

Office of the Governor

**STATE OF WYOMING
EXECUTIVE DEPARTMENT
EXECUTIVE ORDER**

**Order 2015-4
(Replaces 2011-5 and 2013-3)**

GREATER SAGE-GROUSE CORE AREA PROTECTION

WHEREAS, the State of Wyoming is proud of its rich wildlife heritage and is one of few states remaining in the United States where wildlife exist in great abundance; and

WHEREAS, the Greater sage-grouse (*Centrocercus urophasianus*), an iconic western species, inhabits much of the sagebrush-steppe habitat in Wyoming; and

WHEREAS, the sagebrush-steppe habitat type is abundant across the State of Wyoming; and

WHEREAS, the State of Wyoming currently has the greatest population of Greater sage-grouse across the range; and

WHEREAS, the State of Wyoming has management authority over Greater sage-grouse populations in Wyoming; and

WHEREAS, the United States Department of the Interior has determined that listing the Greater sage-grouse range-wide as a threatened or endangered species is currently precluded making it a candidate species; and

WHEREAS, in response to the U.S. Fish and Wildlife Service finding under Listing Factor D, the State of Wyoming and partner federal, state and local agencies have developed and put into place a comprehensive and effective set of regulatory mechanisms designed to conserve the Greater sage-grouse; and

WHEREAS, it is the desire of the State of Wyoming and it is in the best interest of the State and the Greater sage-grouse that Wyoming maintain legal primacy for this species; and

WHEREAS, the State of Wyoming continues to be committed both logistically and financially to conserving the Greater sage-grouse; and

WHEREAS, the State of Wyoming recognizes the necessity of a robust and scientifically rigorous system of monitoring; and

WHEREAS, agencies of the State of Wyoming have established oversight mechanisms and implemented management stipulations in compliance with this and previous Executive Orders; and

WHEREAS, the listing of the Greater sage-grouse would have a significant, adverse effect on the land and natural resource management of the State of Wyoming beyond that necessary to maintain and enhance Greater sage-grouse populations and habitat; and

WHEREAS, the listing of the Greater sage-grouse would have a significant, adverse effect on the economy of the State of Wyoming, including the ability to generate revenues from State lands; and

WHEREAS, the listing of the Greater sage-grouse would have a significant, adverse effect on the custom and culture of the State of Wyoming, and would substantially obstruct and conflict with ongoing and effective collaborative efforts to conserve Greater sage-grouse; and

WHEREAS, the Wyoming State Legislature, federal, state and local agencies, industry, conservation organizations, and landowners have dedicated significant time and resources to conserve Greater sage-grouse populations in Wyoming; and

WHEREAS, in order to maintain and enhance Greater sage-grouse populations and adequate sagebrush-steppe habitat, the State of Wyoming has developed and implemented a Greater sage-grouse Core Area Protection strategy; and

WHEREAS, this Executive Order is the State of Wyoming's primary regulatory mechanism to conserve the Greater sage-grouse and preclude the need for listing the bird as a threatened or endangered species pursuant to the Endangered Species Act of 1973; and

WHEREAS, the Sage-Grouse Implementation Team serves as the oversight team in implementing this Executive Order and the Wyoming State Legislature established the Team as a statutory body (W.S. § 9-19-101) to provide recommendations regarding regulatory actions necessary to maintain and enhance Greater sage-grouse populations and habitats in Wyoming; and

WHEREAS, Wyoming's Greater sage-grouse Core Area Protection strategy protects significant quantity and quality of Greater sage-grouse habitat and protects a substantial portion of Wyoming's Greater sage-grouse; and

WHEREAS, on April 17, 2008, the Office of the Governor requested that the U.S. Fish and Wildlife Service review Wyoming's Greater sage-grouse Core Area Protection strategy to determine whether it was a "sound policy that should be moved forward" and on May 7, 2008, the U.S. Fish and Wildlife Service responded that the "core population area strategy... is a sound framework for a policy by which to conserve Greater sage-grouse in Wyoming"; and

WHEREAS, in its March 23, 2010 status determination for the Greater sage-grouse (Decision; 75 Federal Register 13910, 13974) the U. S. Fish and Wildlife Service stated, “the Service believes that the core area strategy[,] if implemented by all landowners via regulatory mechanisms, would provide adequate protection for sage-grouse and their habitats in that State[;]” and

WHEREAS, in a letter dated November 10, 2010, the U.S. Fish and Wildlife Service again confirmed that “[t]his long-term, science-based vision for the conservation of Greater sage-grouse has set the stage for similar conservation efforts across the species range,” and that “the Core Population Area strategy for the Greater sage-grouse provides an excellent model for meaningful conservation of Greater sage-grouse if fully supported and implemented”; and

WHEREAS, the State of Wyoming, the Bureau of Land Management, the U.S. Forest Service, and other land management agencies have coordinated Greater sage-grouse Core Area Protection conservation actions across their boundaries which encompass approximately 15 million acres of habitat for the Greater sage-grouse in Wyoming; and

WHEREAS, federal land management agencies including the Bureau of Land Management and the U.S. Forest Service are revising or amending their respective Land and Resource Management Plans consistent with this Executive Order to prioritize conservation of Greater sage-grouse and their habitats; and

WHEREAS, Candidate Conservation Agreements with Assurances (CCAA) through the U.S. Fish and Wildlife Service and the Sage-Grouse Initiative (SGI) through the Natural Resources Conservation Service on private lands, complemented by Candidate Conservation Agreements (CCA) on public lands, are a proven means of investing in the future of rural land management; and

WHEREAS, significant investments of both time and money have been made by all stakeholders to see the successful implementation of the Greater sage-grouse Core Area Protection strategy; and

WHEREAS, science, information, and data continue to emerge regarding the habitats and behaviors of the Greater sage-grouse; and

WHEREAS, the review process built into Wyoming’s Greater sage-grouse Core Area Protection strategy provides a mechanism to evaluate this emerging science, information, and data and has resulted in updated management recommendations from the Sage-Grouse Implementation Team.

NOW, THEREFORE, in consideration of the recommendations of the Sage-Grouse Implementation Team and pursuant to the authority vested in me by the Constitution and Laws of the State, and to the extent such actions are consistent with the statutory obligations and authority of each individual agency, including those found in the Wyoming Regulatory Takings Act, W.S. §§ 9-5-301 through 9-5-305, I, Matthew H. Mead, Governor of the State of Wyoming, do hereby issue this Executive Order providing as follows:

1. State agencies shall strive to maintain consistency by following the procedures outlined in this Executive Order, while recognizing that adjustments to the stipulations may be necessary based upon local conditions, opportunities, and limitations. The goal is to minimize future disturbance by co-locating proposed disturbances within areas already disturbed or naturally unsuitable.
2. Valid existing rights shall be recognized and respected. Activities existing or permitted in Core Population Areas prior to August 1, 2008, will not be required to be managed under Core Population Area stipulations. Activities existing or permitted prior to the date of this Executive Order and within Core Population Areas added as a result of this Executive Order will not be required to be managed under Core Population Area stipulations (see Attachment A, Figure 2). Examples of existing activities include oil and gas, mining, agriculture, processing facilities, housing, and other uses that were in place prior to the development of the Core Population Areas. Federal and state permitted activities, within a defined project boundary (such as a recognized federal oil and gas unit, drilling and spacing unit, mine plan, subdivision plat, utility ROW, grazing allotment etc.), shall be allowed to continue within the existing boundary even if the use exceeds recommended stipulations (see Attachment A, Figure 1).
3. It is critical that existing land uses and landowner activities continue to occur in Core Population Areas, particularly agricultural activities on private lands. Functioning ranches and agricultural lands provide crucial ecological and habitat services to wildlife. The failure or loss of these areas could have damaging implications to wildlife and their habitats. The loss of these important lands in their current status and role(s) could impact conservation objectives for Greater sage-grouse and other species (USFWS, February 5, 2015, Memo to State Directors and Field Supervisors: Service Position on Livestock Grazing and Working with the Rangeland Owners to Conserve Sage-Grouse).
4. For the most part, activities on private lands are not subject to state or federal agency review or approval. Only those activities which state agencies are required by state or federal law to review or approve are subject to review for consistency. Core Population Areas have been mapped to include additional habitat beyond that strictly necessary to prevent the listing of Greater sage-grouse. The additional habitat included within the Core Population Area boundaries is adequate to accommodate continuation of existing land uses and landowner activities. Existing land uses and landowner activities deemed to have negligible or no impacts to Greater sage-grouse are exempt from review for consistency under this Executive Order (see Attachment C).
5. Land uses and activities proposed inside Core Population Areas for which stipulations have not been developed in this Executive Order may be authorized on a case-by-case basis only when it can be demonstrated to the satisfaction of the permitting agency, and based upon recommendations made by the Wyoming Game and Fish Department, that the activity will avoid negative impacts to Greater sage-grouse.
6. Regulatory agencies and departments of the State of Wyoming including, but not limited to, the Office of State Land and Investments, Department of Environmental Quality, State

Engineer's Office, Industrial Siting Council and the Oil and Gas Conservation Commission, shall prioritize the maintenance and enhancement of Greater sage-grouse habitats and populations inside the Core Population Areas, connectivity areas, and winter concentration areas identified in Attachment A, Figure 1.

7. Development consistent with the stipulations set forth in Attachment B shall be deemed sufficient to demonstrate that the activity will avoid negative impacts to Greater sage-grouse.
8. Incentives to accelerate or enhance required reclamation in habitats adjacent to or within Core Population Areas should be developed, including but not limited to stipulation waivers, funding for enhanced reclamation, and other strategies. It is recognized that some incentives may result in reduced numbers of Greater sage-grouse outside of Core Population Areas.
9. Where consistent with the Greater sage-grouse conservation goals set forth herein, a non-regulatory approach should be used to influence management actions and activities within Core Population Areas. Permit stipulations should reflect unique localized conditions, including soils, vegetation, development type, predation, climate, and other local realities.
10. Wyoming is managing approximately 15 million acres of Core Population Area habitat to maintain high quality Greater sage-grouse habitat and maintain and enhance populations within normal variability.
11. Fire suppression efforts in Core Population Areas should be emphasized, recognizing that other local, regional, and national suppression priorities may take precedence. Public and firefighter safety remains the number one priority for all fire management activities.
12. The State of Wyoming will support research of activities in winter concentration areas where biologically significant numbers of Greater sage-grouse nesting in Core Population Areas are suspected of congregating. Further, the State of Wyoming will develop appropriate local, science-based standards to manage disturbance in identified and mapped winter concentration areas (see Attachment A, Figure 1).
13. To ensure continued sustainability of Wyoming's economy, all efforts to encourage, enhance, and prioritize development outside of Core Population Areas shall be made. State and federal agencies, with other relevant stakeholders, should work collaboratively to develop a strategic plan to achieve a beneficial balance between Greater sage-grouse protection and Wyoming's economy. Incentives, prioritization of projects outside of Core Population Areas, and streamlining permit processes should be considered.
14. State and federal agencies, including the U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Forest Service, Wyoming Game and Fish Department, and other stakeholders shall work collaboratively to ensure a uniform and consistent application of

this Executive Order to maintain and enhance Greater sage-grouse habitats and populations.

15. State agencies shall work collaboratively with all appropriate stakeholders to maintain and enhance Greater sage-grouse habitats and populations consistent with the language and spirit of this Executive Order.
16. The State of Wyoming will support voluntary enrollment and expanded coverage for conservation easements, CCAA, CCA, and commensurate improvements and investments by the U.S. Department of Agriculture and the U.S. Fish and Wildlife Service, where appropriate. These efforts should be focused and prioritized to take place in Core Population Areas.
17. Local Working Groups will continue to be engaged through the Local Working Group Charter.
18. The State of Wyoming will engage in adaptive management that will include the involvement of state and federal land management and regulatory agencies as appropriate (see Attachment B).
19. State agencies shall report all conservation and permitted actions occurring within Greater sage-grouse Core Population Areas annually, or more frequently, as determined necessary.
20. The State of Wyoming shall work with federal, state, county, private and non-governmental organization partners to collect data to determine the condition of each Core Population Area in relationship to the goals of the Wyoming's Greater sage-grouse Core Area Protection strategy.
21. Absent substantial and compelling information that adjustments are necessary to protect the integrity of the Greater sage-grouse Core Area Protection strategy, these Core Population Areas, connectivity areas, identified and mapped winter concentration areas, and protective stipulations identified in this Executive Order shall not be altered for a minimum of 7 years.
22. The State of Wyoming shall continue to monitor and document Greater sage-grouse populations and development activities to ensure that permitted activities under this authority do not result in negative impacts to Greater sage-grouse outside cyclical trends.
23. This Executive Order, together with its attachments, constitutes Wyoming's strategy for the conservation of the Greater sage-grouse and their habitats. Attachments A through I

are expressly adopted and incorporated by reference herein, and each shall have the full force and effect of this Executive Order.

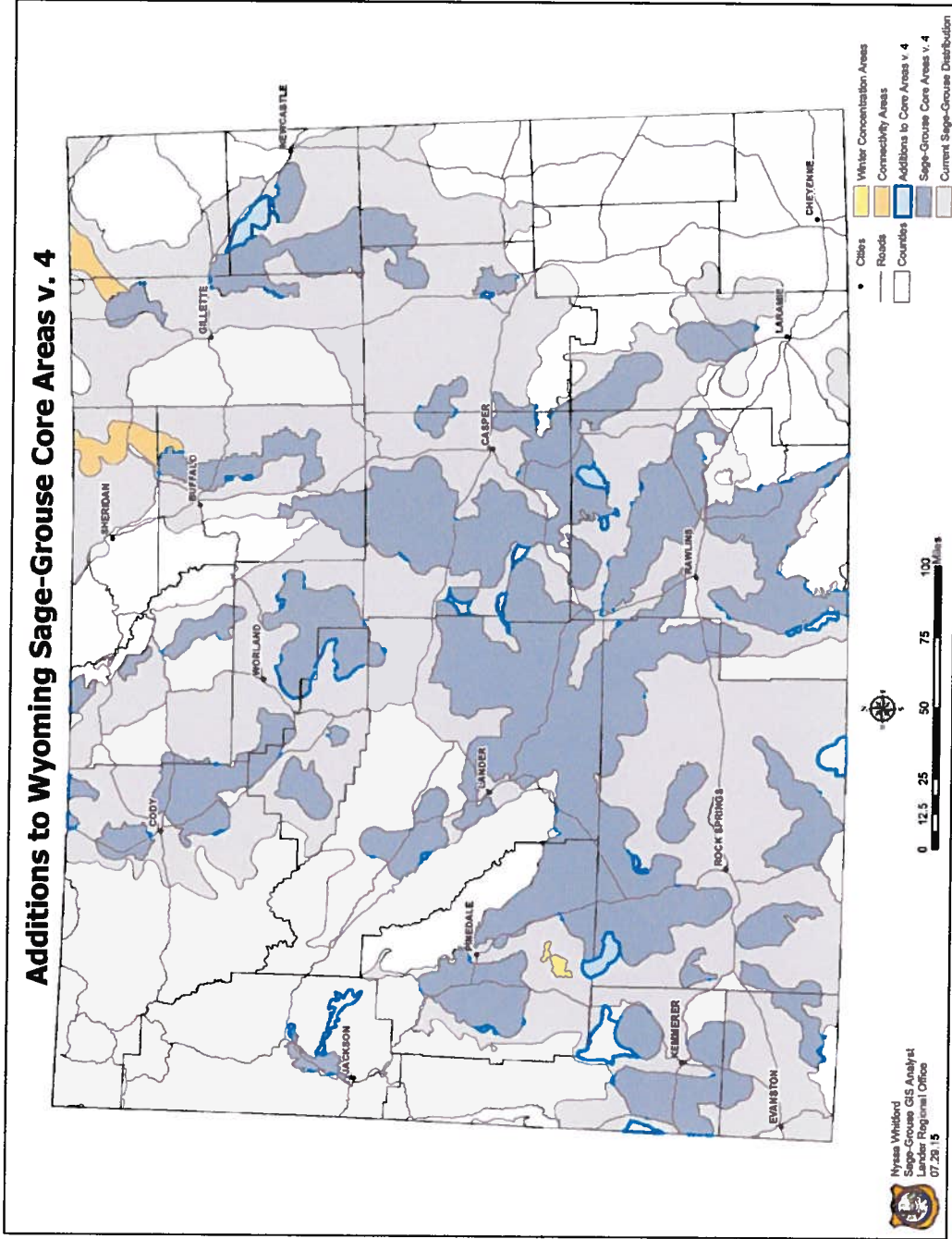
Given under my hand and the Executive Seal of the State of Wyoming this 29 day of July, 2015.



A handwritten signature in blue ink, appearing to read "Matthew H. Mead", is written over a horizontal line.

Matthew H. Mead
Governor

Figure 2.



HOW THE WYOMING GREATER SAGE-GROUSE CORE AREA PROTECTION STRATEGY WAS DEVELOPED

Beginning in 2007, the Sage Grouse Implementation Team was charged with three primary tasks: (1) identification of areas where Greater sage-grouse and their habitats would be most effectively conserved, (2) development of a strategy to reduce or eliminate potential threats to the species, and (3) development of methodology to evaluate, document and track potential impacts over time. The following describes those efforts to date.

1. Establishment of Greater Sage-Grouse Core Population Areas

Greater sage-grouse lek location and attendance data as identified through modeling of bird populations and habitat were overlaid with areas of valid existing rights to produce the Greater sage-grouse Core Population Area map for Wyoming (Figure 3). This iterative process consisted of a series of reviews conducted in the field by Local Working Group (LWG) and others with a thorough understanding of local Greater sage-grouse use to assure that areas included as core habitat were a true representation of actual conditions on the ground. Similar processes were used in 2010 (Figure 4) and 2015 (Figure 5) to refine the Core Population Area mapping, resulting in the current Core Population Areas.

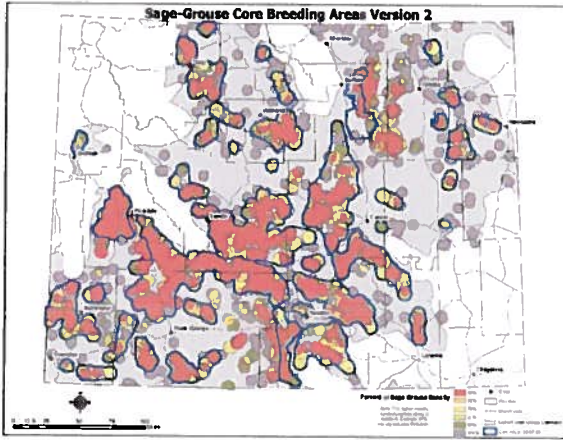


Figure 3. Greater sage-grouse breeding density and Core Population Areas (Version 2) associated with Executive Order 2008-2.

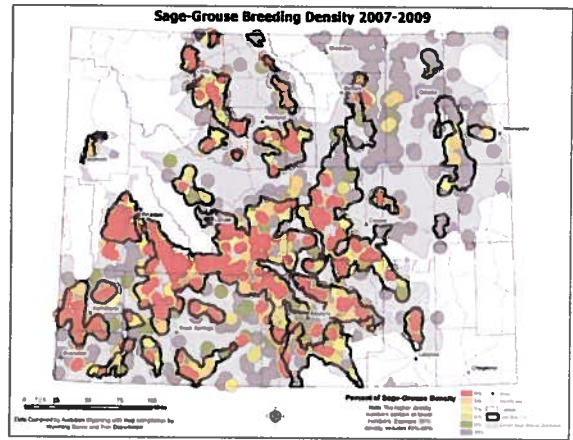


Figure 4. Greater sage-grouse breeding density and Core Population Areas (Version 3) associated with Executive Orders 2010-4 and 2011-5.

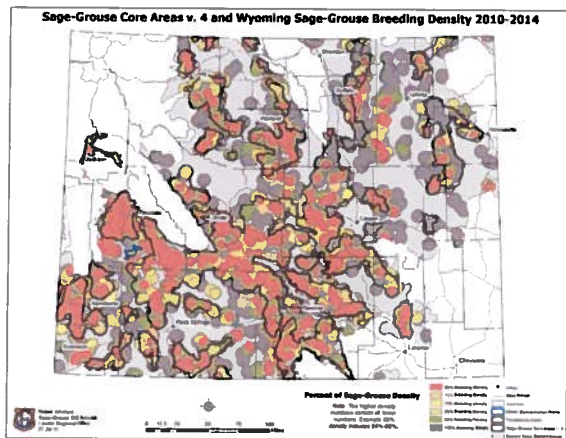


Figure 5. Greater sage-grouse breeding density and Core Population Areas (Version 4) associated with Executive Order 2015-4.

A kernel density function was applied to the lek location and attendance data to develop the final Greater sage-grouse density maps and later adjustments (Doherty et al. 2010, 2011). The red areas on Figures 3 and 4 represent the breeding habitat for 65% of Greater sage-grouse in Wyoming based on lek size and location. The maps illustrate population proportions at a given time, not trends over time. This method was based on breeding birds and did not take into account late brood-rearing and wintering seasonal habitats. During the 2010 revision of Core Population Area boundaries in Wyoming, both late brood-rearing and winter use were considered in the process and most of these seasonal habitats associated with birds in the existing Core Population Area were included in the final product (Figure 4). The eight LWGs assisted in the revision process by using highly-detailed habitat imagery (1 meter NAIP) and reviewing new

lek and development data. These activities were open to the public and other interests throughout the process.

The resultant 2008, 2010 and 2015 (Figures 3, 4, and 5) Core Population Areas encompass approximately 83% of the Greater sage-grouse population, on approximately 24% of the surface area of the State of Wyoming (unpublished data, Wyoming Game and Fish Department, Gamo et al. 2013).

Connectivity Areas

Connectivity corridors are recognized as areas important for maintaining the transmission of genetic material between populations. These corridors have been identified as the most likely dispersal routes used by Greater sage-grouse to travel between potentially isolated populations in Wyoming to populations in neighboring states. Viable corridors reduce the threat of creating isolated populations in Wyoming and adjacent populations in neighboring states. Connectivity corridors are managed to limit anthropogenic development and have been delineated to increase the likelihood of natural immigration/emigration important for maintaining genetic variability in Core Populations Areas.

Winter Concentration Areas

The identification of Core Population Areas is intended to capture all seasonal requirements for Greater sage-grouse; however, there is a recognition that in some cases Core Population Areas may not capture all Greater sage-grouse needs (Aldridge and Boyce 2007, Doherty et al. 2008, Doherty et al. 2011). Specifically, winter concentration areas, defined as places where large numbers of Core Population Area Greater sage-grouse congregate and persistently occupy between December 1 and March 14, should be identified and protected. Identification of winter concentration areas should be based on habitat features and repeated observations of winter use by biologically significant numbers of Greater sage-grouse (e.g., groups of ≥ 50 Greater sage-grouse) using a validated Resource Selection Function (RSF) modeling approach.

2. Management Goals and Mitigation in the Greater Sage-Grouse Core Area Protection Strategy

The Wyoming Greater sage-grouse Core Area Protection strategy represents a proactive identification of a set of conservation actions to maintain and enhance a viable and connected set of populations before the opportunity to do so is lost (Doherty et al 2011). The strategy is based on the identification of important habitat areas for Greater sage-grouse and a set of actions that when taken are intended to ensure the long-term survival of Greater sage-grouse populations in Wyoming. The strategy follows an established hierarchy of *avoidance*, understanding that the primary mission is avoiding impacts to and protecting the best remaining habitat for Greater sage-grouse; *minimizing* impacts where they cannot first be avoided; and when Core Population Area thresholds are exceeded, *compensating* for any unavoidable impacts to Greater sage-grouse.

Avoidance

Preferred development plans avoid negative impacts in Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse. This maximizes protections for both Greater sage-grouse and sagebrush habitat. Avoidance can be both spatial and temporal.

Minimization

When development occurs within Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse, all reasonable options are pursued to minimize impacting additional suitable habitat and/or maintaining impacts below identifiable thresholds to the greatest extent possible. This may result in new disturbance within Core Population Areas, but the disturbance is managed not to exceed Executive Order thresholds and result in no discernible impacts at the population level. Development plans are managed to limit disturbance to less than 5% and no more than an average of one oil and gas pad or mining site per 640 acres within the Density Disturbance Calculation Tool (DDCT) project area.

Compensation

The complexity of developing compensatory mitigation projects that provide biologically meaningful benefits to Greater sage-grouse populations requires rigorous standards for mitigation to be defined and developed. Performance standards (e.g., net benefit to Greater sage-grouse), monitoring requirements, and adaptive management plans should explicitly link landscape conservation actions to Core Population Areas and other Executive Order delineated habitats used by Core Population Area Greater sage-grouse and statewide landscape conservation objectives for Greater sage-grouse. See also Attachment H.

3. Use of the DDCT in Managing the Greater Sage-Grouse Core Area Protection Strategy

A 4-mile radius around active leks captures 74-80% of nesting females associated within their lek of breeding. The 4-mile distance has been confirmed by multiple studies as having particular importance to Greater sage-grouse in the West, including the majority of seasonal habitats associated with an individual lek, and falls within a reasonable range of buffers (Manier et al. 2014) for Greater sage-grouse. This radius accounts for all types of disturbance within the background of measurable impacts to Greater sage-grouse in field studies. By using the 4-mile radius, the DDCT achieves both a realistic consideration of impacts in a relevant assessment area, while avoiding dilution of existing disturbance being considered in conjunction with any one proposed development.

Core Population Area Monitoring and Management:

A system of interagency coordination has been developed to monitor and track development and conservation activities across Core Population Areas to determine whether development actually meets the thresholds of this Executive Order (see Attachment B).

Literature Cited:

- Aldridge, C. L. and M. S. Boyce. 2007. Linking occurrence and fitness to persistence: habitat-based approach for endangered greater sage-grouse. *Ecological Applications* 117:508–526.
- Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham. 2008. Greater sage-grouse winter habitat selection and energy development. *Journal of Wildlife Management* 72:187–195.
- Doherty K.E., J.D. Tack, J.S. Evans, and D.E. Naugle. 2010. Breeding densities of Greater sage-grouse: A tool for range-wide conservation planning. BLM Completion Report: Interagency Agreement # L10PG00911. Bureau of Land Management. Washington, D.C.
- Doherty, K. E., D. E. Naugle, H. E. Copeland, A. Pocerwicz, and J. M. Kiesecker. 2011. Energy development and conservation tradeoffs; systematic planning for Greater sage-grouse in their eastern range. Pp. 505-516 *in* S. T. Knick and J. W. Connelly (editors). *Greater sage-grouse: ecology and conservation of a landscape species and its habitats*. Studies in Avian Biology (vol. 38). University of California Press, Berkeley, CA.
- Gamo, R. S., J. D. Carlisle, J. L. Beck, J. C. Bernard, and M. E. Herget. 2013. Can the greater sage-grouse serve as an umbrella species for other sagebrush-dependent wildlife? *The Wildlife Professional*.
- Manier, D.J., Bowen, Z.H., Brooks, M.L., Casazza, M.L., Coates, P.S., Deibert, P.A., Hanser, S.E., and Johnson, D.H., 2014, Conservation buffer distance estimates for Greater Sage-Grouse—A review: U.S. Geological Survey Open-File Report 2014–1239, 14 p., <http://dx.doi.org/10.3133/ofr20141239>.
- USFWS. 2014. Greater Sage-Grouse Range-Wide Mitigation Framework v. 1.0

**EXECUTIVE ORDER 2015-4
ATTACHMENT B**

**Permitting Process and Stipulations for Development in
Greater Sage-Grouse Core Population Areas**

PERMITTING PROCESS

Point of Contact

The density of disruptive activities (1/640) and surface disturbance (5%) will be analyzed via the Density/Disturbance Calculation Tool (DDCT), and will be conducted by the Federal Land Management Agency or project proponent (as determined by the BLM Field Office Manager) on federal surface/mineral and the project proponent on non-federal (private, state). The DDCT analysis is then evaluated against Executive Order 2015-4 thresholds.

When State agency permit is needed, without a need for a federal permit:

The first point of contact for addressing Greater sage-grouse Core Population Area issues for any state permit application should be the Wyoming Game and Fish Department (WGFD). Project proponents should contact WGFD at least 45-60 days prior to submitting their application. More complex projects will require more time. It is understood that WGFD has a role of consultation, recommendation, and facilitation, and has no authority to either approve or deny the project. The purpose of the initial consultation with the WGFD is to become familiar with the project proposal and ensure the project proponent understands the DDCT and recommended stipulations. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse prior to submitting an application to the permitting agency.

When Federal agency permit is needed, with or without a State permit:

When a project requires federal action prior to approval, the proponent should contact the federal agency responsible for reviewing the action. The federal agency and the proponent will determine the best process for completing the DDCT and receiving recommendations from WGFD. Project proponents need to have a thorough description of their project and identify the potential effects on Greater sage-grouse prior to submitting an application to the permitting agency (see Attachment D).

Maximum Density and Disturbance Process

Density and Disturbance Calculation: The DDCT, (ddct.wygisc.org), is a spatially based tool that calculates both the average density of disruptive activities and total surface disturbance within the area affected by the project, or DDCT assessment area. The DDCT assessment area is created based on an initial radius around projects proposed in Greater sage-grouse Core Population Areas (Doherty et al. 2011), and subsequent radius around any occupied, Core

Population Area leks within the initial radius (see Figures 1 – 2). A 4-mile radius is used to identify 75% of the Greater sage-grouse use around a lek (Walker et al. 2007, Fedy et al. 2012). Any portion of the analysis area not found in core is removed (see Figure 3). All activities will be evaluated within the context of maximum allowable disturbance (disturbance percentages, location and number of disturbances) of suitable Greater sage-grouse habitat (see Attachment F for definition of suitable Greater sage-grouse habitat and disturbance of suitable Greater sage-grouse habitat) within the DDCT assessment area (see Figure 4). This tool allows for better siting of projects rather than averaging the density/disturbance calculation per section.

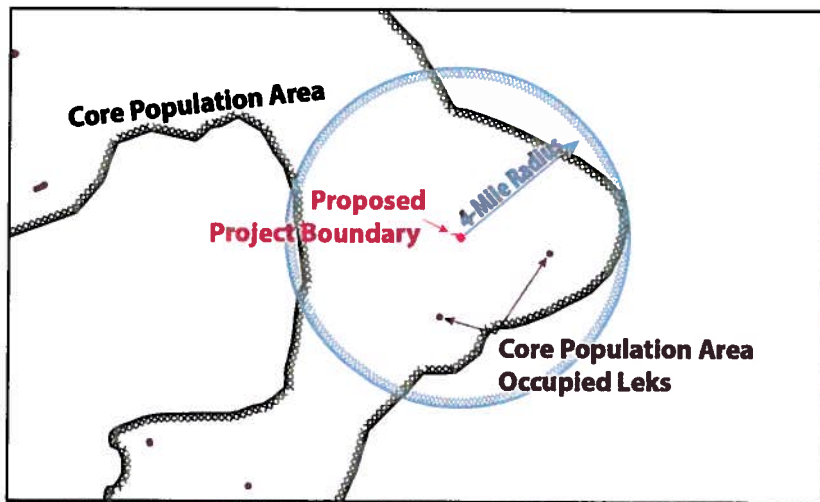


Figure 1 – DDCT assessment area step 1, proposed project boundary.

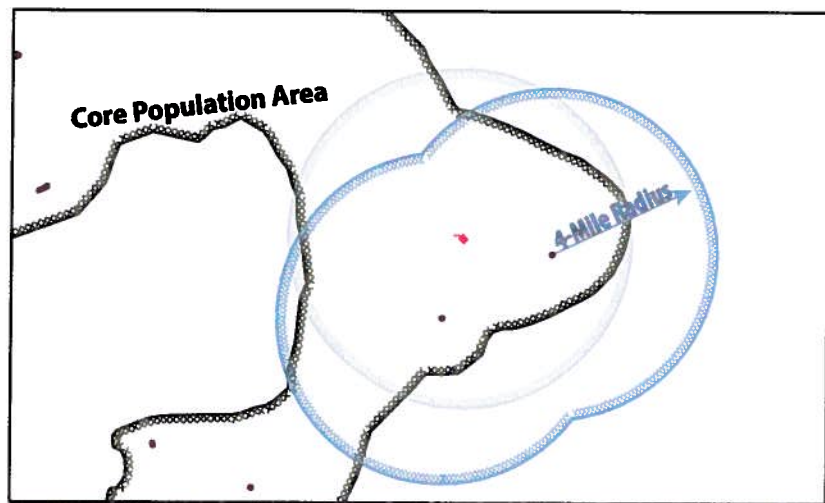


Figure 2 - DDCT assessment area step 2, lek boundaries.

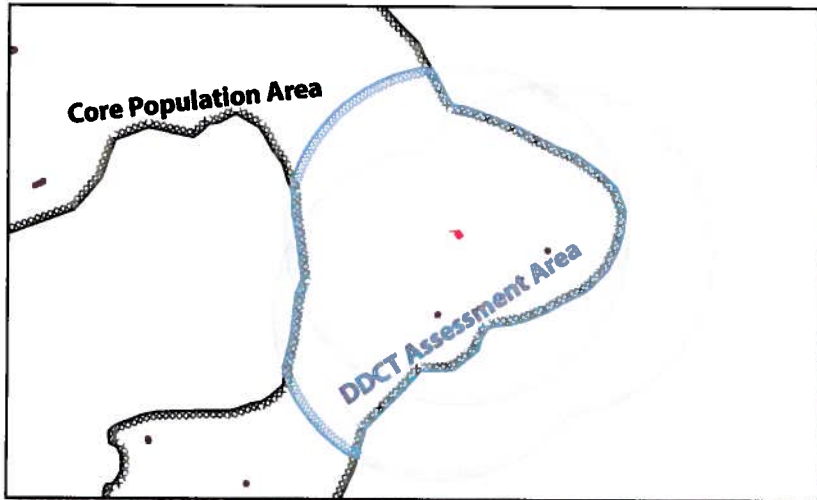


Figure 3 - DDCT assessment area step 3, remove non-core population areas.

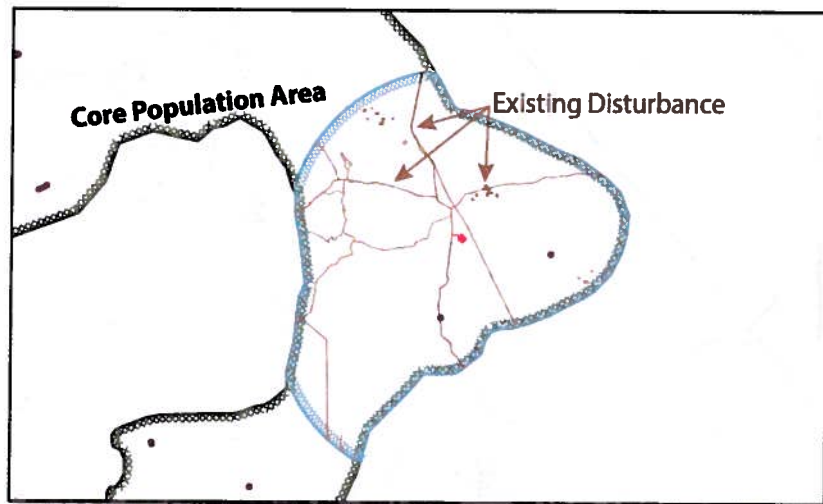


Figure 4 - Existing and proposed disturbance in the DDCT assessment area.

All lands within Core Population Area boundaries are considered suitable habitat unless documented. Mapped unsuitable habitat is treated as neither suitable habitat, nor disturbance, which results in the area being removed from the DDCT assessment area altogether.

Density and disturbance analysis: The total number of discrete disruptive activity features, as well as the total disturbance acres within the DDCT assessment area will be determined through an evaluation of:

- Existing disturbance (Greater sage-grouse habitat that is disturbed due to existing anthropogenic activity and wildfire).
- Approved permits (that have approval for on the ground activity) not yet implemented.

- Validation of the digitized disturbance through on the ground evaluation.

Avoiding and Minimizing Impacts

See Attachment A.

The following is the suggested administrative process for avoiding and minimizing impacts, as necessary.

For valid existing rights: If the proposed project DDCT is at or above Executive Order thresholds, the project proponent, WGFD and the permitting agency must determine whether or not there are ways to avoid or minimize impacts to Greater sage-grouse before issuing a permit to proceed.

The proponent will work with the permitting agency to site the project within the permit/lease area in a way that will likely have the least amount of impact on local Greater sage-grouse populations (i.e., existing anthropogenic disturbance, geographically remote from Greater sage-grouse habitat, unsuitable habitats). The surface disturbance and disruptive activity resulting from the proposed project will still count towards the 5% disturbance and 1/640 density thresholds (unless the proponent can show that there is a 0.6 mile buffer of unsuitable habitat between the proposed disturbance and suitable habitat). It is understood that project locations are often resource specific and that certain projects may not be able to be relocated to another location.

The proponent and the permitting agency will evaluate the DDCT area and the affected Greater sage-grouse Core Population Area for areas where additional reclamation/restoration actions or management of invasive species (especially within the proponents permit/lease area(s)) could reduce the amount of overall disturbance.

The proponent and the permitting agency should consider other opportunities to improve Greater sage-grouse habitat (i.e., conservation easements, additional reclamation of disturbed habitats in suitable habitats that are no longer necessary).

Should the proponent and the state permitting agency not come to agreement; the Sage Grouse Implementation Team (SGIT) will review the information. The BLM and U.S. Forest Service both have their own appeal process to handle disagreements but may coordinate through the SGIT.

Permitting

The complete analysis package (DDCT results, map book, and worksheet), and recommendations developed by consultation and review outlined herein will be forwarded to the appropriate permitting agency(s). WGFD recommendations will be included, as will other

recommendations from project proponents and other appropriate agencies. Project proponent shall have access to all information used in developing recommendations. Where possible and when requested by the project proponent, State agencies shall provide the project proponent with potential development alternatives other than those contained in the project proposal.

If the permit for which a proponent has applied expires, another DDCT analysis is required before issuing a new permit. An additional DDCT is not required for Permit extensions or renewals when no changes are being authorized.

The Executive Order in effect at the time of a complete formal application will remain in effect through the final permit.

Projects that have formally applied for a permit (e.g., CPCN, CUP, NOA, NOI, Initiation of scoping, other permits, or other official public action declaring the project, etc.) should comply with the Executive Order in effect when the project application was made. It is recognized that project planning and permitting can take years to move to a final permit.

EXEMPT ACTIVITIES

A list of exempt (“de minimus”) activities, including standard uses of the landscape is available in Attachment C.

GENERAL STIPULATIONS

These stipulations are designed and intended to maintain existing suitable Greater sage-grouse habitat by permitting development activities in Core Population Areas in a way that will avoid negative impacts to Greater sage-grouse.

General stipulations are recommended to apply to all activities in Core Population Areas, with the exception of exempt (“de minimus”) actions defined herein (see Attachment C) or specifically identified activities. The specific industry stipulations are considered in addition to the general stipulations.

Surface Disturbance

Core Population Area: Surface disturbance will be limited to 5% of suitable Greater sage-grouse habitat per an average of 640 acres over the entire DDCT assessment area. The DDCT process will be used to determine the level of disturbance. Distribution of disturbance may be considered and approved on a case-by-case basis. Unsuitable habitat should be identified in a seasonal and landscape context, on a case-by-case basis, outside the 0.6 mile buffer around occupied leks. This will incentivize proponents to locate projects in unsuitable habitat to avoid creating additional disturbance acres. The primary focus should be on protection of suitable habitats and minimizing habitat fragmentation. See Attachment F for a description of suitable, unsuitable habitat and disturbance.

Non-Core Population Area: There are no limitations to disturbance outside the 0.25 mile no surface occupancy buffer.

Surface Occupancy

Core Population Area: Within 0.6 miles of the perimeter of occupied Greater sage-grouse leks there will be no surface occupancy (NSO). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur. Seasonal protections are to be determined on principal usage of site by Greater sage-grouse. The primary purpose of the 0.6 restriction around leks is to avoid disturbing leking birds and to maintain habitat integrity (Holloran 2005, Hess and Beck 2012). This necessitates the limitation of traffic or infrastructure that would encourage human activity around occupied leks.

Non-Core Population Area: Within 0.25 miles of the perimeter of occupied Greater sage-grouse leks there will be NSO (Braun et al. 2002). NSO, as used in these recommendations, means no permanent surface facilities including roads shall be placed within the NSO area. Other activities may be authorized with the application of appropriate seasonal stipulations, provided the resources protected by the NSO are not adversely affected. For example, underground utilities may be permissible if installation is completed outside applicable seasonal stipulation periods and significant resource damage does not occur.

Seasonal Use

Core Population Areas (Holloran 2005): Activities will be allowed from July 1 to March 14 outside of the 0.6 mile perimeter of an occupied lek in Core Population Areas where breeding, nesting and early brood-rearing habitat is present.

Non-Core Population Areas (Braun et al. 2002, Dzialak 2011): Activity will be allowed from July 1 to March 14 outside of the 0.25 mile perimeter of an occupied lek. A 2-mile seasonal buffer from March 15 to June 30, applies to occupied leks where breeding, nesting and early brood-rearing habitat is present. Activities in unsuitable habitat may also be approved year-round on a case-by-case basis. Activities may be allowed during seasonal closure periods as determined on a case-by-case basis.

Special Considerations: Where credible data support different timeframes for these seasonal restrictions, dates may be shifted 14 days prior to or subsequent to the above dates, but not both.

Winter Concentration Areas: In areas identified as winter concentration areas, activities will be allowed March 14 to December 1. Activities in unsuitable habitat may also be approved year-

round on a case-by-case basis (except in specific areas where credible data shows calendar deviation). Activities may be allowed during seasonal closure periods as determined on a case-by-case basis.

Production and Maintenance Activities: Production and maintenance activities are exempt from seasonal use stipulations.

Geophysical Exploration

Geophysical exploration which includes minimal disturbance (3 inch diameter drill holes or just “vibrating”) may be permissible in accordance with seasonal stipulations. Staging areas should be located outside of Core Population Areas, covered through a DDCT process, or placed on existing disturbance.

Transportation

Locate new collector or arterial roads that will have relatively high levels of activity (accessing multiple wells, housing development) greater than 1.9 miles from the perimeter of occupied Greater sage-grouse leks (Lyons and Anderson 2003). Locate new local roads used to provide facility site access and maintenance greater than 0.6 miles from the perimeter of occupied Greater sage-grouse leks. Construct roads to minimum design standards needed for production activities.

Collector or Arterial Roads are single-lane or double-lane roads, with travel ways 12 to 24 feet in width. They collect traffic from local roads and connect to arterial roads or public highways. They are operated for intermittent or constant service.

Local Roads are single-lane roads with travel ways 12 to 14 feet in width. They connect terminal facilities, such as well sites, to collector, local, arterial, or other higher-class roads. They are operated for low-volume traffic.

Overhead Power Lines (Avian Power Line Interaction Committee (APLIC) 2015)

It will be necessary to construct significant new transmission infrastructure to transport electricity generated in Wyoming to out-of-state load centers. Currently, it is unknown what type of lines impact Greater sage-grouse populations, how, and to what extent (Messmer, et al. 2014). There will be new distribution and transmission lines that will need to be built to service existing approved projects.

For purposes of consistency with this Executive Order there is established a transmission line corridor through Core Population Areas in south central and southwestern Wyoming as illustrated on Attachment I. This 2-mile wide corridor represents the State of Wyoming’s preferred alternative for routing electric transmission lines across the southern portion of the state while reducing impacts to Core Population Areas and other natural resources.

New transmission lines constructed within corridors identified in this Executive Order (see Attachment I) or within ½-mile either side of existing or permitted (prior to August 1, 2008) 115 kV or larger transmission lines, creating a corridor no wider than 1-mile shall be considered consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1 and December 1 in Executive Order identified and mapped winter concentration areas). New transmission lines constructed within ½-mile either side of 115kV or larger transmission lines in existence or permitted prior to the date of this Executive Order and within Core Population Areas added as a result of this Executive Order, creating a corridor no wider than 1-mile, shall be considered to be consistent with this Executive Order if construction occurs within the corridor between July 1 and March 14 (or between July 1 and December 1 in Executive Order identified and mapped winter concentration areas).

New transmission lines outside the above described corridors but within Core Population Areas should be authorized or conducted only when it can be demonstrated that the activity will avoid negative impacts to Greater sage-grouse. If it is absolutely necessary to site new distribution and transmission lines through a Core Population Area outside of an existing corridor, lines should be sited to minimize negative impact on Greater sage-grouse or their habitats, and preferentially consider siting along or adjacent to existing long-term linear disturbance features whenever possible (i.e., along existing occupied above ground utilities or roads).

Proponents are encouraged to apply appropriate Best Management Practices (BMPs) specific to electric utility facilities (see APLIC 2015); otherwise, locate overhead lines at least 0.6 miles from the perimeter of occupied Greater sage-grouse leks.

Lines permitted but not located in an Executive Order transmission corridor will be counted towards the 5% disturbance calculation (line disturbance is equal to ROW width X length and includes all access roads, staging areas, and other permanent surface disturbance associated with construction outside of the ROW).

Noise

New project noise levels, either individual or cumulative, should not exceed 10 decibels (as measured by L_{50}) above baseline noise at the perimeter of a lek from 6:00 pm to 8:00 am during the breeding season (March 1 to May 15). Specific noise protocols for measurement and stipulations for implementation will be developed as additional research and information emerges.

Vegetation Removal

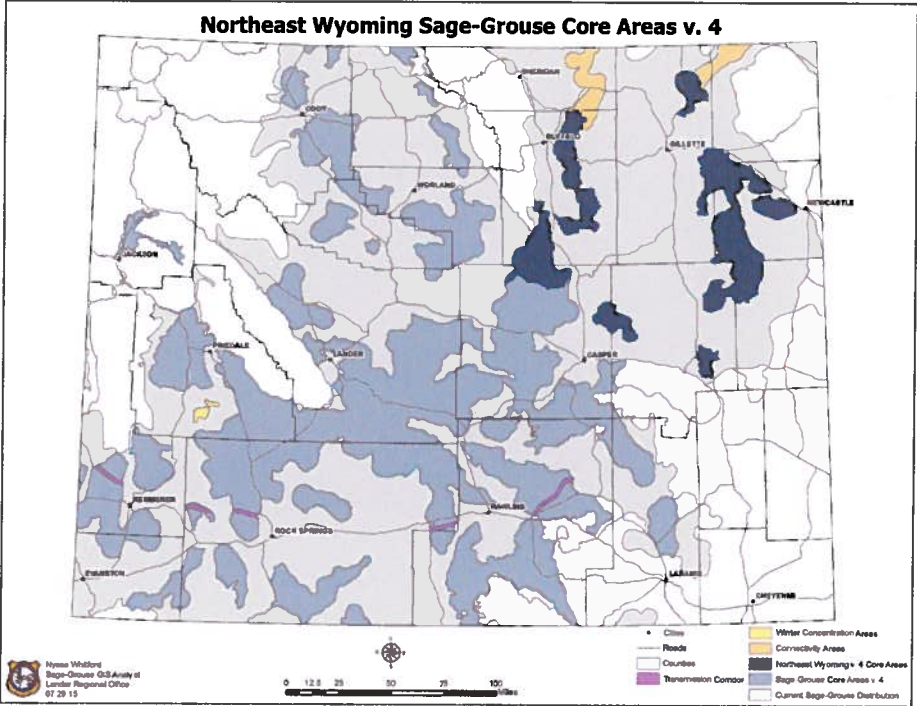
Vegetation removal should be limited to the minimum disturbance required by the project. All topsoil stripping and vegetation removal in suitable habitat is limited to between July 1 and March 14 in areas that are within 4-miles of an occupied lek. Production and maintenance activities (surface mining) outside seasonal stipulations are considered permissible once the vegetation is removed outside the seasonal stipulations. Initial disturbance in unsuitable habitat

between March 15 and June 30 may be approved on a case-by-case basis. It is important that the “viability” of the topsoil is maintained. A set of BMPs for protecting top soil are outlined in Attachment G.

Sagebrush Treatment

Sagebrush eradication is considered disturbance and will contribute to the 5% disturbance factor. Northeast Wyoming, as depicted in Figure 5, is of particular concern because sagebrush habitats rarely exceed 15% canopy cover and large acreages have already been converted from sagebrush to grassland or cropland. Absent solid demonstration that the proposed treatment will not reduce canopy cover to less than 15% within the treated area, habitat treatments in Northeast Wyoming (Figure 5) should not be conducted. In stands with less than 15% cover, treatment should be designed to maintain or improve sagebrush habitat. Sagebrush treatments that maintain sagebrush canopy cover at or above 15% total canopy cover within the treated acres will not be considered disturbance. The WGFD has developed a Vegetation Treatment Protocol (July 8, 2011 or updated version) for treating sagebrush to be consistent with this Executive Order. Treatments in Core Population Areas shall follow the Protocol or the treatment acreage may be considered disturbance.

Figure 5



Reclamation

Reclamation should re-establish native grasses, forbs and shrubs during interim and final reclamation to achieve cover, species composition, and life form diversity commensurate with the surrounding plant community or desired ecological condition to benefit Greater sage-grouse and replace or enhance Greater sage-grouse habitat to the degree that environmental conditions allow. Seed mixes should include two native forbs and two native grasses with at least one bunchgrass species. See Attachment E. Where sagebrush establishment is prescribed, establishment is defined as meeting the standard prescribed in the individual reclamation plan. Landowners should be consulted on desired plant mix on private lands. The operator is required to control noxious and invasive weed species, including cheatgrass. Rollover credit, if needed, will be outlined in the individual project reclamation plan.

Credit may be given for completion of habitat enhancements on bond release or other minimally functional habitat when detailed in a plan. These habitat enhancements may be used as credit for reclamation that is slow to establish in order to maintain the disturbance cap or to improve nearby Greater sage-grouse habitat.

Conditions for determining when disturbed lands are now considered suitable can be found in Attachment F.

Monitoring/Adaptive Response

Proponents of new projects are expected to coordinate with the permitting agency and local WGFD biologist to determine which leks need to be monitored and what data should be reported by the proponent. Certain permits may be exempted from monitoring activities pending permitting agency coordination. If declines in affected leks (using a three-year running average during any five year period relative to trends on reference leks) are determined to be caused by the project, the operator will propose adaptive management responses to increase the number of birds. If the operator cannot demonstrate a restoration of bird numbers to baseline levels (established by pre disturbance surveys, reference surveys and taking into account regional and statewide trends) within three years, operations will cease until such numbers are achieved.

PREEXISTING OIL AND GAS UNITS

In administering oil and gas plans of development in Core Population Areas, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements established prior to August 1, 2008 and the goals of this Executive Order. In administering oil and gas plans of development in Core Population Areas added as a result of this Executive Order, logical and systematic planning will occur in accordance with the terms of oil and gas unit agreements in existence prior to the date of this Executive Order and the goals of this Executive Order. This will be accomplished by concentrating activity within existing unit boundaries even if disturbance and density exceed Executive Order thresholds within the DDCT assessment area.

Each situation should be addressed with flexibility and an understanding of the local landscape, habitats, and other factors.

Federal oil and gas units in effect prior to August 1, 2008 are not subject to new Greater sage-grouse mitigation measures contained in Attachment B of this Executive Order with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage-grouse lek. Federal oil and gas units in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order are not subject to new Greater sage-grouse mitigation measures contained in Attachment B of this Executive Order with the exception that unit operators cannot initiate activities resulting in new surface occupancy within 0.6 miles of the perimeter of an occupied Greater sage-grouse lek.

For oil and gas development approved under the annual plan of development and associated surface disturbance proposals by the unit operator, the unit operator is required to complete the DDCT process including the appropriate worksheet when submitting those applications. It is understood that the level of existing and future development in pre-August 1, 2008 Federal oil and gas units may exceed Executive Order thresholds. It is understood that the level of existing and future development in Core Population Areas added as a result of this Executive Order for Federal oil and gas units may exceed Executive Order thresholds.

The DDCT results and worksheet completed for the pre-August 1, 2008 oil and gas unit activity will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring and to calculate existing and future planned disturbance. For activity in federal oil and gas units in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order, the DDCT results and worksheet completed will be used solely to track disturbance data inside the unit boundary to obtain baseline data for use in Executive Order monitoring and to calculate existing and future planned disturbance. Proponents and agencies are still expected to minimize surface disturbance whenever possible and follow all other existing, applicable lease stipulations. As projects are completed, as-built footprints will be collected and the disturbance layer updated with the as-built information.

For project proposals located outside unit boundaries, wherein a DDCT assessment area for the project proposal encompasses parts of pre-August 1, 2008 oil and gas units, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the BLM Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas Conservation Commission. For project proposals located outside unit boundaries established prior to the date of this Executive Order, wherein a DDCT assessment area for the project proposal encompasses parts of oil and gas units in Core Population Areas added as a result of this Executive Order, disturbance will be based upon the existing disturbance, annual plans of development, or other relevant information regarding development provided by the unit operator, the BLM Reservoir Management Group or other credible sources of information such as the Wyoming Oil and Gas

Conservation Commission. In the absence of an annual plan of development or other relevant information, the unit affected will be considered fully developed for the purpose of calculating existing disturbance per the DDCT process.

For new development inside the boundary of a Federal oil and gas unit in effect prior to August 1, 2008 that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order. For new development inside the boundary of a Federal oil and gas unit in effect prior to the date of this Executive Order within Core Population Areas added as a result of this Executive Order that is not directly related to oil and gas development (e.g., vegetation treatment or gravel pits), the project proponent will be required to comply with all aspects of this Executive Order.

SPECIFIC STIPULATIONS
(to be applied in addition to general stipulations)

Oil and Gas

Oil and gas well pads and associated infrastructure densities are not to exceed an average of one pad per square mile (1/640) and suitable habitat disturbed not to exceed 5% of suitable habitat within the DDCT assessment area. As an example, the number of well pads within a two mile radius of the perimeter of an occupied Greater sage-grouse lek should not exceed 11, distributed preferably in a clumped pattern in one general direction from the occupied lek.

Mining

For development drilling or ore body delineation drilled on tight centers, (approximately 100' X 100') the disturbance area will be delineated by the external limits of the development area. Assuming a widely-spaced disturbance pattern, the actual footprint will be considered the disturbance area.

Monitoring results will be reported annually in the mine permit annual report and to WGF. Pre-disturbance surveys will be conducted as required by the appropriate regulatory agency.

The number of active mining development areas (e.g., operating equipment and significant human activity) is not to exceed an average of one site per square mile (1/640) within the DDCT.

Surface disturbance and surface occupancy stipulations will be waived within the Core Population Area when implementing underground mining practices that are necessary to protect the human health, welfare, and safety of miners, mine employees, contractors and the general public. The mining practices include but are not limited to bore holes or shafts necessary to: 1) provide adequate oxygen to an underground mine; 2) supply inert gases or other substances to prevent, treat, or suppress combustion or mine fires; 3) inject mine roof stabilizing substances; and 4) remove methane from mining areas. Any surface disturbance or surface occupancy

necessary to access the sites to implement these mining practices will also be exempt from any stipulation.

Coal mining operations will be allowed to continue under the regulatory and permit-specific terms and conditions authorized under the Wyoming Environmental Quality Act (WEQA) and the Surface Mining Control and Reclamation Act of 1977 (SMCRA) as administered by the Wyoming Department of Environmental Quality (WDEQ).

- i. There is the expectation that coal activities as permitted under the WEQA and SMCRA will be implemented to protect Greater sage-grouse and their habitat in Core Population Areas to a high level.
- ii. In Core Population Areas, to avoid significant “negative” impacts to Greater sage-grouse, unsuitability criteria for state high sensitive species (i.e., Greater sage-grouse), will be applied to each coal lease application during the federal coal leasing process. This process includes consultation with the State to identify any lands within the application area that are essential for maintaining high priority wildlife (i.e., Greater sage-grouse). Where appropriate, BLM will find such lands to be unsuitable for further federal coal leasing consideration. Incorporation of new leases into existing mining operations is considered allowable by the State without further regulatory obligations under the Greater sage-grouse Core Area Protection strategy, beyond the current requirements under the WEQA and SMCRA.
- iii. In Core Population Areas, it is understood that there will be exceptions for minimal impacts due to existing mines as they expand their existing operations through modified mine plans and new leases.
- iv. The USFWS has agreed that SMCRA is an adequate regulatory mechanism to protect Greater sage-grouse (USFWS letter dated November 10, 2010). Permitting under the WEQA is required to be equally or more stringent than SMCRA (Section 503 SMCRA 1977).

Connectivity Corridors

See Attachment A.

The suspension of federal and state leases in connectivity corridors (see Attachment A) is encouraged where there is mutual agreement by the leasing agency and the operator. These suspensions should be allowed until additional information clarifies their need. Where suspensions cannot be accommodated, disturbance should be limited to no more than an average of 5% per 640 acres (DDCT Process) of suitable Greater sage-grouse habitat within connectivity corridors.

For protection of connectivity corridors (see Attachment A), a NSO buffer of 0.6 miles around occupied leks or their documented perimeters is required. In addition, a March 15 to June 30 timing limitation stipulation is required within nesting habitat within 4 miles of occupied leks.

Underground Rights of Way

The State of Wyoming and federal management agencies have worked to develop utility corridors in current Resource Management Plans (RMPs). One of the primary purposes of these utility corridors is to encourage placement of future linear development (i.e., pipelines, water lines, fiber optics, etc.) adjacent to existing infrastructure to reduce habitat fragmentation. It is the intent of this Executive Order to continue to incentivize co-location of new pipelines in RMP designated utility corridors. New pipelines proposed in RMP established utility corridors will be required to complete DDCT calculations prior to construction. To allow for accurate future DDCT calculations for projects adjacent to but outside the utility corridors, applicants will submit to the SGIT as-built construction diagrams within 60 days of construction completion that delineate all areas of temporary and permanent disturbance in Core Population Areas including the construction and permanent rights-of-way, roads, storage yards, laydown areas and extra temporary work spaces. The pipeline proponents are not expected to meet Executive Order thresholds within the utility corridor, but the project construction would be subject to appropriate seasonal timing stipulations. The locations of permanent above-ground facilities (such as block valves, compressors, etc.) will be subject to Executive Order thresholds if located outside the designated corridor. Pipelines outside RMP designated utility corridors, but in Core Population Areas, are required to comply with the 5% disturbance per the DDCT analysis.

Wind Energy Development

Wind development is not recommended in Greater sage-grouse Core Population Areas, but will be reevaluated on a continuous basis as new science, information and data emerges.

PROCESS DEVIATION OR UNDEFINED ACTIVITIES

Development proposals incorporating less restrictive stipulations or development that are not covered by these stipulations may be considered depending on site-specific circumstances. The proponent must have data demonstrating that the alternative development proposal will avoid negative impacts to Greater sage-grouse in Core Population Areas. Proposals to deviate from standard stipulations will be considered by a team including WGFD and the appropriate land management and permitting agencies, with input from the USFWS. To deviate from standard stipulations project proponents need to demonstrate that the project development would meet at least one of the following conditions:

- No suitable habitat is present in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and suitable habitat;

- No Greater sage-grouse use occurs in one contiguous block of land that includes at least a 0.6 mile buffer between the project area and adjacent occupied habitat, as documented by total absence of Greater sage-grouse droppings and an absence of Greater sage-grouse activity for the previous ten years; or
- Implementation of a development/mitigation plan that has demonstrated through previous research avoids negative impacts to Greater sage-grouse. The demonstration must be based on monitoring data collected and analyzed with accepted scientific based techniques.

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**EXECUTIVE ORDER 2015-4
ATTACHMENT C**

Exempt (“de minimis”) Activities

The following are considered “de minimis” activities:

1. Drilling and outfitting of agricultural or residential water wells (including tank installation, pumps, and agricultural water pipelines) more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek. New tanks shall have escape ramps.
2. Electric utilities are obligated by regulation to serve customers with safe and reliable electric service. Likewise, utilities must comply with agency Greater sage-grouse protective stipulations. In order to allow electric utilities the operational ability to provide and maintain service to their customers while affording adequate protection for Greater sage-grouse, distribution lines within 0.6 miles from an occupied lek are considered “de minimus” provided that: (1) construction of lines occurs from July 1 through March 14; (2) such lines are not constructed on the lek itself; and (3) a habitat evaluation has occurred. For general and operational maintenance activities of existing distribution lines, the electric utility shall use appropriate/applicable Best Management Practices for electric utilities (Avian Power Line Interaction Committee 2015). Coordination of ongoing activities with Wyoming Game and Fish Department (WGFD) is encouraged.
3. Preventative or required county road maintenance activities within the right-of-way (blading/smoothing, filling pot holes, graveling, culvert replacement, right-of-way maintenance, cattle guard maintenance, etc.) are considered “de minimis”. Road construction activities (vertical or horizontal realignment, roadway widening, new construction, bridge replacement, etc.) are not considered “de minimis” and may require completion of a Density/Disturbance Calculation Tool (DDCT) analysis (Pendleton 2015).
4. Authorized or required cultural, paleontological, and biological resource and land surveys.
5. Emergency response and public health and safety issues.
6. Existing animal husbandry practices (including branding, docking, herding, trailing, etc.).
7. Existing farming practices and reclamation seeding (excluding conversion of sagebrush habitats to agricultural lands).
8. Construction of agricultural reservoirs, less than 10 surface acres and more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided that development does not occur on the lek.

9. Construction of aquatic habitat improvements, less than ten wetland or water surface acres, more than 0.6 miles from the perimeter of an occupied lek. Construction within 0.6 miles is allowed from July 1 through March 14, after a habitat evaluation has occurred, and provided development does not occur on the lek.
10. Irrigation (excluding the conversion of sagebrush habitats to new irrigated lands).
11. Spring development; if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation. Fences should be constructed to be highly visible to Greater sage-grouse (i.e., buck-and-rail, steeljack, etc.) and/or marked to minimize collision potential.
12. New fencing more than 0.6 miles from the perimeter of an occupied lek. New fences or new stretches of fences, with high potential for collisions should be marked or be designed to minimize risk. Construction within 0.6 miles is permitted so long as construction does not occur from March 15 to June 30 or on the lek itself; coordination with WGFD is strongly suggested.
13. Maintenance of existing fence.
14. Herbicide applications within existing road, pipeline, and power line rights-of-ways, application within reclamation areas for weed control, application adjacent to structures or other applications for spot treatments. Pesticide treatment for Grasshopper/Mormon cricket control following Reduced Agent-Area Treatments protocol. Other required or authorized pesticide treatments for state or county listed species or vector treatments for other diseases such as West Nile Virus. All treatments must be done in accordance with regulations and labels. Coordination with Weed & Pest Districts is strongly encouraged.
15. Grazing operations that utilize recognized management approaches (allotment management plans, Natural Resource Conservation Service grazing plans, prescribed grazing plans, etc.).

It is Wyoming's primary premise that grazing activities are compatible with Greater sage-grouse conservation and may improve habitat for Greater sage-grouse. Grazing management practices maintain or enhance Wyoming rangelands. Properly managed rangelands are capable of sustaining robust Greater sage-grouse populations and a diversity of plant species important to Greater sage-grouse habitat. (USFWS, February 5, 2015, Memo to State Directors and Field Supervisors: Service Position on Livestock Grazing and Working with the Rangeland Owners to Conserve Sage-Grouse)

The State of Wyoming will collaborate with appropriate Federal agencies to: (1) develop appropriate conservation objectives; (2) define a framework for evaluating situations where Greater sage-grouse objectives are not being achieved on Federal land, to determine if a causal relationship exists between improper grazing (by wildlife, wild horses or livestock) and Greater sage-grouse conservation objectives; and (3) identify appropriate site-based action to achieve Greater sage-grouse conservation objectives within the framework.

If grazing adjustments are believed necessary to achieve Greater sage-grouse conservation objectives, coordination among land management agencies and permit/lease holders shall take place. Monitoring data used within the framework will, at a minimum: reflect 5 years of information, include rangeland health assessments, and require conclusion or action to be based on 3 out of 5 consecutive years of data (*i.e.*, Y1-2-3, Y2-3-4, Y3-4-5). These requirements may be waived in case of a catastrophic event such as fire. Further, the State recognizes there is a distinction between conservation objectives and land health standards and that it is possible to achieve land health standards while not achieving Greater sage-grouse conservation objectives and vice-versa. Federal agency participation in the implementation of this Executive Order in no way precludes them from managing federal surface for rangeland health.

**EXECUTIVE ORDER 2015-4
ATTACHMENT D**

Federal and State Permitting Agency Coordination

Background:

The Density/Disturbance Calculation Tool (DDCT) process and review of project compliance with Executive Order 2015-4 will be coordinated through the DDCT web application (ddct.wygisc.org).

The proponent should provide the most complete and comprehensive description of a project as possible. Splitting a project into smaller components can cause delay in review and could risk denial of a permit necessary for the entire project. It is recommended that proponents thoughtfully consider and include for review potential future development(s) and/or infrastructure associated with or that may be needed to support the current proposed project.

If the proponent has a concern that a project will not comply with this Executive Order, the proponent should contact the Wyoming Game and Fish Department (WGFD) and the appropriate land management and/or permitting agencies as soon as possible. Noncompliance with this Executive Order is not an automatic permit denial and all projects will be reviewed and potential impacts to local Greater sage-grouse populations and habitat will be assessed. Advanced planning with the permitting agencies and WGFD is the recommended way to resolve issues.

If the proponent submits a DDCT that is not in compliance, the agencies involved will need to discuss all options and potential impacts to local Greater sage-grouse populations and habitat. Initiating these discussions in advance of the final DDCT submittal may yield timelier review/decision results.

1. If federal surface/mineral is involved, the proponent works with the appropriate federal land management agency on the DDCT process and disturbance delineations, then:
 - The federal agency submits the DDCT (and worksheet) for technical review to the DDCT Data Steward at the Wyoming Geographic Information Science Center. The Data Steward will work with the federal agency in completing the technical review process (Note: the federal agency may use a contractor to make the corrections). When completed, the federal agency also submits the DDCT worksheet to the Data Steward.
 - Once technical review is completed, the Data Steward submits the DDCT final results and DDCT worksheet to WGFD Habitat Protection Program (HPP) for policy review.
 - WGFD HPP coordinates with state agencies and the federal agency if there are issues with Executive Order exceedances or compliance.
 - WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the federal agency and copies the proponent and permitting agencies that may also be involved in the project.

- If agencies have questions about the recommendations, they should contact WGFD HPP.
2. If federal surface or mineral is not involved, the project proponent (NOTE: could be a consultant) completes the DDCT process, then:
- Submits the DDCT to the Data Steward for technical review. The Data Steward will work with the proponent to complete the technical review process. When completed, the proponent submits the DDCT worksheet to the Data Steward.
 - The Data Steward submits the DDCT final results and DDCT worksheet to WGFD HPP for policy review.
 - WGFD HPP coordinates with state agencies if there are issues with Executive Order exceedances or compliance.
 - WGFD HPP sends a letter regarding Executive Order compliance and recommendations to the proponent and copies permitting agencies.
 - If agencies have questions about the recommendations, they should contact WGFD HPP.

Letters from WGFD:

Letters from WGFD will determine whether or not the project complies with the process and stipulations outlined in this Executive Order and may provide recommendations on whether the permit should be issued and/or recommendations on how impacts to the Greater sage-grouse may be minimized. State agencies will be the point of contact for conducting a DDCT analysis for locatable minerals. These recommendations may or may not be accepted by the permitting agency and incorporated in the conditions of the permit. If there are changes to the project, the proponent should complete the DDCT review process again.

The permitting agency should document whether or not the recommendations were accepted and incorporated as part of permit. If the permitting agency is unable to implement a recommendation, the agency should document the circumstances which preclude incorporation into the permit. For example, it is not within the agency's regulatory authority or it is not physically or legally possible to make the recommended changes.

**EXECUTIVE ORDER 2015-4
ATTACHMENT E**

Vegetation Monitoring for Suitability Criteria of Reclaimed Areas

Goal: Measurements that should be taken when there is uncertainty concerning the status of reclaimed areas contributing to suitable habitat.

If sagebrush canopy cover is 5%, or greater, as measured by the method described in the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework, it is considered suitable habitat.

When sagebrush canopy cover is less than 5%, but within 60 meters of greater than 5% sagebrush canopy cover, measure to determine compliance with the following conditions:

Measure for 2 (or more) desirable native grasses at least one of which is a bunchgrass in appropriate sites. The species present in the reclaimed area should be reflected in an appropriate reference site, described in the ecological site description (ESD) for the reclaimed site(s), or be representative of pre-disturbance species data. A reference site will be agreed upon and determined by the land management agency or owner, Wyoming Game and Fish Department and the proponent. It is recognized that reference sites could be numerous for linear features.

- The **frequency** of occurrence of grass is expected to meet or exceed 70% of the frequency of grass as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data. **Grass canopy cover** measurement is expected to meet or exceed 70% of the grass canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

Likewise, measure for 2 desirable native forbs.

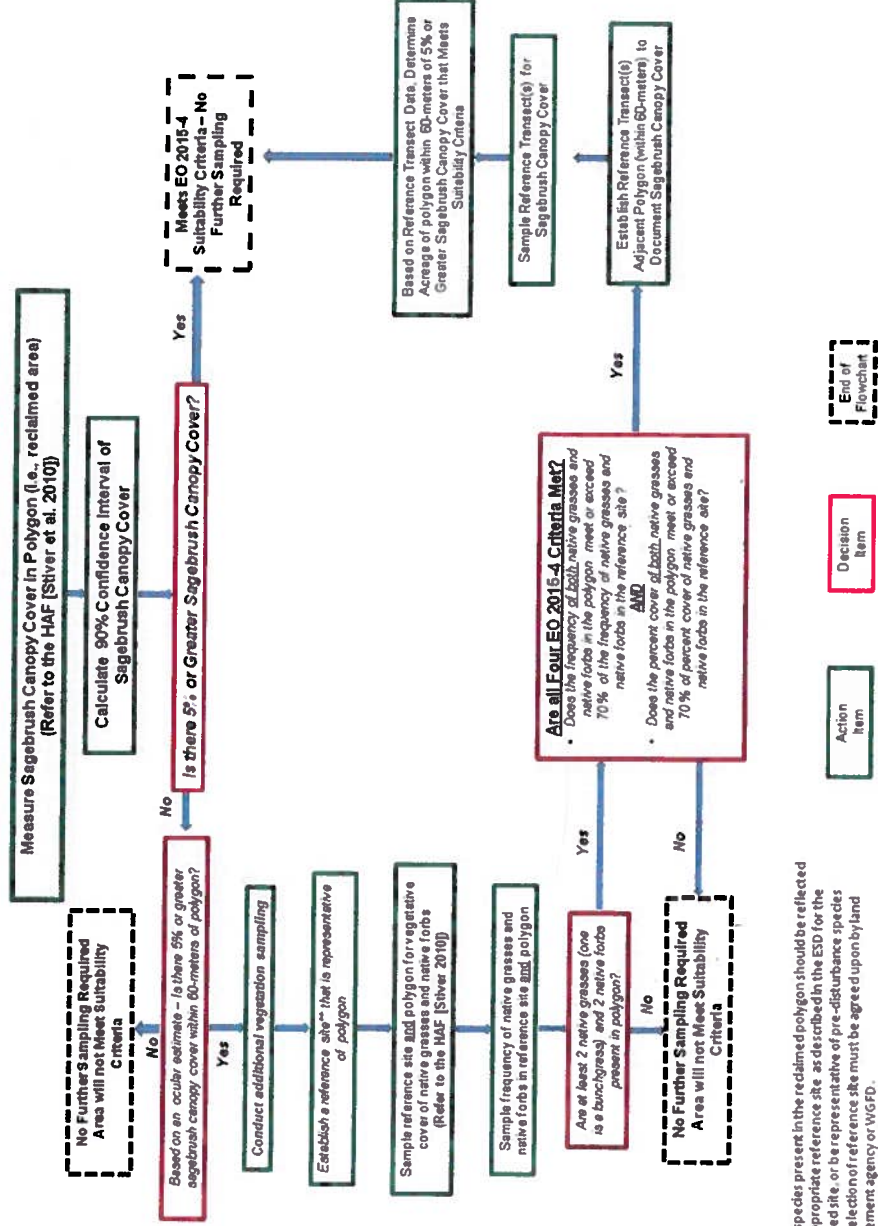
- The **frequency** of occurrence of forbs is expected to meet or exceed 70% of the frequency of forbs as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.
- Forbs **canopy cover** is expected to meet or exceed 70% of the forb canopy cover as measured on the reference site, as described in the ESD for the reclaimed sites(s), or as represented in the pre-disturbance species data.

Methodology

- Sampling timing for grasses, forbs, and shrubs is typically not later than July 1.
- Canopy cover for grasses/forbs: Line Point Intercept (see Habitat Assessment Framework).
- Frequency for grasses/forbs: Plot (rectangles, squares or circles) frequency computed as number of quadrats with the species of interest rooted within it, divided by the total

number of quadrats that are sampled. This value will be multiplied by 100 to yield frequency as a percentage. It is recommended that a minimum of 5 to 10 transects, 30 to 50 meters wide be conducted with a minimum of 10 to 20 quadrats (e.g. Daubenmire frame or quadrat appropriate to the site) placed equidistantly along each transect.

- Canopy cover for sagebrush: Line Intercept (see Habitat Assessment Framework).
- Sample size: The Habitat Assessment Framework provides sample size recommendations. Final estimates must include a 90% confidence interval computed around the mean values estimated from vegetation sampling.



**The species present in the reclaimed polygon should be reflected in an appropriate reference site as described in the ESD for the reclaimed site or be representative of pre-disturbance species data. Selection of reference site must be agreed upon by land management agency or WGFDF.

Decision-based Flowchart for Vegetation Sampling Methods and Suitability Determination (Source: TRC 2015)

**EXECUTIVE ORDER 2015-4
ATTACHMENT F**

Greater Sage-Grouse Habitat Definitions

Greater sage-grouse require somewhat different seasonal habitats distributed over large areas to complete their life cycle. All of these habitats consist of, are associated with, or are immediately adjacent to, sagebrush. An abbreviated description of a complex system cannot incorporate all aspects of, or exceptions to, what habitats a local Greater sage-grouse population may or may not utilize. Refer to the Bureau of Land Management's Sage-Grouse Habitat Assessment Framework for further information.

“Suitable” Greater sage-grouse habitat (nesting, breeding, brood-rearing, or winter) is within the mapped occupied range of Greater sage-grouse, and:

1. has 5% or greater sagebrush canopy cover (for nesting, brood-rearing and/or winter) as measured by the point intercept method. "Sagebrush" includes all species and sub-species of the genus *Artemisia* except the mat-forming sub-shrub species: *frigida* (fringed) and *pedatifida* (birdfoot);
2. is riparian, wet meadow (native or introduced) or areas of alfalfa or other suitable forbs (brood rearing habitat) within 275 meters of sagebrush habitat with 5% or greater sagebrush canopy cover (for roosting/loafing); or
3. is reclaimed habitat containing at least 2 native grasses (at least one bunchgrass in appropriate sites) and 2 native forbs (see Reclamation, Attachment B) and no point within the grass/forb habitat is more than 60 meters from adjacent 5% or greater sagebrush cover.

“Transitional” Greater sage-grouse habitat is land that has been treated or burned prior to 2011 resulting in less than 5% sagebrush cover but is actively managed to meet a minimum of 5% sagebrush canopy cover with associated grasses and forbs by 2021 (as determined by analysis of local condition and trend) and may or may not be considered “disturbed”. Land that does not meet the above vegetation criteria by 2021 should be considered disturbed.

Habitat treatments must meet the current Wyoming Game and Fish Department Protocols for Treating Sagebrush to be consistent with Executive Order 2015-4, Greater Sage-grouse Core Area Protection, or the habitat treated will be considered disturbed. Following wildfire, lands shall be considered “disturbed” pending an implemented management plan with trend data showing the area returning to functional Greater sage-grouse habitat.

- Areas burned by wildfire (after 2011) shall be treated as disturbed pending an implementation management plan with trend data showing the area returning to functional Greater sage-grouse habitat. This is specific only to wildfire. This direction is not intended for other incentive/mitigation/habitat treatment situations.

- The goal is to incentivize restoration of wildfire burns to return as much of the affected burned area back to suitable habitat as quickly as possible. This is a landscape effort and is not considered mitigation banking. This process should be used when wildfire is impacting the disturbance percentages.
- A Technical Team comprised of the U.S. Forest Service, Bureau of Land Management, Natural Resource Conservation Service, the Wyoming Game and Fish Department, Office of State Lands and Investments Forestry Division, Wyoming Department of Agriculture (Weed and Pest), local working groups, conservation districts and private landowners would develop the plan and trending data. It would be the responsibility of the project proponent to conduct the monitoring. An upward trend would be determined through the collection of five years of data and review by the Technical Team.

“Unsuitable” Greater sage-grouse habitat¹ is land within the historic range of Greater sage-grouse that did not, does not, and will not provide Greater sage-grouse habitat due to natural ecological conditions such as badlands, canyons or forests.

“Disturbed” suitable Greater sage-grouse habitat¹ is land that has been converted from formerly suitable habitat to grasslands, croplands, mined or otherwise physically disturbed areas. To evaluate the 5% disturbance cap per average 640 acres using the Density/Disturbance Calculation Tool (DDCT), suitable habitat is considered disturbed when it is removed and unavailable for immediate Greater sage-grouse use. These areas may provide habitat at some time in the future through succession or restoration. Disturbed suitable habitats could also include those permanent disturbances such as major reservoirs and cities that once were considered suitable.

The following items are guidelines for determining disturbed habitat for the DDCT process:

- a. Long-term removal occurs when habitat is physically removed through activities that replace suitable habitat with long-term occupancy of unsuitable habitat such as a road, well pad or active mine.
- b. Short-term removal occurs when vegetation is removed in small areas, but restored to suitable habitat within a few years of disturbance, such as a successfully reclaimed pipeline, or successfully reclaimed drill hole or pit.
- c. There may be additional suitable habitat considered disturbed between two or more long-term (greater than 1 year) anthropogenic disturbance activities if the activities are located such that Greater sage-grouse use of the suitable habitat between these activities is significantly reduced due to the close proximity (less than 1.2 miles apart, 0.6 mile from each activity) and resulting cumulative effects of these large scale activities. Exceptions

¹ The BLM Habitat Assessment Framework definition of “unsuitable” includes both “disturbed” and “unsuitable” habitats as defined above.

may be provided.

- d. Land in Northeast Wyoming (see Attachment B, Figure 8) that has had sagebrush removed post-1994 (based on Orthophoto interpretation), and not recovered to suitable habitat will be considered disturbed when using the DDCT.

**EXECUTIVE ORDER 2015-4
ATTACHMENT G**

Best Management Practices for Soils on Resource Extraction Sites

1. Get to know the nature of the soil(s) on the site where you are working. Good basic information can be obtained from the Natural Resource Conservation Service Soil Survey and more detailed information can easily be gathered by digging a few soil pits and testing some soil properties on the site (pH, Electrical Conductivity, Texture, Calcium Carbonate content and gravel content).
2. Topsoil should be removed from the site before resource extraction activities and stored in suitable stockpiles to protect this valuable resource from loss or contamination during resource extraction. Topsoil is important to timely site reclamation. Topsoil should be salvaged while at a low moisture content. Avoid mixing A horizons with B horizons if the B horizons are salty and or clayey.
3. Topsoil stockpiles should be located in an area where they will not be disturbed by resource extraction activities or contaminated by foreign or spilled materials. Movement of stockpiles should be kept to a minimum. Stockpiles should be designed to minimize exposure to erosional forces and bury as little undisturbed soil as possible.
4. Upon completion of resource extraction activities or interim reclamation, topsoil should be respread on the disturbed site to approximate original conditions. Vegetation should be reestablished on the replaced soil as quickly as possible to stabilize the site and prevent erosion. Regular monitoring should be conducted to be sure that revegetation and stabilization of the site proceed according to expectations and no site degradation occurs.
5. The use of commercial fertilizers is generally not recommended for native rangeland reestablishment due to the possibility of increased annual weeds. Soil testing should be completed prior to reestablishment of native plants on highly disturbed soils and, if necessary, the appropriate amendments should be used.
6. It is important not to over-estimate the amount of vegetation removal (habitat loss) in a given year.
7. In order to minimize impacts to soil resources, an alternative to large-scale advanced removal of soil is to skim the surface of the soil with a motor patrol between July 1 and March 14. This may be useful or applicable where operational plans are uncertain or where there is a desire to “live-spread” soils at some point in the period of March 14 – July 1.
 - Leave as much root intact as possible.
 - Leave vegetative biomass in wind-rows to reduce wind and water erosion.

8. If unexpected changes in operational plans require vegetation removal between March 14 and July 1, a nest survey shall be completed by a competent biologist within 1 week prior to any vegetation removal in suitable habitat. Results shall be submitted to the appropriate regulatory agency with a copy to Wyoming Game and Fish Department (WGFD). If a nest is discovered, operations will not be allowed to proceed until after July 1 or otherwise approved by WGFD.

Source: Peter Stahl and Jay Norton, Wyoming Reclamation and Restoration Center, University of Wyoming

**EXECUTIVE ORDER 2015-4
ATTACHMENT H**

Compensatory Mitigation

Compensatory mitigation is an essential component of a long-term conservation strategy, where avoidance and minimization are either inadequate or impossible to assure perpetuation of a species of concern. By its nature, compensatory mitigation may be applicable “on-site”, but may often be achieved more effectively “off-site” in order to maintain a landscape-scale result that is beneficial to a species, and not a particular population or group of animals. Compensatory mitigation must be secured prior to any negative impact to a species or its habitat occurs.

Compensatory mitigation that occurs “off-site” should meet the complete life-cycle needs of the species, be secured for an adequate time to assure the replacement of resources that are lost as a result of any negative action impacting the species, and be critically evaluated to provide adequate biological assurances that the initial impact, and any associated mitigation will maintain the species and its habitat until the impact has been removed and the species is recovered at the site of impact. Compensatory mitigation must provide an adequate ratio of assurance that the conservation of the species will not be compromised due to the failure of compensation measures to adequately protect the species, including management changes, natural disasters, and other impacts.

The State of Wyoming recognizes compensatory mitigation as a strategy that should be used when avoidance and minimization are inadequate to protect Core Population Area Greater sage-grouse. Any compensatory mitigation proposal must include approval from the State of Wyoming to assure the species considered is adequately protected, and that the benefits proposed for a species under the jurisdiction of the State of Wyoming are real, adequate, and fully realized prior to the time of acceptance.

**EXECUTIVE ORDER 2015-4
ATTACHMENT I**

