4.4.6.2 – Prescribed Fire Operational Controls

Aspect/Impact Combination: Prescribed Fire. Potential impacts included: Species of Concern and Vegetative Diversity.

Prescribed Fire is a tool used to mimic natural ecological conditions and events found in the Grasslands/Forests environment. The Pike/San Isabel National Forests and Cimarron/Comanche National Grasslands (PSICC) use this tool to specifically manage vegetative diversity, species of concern, as well as others. However, before any fire prescription can be implemented permits must be issued. The Colorado Air Pollution Control Division requires a permit for each prescribed burn project to be implemented, Kansas does not require a Air Pollution permit ; Las Animas County issues a "Controlled Burning Permit" via Kim Volunteer Fire Department for all controlled burns within Las Animas County; finally, Morton County, Kansas requires a permit for all open burning within its jurisdiction.

The Forest Service is required to evaluate potential effects of Prescribed Fire in accordance with the National Environmental Policy Act (NEPA). NEPA analysis considers legal, policy and regulatory requirements that must be incorporated into project design and implementation. The project-specific NEPA decision document (i.e. Decision Memo, Decision Notice, or record of Decision) is developed for both the permitting of use and the administration of that use.

Prescribed Fire Burn Plans are required before any prescription can be implemented and specifies how prescribed fires will be managed including weather, fire behavior, ignition patterns, smoke management, and provisions to protect other resources, among many others which are needed to implement the prescription. A site specific prescription will be developed for each prescribed fire or a single prescription may be used to implement several projects within a District. The prescription is then analyzed pursuant to the NEPA. Prescription elements will include rate of spread, probability of ignition, fireline intensity, and flame length. These elements control fire intensity and thus have a direct effect on whether or not desired ground cover remains after burning, and whether or not a water-repellent layer is formed in the soil. Therefore, elements such as methods of fire initiation, location, control, access, and intensity are generally included in any Prescribed Fire Burn Plan.

Operational Controls described below apply to Prescribed Fire. The more formal process described below will be effective upon final approval and "turn-on" of the EMS.

Step 1 – Initiating the development of the prescription.

The appropriate line officer (Forest Supervisor or District Ranger) is responsible for initiating the development of the prescription using a project initiation letter. Once this is completed, the decision document is reported in the Schedule of Proposed Action (SOPA). The Project Initiation Letter is filed under file codes 5140 and 1950 at the District. (Note: Project Initiation Letter is only needed for projects requiring an EA or EIS. Most fire projects are done under CE's, therefore do not require Project Initiation Letters).

What:	Draft project initiation letter	
Who:	District Ranger	
How:	Draft letter	
When:	Initial planning.	

Step 2 –Preparing prescription (burn plan).

The fire prescription is prepared by the Zone FMO and is reviewed by the Forest FMO and Forest Fuels FMO. The prescription is incorporated into a Prescribed Fire Burn Plan (RxBP) by the Zone FMO.

Elements needed to be included in NEPA are identified by the Zone Specialists. These elements and/or respective mitigation measures are also incorporated into the RxBP as needed.
A RxBP is an operational document that specifies how a prescribed fire will be managed. Considerations such as fuel moisture, season, soil moisture and fire behavior elements are needed to complete the prescription. A site specific prescription will be developed for each prescribed fire or a single prescription may be used to implement several projects within a District. The prescription is then analyzed pursuant to the NEPA by the Zone or SO FMO. Prescription elements will include rate of spread, probability of ignition, fireline intensity, and flame length. These elements control fire intensity and thus have a direct effect on whether or not a desired ground cover remains after burning, and whether or not a water-repellent layer is formed in the soil.
Items such as vegetative desired conditions that have been established in the Land and Resource Management Plan are used as guidance to establish where prescribed burning may occur. These desired conditions are based on a variety of factors, including seral stages and wildlife habitat in which both promote vegetative diversity.

The RxBP is approved by the appropriate line officer.

What:	Develop prescriptive burn plan and determine how it relates/affects species of concern and vegetative diversity	
Who:	FMO, resource specialists	
How:	These plans are developed by incorporating direction from the Fire Management Plan, input from Specialists.	
When:	After Project Initiation and after NEPA review.	

Step 3 – Test Fire

ID team, or district team meets to determine if constraints within the prescription are met. The data is submitted to the line officer or burn boss for decision to proceed or not proceed with the test fire. Pre-review of prescription is required before test is conducted. A checklist may be used for planning. Once checklist is completed, and the conditions are within acceptable parameters, the test fire may begin. If this test fire stays within prescription, then the prescribed fire may proceed. If this test fire does not stay within prescription, then the prescribed fire may not proceed.

What:	Test fire	
Who:	District FMO and staff (Burn Boss, FBAN)	
How:	Implement burn according to Prescribed Fire Burn Plan (which includes Prescription Parameters)	
When:	Following NEPA analysis and decision processes and before implementation of prescription	

Step 4 – Implement prescription

If all elements/requirements of prescription are met, the burn can be implemented as long as conditions still fall within prescription as they did during the test fire.

What:	Begin Prescribed burn	
Who:	Burn Boss, Line Officer	
How:	Use RxBP as direction	
When:	Following test fire	

Step 5 – Monitoring prescription - post burn

Monitoring data collected during the burn includes weather, fire behavior and First Order Fire Effects (FOFE) observations. This data is used to determine whether or not the burn is within the limits of the RxBP. This data is documented in the RxBP filed under file code 5140. If fire exceeds prescription, operations move to correct under Step 6. After the burn, vegetative

diversity and species of concern are monitored. This data is used as a measure of meeting the objectives of the burn such as the degree of residual cover for lesser prairie chicken nesting habitat. Population monitoring for species of concern includes lesser prairie chicken lek counts in collaboration with Colorado Division of Wildlife and Kansas Wildlife and Parks, mountain plover point counts at prairie dog colonies and recent prescribed burns/wildfires in shortgrass prairie, and GPS surveys of prairie dog colony boundaries. This is typically done by a district resource specialist. Inspection files are maintained in file code 2600.

Also, prescribed burns are monitored to ensure no invasive species become established and that re-growth of desired plant species is occurring, thus promoting vegetative diversity. Range Conservationists monitor and inspect using Range Analysis Transects, then file under 2200.

What:	Review and monitoring of burn	
Who:	Zone FMO, Resource Specialists	
How:	On – site visits and photo points - documentation.	
When:	Following Prescribed burn.	

Step 6 – Corrective and preventative actions

If prescribed fire is out of prescription, it will shift into an emergency response (4.4.7 – Emergency Preparedness and Response).

What:	Burn is out of prescription	
Who:	Line Officer (usually delegated to Burn Boss)	
How:	Line Officer shifts operations into an emergency response.	

Appendix

FSH 2509.13 Best Management Practices, Non-Point Source Management