enjoyment and use of the public lands (e.g., hiking, camping, hunting, etc.) require no formal Forest Service authorization.

Baseline condition - The pre-existing condition of a defined area and/or resource that can be quantified by an appropriate metric(s). During environmental reviews, the baseline is considered the affected environment that exists at the time of the review's initiation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

Biologically significant unit - A geographical/spatial area within greater sage-grouse habitat that contains relevant and important habitats that is used as the basis for comparative calculations to support evaluation of changes to habitat. A biologically significant unit or subset of the unit is used in the calculation of the anthropogenic disturbance threshold and in the adaptive management habitat trigger.

Co-locate - Installation of new improvements (e.g., equipment or facilities) on or within existing improvements.

Communication tower site - Sites that include broadcast types of uses (e.g., television, AM/FM radio, cable television, broadcast translator) and non-broadcast uses (e.g., commercial or private mobile radio service, cellular telephone, microwave, local exchange network, passive reflector).

Compensatory mitigation - Compensating for the residual impact of a certain action or parts of an action by replacing or providing substitute resources or environments.

Compensatory mitigation projects – The restoration, creation, enhancement, and/or preservation of impacted resources, such as on-the-ground actions to improve and/or protect habitats (e.g. chemical vegetation treatments, land acquisitions, conservation easements).

Disruptive activities - Land resource uses/activities that are likely to alter the behavior, displace, or cause excessive stress to greater sage-grouse populations occurring at a specific location and/or time. Actions that alter behavior or cause the displacement of individuals such that reproductive success is negatively affected, or an individual's physiological ability to cope with environmental stress is compromised.

Distribution line - An electrical utility line with a capacity of less than 100kV or a natural gas, hydrogen, or water pipeline less than 24" in diameter.

Diversity (species) – The number, distribution, and geographic ranges of plant and animal species including focal species and species-at-risk.

Durable (protective and ecological) - The administrative, legal, and financial assurances that secure and protect the conservation status of a compensatory mitigation site, and the ecological benefits of a compensatory mitigation project, for at least as long as the associated impacts persist.

Enhance - The improvement of habitat by increasing missing or modifying unsatisfactory components and/or attributes of the plant community to meet greater sage-grouse objectives.

Exception - A case-by-case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria apply. The authorized officer (any employee of the Forest Service to whom has been delegated the authority to perform the duties described in the applicable Forest Service manual or handbook) may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of greater sage-grouse.

Feasible – see technically/economically feasible.

Fluid minerals - Oil, gas, coal bed natural gas, and geothermal resources.

General habitat management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as those areas outside of priority habitat management areas and sagebrush focal areas and occupied by greater sage-grouse seasonally or year-round.

Habitat - An environment that meets a specific set of physical, biological, temporal, or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of their life cycle.

Hard triggers - Thresholds indicating that immediate action is necessary to stop a severe deviation from sage grouse conservation objectives set forth in the land and resources management plan.

High-voltage transmission line – An electrical power line that is 100 kilovolts or larger.

Holder – An individual or entity that holds a valid special use authorization.

Impact - The effect, influence, alteration, or imprint caused by an action.

Indicators - Factors that describe resource condition and change and can help the BLM and the Forest Service determine trends over time.

Isolated parcel - An individual parcel of land that may share a corner, but does not have a common border with another parcel.

Invasive species (invasives plant species, invasives) - An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. The species must cause, or be likely to cause, harm, and be exotic to the ecosystem it has infested before considered invasive.

Landscape – A distinct association of land types that exhibit a unique combination of local climate, landform, topography, geomorphic process, surficial geology, soil, biota, and human influences. Landscapes are generally of a size that the eye can comprehend in a single view.

Lease – A type of special use authorization (usually granted for uses other than linear rights-of-way) that is used when substantial capital investment is required and when conveyance of a conditional and transferable interest in National Forest System lands is necessary or desirable to serve or facilitate authorized long-term uses, and that may be revocable and compensable according to its terms.

Leasable minerals - Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. These include energy-related mineral resources such as oil, natural gas, coal, and geothermal, and some non-energy minerals, such as phosphate, sodium, potassium, and sulfur. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

Lessee - A person or entity authorized to use and occupy National Forest System land under a specific instrument identified as a lease. Forest special use leases are limited to authorize certain wireless communication uses. Leases are also used for certain mineral leasable activities.

Lek - A courtship display area attended by male greater sage-grouse in or adjacent to sagebrush dominated habitat. For management purposes, leks with less than five males observed strutting should be confirmed active for 2 years to meet the definition of a lek (Connelly et al 2000, Connelly et al. 2003, 2004).

Locatable minerals - Mineral disposable under the General Mining Act of 1872, as amended, that was not excepted in later legislation. They include hardrock, placer, industrial minerals, and uncommon varieties of rock found on public domain lands.

Major pipeline – A pipeline that is 24 inches or more in outside-pipe diameter (Mineral Leasing Act of 1920 30 U.S.C. § 181; 36 CFR 251.54(f)(1)).

Mineral - Any naturally formed inorganic material, solid or fluid inorganic substance that can be extracted from the earth, any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained usually from the ground. Under Federal laws, considered as locatable (subject to the general mining laws), leasable (subject to the Mineral Leasing Act of 1920), and salable (subject to the Materials Act of 1947).

Mineral materials - Common varieties of mineral materials such as soil, sand and gravel, stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Materials Act of 1947, as amended.

Minimization mitigation - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

Mitigation - Specific means, measures, or practices that could reduce, avoid, or eliminate adverse impacts. Mitigation can include avoiding the impact altogether by not taking a certain action or parts of an action, minimizing the impact by limiting the degree of magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitation, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, and compensating for the impact by replacing or providing substitute resources or environments.

Modification (oil and gas) – A fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

Native plant species - Species that were located on the land before European settlement, and consequently are in balance with ecosystems because they have well developed parasites, predators, and pollinators.

Net conservation gain - The actual benefit or gain above baseline conditions.

No surface occupancy (NSO) - Use or occupancy of the land surface for fluid mineral exploration or development prohibited to protect identified resource values. The NSO stipulation includes stipulations that may be worded as "No Surface Use/Occupancy," "No Surface Disturbance," "Conditional NSO," or "Surface Disturbance or Surface Occupancy Restriction (by location)."

Occupied lek - A lek that has been active during at least one strutting season within the prior 10 years.

Opportunity (allotment closure) - A suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit.

Permit — A special use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System land or facilities for specified purposes, and which is both revocable and terminable.

Persistent woodlands – Long-lived pinyon-juniper woodlands that typically have sparse understories and occur on poor substrates in the assessment area.

Plan of Operation - A Plan of Operation is required for all mining activity conducted under the General Mining Act of 1872, as amended, if the proposed operations will likely cause significant disturbance of surface resources. The Plan of Operation describes the type of operations proposed and how they would be conducted, the type and standard of existing and proposed roads or access routes, the means of transportation to be used, the period

during which the proposed activity will take place, and measures to be taken to meet the requirements for environmental protection (36 CR 228.4).

Prescribed fire - Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist and NEPA requirements, where applicable, must be met before ignition.

Priority habitat management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as having the highest conservation value to maintaining sustainable greater sage-grouse populations. These areas include breeding, late brood-rearing and winter concentration areas.

Prohibit – To forbid (something) by law, rule, or other authority; no authorizations will be issued.

Reclamation plans – Plans that guide the suite of actions taken within an area affected by human disturbance, the outcome of which is intended to change the condition of the disturbed area to meet pre-determined objectives and/or make it acceptable for certain defined resources (e.g., wildlife habitat, grazing, ecosystem function, etc.).

Residual impacts - Impacts from an implementation-level decision that remain after applying avoidance and minimization mitigation; also referred to as unavoidable impacts.

Restoration - Implementation of a set of actions that promotes plant community diversity and structure that allows plant communities to be more resilient to disturbance and invasive species over the long term. The long-term goal is to create functional, high quality habitat that is occupied by greater sage-grouse. Short-term goal may be to restore the landform, soils and hydrology and increase the percentage of preferred vegetation, seeding of desired species, or treatment of undesired species.

Restrict – To put a limit on; keep under control; to limit someone's actions or movement, or to limit the amount, size, etc., of something.

Right-of-way - Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project or facility passing over, upon, under or through such land.

Road or trail – A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

Sagebrush focal areas – Areas identified by the U.S. Fish and Wildlife Service that represent recognized "strongholds" for greater sage-grouse and are considered most vital to the species persistence and therefore, have the strongest levels of protection.

Soft triggers - An intermediate threshold indicating that management changes are needed at the implementation level to address habitat or population losses.

Special use authorization - A written permit, term permit, lease, or easement that authorizes use or occupancy of National Forest System lands and specifies the terms and conditions under which the use or occupancy may occur.

Stipulation (general) - A term or condition in an agreement, contract, or written authorization.

Stipulation (oil and gas) - A provision that modifies standard lease rights and is attached to and made a part of the lease.

Surface disturbing and disruptive activities - Actions that alter the vegetation, surface/near surface soil resources, and/or surface geologic features, beyond natural site conditions and on a scale that affects other public land values. Examples of surface disturbing activities may include operation of heavy equipment to construct well pads, roads, pits and reservoirs; installation of pipelines and power lines; maintenance activities, and several types of vegetation treatments (e.g., prescribed fire, etc.). Surface disturbing activities may be either restricted or prohibited.

Surface uses - Activities that may be present on the surface or near-surface (e.g., pipelines) of public lands. When administered as a use restriction (e.g., no surface occupancy), this phrase prohibits all but specified resource uses and activities in a certain area to protect particular sensitive resource values and property. This designation typically applies to small acreage sensitive resource sites (e.g., plant community study exclosure, etc.), and/or administrative sites (e.g., government ware-yard, etc.) where only authorized, agency personnel are admitted.

Tall structures – A wide array of infrastructure (e.g., poles that support lights, telephone and electrical distribution, communication towers, meteorological towers, high-tension transmission towers, and wind turbines) that have the potential to disrupt lekking or nesting birds by creating new perching/nesting opportunities and/or decreasing the use of an area. A determination as to whether something is considered a tall structure would be based on local conditions such as vegetation or topography.

Technically/economically feasible - Actions that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. It is the Forest Service's sole responsibility to determine what actions are technically and economically feasible. The Forest Service will consider whether implementation of the proposed action is likely given past and current practice and technology; this consideration does not necessarily require a cost-benefit analysis or speculation about an applicant's costs and profit.

Temporary special use permit – A type of permit that terminates within 1 year or less after the approval date. All other provisions applicable to permits apply fully to temporary permits. Temporary special use permits are issued for seasonal or short-duration uses involving minimal improvement and investment.

Term permit – An authorization to occupy and use National Forest System land, other than rights-of-way for a specified period that is both revocable and compensable according to its terms.

Timely - The conservation benefits from compensatory mitigation accruing as early as possible or before impacts have begun.

Transmission line - An electrical utility line with a capacity greater than or equal to 100kV or a natural gas, hydrogen, or water pipeline greater than or equal to 24" in diameter.

Travel management system – Planned and authorized roads, trails, and areas for motor vehicle use on National Forest System lands that are managed in a controlled, sustained manner.

Utility-scale and/or commercial energy development – A project that is capable of producing 20 or more megawatts of electricity for distribution to customers through the electricity-transmission-grid system.

Valid existing rights - Documented, legal rights, or interests in the land, which allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include but are not limited to fee title ownership, mineral rights, and easements. Such rights may have been reserved, acquired, granted or otherwise authorized under various statutes of law.

Vegetation treatment - Management practices that are designed to maintain current vegetation structure or change the vegetation structure to a different stage of development. Vegetation treatment methods may include managed fire, prescribed fire, chemical, mechanical, and seeding.

Waiver (oil and gas) - Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

West Nile virus - A virus that is found in temperate and tropical regions of the world and most commonly transmitted by mosquitoes. West Nile virus can cause flu-like symptoms in humans and can be lethal to birds, including greater sage-grouse.

Wildfire suppression - An appropriate management response to wildfire, escaped wildland fire use or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

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Forest Service Plan Components Defined

Desired conditions - A description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates. (36 CFR 219.7(e)(1)(i)) FSH 1909.12, Chapter 20)

Guideline – A constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. (§ 219.15(d)(3)). Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1)(iv); FSH 1909.12, Chapter 20)

Objective - A concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets. (36 CFR 219.9(e)(1)(ii)) FSH 1909.12, Chapter 20)

Standard - A mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.7(e)(1) (iii)) FSH 1909.12, Chapter 20)

General Greater Sage-grouse

GRSG-GEN-DC-001-Desired Condition – The landscape for greater sage-grouse encompasses large contiguous areas, approximately 6 to 62 square miles in area, to provide for multiple aspects of species life requirements. Within these landscapes, a variety of sagebrush-community compositions exist, with variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure, to meet seasonal requirements for food, cover, and nesting for greater sage-grouse.

GRSG-GEN-DC-002-Desired Condition – Anthropogenic disturbance is focused in non-habitat areas outside of priority and general habitat management areas[1]. Disturbance in general habitat management areas is limited, and there is little to no disturbance in priority habitat management areas except for valid existing rights and existing authorized uses.

GRSG-GEN-DC-003-Desired Condition – In greater sage-grouse management areas, including all seasonal habitats, 70% of lands capable of producing sagebrush have 10 to 30% sagebrush canopy cover and less than 10% conifer canopy cover. In addition, within breeding and nesting habitat, sufficient herbaceous vegetation structure and height provides overhead and lateral concealment for nesting and early brood rearing life stages. Within brood rearing habitat, wet meadows and riparian areas sustain a rich diversity of perennial forb species relative to site

[1] Suitable greater sage-grouse habitat within polygons identified as priority or general habitat management areas. Areas of non-habitat within a polygon are not included as part of any priority or general habitat management area.

potential. Within winter habitat, sufficient sagebrush height and density provides food and cover for greater sage-grouse during this seasonal period. Specific desired conditions for greater sage-grouse based on seasonal habitat requirements are in table 1.

Table 1. Seasonal Habitat Desired Conditions for Greater Sage-grouse.

ATTRIBUTE	INDICATORS	DESIRED CONDTION
BREEDING AND NESTING [1,2,3] (Seasonal Use Period March 1-June 15) Apply 4 miles from active leks. [4]		
Lek Security	Proximity of trees [5]	Trees or other tall structures are none to uncommon within 1.86 miles of leks [6,7]
	Proximity of sagebrush to leks [6]	Adjacent protective sagebrush cover within 328 feet of lek [6]
Cover	Seasonal habitat extent [7]	>80% of the breeding and nesting habitat
	Sagebrush canopy cover [6,7,8]	15 to 25%
	Sagebrush height [7] Arid sites [6,7,9] Mesic sites [6,7,10]	 12 to 32 inches 16 to 32 inches
	Predominant sagebrush shape [6]	>50% in spreading [11]
	Perennial grass canopy cover [6,7] Arid sites[7,9] Mesic sites [710]	 ≥10% ≥15%
	Perennial grass height [6,7,8]	Provide overhead and lateral concealment from predators [7]
	Perennial forb canopy cover [6,7,8] Arid sites [9] Mesic sites [10]	 ≥5%[6,7] ≥10%[6,7]
BROOD-REARING/SUMMER[1] (Seasonal Use Period June 16-October 31)		
Cover	Seasonal habitat extent [7]	>40% of the brood-rearing/summer habitat
	Sagebrush canopy cover [6,7,8]	10 to 25%
	Sagebrush height [7,8]	16 to 32 inches
	Perennial grass canopy cover and forbs [7,8]	>15%
	Riparian areas/mesic meadows	Proper Functioning Condition [12]
	Upland and riparian perennial forb availability [6,7]	Preferred forbs are common with several preferred species present [13]
WINTER[1] (Seasonal Use Period November 1-February 28)		
Cover and Food	Seasonal habitat extent [6,7,8]	>80% of the winter habitat
	Sagebrush canopy cover above snow [6,7,8]	>10%
	Sagebrush height above snow [6,7,8]	>10 inches [14]

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

[2] Doherty, K. 2008. *Sage-grouse and Energy Development: Integrating Science with Conservation Planning to Reduce Impacts*. University of Montana. Missoula, MT.

[3] Holloran and Anderson. 2005. *Spatial Distribution of Greater Sage-grouse nests in relatively contiguous sagebrush habitats*. Condor 107:742-752.

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

[5] Baruch-Mordo, S. J.S. Evans, J.P Severson, D.E. Naugle, J. D. Maestas, J.M. Kiesecker, M.J. Falkowski. C.A. Hagen, and K.P. Reese. . 2013. *Saving sage-grouse from trees*: A proactive solution to reducing a key threat to a candidate species. Biological Conservation 167: 233-241.

[6] Stiver, S.J., E.T. Rinkes, D.E. Naugle, P.D. Makela, D.A. Nance, and J.W. Karl, eds. 2015. Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool. Technical Reference 6710-1. Bureau of Land Management and Western Association of Fish and Wildlife Agencies, Denver, Colorado.

[7] Connelly, J. M. A. Schroweder, A.R. Sands, and C.E. Braun.2000. Guidelines to manage sage-grouse populations and their habitats. Wildlife Society Bulletin 28 (4): 967-985.

[8] Connelly, J. K. Reese, and M. Schroder. 2003. *Monitoring of Greater sage-grouse habitats and populations*. Station Bulletin 80, Contribution 979. University of Idaho, College of Natural Resources Experiment Station. Moscow, ID.

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

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

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

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

[13] Preferred forbs are listed in HAF Table III-2 (HAF 2014). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2.

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

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ATTRIBUTE	INDICATORS	DESIRED CONDTION
stands.		

GRSG-GEN-ST-001-Standard – In priority habitat management areas, do not issue new discretionary written authorizations unless all existing discrete anthropogenic disturbances cover less than 3% of the total greater sage-grouse habitat within the Biologically Significant Unit and the proposed project analysis area, regardless of ownership, and the new use will not cause exceedance of the 3% cap (Appendix Z – Disturbance Cap Guidance).

GRSG-GEN-ST-002-Standard – In priority and general habitat management areas, only allow new authorized land uses if the residual impacts to greater sage-grouse or their habitats are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, which will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions. Any compensatory mitigation will be durable, timely, and in addition to what would have resulted without the compensatory mitigation as addressed in the Mitigation Framework (Appendix X).

GRSG-GEN-GL-001-Guideline – During lekking (March 1 to April 30) surface disturbing and disruptive activities, including noise at 10 dB above ambient (not to exceed 20-24 dB) to lekking birds should be restricted from 6 pm to 9 am at a distance of 3.1 miles from the perimeter of an occupied lek.

GRSG-GEN-GL-002-Guideline – During breeding and nesting (March 1 to June 15), surface disturbing and disruptive activities to nesting birds should be restricted.

GRSG-GEN-GL-003-Guideline - When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired habitat conditions displayed in table 1.

GRSG-GEN-GL-004-Guideline – Development of tall structures within 2.0 miles from the perimeter of occupied leks, as determined by local conditions (such as vegetation or topography), with the potential to disrupt breeding or nesting by creating new perching/nesting opportunities for avian predators or by decreasing the use of an area, should be restricted in nesting habitat.

Adaptive Management

GRSG-AM-ST-001-Standard – If a hard trigger is identified, immediate action is necessary to stop a severe deviation from greater sage-grouse conservation objectives. The hard trigger response will be an entire restrictive alternative, or one or more appropriate components of a more restrictive alternative, such as the immediate cessation of authorizing land use authorizations. An interagency team will conduct an assessment to determine the causal factor(s) and recommend corrective strategies (Appendix Z - Adaptive Management Guidance and Sideboards).

GRSG-AM-ST-002-Standard – If a soft trigger is identified, apply more conservative or restrictive implementation measures (e.g., extending seasonal restrictions for seasonal surface disturbing activities, modifying seasons of use for livestock grazing, and applying additional restrictions on discretionary activities) for the specific causal factor in the decline of populations and/or habitats, with consideration of local knowledge and conditions (Appendix Z - Adaptive Management Guidance and Sideboards).

Lands and Realty

Special Use Authorizations (non recreation)

GRSG-LR-SUA-O-001-Objective - In brood reading and nesting habitats, retrofit existing tall structures (e.g., power poles, cellular towers) with perch deterrents or other anti-perching devices within 2 years of signing the Record of Decision.

GRSG-LR-SUA-ST-001-Standard – In priority habitat management areas, restrict issuance of new lands special use authorizations that authorize infrastructure, such as high-voltage transmission lines, major pipelines, hydropower, distribution lines, and cellular towers. Exceptions must be limited and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to greater sage-grouse will be avoided by the exception.

GRSG-LR-SUA-ST-002-Standard – In general habitat management areas, new lands special use authorizations may be authorized for infrastructure, such as high-voltage transmission lines and major pipelines, if they can be located within existing designated corridors and the authorization includes stipulations to protect greater sage-grouse and their habitats.

GRSG-LR-SUA-ST-003-Standard – In priority and general habitat management areas, do not authorize temporary lands special uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (i.e., greater than 5 years) negative impact on greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-004-Standard – In priority and general habitat management areas, require protective stipulations (e.g., noise, tall structure, guy wire removal, perch deterrent installation) when issuing new authorizations or during renewal, amendment, or reissuance of existing authorizations that authorize infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers).

GRSG-LR-SUA-ST-005-Standard – In priority and general habitat management areas, locate upgrades to existing transmission lines within the existing designated corridors unless an alternate route would benefit greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-006-Standard - In priority and general habitat management areas, when a lands special use authorization is revoked or terminated and no future use is contemplated, the authorization holder must remove overhead lines and other surface infrastructure in compliance with 36 CFR 251.60(i).

GRSG-LR-SUA-ST-007-Standard - In priority and general habitat management areas, if the potential long-term (greater than 5 years) impacts of mitigation (e.g., relocation or burying) to greater sage-grouse or their habitats are greater than the potential impacts from new lands special use authorizations, do not pursue the mitigation. If mitigation is not feasible or would result in short-term (less than 5 years) or long-term impacts, incorporate additional terms and conditions in the special use authorization for protection of greater sage-grouse or their habitats.

GRSG-LR-SUA-ST-008-Standard – In priority and general habitat management areas, co-locate new infrastructure (e.g., high-voltage transmission lines, major pipelines, roads, distribution lines, and cellular towers) with existing infrastructure to limit disturbance to the smallest footprint, or where it best limits impacts to greater sage-grouse or their habitats. When co-location of new infrastructure cannot be accomplished, locate it adjacent to existing

infrastructure, roads, or already disturbed areas. New communication tower sites may be authorized for public safety.

GRSG-LR-SUA-GL-001-Guideline – In priority habitat management areas, outside of existing designated corridors, new transmission lines and pipelines should be buried to limit disturbance to the smallest footprint unless explicit rationale is provided that the biological impacts to greater sage-grouse are being avoided. When new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

Land Ownership Adjustments

GRSG-LR-LOA-ST-001-Standard – In priority and general habitat management areas, prohibit land ownership adjustments unless the action results in a net conservation gain to greater sage-grouse or it will not directly or indirectly adversely impact greater sage-grouse conservation.

GRSG-LR-LOA-GL-001-Guideline – In priority and general habitat management areas with minority Federal ownership, consider land ownership adjustments to achieve a landownership pattern (e.g., consolidation, reducing fragmentation) that supports improved greater sage-grouse population trends and habitats.

Land Withdrawal

GRSG-LR-LW-GL-001-Guideline – In priority habitat management areas, utilize land withdrawals as a tool, where appropriate and subject to valid existing rights, to prevent activities that will be detrimental to greater sage-grouse or their habitats.

Wind and Solar

GRSG-WS-ST-001-Standard – In priority habitat management areas, prohibit new solar and wind utility-scale and/or commercial energy development except for on-site power generation associated with existing industrial infrastructure (e.g., mine site).

GRSG-WS-GL-001-Guideline – In general habitat management areas, new solar and wind energy utility-scale and/or commercial development should be restricted. If development cannot be restricted due to existing authorized use, adjacent developments, or split estate issues, then ensure that stipulations are incorporated into the authorization to protect greater sage-grouse and their habitats.

Greater Sage-grouse Habitat

GRSG-GRSGH-ST-001-Standard – Design habitat restoration projects to move towards desired conditions (table 1).

GRSG-GRSGH-GL-001-Guideline – Sagebrush removal in greater sage-grouse breeding and nesting and wintering habitats should be restricted unless necessary to support attainment of desired habitat conditions (table 1).

GRSG-GRSGH-GL-002-Guideline – When removing conifers that are encroaching into greater sage-grouse habitat, avoid persistent woodlands (old growth relative to the site or more than 100 years old).

GRSG-GRSGH-GL-003-Guideline – In priority and general habitat management areas, actions and authorizations should include design features to limit the spread and effect of undesirable non-native plant species.

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GRSG-GRSGH-GL-004-Guideline - To facilitate safe and effective fire management actions, in priority and general habitat management areas, fuels treatments should be designed to reduce the spread and intensity of wildfire in high-risk areas (i.e., areas of increased potential for ignition and in areas where there is a potential for wildfire that would be difficult for suppression resources to contain and control).

GRSG-GRSGH-GL-005-Guideline - In priority and general habitat management areas, native plant species should be used, when possible, to restore, enhance, or maintain desired habitat conditions (table 1).

GRSG-GRSGH-GL-006-Guideline – In priority habitat management areas, vegetation treatment projects should only be conducted if they restore, enhance, or maintain desired habitat conditions (table 1).

Livestock Grazing

GRSG-LG-DC-001-Desired Condition – In priority and general habitat management areas, livestock grazing is managed to ensure for adequate nesting cover and do not conflict with the attainment of other vegetative attributes (table 1).

GRSG-LG-ST-001-Standard – In priority habitat management areas, prohibit construction of water developments unless beneficial to greater sage-grouse habitat.

GRSG-LG-GL-001-Guideline - Grazing guidelines should be applied in each of the seasonal habitats in table 2. If values in table 2 guidelines cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site capability analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in table 1 consistent with the ecological site capability. Do not use drought and degraded habitat condition to adjust values. Grazing guidelines in table 2 would not apply to isolated parcels of National Forest System lands that have less than 200 acres of greater sage-grouse habitat.

Table 2. Grazing Guidelines for Greater Sage-grouse Seasonal Habitat.

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

[1] For descriptions of Seasonal Habitat and Seasonal Periods of greater sage-grouse see table 1.
[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.
[3] Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming*.
[4] Average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly, 2000).
[5] Hagen C., J.W. Connelly, and M.A. Schroeder. 2007. *A meta-analysis of greater sage-grouse Centrocercus urophasianus nesting and brood-rearing habitats*. Wildlife Biology 13(1): 42-50.
[6] Stubble height to be measured at the end of the growing season.
[7] Crawford et al. 2004. Ecology and Management of sage-grouse and sage-grouse habitat. "In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5-15 cm (2-6 in) vs. 30-50 cm (12-20 in); Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing (Neel 1980, Evans 1986). "Moderate use equates to a 10-cm residual stubble height for most grasses and sedges."
[8] Stubble height to be measured in the meadow areas used by greater sage-grouse for brood-rearing (not on the hydric greenline).

GRSG-LG-GL-002-Guideline – In priority habitat management areas, consider closure of grazing allotments, pastures, or portions of pastures, or managing the allotment as a forage reserve as opportunities arise under

applicable regulations, where removal of livestock grazing would enhance the ability to achieve desired habitat conditions (table 1).

GRSG-LG-GL-003-Guideline – Bedding sheep and locating camps within 1.2 miles from the perimeter of a lek during lekking (March 1 to April 30) should be restricted.

GRSG-LG-GL-004-Guideline – During breeding and nesting season (March 1 to June 15), trailing livestock through breeding and nesting habitat should be minimized. Specific routes should be identified, existing trails should be used, and stopovers on active leks should be restricted.

GRSG-LG-GL-005-Guideline – Fences should not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, and design).

GRSG-LG-GL-006-Guideline – New permanent livestock facilities (e.g., windmills, water tanks, corrals) should not be constructed within 1.2 miles from the perimeter of occupied leks.

Fire Management

GRSG-FM-ST-001-Standard – In priority and general habitat management areas, do not use prescribed fire, except for pile burning, in 12-inch or less precipitation zones unless necessary to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1.

GRSG-FM-ST-002-Standard – In priority and general habitat management areas, if it is necessary to use prescribed fire to facilitate site preparation for restoration of greater sage-grouse habitat consistent with desired conditions in table 1, the associated NEPA analysis must identify how greater sage-grouse desired conditions would be met, why alternative techniques were not selected, and how potential threats to greater sage-grouse habitat would be minimized.

GRSG-FM-GL-001-Guideline – In wintering or breeding and nesting habitat, sagebrush removal or manipulation, including prescribed fire, should be restricted unless the removal strategically reduces the potential impacts from wildfire.

GRSG-FM-GL-002-Guideline – In priority and general habitat management areas, when reseeding in fuel breaks, fire resistant native plant species should be used if available, or consider using fire resistance non-native species to meet resource objectives.

GRSG-FM-GL-003-Guideline – In priority and general habitat management areas, fuel treatments should be designed to restore, enhance, or maintain greater sage-grouse habitat.

GRSG-FM-GL-004-Guideline – Locating temporary wildfire suppression facilities (e.g., incident command posts, spike camps, helibases, mobile retardant plants) in priority, sagebrush focal, and general habitat management areas should be restricted.

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GRSG-FM-GL-005-Guideline - In priority and general habitat management areas, cross-country vehicle travel during fire operations should be restricted, whenever safe and practical to do so as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-006-Guideline – In priority and general habitat management areas, burnout operation areas should be avoided by constructing direct fire lines, whenever safe and practical to do so, to improve suppression effectiveness and minimize loss of existing sagebrush habitat as determined by fireline leadership, incident commanders, etc.

GRSG-FM-GL-007-Guideline – In priority and general habitat management areas, prescribed fire prescriptions should minimize undesirable effects on vegetation and/or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of hydrophobicity).

GRSG-FM-GL-008-Guideline - In priority and general habitat management areas, roads and natural fuel breaks should be incorporated into fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.

GRSG-FM-GL-009-Guideline - In priority and general habitat management areas, all fire-associated vehicles and equipment should be power-washed before entering and exiting the area to minimize the introduction of undesirable invasive plant species.

GRSG-FM-GL-010-Guideline - Unit-specific greater sage-grouse fire management toolboxes containing maps, lists, contact information for qualified resource advisors, local guidance, and relevant information should be developed.

GRSG-FM-GL-011-Guideline – Localized maps of priority and general habitat management areas should be provided to dispatch officers and extended attack incident commanders to use when prioritizing wildfire suppression resources and designing suppression tactics.

GRSG-FM-GL-012-Guideline - In or near priority and general habitat management areas, a greater sage-grouse resource advisor should be assigned to all extended attack fires.

GRSG-FM-GL-013-Guideline – On critical fire weather days, available fire suppression resources should be pre-positioned to optimize a quick and efficient response into priority and general habitat management areas.

GRSG-FM-GL-014-Guideline - During periods of multiple fires, line officers should be involved in setting priorities to help protect priority and general habitat management areas.

GRSG-FM-GL-015-Guideline – In priority and general habitat management areas, consider using fire retardant and mechanized equipment only if it is likely to result in minimizing burned acreage.

GRSG-FM-GL-016-Guideline – In priority and general habitat management areas, to minimize sagebrush loss, mop-up should be conducted where the burned areas adjoin unburned islands, doglegs, or other habitat features, as safety and available resources allows.

Recreation

GRSG-R-DC-001-Desired Condition – In priority habitat management areas, existing and new recreation special use authorizations and expansion of special use authorizations restrict effects to greater sage-grouse and their habitats.

GRSG-R-ST-001-Standard – In priority and general habitat management areas, do not authorize temporary recreation uses (i.e., facilities or activities) that result in loss of habitat or would have long-term (greater than 5 years) negative impacts on greater sage-grouse or their habitats.

GRSG-R-GL-001-Guideline – In priority and general habitat management areas, terms and conditions that protect and/or restore greater sage-grouse habitat within the permit area should be included in new recreation special use authorizations. During renewal, amendment, or reauthorization, terms and conditions in existing permits and operating plans should be modified to protect and/or restore greater sage-grouse habitat.

GRSG-R-GL-002-Guideline – In priority habitat management areas, new recreational facilities or expansion of existing recreational facilities (e.g., roads, trails, campgrounds), including special use authorizations for facilities and activities, should not be approved unless the development results in a net conservation gain to greater sage-grouse and/or their habitats or the development is required for visitor safety.

Roads/Transportation

GRSG-RT-DC-001-Desired Condition - In priority and general habitat management areas, within the travel management system, greater sage-grouse experience minimal disturbance during breeding and nesting (March 1 to June 15) and wintering periods (November 1 to February 28).

GRSG-RT-ST-001-Standard – In priority and general habitat management areas, prohibit new road or trail construction (does not apply to realignments for resource protection) except when necessary for administrative access, public safety, or to access valid existing rights. If necessary to construct new roads and trails for one of these purposes, construct them to the minimum standard, length, and number and avoid, minimize, and mitigate impacts.

GRSG-RT-ST-002-Standard – Prohibit road and trail maintenance activities within 2 miles from the perimeter of active leks during lekking (March 1 to April 30) from 6 pm to 9 am.

GRSG-RT-ST-003-Standard – In priority habitat management areas, prohibit public access on temporary energy development roads, unless consistent with all other terms and conditions included in the land use management plan.

GRSG-RT-GL-001-Guideline – In priority habitat management areas, new roads and road realignments should be designed and administered to reduce collisions with greater sage-grouse.

GRSG-RT-GL-002-Guideline – In priority habitat management areas, road construction within riparian areas and mesic meadows should be restricted. If not possible to restrict construction within riparian areas and mesic meadows, roads should be designed and constructed at right angles to ephemeral drainages and stream crossings, unless topography prevents doing so.

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GRSG-RT-GL-003-Guideline – In priority and general habitat management areas, when decommissioning roads and unauthorized routes, restoration activity should be designed to move habitat towards desired conditions (table 1).

GRSG-RT-GL-004-Guideline – In priority and general habitat management areas, dust abatement terms and conditions should be included in road use permits when dust has the potential to impact greater sage-grouse.

GRSG-RT-GL-005-Guideline - In priority and general habitat management areas, road and road-way maintenance activities should be designed and implemented to reduce the risk of vehicle or human-caused wildfires and the spread of invasive plants. Such activities include but are not limited to the removal or mowing of vegetation a car-width off the edge of roads; use of weed-free earth-moving equipment, gravel, fill, or other materials; and blading or pulling roadsides and ditches that are infested with noxious weeds only if required for public safety or protection of the roadway.

Minerals

Fluid Minerals – Unleased

GRSG-M-FMUL-ST-001-Standard - In priority habitat management areas, any new oil and gas leases must include a no surface occupancy stipulation. There will be no waivers or modifications. An exception could be granted by the authorized officer with unanimous concurrence from a team of agency greater sage-grouse experts from the Fish and Wildlife Service, Forest Service, and State wildlife agency if:

- There would be no direct, indirect, or cumulative effects to greater sage-grouse or their habitats or
- Granting the exception provides an alternative to a similar action occurring on a nearby parcel and
- The exception provides a clear net conservation gain to greater sage-grouse.

GRSG-M-FMUL-ST-002-Standard – In general habitat management areas, any new leases must include appropriate controlled surface use and timing limitation stipulations to protect greater sage-grouse and their habitat.

GRSG-M-FMUL-ST-003 – In priority and general habitat management areas, when analyzing leasing of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations.

Fluid Minerals – Leased

GRSG-M-FML-ST-001-Standard – In priority habitat management areas, when approving the Surface Use Plan of Operation portion of the Application for Permit to Drill on existing leases that are not yet developed, require that leaseholders avoid and minimize surface disturbing and disruptive activities consistent with the rights granted in the lease.

GRSG-M-FML-ST-002-Standard – In priority habitat management areas, when facilities are no longer needed or leases are relinquished, require reclamation plans to include terms and conditions to restore habitat to desired conditions as described in table 1.

GRSG-M-FML-ST-003-Standard – In general habitat management areas, authorize new transmission line corridors, transmission line right-of-ways, transmission line construction, or transmission line-facility construction associated

with fluid mineral leases with stipulations necessary to protect greater sage-grouse and their habitats, consistent with the terms and conditions of the permit.

GRSG-M-FML-ST-004-Standard – Locate compressor stations on portions of a lease that are non-habitat and are not used by greater sage-grouse, and if there would be no direct, indirect, or cumulative effects on sage-grouse or their habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise.

GRSG-M-FML-ST-005-Standard – In priority and general habitat management areas, when authorizing development of fluid mineral resources, prioritize development in non-habitat areas first and then in the least suitable habitat for greater sage-grouse, subject to valid existing rights, law, and regulations

GRSG-M-FML-GL-001-Guideline – In priority and general habitat management areas, operators should be encouraged to reduce disturbance to greater sage-grouse habitat. At the time of approval of the Surface Use Plan of Operation portion of the Application for Permit to Drill, terms and conditions should be included to reduce disturbance to greater sage-grouse habitat, where appropriate and feasible and consistent with the rights granted to the lessee.

GRSG-M-FML-GL-002-Guideline – On Federal leases in priority habitat management areas, when surface occupancy cannot be restricted due to valid existing rights or development requirements, disturbance and surface occupancy should be limited to areas least harmful to greater sage-grouse based on vegetation, topography, or other habitat features.

GRSG-M-FML-GL-003-Guideline - In priority and general habitat management areas, where the federal government owns the surface and the mineral estate is in non-federal ownership coordinate with the mineral estate owner/lessee to apply appropriate stipulations, conditions of approval, conservation measures and required design features to the appropriate surface management instruments to the maximum extent permissible under existing authorities.

Fluid Minerals – Operations

GRSG-M-FMO-ST-001-Standard – In priority habitat management areas, prohibit employee camps.

GRSG-M-FMO-ST-002-Standard – In priority habitat management areas, when feasible, do not locate tanks or other structures that may be used as raptor perches. If this is not feasible, use perch deterrents.

GRSG-M-FMO-GL-001-Guideline – In priority habitat management areas, closed-loop systems should be used for drilling operations with no reserve pits, where feasible.

GRSG-M-FMO-GL-002-Guideline – In priority and general habitat management areas, during drilling operations, soil compaction should be minimized and soil structure should be maintained using the best available techniques to improve vegetation reestablishment.

GRSG-M-FMO-GL-003-Guideline – In priority and general habitat management areas, dams, impoundments and ponds for mineral development should be constructed to reduce potential for West Nile virus. Examples of methods to accomplish this include:

- Increase the depth of ponds to accommodate a greater volume of water than is discharged.

- Build steep shorelines (greater than 2 feet) to reduce shallow water and aquatic vegetation around the perimeter of impoundments to reduce breeding habitat for mosquitoes.
- Maintain the water level below that of rooted aquatic and upland vegetation. Restrict flooding terrestrial vegetation in flat terrain or low-lying areas.
- Construct dams or impoundments that restrict down-slope seepage or overflow by digging ponds in flat areas rather than damming natural draws for effluent water storage or lining constructed ponds in areas where seepage is anticipated.
- Line the channel where discharge water flows into the pond with crushed rock or use a horizontal pipe to discharge inflow directly into existing open water.
- Line the overflow spillway with crushed rock and construct the spillway with steep sides.
- Fence pond sites to restrict access by livestock and other wild ungulates.
- Remove or re-inject produced water.
- Treat waters with larvicides to reduce mosquito production where water occurs on the surface.

GRSG-M-FMO-GL-004-Guideline – In priority and general habitat management areas to keep habitat disturbance at a minimum, a phased development approach should be applied to fluid mineral operations, wherever possible, consistent with the rights granted under the lease. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

Coal Mines - Unleased

GRSG-M-CMUL-ST-001-Standard – In priority habitat management areas, prohibit surface disturbances (e.g., appurtenant facilities) for new underground coalmines.

Coal Mines – Leased

GRSG-M-CML-ST-001-Standard – In priority habitat management areas, do not authorize new appurtenant surface facilities for existing underground mines unless no technical feasible alternative exists. If new appurtenant surface facilities associated with existing mine leases cannot be located outside of priority habitat management areas, co-locate them with any existing disturbed areas, if possible. If co-location is not possible, then construct new facilities to minimize disturbed areas while meeting mine safety standards and requirements, as identified by MSHA mine-plan approval process, and locate the facilities in an area least harmful to greater sage-grouse habitats based on vegetation, topography, or other habitat features.

GRSG-M-CML-GL-001-Guideline – In priority and general habitat management areas, when coal leases are subject to readjustment, additional requirements should be included in the readjusted lease to protect and reduce threats to greater sage-grouse and their habitats to conserve, enhance, and restore habitat for long-term viability.

Locatable Minerals

GRSG-M-LM-ST-001-Standard – In priority habitat management areas, approve Plans of Operation with mitigation to protect greater sage-grouse and their habitats, consistent with the rights of the mining claimant as granted by the General Mining Act of 1872, as amended.

GRSG-M-LM-GL-001-Guideline – In priority and general habitat management areas to keep habitat disturbance at a minimum, a phased development approach should be applied to operations consistent with the rights granted

under the General Mining Act of 1872, as amended. Disturbed areas should be reclaimed as soon as they are no longer needed for mineral operations.

GRSG-M-LM-GL-002-Guideline - In priority and general habitat management areas, abandoned mine sites should be closed or mitigated, subject to valid or existing rights, to reduce predation of greater sage-grouse by eliminating tall structures that could provide nesting opportunities and perching sites for predators.

Non-energy Leasable Minerals

GRSG-M-NEL-GL-001-Guideline – In priority and general habitat management areas, at the time of issuance of prospecting permits, exploration licenses and leases, or readjustment of leases, the Forest Service should provide recommendations to the Bureau of Land Management for the protection of greater sage-grouse and their habitats.

GRSG-M-NEL-GL-002-Guideline - In priority and general habitat, the Forest Service should recommend to the Bureau of Land Management that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to greater sage-grouse and their habitat

Mineral Materials

GRSG-M-MM-ST-001-Standard – In priority habitat management areas, prohibit new mineral material disposal or development.

GRSG-M-MM-ST-002-Standard – In priority habitat management areas, free-use mineral material collection permits may be issued and expansion of existing active pits may be allowed, except from March 1 to April 30 between 6 pm and 9 am within 2 miles from the perimeter of occupied leks, if doing so is within the Biologically Significant Unit and does not exceed the disturbance cap.

GRSG-M-MM-ST-003-Standard - In priority and general habitat management areas, any existing permit for mineral material operations must include appropriate requirements for operation and reclamation of the site to restore, enhance, or maintain desired habitat conditions (table 1).

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Glossary of Terms as Used in this Plan

Active lek - Any lek that has been attended by male greater sage-grouse during the most recent strutting season.

Adjacent – Installation of new improvements (e.g., equipment or facilities) parallel, near, or next to existing improvements.

Administrative access - Access for resource management and administrative purposes such as fire suppression, cadastral surveys, permit compliance, law enforcement, and military in the performance of their official duty, or other access needed to manage National Forest System lands or uses.

Ambient (noise level) - Sometimes called background noise level, reference sound level, or room noise level is the background sound pressure level at a given location, normally specified as a reference level to study a new intrusive sound source.

Anthropogenic disturbances – Human-created features including but are not limited to paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells and associated facilities, geothermal wells and associated facilities, pipelines, landfills, agricultural conversion, homes, grazing-related facilities and structures, and mines.

Appurtenant (minerals) - A piece of equipment (e.g., pump jack, separator, storage tank, compressor station, metering equipment) necessary for production.

Authorized use - An activity (i.e., resource use) occurring on the public lands that is either explicitly or implicitly recognized and legalized by law or regulation. The term may refer to activities occurring on the public lands for which the Forest Service has issued a formal authorization document (e.g., livestock grazing permit, special use authorization, approved plan of operation, etc.). Formal authorized uses can involve both commercial and noncommercial activity, facility placement, or event. These authorized uses are often spatially or temporally limited. Unless constrained or bounded by statute, regulation, or an approved land use plan decision, legal activities involving public enjoyment and use of the public lands (e.g., hiking, camping, hunting, etc.) require no formal Forest Service authorization.

Baseline condition - The pre-existing condition of a defined area and/or resource that can be quantified by an appropriate metric(s). During environmental reviews, the baseline is considered the affected environment that exists at the time of the review's initiation, and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

Biologically significant unit - A geographical/spatial area within greater sage-grouse habitat that contains relevant and important habitats that is used as the basis for comparative calculations to support evaluation of changes to habitat. A biologically significant unit or subset of the unit is used in the calculation of the anthropogenic disturbance threshold and in the adaptive management habitat trigger.

Co-locate - Installation of new improvements (e.g., equipment or facilities) on or within existing improvements.

Communication tower site - Sites that include broadcast types of uses (e.g., television, AM/FM radio, cable television, broadcast translator) and non-broadcast uses (e.g., commercial or private mobile radio service, cellular telephone, microwave, local exchange network, passive reflector).

Compensatory mitigation - Compensating for the residual impact of a certain action or parts of an action by replacing or providing substitute resources or environments.

Compensatory mitigation projects – The restoration, creation, enhancement, and/or preservation of impacted resources, such as on-the-ground actions to improve and/or protect habitats (e.g. chemical vegetation treatments, land acquisitions, conservation easements).

Distribution line - An electrical utility line with a capacity of less than 100kV or a natural gas, hydrogen, or water pipeline less than 24" in diameter.

Disruptive activities: Land resource uses/activities that are likely to alter the behavior, displace, or cause excessive stress to greater sage-grouse populations occurring at a specific location and/or time. Actions that alter behavior or cause the displacement of individuals such that reproductive success is negatively affected, or an individual's physiological ability to cope with environmental stress is compromised.

Diversity (species) – The number, distribution, and geographic ranges of plant and animal species including focal species and species-at-risk.

Durable (protective and ecological) - The administrative, legal, and financial assurances that secure and protect the conservation status of a compensatory mitigation site, and the ecological benefits of a compensatory mitigation project, for at least as long as the associated impacts persist.

Enhance - The improvement of habitat by increasing missing or modifying unsatisfactory components and/or attributes of the plant community to meet greater sage-grouse objectives.

Exception - A case-by-case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria apply. The authorized officer (any employee of the Forest Service to whom has been delegated the authority to perform the duties described in the applicable Forest Service manual or handbook) may grant an exception if an environmental record of review determines that the action, as proposed or conditioned, would not impair the function or utility of the site for the current or subsequent seasonal habitat, life-history, or behavioral needs of greater sage-grouse.

Feasible – see technically/economically feasible.

Fluid minerals - Oil, gas, coal bed natural gas, and geothermal resources.

General habitat management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as those areas outside of priority habitat management areas and occupied by greater sage-grouse seasonally or year-round.

Habitat - An environment that meets a specific set of physical, biological, temporal, or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of their life cycle.

Hard triggers - Thresholds indicating that immediate action is necessary to stop a severe deviation from sage grouse conservation objectives set forth in the land and resources management plan.

High-voltage transmission line – An electrical power line that is 100 kilovolts or larger.

Holder – An individual or entity that holds a valid special use authorization.

Impact - The effect, influence, alteration, or imprint caused by an action.

Indicators - Factors that describe resource condition and change and can help the BLM and the Forest Service determine trends over time.

Isolated parcel - An individual parcel of land that may share a corner, but does not have a common border with another parcel.

Invasive species (invasives plant species, invasives) - An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. The species must cause, or be likely to cause, harm, and be exotic to the ecosystem it has infested before considered invasive.

Landscape – A distinct association of land types that exhibit a unique combination of local climate, landform, topography, geomorphic process, surficial geology, soil, biota, and human influences. Landscapes are generally of a size that the eye can comprehend in a single view.

Lease – A type of special use authorization (usually granted for uses other than linear rights-of-way) that is used when substantial capital investment is required and when conveyance of a conditional and transferable interest in National Forest System lands is necessary or desirable to serve or facilitate authorized long-term uses, and that may be revocable and compensable according to its terms.

Leasable minerals - Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. These include energy-related mineral resources such as oil, natural gas, coal, and geothermal, and some non-energy minerals, such as phosphate, sodium, potassium, and sulfur. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

Lessee - A person or entity authorized to use and occupy National Forest System land under a specific instrument identified as a lease. Forest special use leases are limited to authorize certain wireless communication uses. Leases are also used for certain mineral leasable activities.

Lek - A courtship display area attended by male greater sage-grouse in or adjacent to sagebrush dominated habitat. For management purposes, leks with less than five males observed strutting should be confirmed active for 2 years to meet the definition of a lek (Connelly et al 2000, Connelly et al. 2003, 2004).

Locatable minerals - Mineral disposable under the General Mining Act of 1872, as amended, that was not excepted in later legislation. They include hardrock, placer, industrial minerals, and uncommon varieties of rock found on public domain lands.

Major pipeline – A pipeline that is 24 inches or more in outside-pipe diameter (Mineral Leasing Act of 1920 30 U.S.C. § 181; 36 CFR 251.54(f)(1)).

Mineral - Any naturally formed inorganic material, solid or fluid inorganic substance that can be extracted from the earth, any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained usually from the ground. Under Federal laws, considered as locatable (subject to the

general mining laws), leasable (subject to the Mineral Leasing Act of 1920), and salable (subject to the Materials Act of 1947).

Mineral materials - Common varieties of mineral materials such as soil, sand and gravel, stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Materials Act of 1947, as amended.

Minimization mitigation - Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

Mitigation - Specific means, measures, or practices that could reduce, avoid, or eliminate adverse impacts. Mitigation can include avoiding the impact altogether by not taking a certain action or parts of an action, minimizing the impact by limiting the degree of magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitation, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, and compensating for the impact by replacing or providing substitute resources or environments.

Modification (oil and gas) – A fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

Native plant species - Species that were located on the land before European settlement, and consequently are in balance with ecosystems because they have well developed parasites, predators, and pollinators.

Net conservation gain - The actual benefit or gain above baseline conditions.

No surface occupancy (NSO) - Use or occupancy of the land surface for fluid mineral exploration or development prohibited to protect identified resource values. The NSO stipulation includes stipulations that may be worded as "No Surface Use/Occupancy," "No Surface Disturbance," "Conditional NSO," or "Surface Disturbance or Surface Occupancy Restriction (by location)."

Occupied Lek - A lek that has been active during at least one strutting season within the prior 10 years.

Opportunity (allotment closure) - A suitable or favorable time to abolish or close an allotment because of nonuse violations, term permit waivers where the permit is waived back to the government, resource protection, or permit actions resulting in cancellation of the permit.

Permit — A special use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System land or facilities for specified purposes, and which is both revocable and terminable.

Persistent woodlands – Long-lived pinyon-juniper woodlands that typically have sparse understories and occur on poor substrates in the assessment area.

Plan of Operation - A Plan of Operation is required for all mining activity conducted under the General Mining Act of 1872, as amended, if the proposed operations will likely cause significant disturbance of surface resources. The

Plan of Operation describes the type of operations proposed and how they would be conducted, the type and standard of existing and proposed roads or access routes, the means of transportation to be used, the period during which the proposed activity will take place, and measures to be taken to meet the requirements for environmental protection (36 CR 228.4).

Prescribed fire - Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist and NEPA requirements, where applicable, must be met before ignition.

Priority habitat management areas - Areas identified by the Forest Service, in coordination with respective state wildlife agencies, as having the highest conservation value to maintaining sustainable greater sage-grouse populations. These areas include breeding, late brood-rearing and winter concentration areas.

Prohibit – To forbid (something) by law, rule, or other authority; no authorizations will be issued.

Reclamation plans – Plans that guide the suite of actions taken within an area affected by human disturbance, the outcome of which is intended to change the condition of the disturbed area to meet pre-determined objectives and/or make it acceptable for certain defined resources (e.g., wildlife habitat, grazing, ecosystem function, etc.).

Residual impacts - Impacts from an implementation-level decision that remain after applying avoidance and minimization mitigation; also referred to as unavoidable impacts.

Restoration - Implementation of a set of actions that promotes plant community diversity and structure that allows plant communities to be more resilient to disturbance and invasive species over the long term. The long-term goal is to create functional, high quality habitat that is occupied by greater sage-grouse. Short-term goal may be to restore the landform, soils and hydrology and increase the percentage of preferred vegetation, seeding of desired species, or treatment of undesired species.

Restrict – To put a limit on; keep under control; to limit someone's actions or movement, or to limit the amount, size, etc., of something.

Right-of-way - Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project or facility passing over, upon, under or through such land.

Road or trail – A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources.

Soft triggers - An intermediate threshold indicating that management changes are needed at the implementation level to address habitat or population losses.

Special use authorization - A written permit, term permit, lease, or easement that authorizes use or occupancy of National Forest System lands and specifies the terms and conditions under which the use or occupancy may occur.

Stipulation (general) - A term or condition in an agreement, contract, or written authorization.

Stipulation (oil and gas) - A provision that modifies standard lease rights and is attached to and made a part of the lease.

Surface disturbing and disruptive activities - Actions that alter the vegetation, surface/near surface soil resources, and/or surface geologic features, beyond natural site conditions and on a scale that affects other public land values. Examples of surface disturbing activities may include operation of heavy equipment to construct well pads, roads, pits and reservoirs; installation of pipelines and power lines; maintenance activities, and several types of vegetation treatments (e.g., prescribed fire, etc.). Surface disturbing activities may be either restricted or prohibited.

Surface uses - Activities that may be present on the surface or near-surface (e.g., pipelines) of public lands. When administered as a use restriction (e.g., no surface occupancy), this phrase prohibits all but specified resource uses and activities in a certain area to protect particular sensitive resource values and property. This designation typically applies to small acreage sensitive resource sites (e.g., plant community study exclosure, etc.), and/or administrative sites (e.g., government ware-yard, etc.) where only authorized, agency personnel are admitted.

Tall structures - A wide array of infrastructures (e.g., poles that support lights, telephone and electrical distribution, communication towers, meteorological towers, high-tension transmission towers, and wind turbines) that have the potential to disrupt lekking or nesting birds by creating new perching/nesting opportunities and/or decreasing the use of an area. A determination as to whether something is considered a tall structure would be based on local conditions such as vegetation or topography.

Technically/economically feasible - Actions that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. It is the Forest Service's sole responsibility to determine what actions are technically and economically feasible. The Forest Service will consider whether implementation of the proposed action is likely given past and current practice and technology; this consideration does not necessarily require a cost-benefit analysis or speculation about an applicant's costs and profit.

Temporary special use permit – A type of permit that terminates within 1 year or less after the approval date. All other provisions applicable to permits apply fully to temporary permits. Temporary special use permits are issued for seasonal or short-duration uses involving minimal improvement and investment.

Term permit – An authorization to occupy and use National Forest System land, other than rights-of-way for a specified period that is both revocable and compensable according to its terms.

Timely - The conservation benefits from compensatory mitigation accruing as early as possible or before impacts have begun.

Transmission line - An electrical utility line with a capacity greater than or equal to 100kV or a natural gas, hydrogen, or water pipeline greater than or equal to 24" in diameter.

Travel management system – Planned and authorized roads, trails, and areas for motor vehicle use on National Forest System lands that are managed in a controlled, sustained manner.

Utility-scale and/or commercial energy development – A project that is capable of producing 20 or more megawatts of electricity for distribution to customers through the electricity-transmission-grid system.

Valid existing rights - Documented, legal rights, or interests in the land, which allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include but are not limited to fee title ownership,

mineral rights, and easements. Such rights may have been reserved, acquired, granted or otherwise authorized under various statutes of law.

Vegetation treatment - Management practices that are designed to maintain current vegetation structure or change the vegetation structure to a different stage of development. Vegetation treatment methods may include managed fire, prescribed fire, chemical, mechanical, and seeding.

Viability - For purposes of the National Forest Management Act and its enabling regulations, viability is the availability of habitat that allows a species to persist on landscapes for long-periods (multi-generational) of time. It assumes that populations are abundant (sufficient numbers) and well-distributed (sufficient redundancy of populations) to provide for long-term population persistence on a landscape.

Waiver (oil and gas) - Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

West Nile virus - A virus that is found in temperate and tropical regions of the world and most commonly transmitted by mosquitoes. West Nile virus can cause flu-like symptoms in humans and can be lethal to birds, including greater sage-grouse.

Wildfire suppression - An appropriate management response to wildfire, escaped wildland fire use or prescribed fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

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