

CHAPTER 4 - FIRE MANAGEMENT

4.1 INTRODUCTION AND RESOURCE OVERVIEW

The Moab District Fire Management Plan (Moab FMP) (BLM 1998) includes fire management directives for three BLM Field Offices: Moab, Monticello, and Price. For the purpose of this AMS, the term Moab Fire District refers to the 6.5 million acres of BLM-administered land in these field offices, which are located in Carbon, Emery, Grand, and San Juan Counties, Utah. This widely reaching management area includes many diverse landscapes with a range of fuel types such as low-elevation grassy desert, sagebrush grass and shrub land, pinyon-juniper forest, and high-elevation conifer forest. The Moab Fire District is responsible for all suppression, dispatch, prevention activities, and hazardous fuels treatments in the three field offices listed above. This chapter describes the fire management direction for the Moab Field Office (Moab FO) planning area.

The fire history of the Moab Fire District is closely tied to regional periods of drought. Fire frequency has varied through the years with extreme levels occurring in 1994 and 1996. By 1998, the Moab FO planning area was reporting an average of 48 fires per year, compared to the other field offices in the fire district; Monticello had an average of 34 fires reported, and Price had an average of 16. Between 1999 and 2002, drought conditions continued to affect the fuels within the fire management area and averages continued to climb as well as the number of acres burned. In 2002, the worst conditions in the history of the fire management area occurred. This resulted in major fires throughout southeastern Utah, the largest being the 93,390-acre Rattle Fire Complex in the eastern Book Cliffs. Fire season peaks from mid-June to mid-August, and usually lasts from March through October (BLM 1998).

Fire plays an integral role in most vegetative ecosystems by reducing fuel accumulations and regenerating plant communities. Historically, fire management has altered this successional trend by suppressing fires, resulting in fuel build-ups, and decadent shrublands and forests. In the southwest, climactic conditions and other resource management programs, such as livestock grazing, have also greatly contributed to changing the natural fire regime. Current fire management direction now encourages the incorporation of wildland and prescribed fire in an effort to restore natural fire regimes and overall ecological health to the landscape.

4.2 SPECIFIC MANDATES AND AUTHORITY

Federal Wildland Fire Management Policy (1995), revised as Federal Fire Policy (2001) – provides for firefighter and public safety first, while protecting and improving public lands through fire management activities. Reviewed in 2001, improvements to implementation actions were recognized as necessary to ensure adoption of the Federal Fire Policy (2001) by all federal agencies. The review concluded that while the 1995 Policy is still appropriate, the role of fire should be emphasized in land management to improve ecosystem health and sustainability. Also, more attention must be given to fire risk in the wildland urban interface, and implementation of the Policy could be improved through better interagency and interdisciplinary coordination.

2000 National Fire Plan – Developed under Presidential direction following the fires of 2000, the National Fire Plan calls for the continued development and support of firefighting resources, to

restore damaged landscapes, and to rebuild communities, with economic assistance as necessary. It differs from the 2001 Federal Fire Policy in that it focuses more specifically on operational activities.

- 2000 Cohesive Strategy (Lavery and Williams 2000) – aims to reduce wildland fire risk to communities and to restore and maintain ecosystem health by restoring vegetation to their historic fire regime (i.e., fire frequency and intensity).
- 2003 Healthy Forests Initiative – focuses on expediting fire prevention projects involving fuels treatments, especially in the wildland-urban interface. Its goal is to provide land managers with the ability to reduce hazardous fuels and restore wildfire-damaged areas (U.S.D.A. et al. 2002).
- Clean Air Act – requires attainment/maintenance of National Ambient Air Quality Standards (NAAQS). Recommends implementation of Smoke Management Plans (SMPs).
- Categorical Exclusions 1.12 (hazardous fuels treatments) and 1.13 (post-fire rehabilitation) – revised Bureau policy regarding hazardous fuels treatments and post-fire rehabilitation projects as of June 5, 2003 (USDI 2003).
- Southeastern Utah Annual Fire Operation Plan – coordinates cooperation between other BLM districts, F.S., BIA, State of Utah, and NPS. Includes procedures for initial attack of a wildfire.
- Instruction Memorandum No. 2003 re: Land Use Plan and Implementation Plan Interim Guidance for Wildland Fire Management, which supercedes BLM Handbook 1601-1 Appendix C – section J, Fire Management. The interim guidance ensures Federal Wildland Fire Management Policy and 10 Year Comprehensive Strategy guidance are incorporated into land use plans.
- BLM Manual Handbook H-1742-1 (and supplemental guidance 11/27/2002) – emergency stabilization and restoration.
- BLM Prescribed Fire Manual H-9214 – Provides direction for planning and implementation of prescribed fire projects and associated prescribed fire plan content (BLM 2000).
- Interim Management Policy for Lands Under Wilderness Review H-8550-1 USDI, BLM 1995 – Section J Fire Management provides direction for fire management activities in these specially designated areas.
- Final Environmental Impact Statement Vegetation Treatment on BLM Lands in the Thirteen Western States (1991) – directs the appropriate use of vegetation management techniques.

4.3 CURRENT MANAGEMENT PRACTICES

4.3.1 Fire Management Plan

The Moab FMP acts as the primary strategic document for fire management. It identifies areas by vegetation and fuels, and includes management objectives and operations to restore or suppress fire while protecting firefighters, the public, and natural resources.

4.3.1.1 Fire Management Zones

The Moab FMP (1998) divided the planning area into Fire Management Zones (FMZs) based on fuel type to better identify resource goals and objectives at a more manageable scale and determine the most efficient organization of fire-related responsibilities and activities. (This step is consistent with planning guidance in BLM Handbook 1601-1 Appendix C.) Figure 4.1 shows FMZs across the Moab Fire District.

The following three FMZs were created to categorize areas of similar fuels and fire behavior. Within each FMZ, Representative Locations (RLs) were identified to represent a typical fire response, and to be used for future monitoring of management objectives.

4.3.1.1.1 Zone 1 – Pinyon -Juniper

The vegetation in this FMZ is dominated by stands composed of pinyon and juniper, with some scattered pockets of grass, sagebrush, and ponderosa pine. This mid-elevation landscape is characterized by mesas and benches. RLs in the Moab FO includes the Dolores Triangle area and the La Sal/Lisbon Valley area.

4.3.1.1.2 Zone 2 – Brush/Sage/Grass

Sagebrush and grasses, including cheat grass, are the dominant vegetation in FMZ 2. This FMZ occurs in valleys and riparian areas at lower elevations across the district. RLs include the Cisco Desert, from the Utah-Colorado border to the Yellowcat area, and the area from Moab to Crescent Junction.

4.3.1.1.3 Zone 3 – Timber

This FMZ occurs in the rugged and remote terrain of the Book and Roan Cliffs at the northern end of the District. Vegetation of the high-elevation, north-facing slopes is dominated by Douglas-fir. Mountain brush and Gambel oak occur on the south-facing slopes, and pinyon pine generally occurs at the lower elevations. Much of this zone is in a Wilderness Study Area. Two RLs have been identified, one in the eastern Book Cliffs, and one in the Roan Cliffs and the Tavuputs Plateau.

Within the FMZs, the district is also divided into polygons based on fuel types, which are assigned one of the following management categories to identify how fire would affect resources and desired outcomes. Polygon descriptions also include fire suppression constraints specific to sensitive resources that occur within each polygon.

A – Wildfire is not desired at all.

B – Wildfire is likely to cause negative effects, but these effects may be mitigated.

C – Fire is desired, but there are constraints.

D – Fire is desired and there are no constraints or areas where fire will not normally burn.

4.3.2 Grand Resource Area RMP

The current Grand Resource Area RMP decision for fire management is limited fire suppression, with controlled use of wildland fire allowed on approximately 14,149 acres of the planning area. Areas designated as allowing fires to initially burn under supervision were intended to meet the objectives of increasing forage for livestock and wildlife, while also decreasing suppression costs.

4.3.3 Wildfire and Wildfire Suppression

By 1998, across the Moab Fire District, lightning caused 75 percent of the wildfires, with the remaining 25 percent caused by humans. In the Moab FO area, approximately 135,000 acres burned in wildfires from 1980 to 2002 (50,000 of which occurred in 2002) (Engleman 2004). Human-caused fires in the Moab FO area commonly occur near roads, especially by camping illegally outside the campgrounds along the Colorado River and from vehicle and railroad-caused fires along I-70. Grass and pinyon-juniper communities are the highest risk areas. Resource values threatened by fire include recreation sites, oil/gas sites, cultural sites, and wildland-urban interface areas. Prevention activities include education, signing, and cost-recovery pursuits.

A policy of “appropriate management response” directs fire suppression in the current RMP. Depending on the FMZ and management category, a range of suppression options can be used to control a fire ranging from full suppression, containment strategies, or just monitoring. In general, direction for fire suppression given in the Moab FMP is still considered appropriate.

4.3.4 Rehabilitation and Restoration

Lands not likely to recover naturally from fire damage receive planned rehabilitation and restoration projects. Activities include reforestation and replanting, seeding, watershed and wildlife habitat restoration, road and trail rehabilitation, and invasive plant treatments.

4.3.5 Emergency Stabilization and Restoration

Emergency Stabilization and Restoration (ESR) projects are an important component of the fire management program. Burned areas must be stabilized to prevent further environmental impacts such as erosion and sedimentation. One current ESR project is Goose Island. A human-ignited fire burned along the Colorado River; the fire occurred in tamarisk (an invasive species that has been replacing the native vegetation all along the river corridor). Experimental efforts are underway to eradicate the tamarisk and reestablish a willow community. Another current ESR project resulted from the 2002 Rattle Complex fire in the Book Cliffs.

4.3.6 Fire Use and Fuels

Direction from the 2003 Healthy Forests Initiative and the 2000 National Fire Plan initiated the process of identifying and analyzing fuel reduction projects. Acreage values of wildfire and wildfire use treatments were determined by polygon and representative location. Over a 10-year period, 58,500 acres were identified as desirable to burn across the District, or 5,850 acres per

year. Wildfires account for approximately 5,630 acres per year. The remaining would be treated with prescribed fire/mechanical methods.

Over the last 20 years, an average of one prescribed burn has occurred every two years. Actual acres burned in the Moab Field Office area over the past five years totals 2,500, with 700 additional acres planned for burning in the Spring of 2004. Funding and personnel to plan and implement these projects has, until recently, been lacking. In 2003 funding for necessary personnel, planning, and implementation has become available, and there is now a fuels program staff to plan and implement fuels reduction projects. Current projects have been planned and are in the various stages of implementation throughout the fire management area. At this time there are approximately 2,000 acres ready to be treated and it is estimated that by the end of fiscal year 2004 there could be approximately 25,000 acres of treatment planned and ready for treatment implementation within the fire management area. Acreage values planned for treatment and the necessary budget is recorded weekly through a government on-line program called NFORS.

The Moab FMP identified the following prescribed burn and mechanical treatment projects by field office.

- Moab Field Office – 22 projects over 110,000 acres.
- Monticello Field Office – 43 projects over 57,000 acres.
- Price Field Office – 19 projects over 8,600 acres.

The 1998 FMP also projected an average of 12 treatments per year by the year 2002. A complete list of fuels reduction activities is included in Table 4.1.

Table 4.1. Fire management activities of the BLM Moab Field Office.				
Project Name	Location	Acres	Basic Fire and Fuels Objectives	Resource Objectives
Lackey Fan	T28S R24E Sec.30	300	Hazard fuels project to reduce fire risk using prescribed fire.	Restore natural vegetation, enhance diversity, increase wildlife habitat and cattle forage, protect initial investment of chaining and seeding.
Tamarisk WUI	Riparian systems in Moab Field Office area, including the Colorado, Dolores, and Green rivers, Mill Creek, and Negro Bill Canyon.	25	Wildland urban interface project designed to reduce fire risk by reducing fuels. Treatments include prescribed fire and mechanical. Also targets invasive species (Russian olive, knapweed, tamarisk).	Same as fire and fuels objectives.

Project Name	Location	Acres	Basic Fire and Fuels Objectives	Resource Objectives
Pack Creek WUI	T27S R23E Sec. 22	290	Wildland urban interface project to reduce fire risk by reducing fuels. Treatments include prescribed fire and mechanical. Also targets invasive species (Russian olive, knapweed, tamarisk).	Restore natural vegetation, enhance diversity, increase and improve wildlife habitat in deer winter range, increase forage for cattle.
East Canyon	T16S R24E Sec. 23	612	Hazard fuels project using prescribed fire to reduce fire risk.	Restore natural vegetation, increase diversity, increase wildlife habitat and range for cattle.
Ray Mesa WUI	T29S R25E Sec.1	355	Wildland urban interface project to reduce fire risk by reducing fuels. Treatments include prescribed fire and mechanical.	Restore natural vegetation, increase diversity, increase wildlife habitat and range for cattle.
Black Ridge	T28S R23E	12,550	Hazard fuels project to reduce fire risk using prescribed fire and mechanical treatments.	Restore natural vegetation, enhance diversity, increase wildlife habitat and cattle forage, protect initial investment of chaining and seeding.
Roberts Bottom	T23S R24E Sec.9	40	Hazard fuels project to reduce fire risk using prescribed fire and mechanical treatments. Also targets invasive species (Russian olive, knapweed, tamarisk).	Restore natural vegetation and increase diversity. Reduce invasive species (tamarisk and knapweed).
Horse Pasture	T20S R21E	328	Hazard fuels project to reduce fire risk using prescribed fire and mechanical treatments.	Restore natural vegetation and increase diversity, increase and improve wildlife habitat in deer winter range, protect initial investment of chaining and seeding.
Diamond Creek	T18S R22E	800	Hazard fuels project using prescribed fire to reduce fire risk.	Vegetation manipulation to improve restoration success.

4.4 RESOURCE DEMAND AND FORECAST

Of the programs under fire management, the fire use and fuels program is experiencing the most change. Personnel numbers have increased from one to six, and planned treatments are projected to change from 1,000 acres per year over the entire Moab Fire District, to 5,000 acres per year in each field office. The Moab Fire District has taken direction from the Federal Wildland Fire Policy, the National Fire Plan, and the Healthy Forests Initiative to increase the number of fuels reduction activities. Seventeen projects will be planned by the end of the 2003 fiscal year in the

Moab Field Office. The Moab Fire District needs flexibility in its fuel treatment options to meet current management needs.

Basic goals of the Moab Fuels Team are to manage fire and fuels to protect life, firefighter safety, property, and critical resource values, to reintroduce fire back into the ecosystem, to restore areas to their properly functioning condition (i.e., watersheds), and to continue to work closely with other resource programs and interagency partners (Suwyn 2003)

4.5 CONSISTENCY WITH NON-BUREAU PLANS

All federal programs incorporate the National Fire Plan and Federal Fire Policy (2001).

In addition to the three BLM field offices managed under the Moab Fire District, assistance is also provided to other BLM districts, the U.S. Forest Service, the Bureau of Indian Affairs, the State of Utah, and the National Park Service. Fire suppression policy is consistent among the federal and state agencies. Interagency and intergovernmental coordination facilitates initial attack response.

A city fire department will initially respond to a fire on federal lands within its jurisdiction, but primary firefighting responsibilities are typically passed over to the BLM and other federal agencies.

The Southeast Utah Interagency Fuels Committee (SEUIFC), a subcommittee of the State Fuels Committee, meets three times per year to discuss fire projects and opportunities.

4.6 ISSUES OR CONCERNS

While the limited fire suppression policy in the current RMP is still considered appropriate, some changes are needed to update the FMP. The Moab FMP does not address Fire Condition Classes, a classification system that indicates an area's departure from natural fire and fuels characteristics. This system, established under the Cohesive Strategy (Lavery and Williams 2000), should be incorporated into fuels management planning. Discrepancies between resource specialists as to whether current Fire Condition Class designations are appropriate should be resolved. The majority of the Moab FO planning area is considered Fire Condition Class 3, which means the ecological state of the current vegetation represents a high amount of departure from historic fire regimes. The current FMP also does not address ESR, however, these projects are practiced under current management.

4.7 MANAGEMENT OPPORTUNITIES AND LIMITATIONS

The current FMP could be updated to incorporate a greater focus on the fuels reduction and wildland urban interface components. The 2000 National Fire Plan, the 2001 Federal Fire Policy, and the 2003 Healthy Forests Initiative have made this aspect of fire management a priority. The current FMP could also be updated to include ESR.

Planning fuels reduction and WUI projects is a positive step, but adequate funding for these projected fuel treatment projects is needed for their successful implementation.

Fire management objectives should remain consistent across all field offices within the Moab Fire District. Planners have the opportunity to work with the three field offices to increase management efficiency. Also, the RMP and FMP must be tightly coordinated. This tie between the existing RMP and FMP could be improved by planning the RMP as the document, which the FMP would tier off.

4.8 REFERENCES

Engleman, D. 2004. Personal communication with Michele Weidner, SWCA Environmental Consultants, Inc. Feb. 6, 2004.

Laverty, L. and Williams, J. 2000. *Protecting People and Sustaining Resources in Fire-Adapted Ecosystems, A Cohesive Strategy*. U.S. Forest Service, Washington D.C.

Suwyn, T. 2003. Personal communication with Michele Weidner, SWCA Environmental Consultants, Inc. July 29, 2003.

U.S. Bureau of Land Management

1991 *Final Environmental Impact Statement Vegetation Treatment on BLM Lands in Thirteen Western States*. U.S. Bureau of Land Management, Wyoming State Office.

1995 *Interim Management Policy for Lands Under Wilderness Review*. Handbook No. H-8550-1. U.S. Bureau of Land Management, California State Office

1998 *Moab District Fire Management Plan*. U.S. Bureau of Land Management, Moab Field Office.

2000 *Prescribed Fire Manual*. Handbook No. H-9214. Bureau of Land Management, Washington D.C.

2003 *Land Use Plan and Implementation Plan Interim Guidance for Wildland Fire Management*. U.S. Bureau of Land Management, Washington D.C.

U.S. Department of Agriculture, White House Council on Environmental Quality, and U.S. Department of Interior. 2002. Fact Sheet S-0504.02. *Administrative Actions to Implement the President's Healthy Forests Initiative*, December 11, 2002.

U.S. Department of the Interior, U.S. Department of Agriculture, U.S. Department of Energy, U.S. Department of Defense, U.S. Department of Commerce, U.S. Environmental Protection Agency, Federal Emergency Management Agency, National Association of State Foresters. 2001. *Review and Update of the 1995 Federal Wildland Fire Management Policy*.

U.S. Forest Service and U.S. Department of the Interior. 2000. A Report to the President In Response to the Wildfires of 2000. September 8, 2000. National Fire Plan.