4. Fire and Fuels Management					
Issue 4.1	Fire and fuel treatments may impact GrSG				
Objective 4.1.1	Wildfire – impacts to habitat				
Reference Number	**Conservation Strategy**	**Responsible Parties**	**Timeline**	**Implementation**	**Effectiveness**
4.1.1.1	Plan fire suppression response to potential wildfires in important GrSG habitat. Schedule annual coordination meetings and share fire response and GrSG seasonal habitat information with county, fire district, and federal fire fighting officials to plan and implement appropriate response to wildfires in these areas. Lek and telemetry data are considered sensitive information by CDOW. Limit data distribution to the extent necessary for effective management.	BLM	Annually		
4.1.1.2	Train and use resource advisors to assist with considering sage-grouse conservation in prioritizing response to fire during multiple ignition episodes. Distribute sage-grouse information updates to fire dispatchers for initial attack planning. [See also Information, Communication, and Education Strategy 12.3.1.1]	BLM	Training: annually; Updates: as needed	**BLM:** BLM provides annual training to local resource advisors, and emphasizes SG conservation thru IM WO-2011-138. Resource advisors have access to the most current local SG data available.	
4.1.1.3	Burn-out/backfiring operations, dozer line construction, and other suppression activities in GrSG habitat should be conducted in a manner, and if possible in a location, that minimizes the loss of sagebrush, while still providing for public and fire crew safety.	BLM	As needed	**BLM:** SG occupied habitat is considered when identifying techniques and location for fire fighting efforts.	
4.1.1.4	Where practical, locate fire camps, staging areas, and helibases at least 2 miles away from GrSG leks, and preferably outside of GrSG habitat.	BLM	Annual discussion with FMOs	**BLM:** SG occupied habitat is considered when identifying high traffic areas for fire fighting efforts.	
4.1.1.5	Fire specialists and wildlife biologists should review and update area Wild Fire Management Plans in GrSG habitat every 5 years, or as necessary due to increased fire activity or risk.	BLM	Every 5 years	**BLM:** These fire plans are reviewed annually and signed by Field Office Managers following a review checklist. If SG issues are brought forward, additional review may occur.	
4.1.1.6	Manage habitat mosaics and fuel loads in and adjacent to GrSG habitats to minimize the possibility of catastrophic wildfires, while maintaining sage-grouse habitat quality (see CCP Appendix A, “GrSG Structural Habitat Guidelines”.	BLM	Annually as crews available	**BLM:** Fuel projects under WUI (Wildland Urban Interface) or those proposed for SG habitat improvement consider SG habitat objectives in their design and implementation.	
4.1.1.7	Map all wildfire, prescribed burns, and fuel treatments in GrSG habitat within one year of occurrence, and develop a GIS layer of “vegetation modification” history (see “Habitat Monitoring” strategy, pg. 354; see also strategy 4.1.2.9). Track cumulative historic wildfire events under the umbrella of local fire management plans.	BLM	Annually	**BLM:** In January 2013, a national fire perimeter data call will be conducted bringing our fire map data (historic and current fires, > 10 ac) in line with national data standards. It will be updated on an annual basis after this.	
4.1.1.8	Conduct post-fire operation reviews/evaluations in areas where fires were large enough or intense enough to cause long-term degradation of GrSG habitat. The intent is to improve fire fighting priority setting, tactics, or resource availability in preparation for potential fires in sage-grouse habitat. The urgency of the review depends on when in the fire season the fire occurred, how typical or significant it was, and if there are clearly opportunities to identify and fix problems resulting from individual fires, and to learn important lessons.	BLM	Only as needed or warranted	**BLM:** One major fire has occurred on BLM in GRSG habitat since 2008. No issues were identified relative to fire fighting operations & procedures.	
4.1.1.9	At the wildland-urban interface bordering sagebrush habitats, increase public education and implement fuel reduction projects to reduce the risk of human-caused fires escaping into GrSG habitats (examples include pamphlets, news releases). [See also Information, Communication, and Education Strategy 12.2.1.3]	BLM	Annually and as needed during fire season	**BLM:** If issues are brought forward in the wildland - urban interface near SB habitat, a project is submitted under the WUI program.	
4.1.1.10	During annual training for fire fighting personnel, increase awareness of issues and potential impacts of fire and suppression activities in GrSG habitats. **[See also Information, Communication, and Education Strategy 12.3.1.1]**	BLM	Annually	**BLM:** Emphasis on SG management is part of the annual fire fighting training.	

4. Fire and Fuels Management					
Objective 4.1.2	Prescribed burns and fuel treatments – impacts to habitat				
Reference Number	**Conservation Strategy**	**Responsible Parties**	**Timeline**	**Implementation**	**Effectiveness**
4.1.2.1	Use prescribed burning and mechanical fuels treatments at an appropriate scale (i.e., smaller is better) to maintain or improve the quality and quantity of GrSG habitats. Consider fire scale, seasonality, and moisture regime from a GrSG habitat management perspective (as well as air quality issues, as guided by state regulations) in planning prescribed burns (see "Habitat Enhancement Strategy" [pg. 349] and Monsen 2005).	BLM	During project planning	**BLM:** All habitat and fuels projects conducted by BLM consider SG habitat objectives & site capability in their design, analysis and implementation.	
4.1.2.2	All prescribed burns or mechanical fuel treatments within sagebrush areas should have identified GrSG habitat objectives, and should consider existing sagebrush communities, site conditions, and site potential in treatment design (see "Habitat Enhancement Strategy" [pg. 349] and Monsen 2005).	BLM	Project - dependent	**BLM:** All habitat and fuels projects conducted by BLM consider SG habitat objectives & site capability in their design, analysis and implementation.	
4.1.2.3	In xeric (dry) occupied and potential GrSG habitat, design prescribed burns that are small, irregular in shape, and that encourage natural reestablishment of the native plant community. For burns that are larger than 5 acres in xeric sites in occupied or potential GrSG habitat, encourage sagebrush rehabilitation with appropriate seed mixture (see "Habitat Enhancement" strategy, pg. 349, and CCP Appendix D, "Recommendations Regarding Plant Species for Use in GrSG Habitat Management and Restoration").	BLM	As needed	**BLM:** All habitat and fuels projects conducted by BLM consider SG habitat objectives & site capability in their design, analysis and implementation.	
4.1.2.4	Avoid fire or mechanical fuel reduction treatments within GrSG habitat in areas susceptible to invasion by cheatgrass or other invasive plant species, except where they are part of a well-defined and aggressive restoration program (see "Habitat Enhancement" strategy, pg. 349).	BLM	As needed	**BLM:** All habitat and fuels projects conducted by BLM consider SG habitat objectives & site capability in their design, analysis and implementation.	
4.1.2.5	In areas where sagebrush is limited on the landscape, avoid the use of prescribed fire and other sagebrush reduction projects in areas that currently meet GrSG breeding or winter habitat requirements (see "Habitat Enhancement" strategy, pg. 349 and CCP Appendix B, "GrSG Disturbance Guidelines").	BLM	During project planning	**BLM:** All habitat and fuels projects conducted by BLM consider SG habitat objectives & site capability in their design, analysis and implementation.	
4.1.2.6	Protect sagebrush adjacent to riparian zones, meadows, lakebeds, and croplands that include important GrSG summer habitat.	BLM	During project planning	**BLM:** SG habitat objectives are considered before planning any treatment project in SG habitat. Therefore, important existing SB habitat adjacent to riparian areas that may provide brood rearing or summer habitat will be maintained.	
4.1.2.7	To avoid introduction of noxious weeds in GrSG habitat, wash vehicles and heavy equipment for fires and mechanical fuel reduction treatments prior to arrival at a new location (see "Weeds" strategy, pg. 425).	BLM	As needed	**BLM:** This is a BMP that is applied when appropriate through NEPA on projects in SG habitat.	
4.1.2.8	Consider recent drought events and their effects on GrSG habitat (e.g., understory vigor) when planning/implementing fire or fuel reduction treatment projects (see "Weather" strategy, pg. 423).	BLM	During project planning	**BLM:** All habitat and fuels projects conducted by BLM consider SG habitat objectives & site capability in their design, analysis and implementation.	
4.1.2.9	Map all burns and fuel treatments in GrSG habitat within one year of occurrence, and develop a GIS layer of "vegetation modification" history (see "Habitat Monitoring" strategy, pg. 354; see also strategy 4.1.1.7).	BLM	Annually	**BLM:** All Burns & fuel treatments will be mapped per National BLM data standards early in 2013.	
Objective 4.1.3	All fire and fuel treatments – direct impacts to GrSG				
Reference Number	**Conservation Strategy**	**Responsible Parties**	**Timeline**	**Implementation**	**Effectiveness**

4. Fire and Fuels Management					
4.1.3.1	Schedule prescribed burns and/or fuel treatment projects in sagebrush habitat to avoid, when possible, the GrSG seasonal use period for that area (e.g., breeding, winter; see also CCP Appendix B "GrSG Disturbance Guidelines").	BLM	During project planning	**BLM:** Timing limitations are placed on proposed habitat or fuels reduction projects in SG habitat to protect birds during the appropriate seasonal use period.	**BLM:** Limit disturbance to the bird. See CCP, disturbance guidelines for discussion & references.
4.1.3.2	When treating sagebrush areas to reduce fuels within 0.6 miles of a GrSG lek, maintain adequate canopy cover for sage-grouse (see "Breeding Habitat" in "GrSG Habitat Structural Guidelines", CCP Appendix A). Lek data are considered sensitive information by CDOW. Limit data distribution to the extent necessary for effective management.	BLM	During project planning	**BLM:** Fuels treatments avoid the .6 mi area around a lek to protect the integrity and use of the lek site.	
Objective 4.1.4	Post-burn and -treatment habitat restoration				
Reference Number	**Conservation Strategy**	**Responsible Parties**	**Timeline**	**Implementation**	**Effectiveness**
4.1.4.1	Monitor all wildfires or prescribed burns in the first 3 growing seasons post-fire, and then every 5-10 years for noxious or invasive weeds. Treat accordingly.	BLM	As needed per fire event	**BLM:** One major fire has occurred on BLM in GRSG habitat since 2008. It was treated (restoration seeding) thru the ES&R program which includes a minimum of 3 years subsequent monitoring. Additional monitoring is encouraged, and schedules are based on objectives & funding. Monitoring of smaller fires is typically conducted to determine if project objectives have been met. Schedules depend on objectives (short & long-term), staffing and funding.	
4.1.4.2	All wildfires or prescribed burns greater than 10 acres in size that are subject to cheatgrass invasion will be seeded with an appropriate seed mixture (i.e., avoid undesirable grass species; see CCP Appendix D, "Recommendations Regarding Plant Species for Use in GrSG Habitat Management and Restoration" and Monsen 2005), to reduce the probability of cheatgrass establishment (see also "Habitat Enhancement" strategy, pg. 349).	BLM	As needed per fire event	**BLM:** All fires are evaluated to determine if reseeding is a desirable or necessary management tool.	
4.1.4.3	Annually evaluate all recent wildfires and prescribed burns (greater than 10 acres), and reseed if necessary to achieve GrSG habitat objectives (see "Habitat Enhancement" strategy, pg. 349).	BLM	Annually	**BLM:** All fires are evaluated to determine if reseeding is a desirable or necessary management tool.	
4.1.4.4	Ensure that GrSG habitat considerations are incorporated into restoration and burn rehabilitation plans. Use BMPs and grazing management alternatives (see CCP Appendix E, "Grazing Management Options for GrSG") for land management practices following wild and prescribed fire events (see also Monsen 2005, "Habitat Enhancement" [pg. 349], "Recreational Activities" [pg. 407] and "Grazing" [pg. 342] strategies).	BLM	During project planning	**BLM:** One major fire has occurred on BLM in GRSG habitat since 2008. It was treated (restoration seeding) thru the ES&R program with an emphasis on restoring SG habitat.	
4.1.4.5	Evaluate the response of GrSG habitat (see "Habitat Monitoring" strategy, pg. 354) to all burns and mechanical fuel reduction treatments (be certain to consider the need for weed control in the area).	BLM	Annually	**BLM:** Habitat projects on BLM are typically monitored to determine effectiveness in meeting the project objective. The schedule of monitoring is dependant on the objective (short & long term), staffing and funding.	

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4.1.4.6	Incorporate ecologically appropriate sagebrush seed into fire rehabilitation seed mixtures as often as possible in GrSG habitat (see CCP Appendix D, “Recommendations Regarding Plant Species for Use in GrSG Habitat Management and Restoration”) and Monsen 2005.	BLM	During re-seeding plan	**BLM:** All ES&R plans, as well as, other reseeding projects in SG habitat incorporate the use of SB seed when appropriate.	
4.1.4.7	Encourage and strongly support the development of production and storage facilities for native seed in Colorado, including native seed banks, for use in reclamation efforts (see “Habitat Enhancement” strategy 7.1.1.5). Emphasize the use of native plants following burns/treatments in GrSG habitat whenever possible.	BLM	Annually	**BLM:** Although BLM has strongly supported and funded local native plant efforts thru the Uncompahgre Plateau Partnership and Meeker Plant Center over the last decade, we are not funding or developing a local storage facility. BLM is developing a new seed storage warehouse in Ely, Nevada. BLM has access to native seeds (including storage) at multiple national seed warehouse sites.	
4.1.4.8	When reseeding an area in GrSG habitat, use certified "weed-free" seeds (see “Habitat Enhancement” strategy 7.1.1.6 and “Weeds” strategy section, pg. 425).	BLM	During re-seeding plan	**BLM:** BLM policy requires the use of certified weed-free seed on all public lands managed by the BLM. Straws or mulches applied as part of seeding, stabilization, or restoration projects on public lands must be certified to be weed seed-free as part of this policy.	
4.1.4.9	Rehabilitate firelines or trails caused by equipment use during fire fighting activities in GrSG habitat (see “Habitat Enhancement” strategy, pg. 349).	BLM	Post-fire	**BLM:** Large scale fires are reclaimed using the ES&R program (Emergency Stabilization & Restoration). Small scale fires are reclaimed thru site specific NEPA on a cases by case basis. GRSG habitat needs are considered in both these actions where appropriate.	
4.1.4.10	Identify and secure funding to support post-fire restoration efforts in GrSG habitat.	BLM	Annually	**BLM:** BLM prioritizes restoration needs and ES&R funding on a National and State level. Important SG habitat is a priority for such efforts.	