

## 1.0 INTRODUCTION

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For thousands of years, fires sparked by lightning have occurred every summer in Moffat County, creating grass, shrub, and woodland ecosystems of various ages. The landscape and vegetation within the county have been influenced more by wildland fire than by any other force (Land Stewardship Associates 2002). However, suppression of wildland fires in recent decades has reduced the influence of fire on the landscape. Consequently, the vegetation has become more homogeneous and dense, increasing the danger from wildland fire.

Until recently, agencies that fight wildland fires were required to suppress and extinguish blazes that had the potential to burn private land. This approach was, at times, in conflict with landowner preferences. Some landowners prefer that wildland fires not be suppressed at the border of their property to meet vegetation management goals. Because of recent legislation, governing bodies now have the authority to manage wildland fires and fuels. This new legislation requires that local agencies prepare comprehensive wildland fire and fuel management plans with public involvement from constituents in the county. Moffat County has undertaken this effort, as reported in this document.

Moffat County intends to develop a countywide Fire and Fuel Management Plan to effectively manage wildland fire and fuels within the county. The plan would reflect the preferences of landowners and agencies as expressed through public meetings, individual meetings with private landowners, and discussions with county, state, and federal agencies. The plan would also provide the Moffat County Sheriff's Department and County Commissioners with the guidance and authority necessary to manage wildland fires and fuels on privately owned lands. Furthermore, it would provide guidance for state and federal agencies involved in cooperative management of wildland fires. The safety of the public and firefighters will remain the primary consideration in identifying appropriate responses to wildland fires.

In an effort to develop this plan and collect information from landowners, Moffat County divided the county into three planning areas (**Figure 1**). The planning areas were then addressed as separate phases of the countywide plan. Phase I encompassed the northwest portion of the county, including the communities of Greystone, Powder Wash, and Hiawatha. Phase II covered the southwest portion of the county and included the communities of Dinosaur, Blue Mountain, Elk Springs, and Masadona and a small portion of the northwest part of Rio Blanco County, including the town of Rangely. The Phase III planning area included all private lands within Moffat County east of Range 96 West to the Routt County line.

This report summarizes the findings in the Phase III planning area. The Phase III fire plan contains all the necessary components for incorporation into the countywide fire plan. These components, which are essentially the same as in Phases I and II, include:

- A guide that assigns private lands to one of four categories. These categories will be used in the decision-making process to identify the appropriate response to wildland fires and to develop fuels management projects within critical fire zones.
- Site-specific private property landowner direction pertaining to wildland fire and fuel hazard reduction.
- Landowner and community information essential to development of coordinated strategies and tactics needed for efficient and effective wildland fire response.
- Information that facilitates interagency coordination and cooperation toward development of fuel hazard reduction projects.

In an effort to obtain information for this large area, Moffat County used contractors to collect and provide information to be included in the countywide fire plan. Phase I was prepared in December 2001 by James L. Andersen of Ecosystem Enhancement, LLC. Phase II was prepared in August 2002 by Land Stewardship Associates, LLC. Moffat County contracted Greystone Environmental Consultants, Inc. (Greystone), to conduct the Phase III portion of the fire plan. This Phase III report was prepared using a format similar to the Phase I and II reports, and information in some sections has been transcribed directly from these reports to maintain consistency among documents.

This report covers six primary topics. First, it describes the goals and objectives of the fire plan and identifies policies that pertain to wildland fire and fuel management. Second, it identifies public and agency involvement over the course of the project. Third, it describes the planning area in terms of geography, land status, history of wildland fire, and available firefighting resources. Fourth, it presents the results of community assessments for the wildland-urban interface for 23 communities within the Phase III planning area. Fifth, through information developed from a series of interviews, it identifies the desires of each rural landowner by describing the landowner's fire management objectives for each parcel within the Phase III planning area. Finally, it presents implementation of the plan.

Appendices to this report:

- List additional implementation procedures.
- Further describe the vegetation and the effects of fire in the Phase III planning area.
- Provide copies of community assessment forms.
- Show representative photographs of communities.
- Display the Memorandum of Understanding that participating landowners were asked to sign.
- Provide lists of landowners who declined to participate and who were not interviewed.
- Describe the detailed results of each landowner interview.
- Provide contact information for all participating landowners, including telephone numbers.

**Figure 1 – Moffat County Fire Plan Phase Map**

## **2.0 FIRE AND FUEL MANAGEMENT POLICIES**

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This chapter reviews the policies that guided development of the Moffat County Wildland Fire and Fuel Management Plan, as well as the mission, goals, and objectives of Phase III of the fire plan. The mission statement, goals, and objectives of Phase III are consistent with the first two phases of the fire plan.

### **POLICY**

In March 2000, the Colorado Legislature passed House of Representatives Bill 00-1283. This bill changed the wording of the original state law from requiring each county sheriff to suppress all wildland fires, to authorizing governing agencies to manage wildland fire and fuel. Specifically, each county is to complete a fire plan that identifies potential private lands to be included in a fire plan. In addition, the county sheriff is allowed to collaborate in a comprehensive planning effort in order to manage wildland fires in conjunction with other adjacent land managing agencies.

### **MISSION STATEMENT**

The wildland fire and fuels management program initiated by Moffat County seeks to achieve resource benefits while reducing hazardous fuels by restoring and maintaining a natural fire regime in a manner consistent with landowner desires and safety for the public and firefighters.

### **GOALS**

The goals of the Moffat County Wildland Fire and Fuel Management Plan are to:

- Protect ecological values in Moffat County, including vegetation, water, wildlife, and air resources; social values including public safety and historic properties; and private residences.
- Reduce wildland fire hazards and restore the functions of ecological communities.
- Reduce the risk to life and property from wildland fire.

### **OBJECTIVES**

Moffat County will focus on six objectives that will achieve the three program goals discussed above:

- Coordinate the strategies and tactics for wildland fire suppression between private landowners and associated public land administrators.
- Coordinate planning and implementing fuel treatments among land jurisdictions to enhance consistency, reduce fire hazard, and restore ecological values.
- Sponsor a safe working environment for wildland firefighters.
- Monitor, evaluate, and manage the effects of fire management actions.
- Provide current and accurate information regarding wildland fire and fuel management to the public and cooperating agencies.
- Cooperate with other agencies to provide interpretive and educational programs designed to enhance public and staff understanding and awareness of fire ecology and wildland fire management.

## 3.0 PUBLIC AND AGENCY INVOLVEMENT

Public participation and agency involvement were an integral part of Phase III of the fire plan. Public concerns and issues with the fire plan and wildland fire and fuels management were solicited. Agency participation will ensure seamless wildland fire and fuel management.

### PUBLIC INVOLVEMENT

Public involvement was considered critical to the completion and success of the Phase III fire plan. Moffat County conducted a significant public involvement effort in support of Phase III of the fire plan. First, Moffat County sent a letter describing the Phase III effort to landowners with the most opportunity to participate in fire and fuels management. The letter, which was sent to landowner in December 2002, reviewed the planning process and opportunities for public involvement that would be available and invited landowners to future public meetings.

The County Commissioners hosted four public meetings in January 2003. The public meetings were conducted to raise the awareness of landowners and community members about the planning process and solicit interest in participating in landowner interviews and community assessments. One meeting was conducted at the Maybell Community Center on January 6; two were conducted at the Shadow Mountain Clubhouse in Craig on January 7; and one was conducted at the Hamilton Community Center on January 8. In addition to the invitation extended to landowners in the December 2002 letter, the public meetings were advertised in the *Craig Daily Press* from December 28, 2002, to January 4, 2003. Public announcements were made on radio station KRAI from December 30 until January 3. Flyers were posted within the communities that hosted the meetings. The meetings were generally well attended and public sentiment generally supported the fire plan.



Former County Commissioner T. Wright Dickinson speaking to the public at the Craig community meeting, January 7, 2003.

A draft of the Phase III fire plan was made available to the public for review and comment. The document was posted on the Moffat County website, and a copy of the report was made available at the Moffat County Natural Resource Department during the review period. Comments from the public, staff at the

Moffat County Natural Resource Department, and Moffat County Commissioners were reviewed, evaluated, and incorporated, as appropriate, into the final Phase III fire plan. The final Phase III fire plan was presented for adoption to the Moffat County Board of Commissioners at a regularly scheduled meeting.

## **AGENCY COORDINATION**

Moffat County conducted an agency coordination meeting on December 10, 2002. The meeting was held to explain, receive input on, and obtain concurrence with the Phase III fire plan from all cooperating agencies. The following agencies participated in the meeting: Moffat County Commissioners; Moffat County Natural Resources Department; Bureau of Land Management (BLM); Red Cross; Colorado Division of Wildlife (CDOW); Colorado State Forest Service (CSFS); Craig Rural Fire District (RFD); State Land Board (SLB); and U.S. Forest Service (USFS). The Phase III fire plan is a collaborative result of participation of all of these agencies.

Response to wildland fire is a cooperative effort, and planning is the responsibility of all agencies. The operational procedures for implementing the Phase III fire plan resulted from negotiations with and agreements between Moffat County and land management agencies that have responsibilities for fire control in the Phase III planning area. These operational procedures are provided in **Appendix A**.

Prescriptive criteria will be used to guide strategic decision-making when the Moffat County Sheriff decides whether to manage a new fire start to benefit resource values. In addition, these criteria must provide for firefighter safety. This prescription is, in essence a “Go/No-Go checklist” to ensure that all factors beyond firefighter safety and lowest cost have been evaluated in the future management of a specific fire. In addition, environmental components must be evaluated to make a sound decision. The Go/No-Go checklist and components that will be considered are provided in **Appendix B**.

This plan is consistent with the BLM Little Snake Field Office Fire Management Plan (BLM 2002). BLM documents are tiered to the *Federal Wildland Fire Management Policy and Program Review* (December 1995) and the *Wildland and Prescribed Fire Management Plan* (August 1998). All decisions about fire management conform to the guidelines outlined in these documents. Fire management complies with the policies identified in state regulations on wilderness, threatened and endangered species, and cultural and historical preservation, as well as federal and state regulations for air and water quality.

Ultimately, these agencies will use this plan to reevaluate current fire and fuel management direction as well as to refine responses based on the wishes of the landowner. Involvement will result in better coordination between private landowners and public agencies, increased safety to the public and firefighters, and may decrease the costs of firefighting and improve natural resource management. For instance, the current management direction if a wildland fire occurs on a BLM parcel adjacent to private lands is to suppress the fire immediately. However, BLM can use the fire plan to decide that a specific landowner does not object to a wildland fire that burns on the property (there are no constraints such as threat to life or property). In this case, firefighters may allow the fire to burn to a favorable topographic feature, such as a river or ridgeline, instead of trying to stop a fire at an arbitrary property boundary. The benefits of this type of fire management include decreased cost and increased safety for firefighters. In some instances, there may also be benefits to natural resources, such as regeneration of plant productivity for wildlife and livestock.

## 4.0 DESCRIPTION OF THE PHASE III PLANNING AREA

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This section describes the Phase III planning area, including topography, vegetation, land ownership, fire history, and availability of firefighting resources.

### GEOGRAPHIC DESCRIPTION

The Phase III planning area is located in the eastern half of Moffat County (**Figure 1**). It is bounded on the west by the west edge of Range 96 West and on the east by the Routt County line. It is bounded on the north by the Wyoming state line and on the south by the Rio Blanco County line. It covers approximately 1.6 million acres. The Phase III planning area is primarily private land; however, lands also are managed by the State of Colorado, BLM, and USFS.

The Phase III planning area is representative of the Green River Basin, one of the Landscape Units displayed on the U.S. Forest Service's draft map of "Ecological Sub-sections of the Rocky Mountain Region" (Beckerman 2003a). Landscape Units are tracts of land where the various biotic and physical characteristics (climate, topography, soils, vegetation, wildlife, and water) are similar. In this unit, alluvial fans, piedmont plains, and slopes from the surrounding mountains join to form broad intermountain basins. Elevation in the Phase III planning area ranges from 5,300 to almost 9,500 feet.

Vegetation in the Phase III planning area is primarily sagebrush (51 percent of the planning area). Additional common vegetation types include salt desert shrub (14 percent), agriculture (12 percent), and mountain shrub (11 percent). Other vegetation includes pinyon/juniper (4 percent), aspen (4 percent), grassland (2 percent), and spruce/fir (2 percent). Lodgepole pine, riparian, and other (urban, built-up, active mining operations, and open water) each make up less than 1 percent of the planning area. Vegetation is shown in **Figure 2**. The condition of the vegetation ranges from sparse to dense, depending on the elevation and the amount of grazing by livestock and wildlife. More detailed descriptions of the vegetation types and fire effects to each vegetation type are contained in **Appendices C and D**.

Slopes within the Phase III planning area vary considerably (**Figure 3**). Terrain west of State Highway 13 and north of U.S. Highway 40 consists of rolling hills with multiple drainages. The Yampa River Valley, Little Snake River, Williams Fork, and Fortification Creek constitute the major streams that cross the planning area. These water bodies often create flat, open meadows adjacent to the stream and join with multiple associated tributaries. Terrain in the northeast is mountainous and extends into the higher elevations of the Elkhead Mountains. Major peaks in the planning area include Baker's Peak, Black Mountain, Mount Welba, Mount Glyphant, and Buck Point. The southeast and southwest portions of the planning area consist of mountainous ridges (Williams Fork Mountains), plateaus and hills (Danforth Hills), and valleys (Axial Basin).

### LAND OWNERSHIP

The Phase III planning area consists of both private and public lands. Most of the private land is intermixed among public lands, which is different from the Phase I and II areas, where public lands represented larger percentages and were more contiguous. The land ownership in the Phase III planning area is 57 percent private, 31 percent BLM, 9 percent state lands managed by the State Land Board, 3 percent USFS, and less than 1 percent state lands managed by CDOW. Land ownership is shown in **Figure 4**. The proportion of private landowners in this area is higher than either the Phase I or Phase II areas. Phase III has a significant number of subdivisions and small, privately owned lots (40 acres or less) intermingled with small BLM tracts of land (160 acres or less).

**Figure 2 – Vegetation in the Phase III Planning Area**

**Figure 3 – Slope in the Phase III Planning Area**

**Figure 4 – Land Ownership in the Phase III Planning Area**

## Private Land

More than half (57 percent) of the Phase III planning area consists of private land. Towns within the Phase III planning area include Craig, Hamilton, Maybell, and Sunbeam. In addition to these towns, there are several small communities across the planning area. Within the Phase III planning area, but not including the City of Craig, there are approximately 2,710 landowners on 3,642 parcels of private land. Of this total, 1,962 landowners hold 2,368 parcels within the 23 communities defined in Chapter 5 of this report. Residential development ranges from small lots, closer to the towns previously mentioned, to large ranches well beyond the communities. Although residential development is scattered, rural landowners generally live along the major road network within the county. Specifically, many rural residents live:

- North of Craig, along County Roads 7 and 3;
- East and west of Craig along U.S. Highway 40;
- South of Craig along County Roads 33 and 17;
- South and north of Craig along State Highway 13; and
- South and north of Maybell and Sunbeam on County Roads 57, 59 and 19, and State Highway 318.

Private landowners are the most concerned with wildland fire because of the potential for loss of property and other resources, such as livestock. They also raised significant safety concerns. Because of the relatively high population in the Phase III planning area compared with Phases I and II, active management of wildland fires and fuels on private lands is critical.

## State

State lands in the Phase III planning area consist primarily of sections deeded to the state and managed by the State Land Board. State parcels account for 127,363 acres in the planning area and typically occur in Sections 16 and 36 of each township. These sections are interspersed with private and federal lands and are often leased by ranchers for grazing livestock. Other state lands include parcels owned by CDOW that account for 8,657 acres within the planning area. CDOW manages several large parcels, including lands in the northwest portion of the planning area and the Bitterbrush State Wildlife Area near Maybell. The management emphasis on these parcels is oriented toward maintaining and improving important habitats for many species of wildlife such as sage grouse, deer, antelope, and elk.

## Bureau of Land Management

BLM lands account for the majority of the public lands within the Phase III planning area and cover 488,330 acres. These lands are made up of both large contiguous parcels (as large as 138,588 acres) and small parcels interspersed among private lands. BLM lands are primarily managed for livestock grazing, wildlife habitat, recreation, and oil and gas development. The Little Snake Resource Area manages the BLM lands in the Phase III planning area.

## U. S. Forest Service

USFS lands account for a small portion of the public lands within the Phase III planning area; however, these lands also represent some of the areas at higher risk of wildland fire because of the proximity to private lands and the fuel types that are most common on these parcels. There are 41,608 acres of USFS lands in two large contiguous parcels in the Phase III planning area. The Medicine Bow-Routt National Forest portion consists of 37,818 acres northeast of Craig and directly east of the Routt County line. This

portion of the Forest is managed by the Hahn's Peak/Bears Ears Ranger District. The White River National Forest portion consists of 3,788 acres on the Moffat/Rio Blanco County line southeast of Craig and is managed by Blanco Ranger District. The USFS lands are primarily managed for wildlife habitat and recreation.

## FIRE HISTORY

The fire season in Moffat County generally starts in May and continues through September. The earliest fires are often started in early April by landowners burning irrigation ditches (Ecosystem Enhancement 2001). Fire activity is usually greatest in July, when thunderstorms release intense lightning. The number of wildland fires and their size in a specific fire season are influenced most by the amount of spring precipitation (Ecosystem Enhancement 2001).

**Figure 5** graphically illustrates the fire history in the Phase III planning area since 1980. Fire occurrence is displayed to identify the location and types of fires that have occurred in the planning area. These past occurrences not only influence the locations and sizes of future fires, but their presence may have shaped the opinions of the landowners who experienced these fires first hand. For instance, several large fires have occurred south of Maybell in recent years. Landowners in this area generally express less immediate concern about wildland fires burning on their lands and are more concerned that vegetation be allowed to recover from the effects of the fires. At the same time, these landowners recognize that fire is an important part of the ecosystem and should be allowed to burn in these areas again after the vegetation has recovered sufficiently.

Fire occurrences are listed as three different types: Types 1, 2, and 3. The number indicates the protection type as reported by BLM. Type 1 indicates that the fire was on BLM land that is protected by BLM; Type 2 indicates that the fire was on BLM land that is protected by another federal agency under a cooperative agreement. Type 3 indicates that the fire was on BLM land that is protected by a non-federal agency under a cooperative agreement (Beckerman 2003b). The dates and types of these incidences are summarized in **Table 1**. The BLM fire polygons shown on **Figure 5** are identified in the *Fire Management Plan for the Northwest Colorado Fire Management Program* (Beckerman 2003b; BLM 2002).

Initial attack and fire suppression are usually led by the BLM, with the local volunteer fire departments and county sheriff cooperating as well as providing some initial attack (Ecosystem Enhancement 2001). For fires of 50 acres or larger, there is a wide range of suppression tactics from "direct attack," working up against the burning edge, to "indirect attack," where firefighters use existing or create new fuel breaks away from the fire for control. The fire's ultimate control, shape, and size are influenced most by connecting existing barriers in the area, such as roads, sandy washes, rock outcrops, and other fuel breaks (Ecosystem Enhancement 2001).

**TABLE 1 – FIRE OCCURRENCES IN THE PHASE III PLANNING AREA**

Year	Type 1	Type 2	Type 3	Total Number of Annual Incidents
1980	8			8
1981	11	1		12
1982	8	1		9
1983	5			5
1984	2	1		3
1985	17			17
1986	8	1		9
1987	19	2		21
1988	33			33
1989	9			9
1990	14	1		15
1991	14			14
1992	28			28
1993	17			17
1994	46	1		47
1995	18			18
1996	40			40
1997	12			12
1998	6			6
1999	36			36
2000	20	1	5	26
2001	32			32
2002	18	9		27
Total Fires by Fire Type	421	18	5	444

## WORKLOAD AND RESOURCES AVAILABLE

The fire load for the Moffat County Sheriff's Department is moderate to high when compared with other Colorado counties (Ecosystem Enhancement 2001). When compared with other BLM management areas, some of the highest numbers of wildland fires and acreage burned are in Moffat County.

The Moffat County Sheriff's Department is responsible for all fires outside of the Craig Rural Fire District in the Phase III planning area. The Moffat County Sheriff's Department works cooperatively with BLM and the Colorado State Forest Service in responding to fires on public lands. They also provide backup to other agencies on request (Jantz 2003). The BLM has the most extensive range of available resources under its interagency fire organization, the Northwest Colorado Fire Management Program. This organization has access to resources from the BLM, USFS, the National Park Service (NPS), and the U.S. Fish and Wildlife Service (USFWS). In Moffat County, the resource responds that is closest to an incident, regardless of land ownership or agency (Beckerman 2003c). The Northwest Colorado Fire Management Program typically provides primary response to all lands in Moffat County, except the private lands in the Craig RFD (Beckerman 2003c).

**Figure 5 – Fire Occurrence in the Phase III Planning Area**

The Moffat County Sheriff's Department has five deuce-and-a-half (deuce) engines and one light engine. During the summer fire season, the light engine and one deuce engine are stationed in Maybell; one deuce engine is stationed at the Vermillion County shop near Browns Park; and one deuce engine is stationed at the entrance to the Wilderness Ranch community on County Road (CR) 38, north of Craig. The remaining two deuce engines are stationed in Craig. About 15 to 18 firefighters are available to the Moffat County Sheriff's Department during the fire season as engine crews for mobile attack or water tenders. The Vermillion and Wilderness engines are not staffed full time; instead, personnel are sent from Craig when there is a fire (Jantz 2003).

Nine vehicles are available under the Northwest Colorado Fire Management Program to respond to incidents in the Phase III planning area: two type-4 engines, two type-6 engines, and one water tender in Craig; one type-4 engine and one type-6 engine in Meeker; one type-6 USFS engine in Steamboat; and one type-6 USFS engine in Yampa. The program maintains two fire stations, one in Craig, and one in Steamboat. The engines are each staffed with two to three crew members on a full-time basis. Additionally, the program supports a Type 1 (Hotshot) crew of 20 in Craig and a five-member squad in Steamboat (Beckerman 2003c).

The Craig RFD is responsible for all wildland fires in the Craig Rural Fire District (**Figure 6**). The department also provides backup outside of the district to the Northwest Colorado Fire Management Program and Moffat County Sheriff's Department (Mason 2003). The Craig RFD is a volunteer department that is paid for responding to calls (Mason 2003). The district owns 10 response vehicles: two 3,500-gallon water tenders, three brush trucks, one utility/brush flatbed truck, one rescue truck, and three engines (Mason 2003). **Figure 6** shows the boundary of the Craig RFD, the locations of fire hydrants in the district, and the dry fire hydrants in the Baker's Peak area, which are beyond the boundary of the Craig RFD.

There is one Volunteer Fire Department (VFD) in the Phase III planning area, the Maybell VFD. Maybell VFD owns six trucks: one light rescue truck, one 3,200-gallon water tender, one 2-ton, a four-by-four brush truck, two structure engines with 500-gallon tanks, and one 1-ton brush truck (Johnson 2003). The department has one station and 15 personnel. Maybell VFD is responsible for private property between the Craig and Artesia fire districts and in the northwest corner of the county (Johnson 2003). Maybell VFD provides backup response to Craig RFD and other agencies as requested and available (Johnson 2003).

**Figure 6 – Craig Rural Fire District Boundaries and Fire Hydrants**