ATTACHMENT B – GREATER SAGE-GROUSE WYOMING PLAN AMENDMENT

Forest Service Plan Components[1]

Desired condition – 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.

Guideline – A constraint on project and activity decision making that allows for departure from its terms so long as the purpose of the guideline is met. 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.

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.

Standard – A mandatory constraint on project and activity decision making established to help achieve or maintain the desired condition or conditions; to avoid or mitigate undesirable effects; or to meet applicable legal requirements.

The direction in the following standards and guidelines will be applied consistently with applicable valid existing rights, laws, and regulations.

Greater Sage-grouse Habitat

GRSG-GRSGH-DC-001-Desired Condition – The landscape for the greater sage-grouse encompasses large contiguous areas of native vegetation, 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 without invasive species, which have variations in subspecies composition, co-dominant vegetation, shrub cover, herbaceous cover, and stand structure to meet seasonal requirements for food, cover, and nesting for the greater sage-grouse.

GRSG-GRSGH-DC-002-Desired Condition – In greater sage-grouse habitat management areas, including all seasonal habitat, 70% or more of lands capable of producing sagebrush have from 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 grass and forb species relative to site potential. Within winter habitat, sufficient sagebrush height and density

[1]Plan component definitions are based on generally accepted meanings under the 1982 rule and the Forest Service Plan Wording Style Guide 2009, http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5260265.pdf.

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

Table 1. *Seasonal Habitat Desired Conditions for Greater Sage- grouse at the Landscape Scale.*

ATTRIBUTE	INDICATORS	DESIRED CONDITION
AREAS MANAGED FOR BREEDING AND NESTING[1,2,3] (Seasonal Use Period from March 15 to June 30) Apply 5.3 miles from occupied leks.[4]		
Lek Security	Proximity of trees[5]	Trees or other tall structures are absent to uncommon within 1.86 miles of leks.[6,7]
	Proximity of sagebrush to leks[6]	Adjacent protective sagebrush cover within 328 feet of lek.[6]
Cover	Seasonal habitat extent[7] (Percent of seasonal habitat meeting desired conditions)	>80% of the breeding and nesting habitat.
	Sagebrush canopy cover[6,7,8]	15 to 25%.
	Sagebrush height[7] Arid sites[7,9] Mesic sites[7,10]	4 to 32 inches in black sage and 12 to 32 inches in all other areas. All Wyoming National Forests and National Grasslands: 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.[6,15]
	Perennial forb canopy cover[6,7,8] Arid sites[9] Mesic sites[10]	 ≥5%.[6,7] ≥10%.[6,7]

ATTRIBUTE	INDICATORS	DESIRED CONDITION
AREAS MANAGED FOR BROOD-REARING/SUMMER[1] (Seasonal Use Period from July 1-to November 30)		
Cover	Seasonal habitat extent[7] (Percent of seasonal habitat meeting desired conditions)	>40% of the brood-rearing/summer habitat.
	Sagebrush canopy cover[6,7,8]	10 to 25%
	Sagebrush height[7,8]	4 to 32 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]
	Sagebrush cover adjacent to riparian areas/mesic meadows[6]	Within 328 feet.
WINTER[1] (Seasonal Use Period from December 1 to March 14)		
Cover and Food	Seasonal habitat extent[6,7,8] (Percent of seasonal habitat meeting desired conditions)	>80% of the winter habitat.
	Sagebrush canopy cover above snow[6,7,8]	>10%.
	Sagebrush height above snow[6,7,8]	>10 inches.[14]

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

[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 if peer-reviewed and published 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, eds., 2015. Sage-Grouse Habitat Assessment Framework: A Multiscale Assessment Tool. Technical Reference 6710-1. BLM and Western Association of Fish and Wildlife Agencies, Denver, Colorado.

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

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

[9] 10–12 inch precipitation zone; *Artemisia tridentata wyomingensis* is a common big sagebrush sub-species for this type site (Stiver et al. 2015).

[10] ≥12 inch precipitation zone; *Artemisia tridentata vaseyana* is a common big sagebrush sub-species for this type site (Stiver et al. 2015).

[11] Sagebrush plants with a spreading shape provide more protective cover than sagebrush plants that are more tree- or columnar shaped (Stiver et al. 2015).

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

[13] Preferred forbs are listed in Table III-2 (Stiver et al. 2015). Overall total forb cover may be greater than that of preferred forb cover since not all forb species are listed as preferred in Table III-2.

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

GRSG-GRSGH-ST-003-Standard – Design habitat restoration projects to move towards the desired conditions in table 1.

GRSG-GRSGH-ST-004-Standard – A soft trigger is hit when there is any deviation from normal trends in habitat or population in any given year. Normal population trends are calculated as the five-year running mean of annual population counts. Metrics include but are not limited to annual lek counts, wing counts, aerial surveys, habitat monitoring, and Density and Disturbance Calculation Tool evaluations. The Forest Service, with the assistance of the BLM, local Wyoming Game and Fish Department offices, and local sage-grouse working groups, will evaluate the metrics with the Adaptive Management Working Group on an annual basis. The purpose of these strategies is to address the localized greater sage-grouse population and habitat changes by providing the framework in which project management will change if monitoring identifies negative population and habitat anomalies to avoid crossing a hard trigger threshold. This strategy may include curtailment of activities that may adversely affect the greater sage-grouse population or habitat. In cooperation with the Adaptive Management Working Group, implement an appropriate response strategy to address causal factors.

GRSG-GRSGH-ST-005-Standard – Hard triggers are considered a catastrophic indicator that the species is not responding to conservation actions or that a larger-scale impact or set of impacts is having a negative effect. Metrics include but are not limited to number of active leks, acres of available habitat, and population trends based upon lek counts. Within the range of normal population variables (five-year running mean of annual population counts), hard triggers shall be determined to take effect when two of the three metrics exceed 60 percent of normal variability for the area under management in a single year or when any of the three metrics exceed 40% of normal variability for a 3-year time period within a 5-year range of analysis. A minimum of 3 consecutive years in a 5-year period is used to determine trends (i.e., Y1-2-3, Y2-3-4, Y3-4-5). If a hard trigger is hit, the Forest Service will immediately defer issuance of discretionary authorizations for new actions for a period of 90 days. Cooperate with the Adaptive Management Working Group to initiate development of an interim response strategy within 14 days and initiate a causal factor assessment. Implement the interim response strategy within 90 days for the appropriate Biologically Significant Unit. Once the causal factor assessment has been completed, the interim strategy will be modified to adequately address the causal factors.

GRSG-GRSGH-GL-006-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-007- Guideline – When removing conifers that are encroaching into greater sage-grouse habitat, avoid persistent woodlands (i.e., old growth relative to the site or more than 100 years old).

GRSG-GRSGH-GL-008-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-009-Guideline – To facilitate safe and effective fire management actions, in priority and general habitat management areas and sagebrush focal areas, fuel treatments in high-risk areas (i.e., areas likely to experience wildfire at an intensity level that might result in movement away from the greater sage-grouse desired conditions in table 1) should be designed to reduce the spread and/or intensity of wildfire or the susceptibility of greater sage-grouse attributes to move away from desired conditions (table 1).

GRSG-GRSGH-GL-010-Guideline – In priority and general habitat management areas and sagebrush focal areas, native plant species should be used, when possible, to maintain, restore, or enhance desired conditions (table 1).

GRSG-GRSGH-GL-011-Guideline – When breeding and nesting habitat overlaps with other seasonal habitats, habitat should be managed for breeding and nesting desired conditions (table 1).

Timing, Distance, Density, and Disturbance

GRSG-TDDD-ST-012-Standard[2] – In priority habitat management areas and sagebrush focal areas, do not authorize 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 habitat management and sagebrush focal areas.

GRSG-TDDD-ST-013-Standard[10] – In general habitat management areas, do not authorize new surface occupancy or surface disturbing activities on or within a 0.25 mile radius of the perimeter of occupied leks.

GRSG-TDDD-ST-014-Standard – Do not authorize new surface disturbing and disruptive activities that create noise at 10dB above ambient measured at the perimeter of an occupied lek during lekking (from March 1 to May 15) from 6 p.m. to 8 a.m. Do not include noise resulting from human activities that have been authorized and initiated within the past 10 years in the ambient baseline measurement.

GRSG-TDDD-ST-015-Standard – In priority and general habitat management areas and sagebrush focal areas, only allow new authorized land uses if after avoiding and minimizing impacts, any remaining residual impacts to the greater sage-grouse or its habitat are fully offset by compensatory mitigation projects that provide a net conservation gain to the species, subject to valid existing rights, 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 B).

[2] On a case-by-case basis, and only when it can be demonstrated that the activity will not cause declines in the greater sage-grouse population, allow exceptions and modifications. The authorized officer, with concurrence from the next higher authority (Forest Supervisor or Regional Forester) 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 the greater sage-grouse. Exceptions may also be granted for prescribed fire activity that is intended to protect or improve greater sage-grouse habitat over time.

GRSG-TDDD-GL-016-Guideline[3] – In priority-core habitat management areas and sagebrush focal areas, do not authorize new surface disturbing or disruptive activities from March 15 through June 30. Where credible data, based upon field analysis, support different timeframes for the seasonal restriction, dates may be shifted by either 14 days before or subsequent to the above dates, but not both.

GRSG-TDDD-GL-017-Guideline[11] – Within priority-connectivity habitat management areas, do not authorize new surface disturbing or disruptive activities from March 15 through June 30 within 4 miles of a lek perimeter. Where credible data, based upon field analysis, support different timeframes for this seasonal restriction, dates may be shifted by either 14 days before or after the above dates, but not both.

GRSG-TDDD-GL-018-Guideline[11] – In general habitat management areas, do not authorize 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. Where credible data, based upon field analysis, support different timeframes for this restriction, dates may be shifted by either 14 days before or subsequent to the above dates, but not both.

GRSG-TDDD-GL-019-Guideline[11] – Within mapped winter concentration areas in priority-core habitat management areas and sagebrush focal areas, do not authorize new surface disturbing or disruptive activities from December 1 through March 14 to protect priority-core and sagebrush focal area greater sage-grouse populations that use these winter concentration habitats.

GRSG-TDDD-GL-020-Guideline[11] – Within mapped winter concentration areas in priority-connectivity and general habitat management areas, do not authorize 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-GL-021-Guideline[11] – 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 pad or mining operation per 640 acres, using the current Density Disturbance Calculation Tool process or its replacement.

GRSG-TDDD-GL-022-Guideline[11] – In priority habitat management areas and sagebrush focal areas, do not authorize surface disturbing 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 and the new use will not cause exceedance of the 5% cap. An exception is described in GRSG-M-LM-ST-097-Standard. Consider the likelihood of surface disturbing activities as a result of development of valid existing rights when authorizing new projects in priority habitat management areas.

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[3] On a case-by-case basis, and only when it can be demonstrated that the activity will not cause declines in the greater sage-grouse population, allow exceptions and modifications. 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 the greater sage-grouse. Exceptions may also be granted for prescribed fire activity that is intended to protect or improve greater sage-grouse habitat over time.

Infrastructure

GRSG-INFRA-GL-023-Guideline – In priority habitat management areas and sagebrush focal areas, when constructing new infrastructure and during maintenance, replacement, and upgrades to existing infrastructure, impacts to the greater sage-grouse and its habitat should be mitigated.

- Existing guy wires should be removed or appropriately marked with bird flight diverters to make them more visible to the 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 the 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 the greater sage-grouse or interference with habitat use.
- Liquid gathering facilities in priority habitat management areas and sagebrush focal areas should be buried and reclaimed to limit or eliminate human disturbance and physical habitat disturbance. 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-024-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 distribution lines, and communication towers. Exceptions may include co-location and must be limited (e.g., safety needs) and based on rationale (e.g., monitoring, modeling, or best available science) that explicitly demonstrates that adverse impacts to the greater sage-grouse will be avoided with the exception. If co-location of new infrastructure cannot be accomplished, locate it adjacent to existing infrastructure, roads, or already disturbed areas and limit disturbance to the smallest footprint or where it best limits impacts to the greater sage-grouse or its habitat. Existing authorized uses will continue to be recognized.

GRSG-LR-SUA-ST-025-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 the greater sage-grouse or its habitat.

GRSG-LR-SUA-ST-026-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, require the authorization holder to remove overhead lines and other infrastructure in compliance with 36 CFR 251.60(i).

GRSG-LR-SUA-ST-027-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 or as close as technically feasible (i.e., 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.

GRSG-LR-SUA-ST-029-Standard – In priority and general habitat management areas and sagebrush focal areas, locate upgrades to existing transmission lines within the existing designated corridors or rights-of-way unless an alternate route would benefit greater sage-grouse or their habitats.

GRSG-LR-SUA-GL-030-Guideline – Authorization of new temporary meteorological 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-031-Guideline – In priority habitat management areas and sagebrush focal areas, outside of existing designated corridors and rights-of-way, 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 the greater sage-grouse are being avoided. If new transmission lines and pipelines are not buried, locate them adjacent to existing transmission lines and pipelines.

Land Ownership Adjustments

GRSG-LR-LOA-ST-032-Standard – In priority and general management areas and sagebrush focal areas, do not approve landownership adjustments, including land exchanges, unless the action results in a net conservation gain to the greater sage-grouse or it will not directly or indirectly adversely affect greater sage-grouse conservation.

GRSG-LR-LOA-GL-033-Guideline – 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 5% of the total greater sage-grouse habitat within the Biologically Significant Unit and the proposed project area, regardless of ownership, and the new use will not cause exceedance of the 5% cap. Discretionary activities that might result in disturbance above 5% at the Biologically Significant Unit and proposed project area 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 would result in a net conservation gain at the Biologically Significant Unit and proposed project area scale. Within existing designated utility corridors, the 5% disturbance cap may be exceeded at the project scale if the site specific NEPA analysis indicates that a net conservation gain to the species will

be achieved. This exception is limited to projects that fulfill the use for which the corridors were designated (e.g., transmission lines, pipelines) and the designated width of a corridor will not be exceeded as a result of any project co-location. Consider the likelihood of surface disturbing activities as a result of development of valid existing rights when authorizing new projects in priority habitat management areas.

Land Withdrawal

GRSG-LR-LW-GL-034-Guideline – In priority habitat management areas and sagebrush focal areas, use land withdrawals as a tool, where appropriate, to withhold an area from activities that will be detrimental to the greater sage-grouse or its habitat.

Wind Energy Development

GRSG-WS-GL-035-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-036-Desired Condition – In priority and general habitat management areas, sagebrush focal areas, and within lek buffers, livestock grazing is managed to maintain or move towards desired habitat conditions (table 1).

GRSG-LG-GL-037-Guideline – Grazing guidelines in table 2 should be applied in each of the seasonal habitats in table 2. If values in table 2 cannot be achieved based upon a site-specific analysis using Ecological Site Descriptions, long-term ecological site potential analysis, or other similar analysis, adjust grazing management to move towards desired habitat conditions in table 1 consistent with the ecological site potential. 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 (from March 15 to June 30) manage for upland perennial grass height of 7 inches.[3,5,6] Measure average droop height, assuming current vegetation composition has the capability to achieve these heights. Heights will be measured at the end of the nesting period (Connelly et al. 2000). When grazing occurs post breeding and nesting season (from July 1 to November 30) manage for 4 inches[5,9] of upland perennial grass height.

SEASONAL HABITAT	GRAZING GUIDELINES
Areas managed for brood rearing and summer habitat[1]	When grazing occurs post breeding and nesting season (from July 1 to November 30) retain an average stubble height of 4 inches for herbaceous riparian/mesic meadow vegetation in all[7] greater sage-grouse habitat.[8,10]
Winter[1]	≤35% utilization of sagebrush.

[1] For descriptions of seasonal habitat and seasonal periods of greater sage-grouse see table 1.

[2] Grass heights only apply in breeding and nesting habitat with ≥10% sagebrush cover to support nesting.

[3] Holloran et al. 2005. *Greater sage-grouse nesting habitat selection and success in Wyoming*.

[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] All GRSG habitat with greater than 10% sagebrush cover irrespective of lek buffers and designated habitat management areas.

[8] In riparian brood-rearing habitat, sage-grouse prefer the lower vegetation (5–15 cm vs. 30–50 cm; Oakleaf 1971, Neel 1980, Klebenow 1982, Evans 1986) and succulent forb growth stimulated by moderate livestock grazing in spring and early summer (Neel 1980, Evans 1986); moderate use equates to a 10-cm residual stubble height for most grasses and sedges and 5-cm for Kentucky bluegrass (Mosley et al. 1997, Clary and Leininger 2000) (Crawford et al. 2004. Ecology and Management of sage-grouse grouse habitat).

[9] Stubble height to be measured at the end of the growing season.

[10] Stubble height to be measured in the meadow areas used by the greater sage-grouse for brood-rearing (not on the hydric greenline). These meadows typically have sagebrush within 328 feet of the meadow.

GRSG-LG-GL-038-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-039-Guideline – In priority and general habitat management areas and sagebrush focal areas, when grazing permits are waived without preference or obtained through permit cancellation, consider the agency's full range of administrative authorities for future allotment management, including but not limited to allotment closure, vacancy status for resource protection, establishment of forage reserve, re-stocking, or livestock conversion as management options to maintain or achieve desired habitat conditions (table 1).

GRSG-LG-GL-040-Guideline – Bedding sheep and locating camps within 0.6 miles from the perimeter of a lek during lekking (from March 1 to May 15) should be restricted.

GRSG-LG-GL-GL-041-Guideline – From March 15 through June 30, trailing livestock should be limited to existing trails. Specific routes and timeframes should be identified; existing trails should be used; and stopovers on occupied leks should be avoided. New trailing activities should be assessed to determine a route that will minimize impacts to the greater sage-grouse and its habitats. Where credible data based upon field analysis support different timeframes for the seasonal restriction, dates may be shifted by either 14 days before or subsequent to the above dates, but not both.

GRSG-LG-GL-042-Guideline – Collision risk associated with existing fences within 1.2 miles of leks should be minimized through removal or modification (e.g. marking, laydown fences, or other design features).

GRSG-LG-GL-043-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-044-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-DC-045-Desired Condition – In priority and general habitat management areas and sagebrush focal areas, protect sagebrush habitat from loss due to unwanted wildfires or damages resulting from management related activities while using agency risk management protocols to manage for firefighter and public safety and other high priority values. In all fire response, first priority is the management of risk to firefighters and the public. Greater sage-grouse habitat will be prioritized as a high value resource along with other high value resources and assets.

GRSG-FM-ST-046-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 towards desired habitat conditions (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 for restoration of greater sage-grouse habitat consistent with desired conditions in table 1.

GRSG-FM-ST-047-Standard – In priority and general habitat management areas and sagebrush focal areas, if it is necessary to use prescribed fire for restoration of greater sage-grouse habitat consistent with desired conditions in table 1, the associated National Environmental Policy Act analysis must identify how the project would move towards greater sage-grouse desired conditions; why alternative techniques were not selected; and how potential threats to greater sage-grouse habitat would be minimized.

GRSG-FM-ST-048-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-049-Guideline – In planned fuels management activities or part of an overall vegetative management strategy to mitigate the impacts of wildfire 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-resistant non-native species if analysis and/or best available science demonstrates that non-native plants will not degrade greater sage-grouse habitat in the long-term.

GRSG-FM-GL-050-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 avoided. When needed to best provide for

firefighter or public safety or to minimize fire size in greater sage-grouse habitat, impacts to the greater sage-grouse should be considered and removal of sagebrush should be limited.

GRSG-FM-GL-051-Guideline – In priority and general habitat management areas and sagebrush focal areas, cross-country vehicle travel during fire operations should be restricted. When needed to best provide for firefighter or public safety or to minimize fire size in greater sage-grouse habitat, impacts to the greater sage-grouse should be considered and removal of sagebrush should be limited.

GRSG-FM-GL-052-Guideline – In priority and general habitat management areas and sagebrush focal areas, use fire management tactics and strategies that seek to minimize loss of existing sagebrush habitat. The safest and most practical means to do so will be determined by fireline leadership and incident commanders.

GRSG-FM-GL-053-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-054-Guideline – In priority and general habitat management areas and sagebrush focal areas, roads and natural fuel breaks should be incorporated into planned fuel break design to improve effectiveness and minimize loss of existing sagebrush habitat.

GRSG-FM-GL-055-Guideline – In priority and general habitat management areas and sagebrush focal areas, where practical and available, all fire-associated vehicles and equipment should be inspected and cleaned using standardized protocols and procedures and approved vehicle/equipment decontamination systems before entering and exiting the area beyond initial attack activities to minimize the introduction of invasive annual grasses and other invasive plant species and noxious weeds.

GRSG-FM-GL-056-Guideline – Unit-specific greater sage-grouse fire management related information should be added to wildland fire decision support systems (currently, the Wildland Fire Decision Support System, WFDSS); local operating plans and resource advisor plans to be used during fire situation to inform management decisions; and aid in development of strategies and tactics for resource prioritization.

GRSG-FM-GL-057-Guideline – Localized maps of priority and general habitat management areas and sagebrush focal areas should be made available to fireline, dispatch, and fire support personnel.

GRSG-FM-GL-059-8Guideline – 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-059-Guideline – On critical fire weather days, protection of greater sage-grouse habitat should receive high consideration, along with other high values, for positioning of resources.

GRSG-FM-GL-060-Guideline – Line officers should be involved in setting pre-season wildfire response priorities and prioritizing protection of priority and general habitat management areas and sagebrush focal areas, along with other high values. During periods of multiple fires or limited resource availability, fire management organizational structure (local, regional, national) will prioritize fires and allocation of resources in which greater sage-grouse habitat is a consideration along with other high values.

GRSG-FM-GL-061-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; preventing the loss of other high value resources; or increasing the effectiveness of other tactical strategies. Agency administrators, their designee, or fireline leadership should consider fire suppression effects while determining suppression strategy and tactics; the use of fire retardant and mechanized equipment may be approved by agency administrators, their designee, or fireline leadership.

GRSG-FM-GL-062-Guideline – In priority and general habitat management areas and sagebrush focal areas, to minimize sagebrush habitat loss, consider using the full range of suppression techniques to protect unburned islands, doglegs, and other sage grouse habitat features that may exist within the perimeter of wildfires. These suppression objectives and activities should be prioritized against other wildland fire suppression activities and priorities.

GRSG-FM-GL-063-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 or supports the attainment of desired conditions.

Recreation

GRSG-R-DC-064-Desired Condition – In priority habitat management areas and sagebrush focal areas, recreation activities are balanced with the ability of the land to support them while meeting greater sage-grouse seasonal habitat desired conditions (table 1) and creating minimal user conflicts.

GRSG-R-ST-065-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 the greater sage-grouse or its habitat.

GRSG-R-GL-066-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 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-067-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 the greater sage-grouse or its habitat or the development is required for visitor safety.

Roads/Transportation

GRSG-RT-DC-068-Desired Condition – In priority and general habitat management areas and sagebrush focal areas, within the forest transportation system and on roads and trails authorized under a special-use authorization, the greater sage-grouse experience minimal disturbance during breeding and nesting (from March 15 to June 30) and wintering (from December 1 to March 15) periods; dates may be shifted by either 14 days before or after the above dates, but not both.

GRSG-RT-ST-069-Standard – Restrict construction of new maintenance 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 the greater sage-grouse.

GRSG-RT-ST-070-Standard – Do not allow 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-012 and 013-Standards.

GRSG-RT-ST-071-Standard – In priority habitat management areas and sagebrush focal areas, do not allow improvements to existing routes that would change route category (level 1 through 5) or capacity unless the upgrading would have minimal impact on the greater sage-grouse; is necessary for motorist safety; or eliminates the need to construct a new road.

GRSG-RT-ST-072-Standard – If necessary to construct new roads and trails in priority or sagebrush focal areas for one of the reasons listed in GRSG-RT-ST-070-Standard or to access valid existing rights, limit construction to the minimum standard, length, and number and avoid, minimize, and mitigate impacts.

GRSG-RT-ST-073-Standard – In priority and general habitat management areas and sagebrush focal areas, do not allow public motor vehicle use on temporary energy development roads.

GRSG-RT-GL-074-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 the greater sage-grouse.

GRSG-RT-GL-075-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-076-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-077-Guideline – In priority and general habitat management areas and sagebrush focal areas, dust abatement terms and conditions should be included in road-use authorizations when dust has the potential to affect the greater sage-grouse.

GRSG-RT-GL-078-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-079-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 the Timing, Distance, Density and Disturbance section.

GRSG-M-FMUL-ST-080-Standard – In priority habitat management areas and sagebrush focal areas, require geophysical exploration projects to be designed to minimize greater sage-grouse habitat fragmentation.

Fluid Minerals – Leased

GRSG-M-FML-ST-081-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 consistent with the rights granted in the lease.

GRSG-M-FML-ST-082-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-GL-083-Guideline – Compressor stations should be located on portions of a lease that are non-habitat and are not used by the greater sage-grouse and if there would be no direct, indirect, or cumulative effects on the greater sage-grouse or its habitat. If this is not possible, work with the operator to use mufflers, sound insulation, or other features to reduce noise consistent with GRSG-TDDD-ST-014-Standard.

GRSG-M-FML-ST-084-Standard – In priority and general habitat management areas and sagebrush focal areas, when authorizing development of fluid mineral resources, work with the operator to minimize impacts to the greater sage-grouse and its habitat, such as locating facilities in non-habitat areas first and then in the least suitable habitat.

GRSG-M-FML-GL-085-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.

GRSG-M-FML-GL-086-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 the greater sage-grouse, based on vegetation, topography, or other habitat features.

GRSG-M-FML-GL-087-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-088-Guideline – In priority habitat management areas and sagebrush focal areas, do not authorize employee camps.

GRSG-M-FMO-GL-089-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-090-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-091-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 the following:

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

GRSG-M-FMO-GL-092-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-093-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-094-Standard – Priority habitat management areas and sagebrush focal areas are essential habitat for maintaining the greater sage-grouse for purposes of the suitability criteria set forth at 43 CFR 3461.5(o)(1).

GRSG-M-CM-GL-095-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 conserve, enhance, and restore the greater sage-grouse and its habitat for long-term viability.

Locatable Minerals

GRSG-M-LM-ST-096-Standard – In priority habitat management areas and sagebrush focal areas, only approve Plans of Operation with mitigation to protect the greater sage-grouse and its habitat, consistent with the rights of the mining claimant as granted by the Mining Law of 1872, as amended.

GRSG-M-LM-ST-097-Standard – The disturbance cap described in GRSG-TDDD-ST-022-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 when determining the percent disturbance and whether the cap has been exceeded.

Non-energy Leasable Minerals

GRSG-M-NEL-GL-098-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 BLM for the protection of the greater sage-grouse and its habitats.

GRSG-M-NEL-GL-099-Guideline – In priority and general habitat management areas and sagebrush focal areas, the Forest Service should recommend to the BLM that expansion or readjustment of existing leases avoid, minimize, or mitigate the effects to the greater sage-grouse and its habitat.

Mineral Materials

GRSG-M-MM-ST-100-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-101-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 maintain, restore, or enhance desired habitat conditions (table 1).

Predators

GRSG-PR-GL-102-Guideline – Efforts by other agencies to minimize impacts from predators on the 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 the male greater sage-grouse during the most recent strutting season.

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

Allotment – A designated area of land in which one or more livestock operators graze their livestock. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

Ambient (noise level) – Sometimes called background noise level, reference sound level, or room noise level; 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 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 – The restoration, creation, enhancement, and/or preservation of impacted resources (adopted and modified from 33 CFR 332), such as on-the-ground actions to improve and/or protect habitats (e.g., chemical vegetation treatments, land acquisitions, and conservation easements).

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

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

Corridor – A tract of land varying in width forming passageway through which various commodities such as oil, gas, and electricity are transported.

Disruptive activities – Land resource uses/activities that are likely to alter the behavior, displace, or cause excessive stress to the greater sage-grouse population 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 (biological) – The number and distribution of plant and animal species within a specified geographic area. For purpose of the National Forest Management Act, the geographic area is a national forest or grassland unit.

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 the greater sage-grouse.

Feasible – see technically/economically feasible.

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

Forage reserve – Designation for allotments on which there is no current term permit obligation for some or all of the estimated livestock grazing capacity and where there has been a determination made to use the available forage on the allotment to enhance management flexibility for authorized livestock use (FSH id_2209.13-2007-1).

Forest transportation system – Roads, trails, and areas designated for motor vehicle use that provide access to National Forest System lands for both motorized and non-motorized uses in a manner that is socially, environmentally, and economically sustainable over the long-term; enhances public enjoyment of National Forest System roads; and maintains other important values and uses.

General habitat management areas – National Forest System lands that are occupied seasonally or year-round habitat outside of priority habitat management areas where some special management would apply to sustain the greater sage-grouse population. The boundaries and management strategies for general habitat management areas are derived from and generally follow the preliminary general habitat boundaries.

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 its 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.

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.

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

Landownership adjustment – Land adjustments to National Forest System lands by purchase, exchange, interchange, or conveyance under authority delegated by law to the Secretary of Agriculture.

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 contract granting use or occupation of property during a specified period in exchange for a specified rent or other form of payment; 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 the terms.

Leasable minerals – Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947. 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**.**

Lek – A courtship display area attended by the 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).

Lessee – A person or entity holding record title in a lease issued by the United States; a person or entity authorized to use and occupy National Forest System lands under a specific instrument identified as a lease.

Livestock conversion – To change the kind of livestock authorized to graze on National Forest System lands (e.g., a change from sheep to cows).

Locatable minerals – Mineral disposable under the General Mining Act of 1872, as amended, that was not excepted in later legislation. These include hardrock, placer, and 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, as amended, 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 (e.g., 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, as amended), 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 – Includes 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, rehabilitating, 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 – A plant species that occurs naturally in a particular region, state, ecosystem, and habitat without direct or indirect human actions.

Net conservation gain – The actual benefit or gain above baseline conditions. Actions which result in habitat loss and degradation include those identified as threats which contribute to GRSG disturbance as identified by the USFWS in its 2010 listing decision (75 *Federal Register* 13910) and shown in Table 2 in the Greater Sage-Grouse Monitoring Framework (Appendix A).

No Surface Occupancy – A major constraint where use or occupancy of the land surface for fluid mineral exploration or development and all activities associated with fluid mineral leasing (e.g., truck-mounted drilling and geophysical exploration equipment off designated routes, construction of wells and/or pads) are prohibited to protect identified resource values. Areas identified as No Surface Occupancy are open to fluid mineral leasing, but surface occupancy or surface-disturbing activities associated with fluid mineral leasing cannot be conducted on the surface of the land.

Access to fluid mineral deposits would require horizontal drilling from outside the boundaries of the No Surface Occupancy area.

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 lands or facilities for specified purposes and which is both revocable and terminable.

Permit cancellation – Action taken to permanently invalidate a term grazing permit in whole or part.

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 National Environmental Policy Act requirements, where applicable, must be met before ignition.

Priority habitat management areas – National Forest System lands identified as having highest habitat value for maintaining sustainable greater sage-grouse populations. The boundaries and management strategies for priority habitat management areas are derived from and generally follow the preliminary priority habitat boundaries. Priority habitat management areas largely coincide with areas identified as priority areas for conservation in the Conservation Objectives Team report.

Priority-connectivity habitat management areas – Areas of priority habitat management areas that are known migration corridors that connect populations or population segments.

Priority-core habitat management areas – Areas of priority habitat management areas that are the most important breeding and nesting habitat.

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 the greater sage-grouse. The 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.

Restriction/restrict – A limitation or constraint, not a prohibition, on public land uses and operations. Restrictions can be of any kind but most commonly apply to certain types of vehicle use, temporal and/or spatial constraints, or certain authorizations.

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 maintenance 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-lane 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 the greater sage-grouse that have been noted and referenced as having the highest densities of greater sage-grouse and other criteria important for the persistence of the species.

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. Lease stipulations include No Surface Occupancy, Timing Limitations, and Controlled Surface Use.

Surface disturbing 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 restricted, not allowed, or not authorized.

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 responsibility to determine what actions are technically and economically feasible based on a review of the applicant's rationale and the available best science. 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 lands 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.

Timing Limitations – A moderate constraint, applicable to fluid mineral leasing, on all activities associated with fluid mineral leasing (e.g., truck-mounted drilling and geophysical exploration equipment off designated routes; construction of wells and/or pads); and other surface disturbing activities (i.e., those not related to fluid mineral leasing). Areas identified for Timing Limitations are closed to fluid mineral exploration and development; surface-disturbing activities; and intensive human activity during identified timeframes. This stipulation does not apply to operation and basic maintenance activities, including associated vehicle travel, unless otherwise specified. Construction, drilling, completions, and other operations considered to be intensive in nature are not allowed. Intensive maintenance, such as workovers on wells, is not permitted. Timing Limitations can overlap spatially with No Surface Occupancy and Controlled Surface Use, as well as with areas that have no other restrictions.

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.

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 that 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, permitted, or otherwise authorized under various statutes of law over time.

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.

Waived without preference – A permittee waives a term grazing permit to the United States without identifying a preferred applicant (i.e., a third party that has purchased either permitted livestock, base property, or both).

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

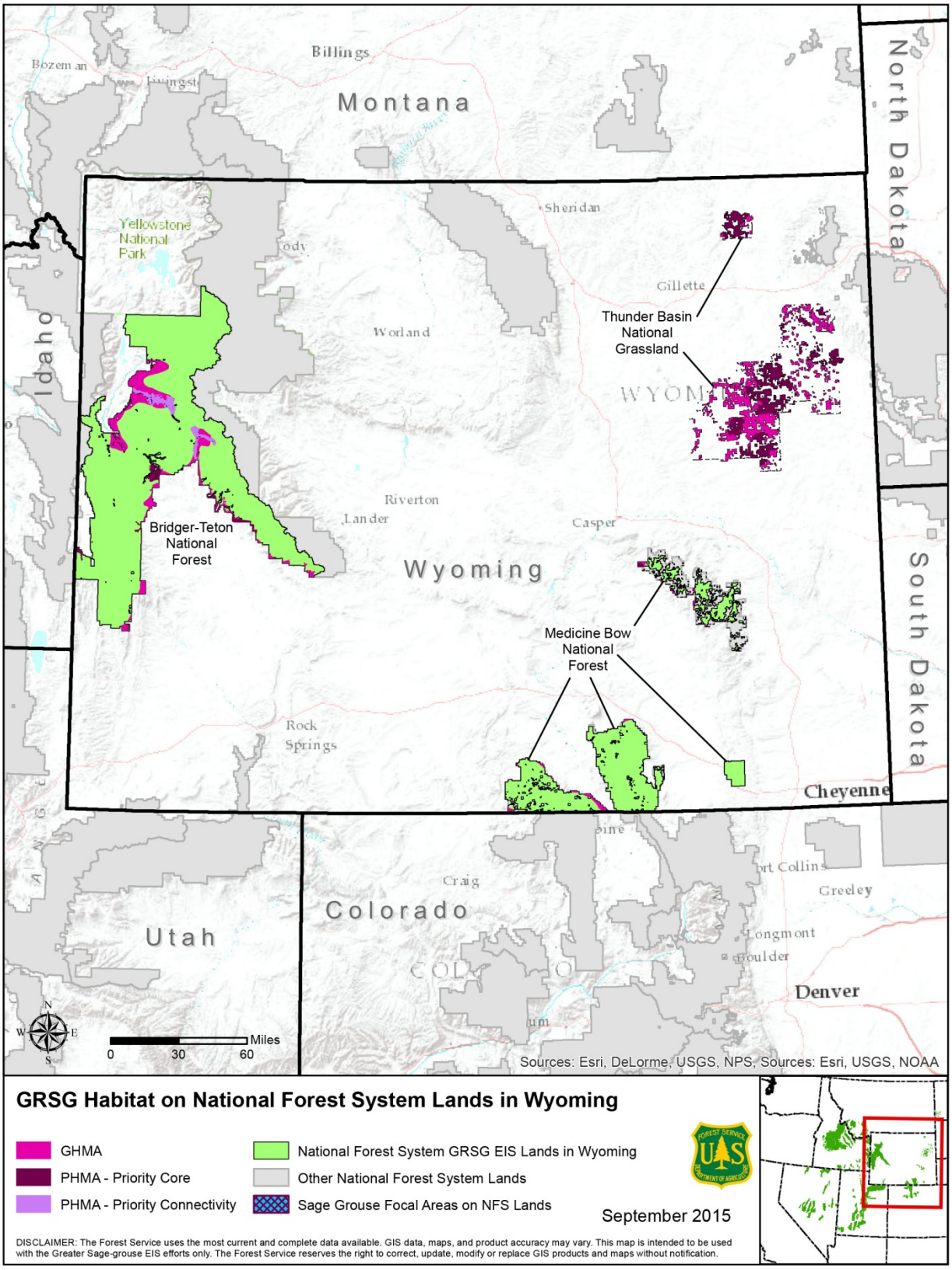
West Nile virus – A virus that is found in temperate and tropical regions of the world and most commonly transmitted by mosquitoes. West Nile virus can cause flu-like symptoms in humans and can be lethal to birds, including the greater sage-grouse.

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

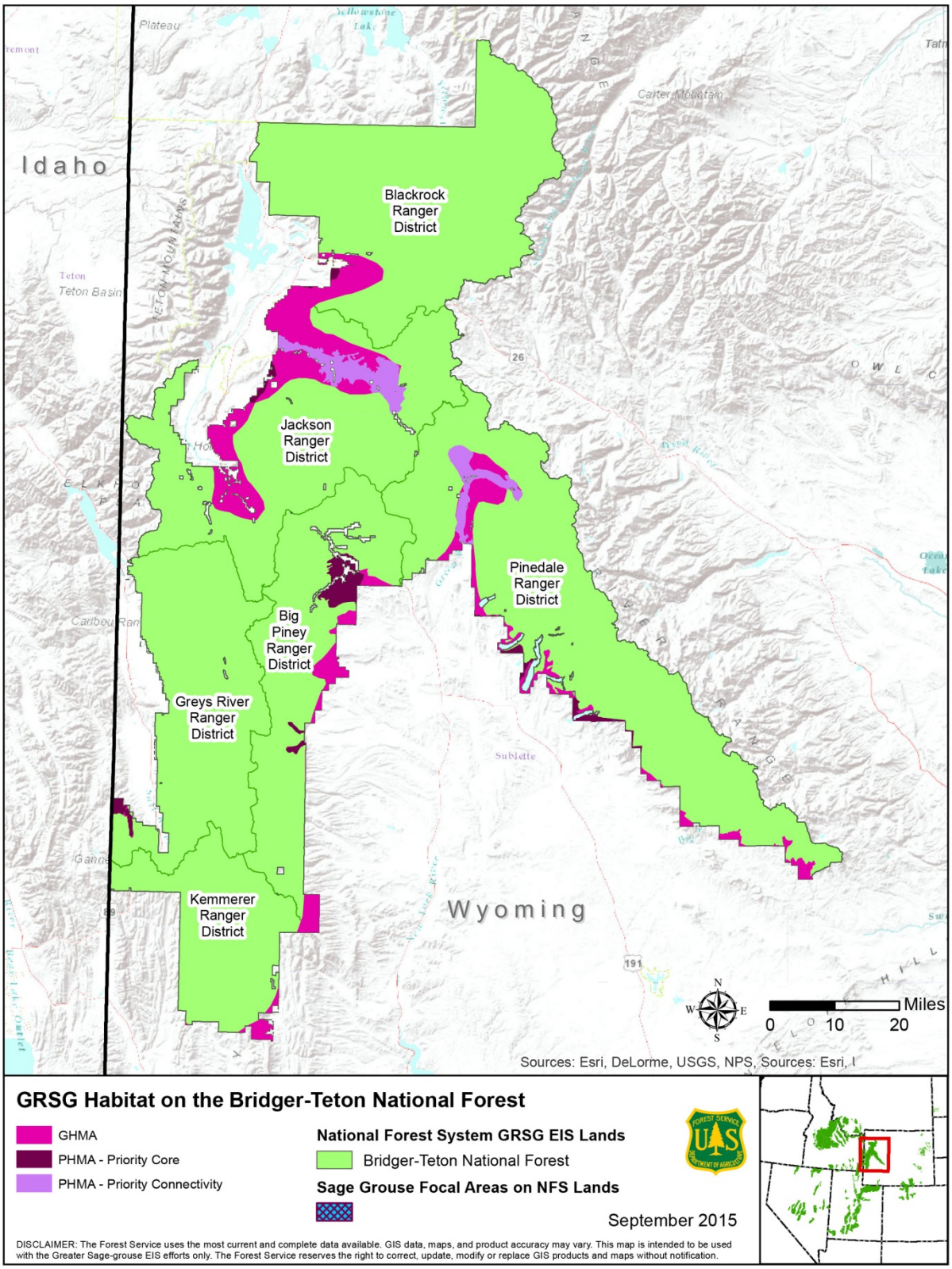
Winter concentration areas – Greater sage-grouse winter habitats that are occupied annually by the greater sage-grouse and provide sufficient sagebrush cover and food to support birds throughout the entire winter (especially periods with above-average snow cover). Many of these areas support several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

Withdrawal (land) – Withholding an area of federal land from settlement, sale, location, or entry under some or all of the general land laws, including the mining and mineral leasing laws, for the purpose of limiting activities under those laws to maintain other public values in the area or for reserving the area for a particular public purpose or program.

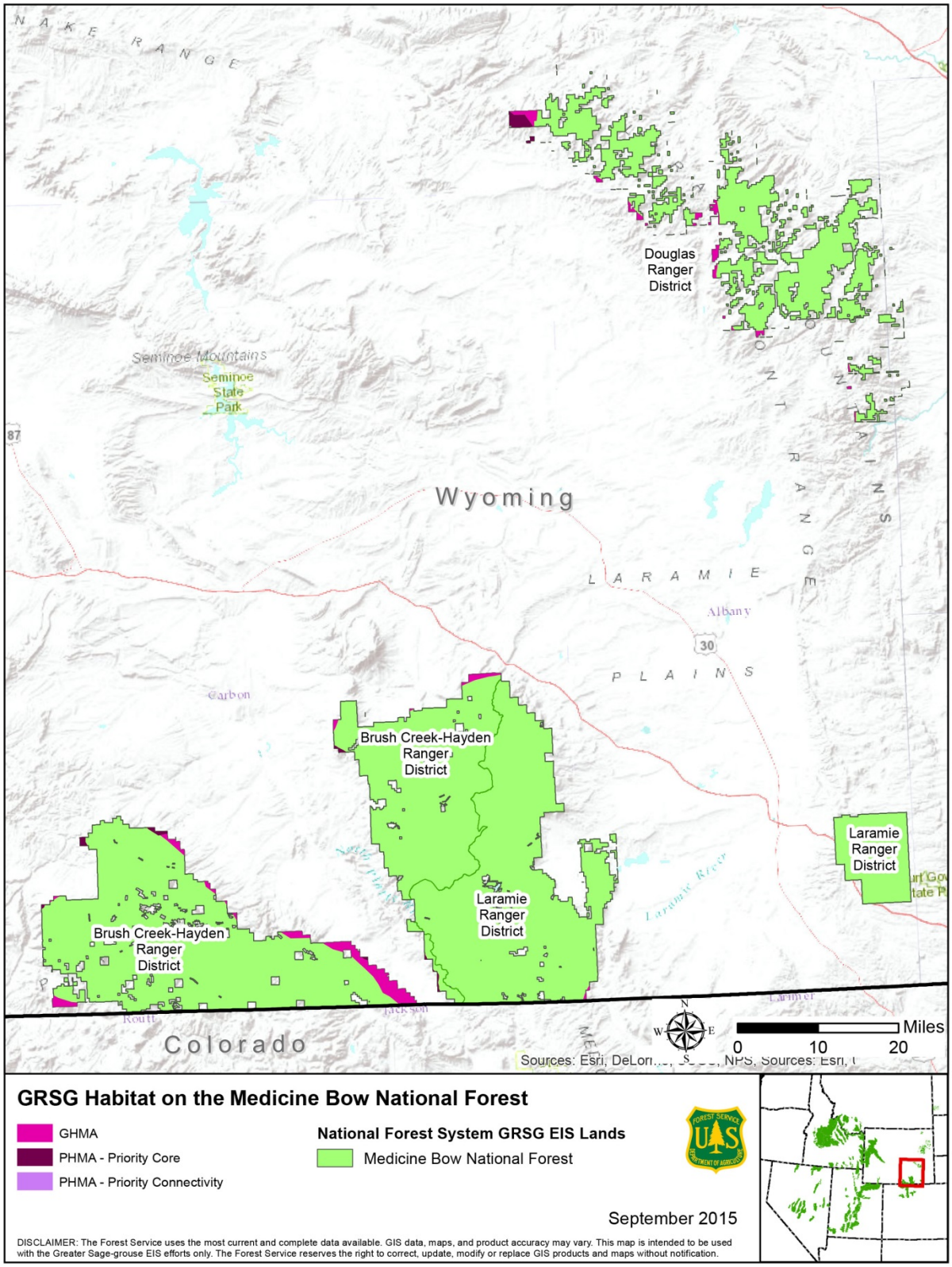
Map 1. *GRSG Habitat on National Forest System Lands in Wyoming.*



Map 2. *GRSG Habitat on the Bridger-Teton National Forest.*



Map 3. *GRSG Habitat on the Medicine Bow National Forest.*



Map 4. *GRSG Habitat on the Thunder Basin National Grassland.*