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# Appendix M

Draft Greater Sage-Grouse Wildland Fire and  
Invasive Species Assessment



# **APPENDIX M**

## **DRAFT GREATER SAGE-GROUSE WILDLAND FIRE AND INVASIVE SPECIES ASSESSMENT**

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*The following process is a suggestion for a consistent approach in conducting an assessment of the GRSG habitat and wildfire threat at the local planning area level. Variations to this approach may be made based on ID team discussion or unique issues in a given planning area. This example format is intended to portray the degree of specificity required for offices which will complete these assessments. Note that this process has similarities to watershed analysis and ecoregional assessments, and as such these documents may prove useful where they exist.*

### **INTRODUCTION**

Greater Sage-Grouse (GRSG) Wildfire and Invasive Species Habitat Assessments (hereafter referred to as “stepdown assessments”) are interdisciplinary evaluations of the threats posed by wildfire and invasive species, as well as identification of priority areas/treatment opportunities for fuels management, fire management, and restoration. Priority areas are spatial delineations where treatments, management actions, or other emphasis should be placed due to factors such as habitat quality, threats, or opportunities to protect, enhance, and restore GRSG habitat. The stepdown assessments will serve as a bridge between RMPs and project level planning, and will position planning efforts to conduct project-scale NEPA following RMP Records of Decision.

The stepdown assessment process involves four steps, beginning with characterization of the planning area and concluding with spatial delineation of priority areas. The content and methods used by Forest Service and the Bureau of Land Management (BLM) in these documents should be consistent to ensure that priority areas are defined using similar criteria. These criteria and methods should be narratively described such that the US Fish and Wildlife Service (USFWS) and other audiences can understand the factors considered.

### **STEP I: CHARACTERIZATION OF GREATER SAGE-GROUSE HABITAT**

The purpose of this step is to broadly establish context of the planning area and sage-grouse habitat.

### **Location and Spatial Extent**

- Describe the location of the planning area, and the relationship of GRSG habitat within the planning area.

### **Relationship to the Larger Scale Setting**

- How does the planning area lie within the larger context of GRSG habitat?

### **Quantifying Habitat within Planning Area**

- Brief description of GRSG habitat described in terms of acreage, habitat classes (e.g., PPH, PGH, and/or PACs)
- Note: A summary map showing the planning area with habitat features is appropriate in Step 1. A tabular summary may also be included.

## **STEP 2: ISSUES AND KEY MANAGEMENT QUESTIONS**

The purpose of this step is to devise management questions related to the issues of fuels management, fire management, and restoration. Note that this step should not answer each management question. Rather, management questions are answered in Step 4 through specific, quantified data.

### **Overview**

- In coordination with state wildlife agencies, the FWS, and your interdisciplinary team, develop an introductory section here which describes why fire or vegetation conditions pose a threat to GRSG in the local planning area. Describe where fire or vegetation conditions are a significant threat to GRSG habitat, and where fire, fuels, and restoration activities may help enhance habitat. In a brief paragraph or two, summarize the relationships between wildland fire, fuels management and invasive species/restoration in the planning area. Examples would include annual grass/wildfire cycle, juniper encroachment into GRSG habitat, recently disturbed areas, etc.

### **Key Management Questions**

#### **Issue #1: Fuels Management**

- In narrative format, develop management questions such as:
  1. Based on fire risk to important GRSG habitats, what types of fuels treatments should be implemented that will reduce the risk? Where should fuels treatments be prioritized, and what's the amount of treatment acres/miles needed for long-term enhancement and protection of GRSG habitat?
  2. Based on opportunities for fire to improve/restore GRSG habitats, what types of fuels treatments should be implemented that will increase ability to allow fire? Where should fuels treatments be prioritized, and what amount of treatment is needed for long-term enhancement and protection of GRSG habitat?

3. What fuel reduction techniques will be most effective; including, but not limited to grazing, prescribed fire, chemical, biological and mechanical treatments?
4. What are the criteria for defining priority fuels management areas (example would be the intersection of high burn probability, PPH, lek locations, and established GRSG population)?
5. Are there opportunities to utilize a coordinated approach across jurisdictional boundaries?
6. Are there areas where fuel treatments help restore GRSG habitat as well as reduce risk?

**Issue #2: Fire Management**

- In narrative format, develop management questions such as:
  1. Where is the greatest wildfire risk, considering trends in fire occurrence, fuel conditions, and highly valued GRSG habitat?
  2. Where will fire suppression resources be most successful to mitigate the risk and protect GRSG Habitats?
  3. Where do opportunities exist that could enhance or improve suppression capability in important GRSG habitats?
    - a. For example, increased water availability through installation of heli wells or water storage tanks.
    - b. Decreased response time through pre-positioned resources or staffing remote stations.
  4. Where should wildfire be managed to achieve LUP objectives for improving or restoring GRSG habitat (limiting juniper expansion)?
  5. What are the criteria for defining priority fire management areas? An example would be the intersection of PPH, lek locations, and high burn probability.
  6. How can fire management be coordinated across jurisdictional boundaries to reduce risk or to improve GRSG habitat?

**Issue #3: Restoration**

- In narrative format, develop management questions such as:
  1. Are there opportunities for restoration treatments to protect, enhance or maintain GRSG habitat? Assume that funding is not a constraint, and describe which sites are biologically suitable for restoration to GRSG habitat in a reasonable period.
  2. Considering the entire planning area, what are the site conditions, such as dominant vegetation, elevation, or precipitation zones, where restoration efforts have been proven to be most successful in the recent past? An

example would be mountain sagebrush sites over 5000' in elevation, and in a 16" or greater precipitation zone.

3. What are the criteria for defining priority restoration areas? An example would be recent burns, moderately disturbed sites, or recovering allotment pastures which have not crossed ecological thresholds or become highly degraded. These may or may not be covered by existing ESR plans.
4. Are there opportunities to utilize a coordinated approach across jurisdictional boundaries?

### **STEP 3: CURRENT CONDITIONS AND TRENDS**

The purpose of this step is to develop information relevant to the issues and key questions identified in Step 2. It provides a snapshot of the present condition, statement of causal factors, and a summary of the trends which are occurring.

#### **Biological Summary of Vegetation, Invasive Species, and Fire Regimes**

[In this introductory section, provide a general biological summary of the planning area. Provide a narrative description of ecological trends, including description of plant communities, fire regimes, and other dominant biological factors affecting GRS habitat.]

- Describe how fire has influenced current vegetation patterns. Are there large areas of even-aged communities, fine-scale mosaics, annual grass monocultures?
- Describe if fire regimes are intact, or if they are altered. If they are altered, describe why. Use fire regime variables such as fire frequency, severity, or size to elucidate your points.
- Describe dominant cover types making up the planning area. These can be broad seral stage groupings, general life forms, or more fine-scale information such as plant associations, habitat types, or ecological systems. Note: this information should be available in the RMP or FMP.
- What has been the impact of fire exclusion (e.g., increased conifer encroachment or decadent shrub communities)?
- What is the current extent of annual grasses and other invasive species?
- What are the effects of invasive species on land health? On trends in plant succession? On fire regimes?

#### **Fuels Management**

- Describe current fuels management practices within the planning area (what are the types of fuels treatments commonly applied to which management issues)?
- How has past fuels management influenced today's planning area (e.g., creation of mosaics, protecting certain features, or increasing invasive species)?
- What are causal factors which have created a need for fuels management practices?
- What are the trends in the fuels management program related to budget or capability?

### **Fire Management**

- Describe the current fire suppression workload.
- Describe fire occurrence trends (include discussion of fire size, numbers of starts, ignition locations)
- Describe causal factors influencing suppression effectiveness.
- Describe suppression capabilities. Discuss types and numbers of resources within office, through interagency agreements, and through resource sharing

### **Restoration**

- Describe invasive species which are present in the planning area
- Describe landscape conditions which may be suitable for restoration within the planning area, and the results of recent restoration efforts in the planning area
- Describe invasive species occurrence
- Describe causal factors influencing restoration needs.

### **Methodology**

- What are the analysis methods to be utilized and analysis assumptions?

### **Use of best available Science**

- Describe data sets used, such as the FSIM layer and local data. (Many data sets being used in RMPs will also be applicable to stepdown assessments).
- What are the elements of science used?

## **STEP 4: IDENTIFICATION OF TREATMENT OPPORTUNITIES, PRIORITY AREAS, AND ACTIONS**

The purpose of this step is to utilize the information from steps 2 and 3 in order to quantify the overall need for treatment or other actions. Specifically, this step should spatially identify and quantify priority areas, using the criteria established in Step 2. Next, this step should identify treatment opportunities which fall within priority areas. Furthermore, treatments should be prioritized and an implementation schedule developed, reflecting the reality that not every acre in need of treatment can receive action within the planning horizon.

### **Fuels Management**

- Spatially delineate priority areas for fuels management, based upon criteria established in Step 2. Fuels priority areas should be delineated by type, such as:
  - Linear fuel break along roads
  - Other linear fuel breaks to create anchor points
  - Prescribed burning
  - Mechanical (e.g., conifer removal)
  - Other mechanical, biological, or chemical treatment
- Quantify the number of acres of needed fuels treatments.

- If they exist, spatially delineate areas where fuel treatments would increase the ability to use fire to improve/enhance GRSG habitat?
  - Include tables, maps, or appropriate info.
- Identify coordination needed between renewable resource, fire management, and fuels management staff to facilitate planning and implementation of fuels treatments.
- Quantify a projected level of treatment within fuels management priority areas.
- Identify treatments to be planned within fuels management priority areas.
- Include a priority or implementation schedule for proposed treatments.

### **Fire Management**

- Spatially delineate priority areas for fire suppression, based upon criteria established in Step 2. Priority areas for fire management should be delineated by type, such as:
  - Initial attack priority areas
  - Resource pre-positioning and movement priority areas
  - Remote station staffing priority areas, if appropriate
  - Include tables, maps or other supporting information
- Quantify the number of acres of GRSG habitats for aggressive initial attack that were identified at highest risk from losing key habitat components.
- Quantify the number and type of suppression resources that will be staged or otherwise pre-positioned, as well as the associated conditions, in order to enhance initial attack capabilities.
- Spatially delineate areas where opportunities exist to enhance or improve suppression capability.
  - Include tables, maps or other supporting information.
- Spatially delineate areas where wildfire can be managed to achieve RMP objectives.
  - Include tables, maps or appropriate information.
- Quantify the number of acres within fire management priority areas.
- Include a priority or implementation schedule for fire suppression proposed actions.

### **Restoration**

- Spatially delineate priority areas for restoration, using criteria established in Step 2. Priority areas for restoration should be delineated by type, such as:
  - Seeding priority areas (aerial, drill, broadcast, or other)
  - Invasive species priority areas (herbicide, mechanical, biological, combination)
  - Priority areas requiring combinations of treatments (e.g., herbicide followed by seeding)

- Include tables, maps or appropriate info.
- Identify locations where post-fire restoration treatments should be focused.
  - Include tables, maps or appropriate info.
- Spatially identify invasive species occurrence
- Identify coordination needed between renewable resource, fire management, and fuels management staff to facilitate planning and implementation of restoration treatments.
- Quantify the projected level of treatment within restoration priority areas.
- Identify treatments to be planned within restoration priority areas.
- Include a priority or implementation schedule for proposed restoration treatments.

**Annual Treatment Needs**

1. Based on the information above and within the planning area, what are the annual needs based on the key questions and summary statements?

**Annual Treatment Abilities**

1. Putting GRSB habitat protection and enhancement into perspective with other high valued resources and important land management goals, how does the annual need relate to capabilities?
2. What are the realistic annual expectations in fire management, fuels management, and restoration for the next 5 years?

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