APPENDIX A—WYOMING GAME AND FISH DEPARTMENT PROTOCOLS FOR TREATING SAGEBRUSH IN GREATER SAGE-GROUSE HABITAT

Sagebrush treatments have been implemented or proposed with the assumption of benefiting sage-grouse. Research, monitoring, and anecdotal observations suggest that treatments can result in beneficial, benign, or harmful impacts to sage-grouse habitat depending on many known and unknown factors.

These protocols are to be used to guide the development of Wyoming Game and Fish Department (WGFD) sponsored or supported sagebrush treatments. The purpose of these protocols is to provide a framework for WGFD projects to ensure that they are consistent with sage-grouse core area and non-core area stipulations. This framework will not answer all questions associated with treatments. It is assumed that these protocols may be revisited as new science becomes available. Communication with the WGFD Director's Office or sage-grouse coordinator will be necessary for many situations.

A.1 CORE AREA TREATMENTS

The following sagebrush treatment protocols are designed to ensure future habitat treatments conform to the provisions of the Wyoming Governor's Executive Order 2011-5 (WY EO 2011-5), to conserve sage-grouse and prevent population declines in core habitat areas. Treatments that will NOT reduce sagebrush canopy cover to less than 15% are NOT subject to the Density/Disturbance Calculation Tool (DDCT) step prescribed below. However, such treatment proposals should still follow the other steps outlined in order to determine and document purpose and need, appropriately apply stipulations and monitor results. In northeast Wyoming core areas, treatments that will result in sagebrush canopy cover being reduced to less than 15% should not be conducted.

1. Determine and document the purpose and need for the treatment (adapted from Wyoming Interagency Vegetation Committee 2002):

    a. Evaluate the juxtaposition, extent, importance, and value of the sagebrush patch in the landscape (is this the only patch of sagebrush in the landscape?).

    b. Identify the sagebrush species/subspecies/variety and assess the ecological site potential and treatment effects.

    c. Determine the associated vegetation composition and condition (e.g., composition of desirable and non-desirable species and their response to treatment) and their contribution to wildlife habitat.

    d. Assess site potential and resilience of the site to recover.

    e. Assess other existing site influences (e.g., current grazing use, presence of noxious/exotic plant infestations, cumulative impacts, etc.).

    f. Evaluate past management history of the site.

    g. Establish post-treatment vegetation management objectives tiered to the management plan for the site.

    h. Create a baseline for short-term/long-term post-treatment monitoring of the site.

2. If there is justified purpose and need, then utilize the DDCT outlined in WY EO 2011-5 and conduct the prescribed analysis.

a. If the cumulative disturbance, including the proposed treatment, is less than 5% of suitable sage-grouse habitat as defined in the Executive Order, the project may proceed.

i. Recognize any treatment reducing sagebrush canopy cover to less than 15% will be considered disturbance for future disturbance calculations (adapted from Connelly 2000, Stiver et al. 2010).

ii. A project plan must be developed that considers, evaluates, and appropriately applies the following stipulations:

1) No treatment should occur within 0.6 mile of any occupied lek that results in less than 15% sagebrush canopy cover unless:

a) The proposed treatment is necessary to maintain the viability of the lek, such as removing conifers or sagebrush encroaching on the lek site.

2) Treatment implementation should not occur within 4 miles of any occupied lek from March 15 to June 30 (WGFD 2010).

3) Treatment implementation should not occur in designated and/or mapped sage-grouse winter concentration areas from November 15 to March 14 (WGFD 2010d).

4) Avoid the use of fire to treat sagebrush in less than 12-inch precipitation zones (Beck et al. 2009, Connelly 2000, Western Association of Fish and Wildlife Agencies [WAFWA] 2009).

5) Control and monitor noxious and/or invasive vegetation post-treatment.

6) Rest the treated area from grazing for two full growing seasons unless vegetation recovery dictates otherwise.

b. If the cumulative disturbance, including the proposed treatment, within the DDCT boundary, is greater than 5% of the suitable sage-grouse habitat and the goal of the treatment is to reduce sagebrush canopy cover to less than 15%, the project shall NOT proceed except when:

i. Acreage of treatment is reduced so cumulative disturbance does not exceed 5% of suitable habitat.

ii. The treatment is configured such that all treated habitat is within 60 meters of sagebrush habitat (adapted from Danvir 2002, Slater 2003, WGFD 2003d, Dahlgren et al. 2006) with 10% or greater canopy cover (Connelly et al. 2000) and no more than 20% of suitable sage-grouse habitat in the DDCT boundary is treated in this manner (adapted from Connelly et al. 2000).

3. Refer to the Bureau of Land Management/WAFWA Sage-Grouse Habitat Assessment Framework when conducting habitat evaluations to determine the need to treat sagebrush to enhance sage-grouse habitat and when devising standardized monitoring protocols to assess the effectiveness of treatments (Stiver et al. 2010).

4. In stands with less than 15% sagebrush cover pretreatment, any proposed treatment should be designed to maintain or improve sagebrush habitat (within the limits of the ecological site).

A.2 General Habitat Area Treatments

As is the case with industrial development outside of core habitat areas, there will be greater flexibility to conduct sagebrush treatments in general habitat areas. There can be more emphasis placed upon the habitat needs of species other than sage-grouse.

1. Determine and document the purpose and need for the treatment (adapted from Wyoming Interagency Vegetation Committee 2002):

a. Evaluate the juxtaposition, extent, importance and value of this sagebrush patch in the landscape (is this the only patch of sagebrush in the landscape?).

b. Identify the sagebrush species/subspecies/variety and understand the ecology and treatment effects.

c. Determine the associated vegetation composition and condition (e.g., composition of desirable and non-desirable species and their response to treatment) and their effects on wildlife habitat.

d. Consider site potential and resilience of the site to recover.

e. Assess the existence of other potential site influences (e.g., current grazing use, presence of noxious/exotic plant infestations, cumulative impacts, etc.).

f. Evaluate past management history of the site.

g. Establish post-treatment vegetation management objectives tiered to the future management plan.

h. Create a baseline for short-term/long-term post-treatment monitoring of the site.

2. Conduct the treatment.

3. Rest the treated area from grazing for two full growing seasons unless vegetation recovery dictates otherwise.

4. Monitor post treatment habitat conditions and grazing/browsing by ungulates to determine success.

5. Monitor and control noxious and/or invasive vegetation post-treatment.

A.2.1 Protocol Exceptions

Exceptions for treatments in core habitat areas will be considered only if it can be demonstrated by previous research the activity will not cause declines in sage-grouse populations. The demonstration must be based on monitoring data collected and analyzed with accepted scientific-based techniques.

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