

## 5.0 WILDLAND-URBAN INTERFACE PLAN

This chapter describes the wildland-urban interface plan for the Phase III planning area. The first section presents the purpose and objectives of the wildland-urban interface plan. The communities that are discussed throughout the rest of this chapter are identified in the second section. The methods and criteria used for each community assessment are summarized in the third section. A general discussion of the results of the community assessments and the recommended fuel treatments and fire services is provided in the fourth section. The last section discusses the hazard rating, defendability, and recommended fuel treatments and fire services for each community.

### PURPOSE AND OBJECTIVES

The wildland-urban interface plan summarizes the risk of wildland fire and the mitigation measures identified for each community within the Phase III planning area. As such, this chapter has four objectives:

- Identify the risk of wildland fire associated with each community;
- Discuss the defendability and survivability of each community;
- Recommend fuel breaks and other vegetation treatments needed to reduce the risk of wildland fire to the community; and
- Recommend fire services needed to increase the defendability and survivability of each community.

### COMMUNITY IDENTIFICATION

A preliminary map of communities in the Phase III planning area was developed by the Moffat County Sheriff's Department in 2001. This map also showed the hazard rating for each community. Development of the Phase III wildland-urban interface plan was initiated at a kickoff meeting with Moffat County on November 19, 2002. A meeting that involved all cooperating agencies, including Moffat County, BLM, Red Cross, CDOW, CSFS, Craig RFD, Colorado SLB, and U.S. Forest Service, was held on December 10, 2002. Based on this meeting and subsequent discussions with the Craig RFD, the Moffat County Sheriff's Department, and the Moffat County Department of Natural Resources, several community boundaries were changed. Furthermore, two additional communities were identified: Knez Divide and Gun Club Road. The Craig community was divided into the Craig, Craig North, and Santisteven communities. The Maybell/Sunbeam community was divided into the Maybell and Sunbeam communities. **Figure 7** shows each of the 23 communities that were evaluated for the Phase III wildland-urban interface plan. These communities include:

- Bakers Peak
- Cedar Mountain
- Craig
- Craig North
- Elkhead
- Freeman Gulch
- Freeman Reservoir
- Great Divide
- Gun Club Road
- Knez Divide
- Lay
- Maybell
- Morapos Creek
- Pagoda
- Power Plant
- Price Creek
- Round Bottom
- Sand Spring
- Santisteven
- Sunbeam
- Western Knolls
- Wilderness Ranch
- Williams Fork

**Figure 7 – Communities in the Phase III Planning Area**

## COMMUNITY ASSESSMENTS

A detailed assessment was completed for each of the communities identified. Each community assessment required several tasks. First, a representative or representatives for each community was identified. These representatives were typically landowners within the community and were often involved with emergency services in the community and county. Second, input for the Craig RFD was sought for communities within its response boundaries. Representatives from the Moffat County Sheriff's Department also attended this meeting and provided input on each community assessment. Finally, each community was visited; a hazard rating for the community was completed; the defendability and survivability of the community was assessed; and new fuel treatments and fire services were recommended. The following sections outline the content of each community assessment.

### Hazard Rating

Before each community was visited, a hazard rating system was developed based on a similar system used by the Colorado State Forest Service. It was, however, modified to reflect conditions that are unique to Moffat County. A number of factors were considered in developing a hazard rating for each community, including:

- Primary access – the more through roads that lead in and out of the community, the lower the hazard rating because access for firefighters and escape for residents is easier.
- Primary road width – the wider the road, the lower the hazard rating because access for firefighters and escape for residents is easier.
- Accessibility – the steeper the road grade that leads to and from the community, the higher the hazard rating because firefighting equipment would be slowed down.
- Secondary roads – the presence of adequate turnarounds for firefighting equipment reduced the hazard rating because the risk of entrapment is reduced.
- Secondary roads – the presence of long dead end roads, especially without adequate turnarounds for fire equipment, increased the hazard rating because the risk of entrapment is higher.
- Average lot size – the larger the lot, the lower the hazard rating because larger lots allow firefighters to defend individual structures.
- Street signs – the presence of street signs reduced the hazard rating because fire crews would be better able to find the correct access routes.
- Fuel types – lighter, lower hazard fuel types reduce the hazard rating because control of fires in these types is easier.
- Defensible space – the greater the number of structures with adequate defensible space, the lower the hazard rating because fewer firefighters would be needed to protect structures.
- Predominant slope – steeper slopes increased the hazard rating because fire spreads faster up steeper slopes.
- Utilities – underground utilities decreased the hazard rating because they are less likely to be affected by fire or to become hazards for firefighters.
- Bridge weight limits – bridge weight limits that would reduce or prevent access for firefighting equipment increased the hazard rating.

- Construction materials – the presence of non-combustible roofs and siding decreased the hazard rating because these materials are less likely to catch fire, which increases the defendability of structures and reduces the need for firefighters to protect structures.
- Water sources – the greater the distance to a source of water for firefighting crews, the greater the hazard rating because availability of water will be limited, and firefighters will have to spend more time hauling water than fighting the fire.

To complete the hazard rating for each community, as much of the community as possible was viewed to determine how each of the hazard factors should be rated. There was often a range of values within each community for each of the criteria used in the hazard rating. For example, grades might be low on some roads in a community, but might be steep on other roads. In most cases, the hazard rating was based on the most common value for a specific criterion. For example, most slopes in a community might be slight, but in one small area might be steep. The hazard rating for this community was based on the slight slopes because they are more common and more likely to affect fire behavior than is one small area of steep slopes. In other cases, the range of values was large enough that the hazard rating was based on a combination of values. For example, some slopes were slight, some were moderate, and others were steep in one community. The final rating chosen was between the value for moderate and steep slopes because steep slopes can have a significant effect on fire behavior.

Several factors were noted during community assessments that can affect the hazard of wildland fire but that were not incorporated into the hazard rating checklist. For example, high winds are common in several of the communities in the Phase III planning area. In addition, response time by firefighters to several communities is long enough to significantly increase the risk that wildfire could affect these communities. These factors were considered in developing an overall hazard rating for each community.

## **Defendability/Survivability**

After the hazard rating was completed, the defendability and survivability of each community were assessed. Several questions were asked in this part of the assessment:

- Can the community currently be defended against wildland fire?
- What are the major factors that influence the community's current defendability?
- Considering the existing fire hazard rating and the available fire services, how likely is the community to survive a wildland fire?

Each community was then rated as fully, partially, or not defensible against wildland fire. These ratings are based on a hypothetical wildland fire burning under average fire conditions with good fire crew availability. More precise ratings were not possible because of the wide range of variability in fuel conditions, weather, location of ignition, accessibility, and fire crew availability that may be encountered during a typical fire season.

Many factors can affect the behavior of wildland fire within a community. These predictions are based on the most likely fire behavior, and not on all possible scenarios. Even the most defensible community would be vulnerable to wildland fire under extreme conditions, especially if fire crews are limited in availability.

## Recommended Fuel Treatments and Fire Services

The final task for each assessment was to recommend new fuel treatments and fire services that would increase the defendability and survivability of each community. These recommendations were designed to make the communities that are not currently defendable as defendable as possible, even if not fully defendable. The recommendations were designed to increase survivability for communities that are already fully defendable in cases of extreme fire conditions. Another important consideration for all recommendations was to increase the safety of firefighters and the public in the event of a wildland fire.

Once all recommendations for fuel treatments and fire services were developed, the effect of these recommendations — assuming they are implemented — was assessed. Each community was again rated as fully, partially, or not defendable against wildland fire, and the major factors in the rating were discussed.

## GENERAL DISCUSSION

This section provides a general discussion of the results of the community assessments. The wildland fire hazard rating for each community is presented and the overall hazard rating, including response time, is discussed. Each new recommended fuel treatment and fire service is listed and prioritized within the context of the entire Phase III planning area. Detailed results for each community are discussed in the following section.

## Hazard Ratings

Overall, hazard ratings for communities in the Phase III planning area were low. However, when other factors were considered, such as firefighter response time, hazard ratings are generally moderate. **Table 2** lists each community, its wildland fire hazard rating, the response time for firefighters, and overall hazard rating. The hazard rating for the majority of the communities (17 of 23) was low, while ratings for five were moderate, and the rating for one was high. Response time varies from 10 minutes for communities near Craig to 90 minutes for communities farther from Craig. Once response time was added to the hazard rating, the overall hazard rating for five communities was low, the overall rating for 16 was moderate, and the overall rating for two was high.

**TABLE 2 – SUMMARY OF COMMUNITY HAZARD RATINGS**

Community	Wildland Fire Hazard Rating	Response Time	Overall Hazard Rating (Including Response Time)
Baker's Peak	58	90 minutes	High
Cedar Mountain	38	15 minutes	Moderate
Craig	32	10 minutes	Low
Craig North	32	15 minutes	Low
Elkhead	35	30 minutes	Moderate
Freeman Gulch	26	60 minutes	Moderate
Freeman Reservoir	46	60 minutes	Moderate
Great Divide	36	60 minutes	Moderate
Gun Club Road	33	15 minutes	Low
Knez Divide	66	20 minutes	High

**TABLE 2 – SUMMARY OF COMMUNITY HAZARD RATINGS**

Community	Wildland Fire Hazard Rating	Response Time	Overall Hazard Rating (Including Response Time)
Lay	31	20 minutes	Moderate
Maybell	28	40 minutes	Moderate
Morapos Creek	42	40 minutes	Moderate
Pagoda	31	40 minutes	Moderate
Power Plant	18	15 minutes	Low
Price Creek	26	45 minutes	Moderate
Round Bottom	31	30 minutes	Moderate
Sand Spring	33	15 minutes	Low
Santisteven	43	10 minutes	Moderate
Sunbeam	27	60 minutes	Moderate
Western Knolls	38	15 minutes	Moderate
Wilderness Ranch	43	90 minutes	Moderate
Williams Fork	35	30 minutes	Moderate

Response times were provided by the Moffat County Sheriff's Department in Craig. The sheriff's department is responsible for all fire responses beyond the boundaries of the Craig Rural Fire Department. The presence of the Maybell Volunteer Fire Department reduces the response time to the Freeman Gulch, Maybell, Price Creek, and Sunbeam communities; however, the Moffat County Sheriff's Department still has primary responsibility for fire response in these areas.

### Defendability/Survivability

Overall, most communities in the Phase III planning area are at least partially defendable against wildland fire. **Table 3** summarizes the current and potential defendability of each community. The potential defendability rating assumes that all recommended fuel treatments and fire services are implemented. Twelve of the 23 communities that were assessed are currently fully defendable, while nine are partially defendable and two are not defendable. After all recommended fuel treatments are implemented, 15 of the 23 communities will be fully defendable, and eight will be partially defendable. Some factor or combinations of factors that cannot be mitigated by reasonable increases in fuel treatments and fire services will continue to influence defendability for each of the eight communities that will remain partially defendable. For example, steep slopes and moderately hazardous fuels cannot be entirely mitigated in the Knez Divide community.

**TABLE 3 – SUMMARY OF COMMUNITY DEFENDABILITY/SURVIVABILITY**

Community	Current Defendability	Potential Defendability*
Baker's Peak	None	Partial
Cedar Mountain	Partial	Partial
Craig	Partial	Full
Craig North	Full	Full
Elkhead	Full	Full
Freeman Gulch	Full	Full
Freeman Reservoir	Partial	Partial

**TABLE 3 – SUMMARY OF COMMUNITY DEFENDABILITY/SURVIVABILITY**

<b>Community</b>	<b>Current Defendability</b>	<b>Potential Defendability*</b>
Great Divide	Partial	Partial
Gun Club Road	Full	Full
Knez Divide	None	Partial
Lay	Partial	Partial
Maybell	Full	Full
Morapos Creek	Full	Full
Pagoda	Full	Full
Power Plant	Full	Full
Price Creek	Partial	Partial
Round Bottom	Full	Full
Sand Spring	Full	Full
Santisteven	Partial	Full
Sunbeam	Full	Full
Western Knolls	Full	Full
Wilderness Ranch	Partial	Partial
Williams Fork	Partial	Full

\* Assumes all recommended fuel treatments and fire services are implemented.

## Recommended Fuel Treatments and Fire Services

Each new recommended fuel treatment project and fire service in the Phase III planning area has been prioritized. Priorities were developed based on the following criteria:

- The cost of implementing the project or service;
- The benefits to the community from implementing the project or service;
- The extent to which the project or service would improve community defendability and survivability;
- The extent to which the project or service would improve the safety of the public and firefighters;
- The potential difficulty of implementing the project or service; and
- The number of landowners who would be affected, both positively and negatively, by implementing the project or service.

**Table 4** lists each recommended fuel treatment project and its priority. **Table 5** lists each recommended fire service and its priority. Priorities have not been assigned to individual projects within each category (high, medium, or low). Implementation of projects will most likely be affected by the willingness of landowners to participate and the availability of funds to complete the project. In some cases, lower-priority projects may be completed earlier than high-priority projects if the necessary funds and community support are available.

**TABLE 4 – SUMMARY OF PRIORITIZED FUEL TREATMENTS**

<b>Community</b>	<b>Fuel Treatment</b>	<b>Priority</b>
Bakers Peak	Contact and encourage all landowners in the community to create, improve, and maintain adequate defensible space around their homes.	High
Cedar Mountain	Remove rubber tires that are stored in dense sagebrush at a home located near the end of County Road 203.	High
Freeman Reservoir	Contact and encourage all landowners in the community to create, improve, and maintain adequate defensible space around their homes.	High
Knez Divide	A large area of opportunity for fuel reduction was identified. The actual location of any fuel reduction projects or fuel breaks would need to be discussed by members of the community, Moffat County, and other agencies.	High
Knez Divide	All landowners in the community should be encouraged to create and maintain adequate defensible space around their homes. Landowners should be contacted and advised of ways to create defensible space around their homes.	High
Lay	Fuel reduction treatment should be implemented on hillsides west of Lay.	High
Maybell	All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Community members should work together to encourage or assist absentee landowners, or residents who are unable to maintain their lots, to arrange to control vegetation on overgrown lots in town.	High
Wilderness Ranch	Contact and encourage all landowners in the community to create, improve, and maintain adequate defensible space around their homes.	High
Bakers Peak	Clear concentrations of fuel along roads to improve the use of roads as fuel breaks and control lines.	Medium
Craig	All landowners in the community should be encouraged to maintain adequate defensible space around their homes, especially in the areas surrounding County Roads 105 and 205.	Medium
Freeman Reservoir	Encourage landowners to remove both live and dead conifers and accumulations of ground fuels. Create an overstory of large, healthy aspen and an understory of low, green, herbaceous plants. Encourage aspen regeneration in openings.	Medium
Freeman Reservoir	Create a fuel break on Forest Service lands north and east of the community. Remove dead and dying subalpine fir and accumulations of ground fuel. Promote aspen regeneration.	Medium
Lay	A fuel reduction project should be implemented south of the County Road 175 loop.	Medium
Maybell	A fuel break should be constructed on state lands that are part of the Bitterbrush State Wildlife Area on the south side of the town of Maybell, particularly near the substation.	Medium
Morapos Creek	A fuel break should be constructed on state and private lands, roughly along the eastern edge the state parcel in Section 36, Township 4 north, Range 92 west.	Medium
Morapos Creek	A fuel break should be constructed on private lands from the end of County Road 43 to the southwest, connecting with County Road 41 approximately 2 miles south of the Morapos School.	Medium
Morapos Creek	A fuel break should be constructed on private lands following an existing private road through Section 15, Township 3 north, Range 91 west.	Medium
Sand Spring	Fuel reduction treatments are recommended in moderately dense patches of sagebrush along County Road 174 in the center part of the community near a few homes and west of County Road 174 and south of U.S. Highway 40.	Medium
Sand Spring	A fuel break should be developed along the west side of the community.	Medium
Sunbeam	Fuels should be reduced on BLM and state lands near the community, especially the areas with pinyon/juniper and sagebrush vegetation types.	Medium
Sunbeam	Fuels should be reduced on BLM land to the north and south of the community.	Medium
Sunbeam	Fuels should be reduced on the periphery of the community on private lands.	Medium
Sunbeam	Fuels should be reduced on the state lease to the northwest of the community.	Medium
Wilderness Ranch	Concentrations of fuel along roads should be cleared to improve the use of roads as fuel breaks and control lines. Construct two short segments of fuel break between Timberland Loop Road and Sprout Drive.	Medium

**TABLE 4 – SUMMARY OF PRIORITIZED FUEL TREATMENTS**

<b>Community</b>	<b>Fuel Treatment</b>	<b>Priority</b>
Williams Fork	The need for a fuel break on BLM and state lands on the south end of the community should be assessed.	Medium
Williams Fork	All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Landowners with homes at the south end of the community should be contacted and advised of ways to create defensible space around their homes.	Medium
Cedar Mountain	Fuel treatment should be implemented in dense areas of sagebrush, especially south of County Road 200, on the hillsides on the north side of County Road 82 past the intersection with County Road 7, and near homes adjacent to Cedar Mountain, especially in Cedar Mountain Gulch.	Low
Cedar Mountain	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Craig North	Patches of dense sagebrush should be treated, especially in the gulch west of the intersection of County Roads 22 and 103.	Low
Craig North	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Elkhead	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Freeman Gulch	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Great Divide	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Gun Club Road	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Lay	All landowners in the community should be encouraged to create and maintain adequate defensible space around their homes.	Low
Morapos Creek	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Pagoda	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Power Plant	Adequate defensible space should be maintained around all structures and facilities in this community.	Low
Price Creek	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Round Bottom	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Sand Spring	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Santisteven	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Sunbeam	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low
Western Knolls	Fuel loads on parcels that border the west side of the community should be monitored.	Low
Western Knolls	All landowners in the community should be encouraged to maintain adequate defensible space around their homes.	Low

**TABLE 5 – SUMMARY OF PRIORITIZED PROPOSED FIRE SERVICES**

<b>Community</b>	<b>Fire Service</b>	<b>Priority</b>
Bakers Peak	Road signs should be posted at all intersections and provide complete maps of the road system to all responding agencies. The Sheriff's Department and BLM should keep copies of the maps available for out-of-area crews.	High
Bakers Peak	Potential safety zones should be mapped. If insufficient safety zones are present, they should be created. Provide maps of these locations to all residents and firefighting agencies.	High
Great Divide	A large-capacity water storage tank should be constructed near the Moffat County maintenance building.	High
Knez Divide	Turnarounds along community roads should be increased in quantity and width, especially in conjunction with private landowners along County Road 206.	High
Knez Divide	Maps of power lines and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that the safety of firefighters is not jeopardized.	High
Maybell	Drafting sites should be examined to identify any that are accessible to fire department equipment and any that need improvements to be accessible.	High
Morapos Creek	The development of potential emergency access routes that would connect County Road 41 to County Road 45 west of the community should be examined. Road improvements would likely be needed to allow passenger cars to travel these routes.	High
Morapos Creek	Maps of power lines, gas pipelines, and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that the safety of firefighters is not jeopardized.	High
Pagoda	Maps of power lines, oil wells, and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that the safety of firefighters is not jeopardized.	High
Power Plant	Maps of power plant, power lines, mine, and other related facilities should be made available to all fire departments that would respond to this community. Coordinated training should be conducted for power plant, mine, and county fire crews so that all crews are familiar with the specific hazards present in this community and the appropriate responses to these hazards.	High
Sand Spring	Street signs should be added to Pronghorn and Behrman Roads.	High
Santisteven	Existing roads should be improved to allow better access for firefighting equipment.	High
Wilderness Ranch	Road signs should be posted at all intersections and complete maps of the road system should be provided to all responding agencies. The Sheriff's Department and BLM should keep copies of the maps available for out-of-area crews.	High
Williams Fork	Maps of power lines, oil wells, and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that the safety of firefighters is not jeopardized.	High
Bakers Peak	An evacuation plan for the entire community should be developed in coordination with the Moffat County Sheriff's Department, BLM, Forest Service, community representatives, and any other interested groups and individuals.	Medium
Bakers Peak	An educational program for landowners should be designed. The focus of the program should be: (1) methods to create, improve, and maintain defensible space; (2) prevention of human-caused fires; and (3) an explanation of the evacuation plan.	Medium
Bakers Peak	All roads should be improved to a standard that would allow access by the various types of firefighting equipment. Vegetation should be cleared, and the surface should be graded and graveled. Many roads should be widened and sharp corners straightened. Steeper roads should be completely reconstructed. Turnarounds should be provided.	Medium
Bakers Peak	Sources of water within the community should be examined to determine if they are reliable. Existing springs and ponds should be improved and dry hydrants installed.	Medium
Cedar Mountain	A large water storage tank should be installed in the community at the intersection of County Roads 7 and 15.	Medium
Elkhead	Road signs should be installed on the private road system and loops and dead ends within the private road system should be marked.	Medium

**TABLE 5 – SUMMARY OF PRIORITIZED PROPOSED FIRE SERVICES**

<b>Community</b>	<b>Fire Service</b>	<b>Priority</b>
Freeman Gulch	The opportunity for improved agreement and coordination with the Maybell Volunteer Fire Department or other adjacent county or city emergency response agencies should be explored.	Medium
Freeman Reservoir	An educational program for landowners should be designed. The focus of the program should be: (1) methods to create, improve, and maintain defensible space; and (2) prevention of human-caused fires.	Medium
Freeman Reservoir	The access road should be improved between Freeman Reservoir and the community. In addition, turnarounds should be created within the community.	Medium
Gun Club Road	A large-capacity water storage tank should be constructed in the northwest portion of the community, possibly near the marshy area at the end of County Road 15.	Medium
Knez Divide	A large-capacity water storage tank should be constructed near County Road 206.	Medium
Knez Divide	A large-capacity water storage tank should be constructed at the intersection of County Road 33 and County Road 394.	Medium
Lay	A large-capacity water storage tank should be constructed on the north side of the intersection of County Road 17 and U.S. Highway 40.	Medium
Morapos Creek	A water storage tank could be developed on private land along County Road 41 near the old Morapos School.	Medium
Pagoda	The suitability as a drafting site of the crossing of the Williams Fork by County Road 37 should be examined.	Medium
Pagoda	A drafting site could be developed on the Williams Fork where State Highway 317 crosses a small area of BLM lands.	Medium
Power Plant	Employees of the power plant and mine, as well as firefighters, should be made aware of the potential escape route between the power plant and mine in the event that a fire were to burn across County Road 93.	Medium
Price Creek	The opportunity for improved agreement and coordination with the Maybell Volunteer Fire Department or other adjacent county or city emergency response agencies should be explored.	Medium
Santisteven	A large water storage tank should be installed within the community. An ideal location would be at the intersection of Yoleta Trail and Walter Way.	Medium
Santisteven	The possibility of creating at least one through road should be examined.	Medium
Western Knolls	A large water storage tank should be installed in the community. An ideal location would be at the intersection of Western Avenue and Knoll Avenue.	Medium
Western Knolls	A staging area should also be constructed at the same location as the water tank.	Medium
Wilderness Ranch	An evacuation plan for the entire community should be developed in coordination with the Moffat County Sheriff's Department, BLM, Forest Service, community representatives, and any other interested groups and individuals.	Medium
Wilderness Ranch	An educational program for landowners should be designed. The focus of the program should be: (1) methods to create, improve, and maintain defensible space; (2) prevention of human-caused fires; and (3) an explanation of the evacuation plan.	Medium
Wilderness Ranch	All dead end roads should be inspected for adequacy of turnarounds. Where inspections find that turnarounds are inadequate, they should be reconstructed if possible. If not, these locations should be noted on road maps and the evacuation plan.	Medium
Williams Fork	The suitability as a drafting site of the crossing of the Williams Fork by State Highway 13 should be examined.	Medium
Craig	County Road 205 should be connected to County Road 105 through Girard Lane.	Low
Craig	County Road 205 should be connected to State Highway 13 through Dunn Drive.	Low
Craig North	A dry hydrant should be installed along County Road 18S, approximately ¼ mile from State Highway 13.	Low
Knez Divide	A cooperative agreement could be drafted between Moffat County and the Trapper mine that would allow use of mine water and equipment in the event of a wildland fire.	Low
Lay	The schoolhouse property on the south side of the intersection of U. S. 40 and County Road 17 could serve as a location for a volunteer fire department or for storage of fire equipment.	Low

**TABLE 5 – SUMMARY OF PRIORITIZED PROPOSED FIRE SERVICES**

<b>Community</b>	<b>Fire Service</b>	<b>Priority</b>
Maybell	A dry hydrant could be installed on the east side of town at a pond adjacent to U.S. Highway 40 on Bruce and Joyce Barnes' Ranch.	Low
Morapos Creek	A potential site for a dry hydrant was identified on private lands at the crossing of County Road 41 near the north end of the community.	Low
Wilderness Ranch	Washed out sections of through roads should be repaired or turnarounds should be constructed on both sides of each washout.	Low

## INDIVIDUAL COMMUNITY DISCUSSIONS

This section discusses each individual community that was assessed in the Phase III planning area. Each community discussion includes an explanation of the hazard rating, the results of the analysis of defendability and survivability, and detailed descriptions of the recommended fuel treatments and fire services for the community. Maps of each community that show important community features and recommendations are also included in this section. The completed community assessment forms used to determine the hazard rating, defendability, and survivability are included in **Appendix E**. Representative photographs of each community are included in **Appendix F**.

### Bakers Peak

The Bakers Peak community is at a high risk from wildland fire. In addition, it is currently not defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community; however, it would remain partially defensible. Important features related to the hazard rating and defendability of this community are shown in **Figure 8**.

### Hazard Rating

Access is poor because of the rough, narrow, steep roads. Some firefighting equipment could not access the community because of the poor condition of the roads. There are several through or loop roads; however, there are also several long, dead end roads. There are no adequate turnarounds in most of the community. The few turnarounds that exist are small and could not be used by some firefighting equipment. There are no street signs, and the roads do not appear to be adequately mapped. Lots sizes and spacing between structures are sufficient to allow defense of individual structures. There are no bridges in the community and, therefore, no weight limits for firefighting equipment.

Vegetation is a mosaic of grassland, sagebrush, mountain shrub, oak brush, aspen, and spruce/fir. Grasslands and sagebrush are found in small pockets and at lower elevations. As the elevation increases, oak brush and mountain shrub mix with sagebrush and grass, then begin to form dense stands toward the middle of the community. Higher in elevation, aspen mixes with oak brush and mountain shrub, eventually becoming dominant at the higher elevations and in moister areas. Spruce/fir is invading aspen stands in some of these areas. Spruce/fir dominates at the highest elevations, especially in the northern half of the community and on north-facing slope. The grasslands and sparse areas of sagebrush pose a low fire hazard, while the denser sagebrush, mountain shrub, and oak brush pose a moderate fire hazard. Aspen tends to pose a low hazard, except under extremely dry conditions. Spruce/fir poses a moderate to high fire hazard, depending on density and amount of ground fuels. Many of the spruce/fir stands in this community show significant mortality of subalpine fir and heavy ground and ladder fuels, posing a high hazard.

Defensible space is not adequate for most structures. Slopes are moderate to steep in most the community and pose a moderate to high risk to existing structures. The combination of heavy fuels, steep slopes, and the lack of defensible space pose a high risk to many of the structures. Most structures have combustible wood siding and non-combustible metal roofs. There are no adequate staging areas. The closest potential staging areas are located along County Roads 38 and 70 in the Wilderness Ranch community. Several of these potential staging areas are shown in **Figure 8**. Safety zones are limited to several moist, open meadows that may not be adequate, depending on fire location and behavior.

There are no utilities. Several small ponds and streams are found throughout the community. Some may provide water all year, but others may dry up by mid-summer. One dry hydrant is located ½ mile south on BLM lands, but access to this site would be difficult and time-consuming. Replenishing water supplies would require a round trip longer than 45 minutes for most of the community. The closest available firefighting equipment is in Craig. Response time to the community from Craig averages 90 minutes. Response time may be reduced to 60 minutes on the southwest corner of the community along County Road 70, but may be as much as 120 minutes for the northern half of the community.

### **Defendability/Survivability**

The Bakers Peak community is not currently defensible and would present many challenges to firefighters in the event of a wildland fire. The road system is difficult to traverse in many areas because of a lack of road signs and maps. Some other challenges include heavy fuel loads, steep slopes, lack of defensible space, slow response time, lack of water, and limited safety zones. All of these factors would be significant concerns for landowners and firefighters in the event of a wildland fire. Because of these hazards, firefighters may be unable to enter the community for safety reasons if any significant fire behavior is observed or predicted. Creation of defensible space and awareness of evacuation routes and safety zones by landowners are important because of the fire danger. Air support would be critical in containing wildland fires in this area.

### **Recommended Fuel Treatments and Fire Services**

Two fuel reduction projects are recommended to reduce the risk of wildland fire to the community:

- (1) Concentrations of fuel along roads should be cleared to improve the potential for their use as fuel breaks and control lines in the event of a fire. These efforts should be focused in the more dangerous fuel types, such as mountain shrub, oak brush, and spruce/fir.
- (2) All landowners in the community should be encouraged to create, improve, and maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) An evacuation plan for the entire community should be developed. This plan should be coordinated among the Moffat County Sheriff's Department, BLM, community representatives, and any other interested groups and individuals. The plan should include contingencies, depending on the location of the fire, and a discussion of how to identify and use safety zones in the event that evacuation is not possible.
- (2) An educational program for landowners that uses community meetings, mailings, or a combination of these efforts should be designed. The focus of the program should be: (1) methods to create, improve, and maintain defensible space that are appropriate for a community where

**Figure 8 – Bakers Peak Community**

- (3) many landowners are present on a part-time or occasional basis; (2) prevention of human-caused fires; and (3) a thorough explanation of the evacuation plan.
- (4) Road signs should be posted at all intersections, and accurate maps of the road system should be provided to all responding agencies. The Moffat County Sheriff's Department and BLM should make extra copies of the maps available to any out-of-area crews that are assigned to fires in this area.
- (5) All roads should be improved to a standard that would allow access by the various types of firefighting equipment. At a minimum, vegetation should be cleared, and the surface should be graded and graveled as needed. Many roads need to be widened, and sharp corners need to be straightened. Steeper road segments should be completely reconstructed to reduce grades. Turnarounds should be provided at the end of all dead end roads, at all intersections, and at regular intervals along all roads. Ideally, turnarounds and turnouts should be within ¼ mile of any location along all roads.
- (6) Sources of water in the community should be examined to evaluate whether they are reliable, especially by the end of the summer. If necessary, existing springs and ponds should be improved to allow dry hydrants to be installed and used as sources of water.
- (7) All potential safety zones in the community should be mapped in conjunction with road mapping and creation of the evacuation plan. If insufficient safety zones are present, they should be created as topography and vegetation allow. These should be located along the main through roads and the longer dead end roads so that there is no more than 1 mile between safety zones. Maps of these locations should be provided to all residents and firefighting agencies.

## **Cedar Mountain**

The Cedar Mountain community is at a moderate risk from wildland fire. In addition, it is currently partially defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defensibility of the community; however, it would remain partially defensible. Important features related to the hazard rating and defensibility of this community are shown in **Figure 9**.

### **Hazard Rating**

Access is good on through roads to most of the community; however, County Road 200 and County Road 203 are dead ends, making access difficult in these areas. The primary roads generally have sufficient widths, slight to moderate grades, adequate turnarounds, well-posted street signs, and lots that are large enough to allow fire crews to defend single structures. There are no bridges in the community and, therefore, no weight limits for firefighting equipment.

The primary vegetation type is sagebrush, which poses a moderate fire hazard. Fuels are dense on the hillsides. Many fuel breaks, such as hayfields and roads, occur on ridges and in valleys. These fuel breaks help divide the denser fuels on steeper slopes.

The majority of the structures currently have adequate defensible space; however, there are some exceptions. For example, rubber tires are stored close to one home. Slopes are variable, but overall pose a moderate risk. Relatively steep slopes are found near County Road 204. Slopes are slight or moderate near areas located off County Roads 7, 82, 200, 203, and 31. Most houses in this community have either

**Figure 9 – Cedar Mountain Community**

combustible roofs and non-combustible siding or non-combustible roofs and combustible siding. Multiple open, flat spaces along County Road 7 or at the intersection of County Roads 183, 31, and 7 could be used as staging areas. Cedar Mountain Gulch, along County Road 7, could serve as a safety zone if it were wet or burned out by firefighters. Numerous potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of these potential safety zones are not shown on **Figure 9**.

Utilities in the community consist of buried pipelines and power lines that are above ground. A round trip to the closest water source identified for fire equipment is between 20 and 45 minutes. The closest source of water is a hydrant located at the intersection of County Roads 7 and 31, 1 mile south of the community. The entire community is within the response boundaries of the Craig Rural Fire Department. Response time to the community from Craig is approximately 15 minutes.

### **Defendability/Survivability**

The Cedar Mountain community is currently partially defensible against wildland fire. The southern portions of the community are more defensible because of the presence of through roads and the closer proximity to sources of water.

In general, response time for the Craig Rural Fire Department and Moffat County Sheriff's Department is short, and access to the community is good; however, County Road 200 and County Road 203 are both relatively short, dead end roads. Dead end roads can cause problems for fire response teams because of potential for entrapment. Entrapment can occur if the fire burns across a dead end road, blocking firefighters. This risk is mitigated in part because turnarounds are adequate on both of these roads and would allow fire equipment to turn around quickly in the event of potential entrapment.

Fuels within the community tend to be relatively dense on hillsides, where fires can spread much more quickly than on flat areas with the same density of fuel. Specifically, there are dense fuels south of County Road 200 and north of County Road 82 past the intersection with County Road 7. Vegetation within Cedar Mountain Gulch is thick, and the slopes are steep and erosive.

Many of the houses are located on the hillsides along Cedar Mountain Gulch. Because of the terrain, up-valley winds are likely during afternoon heating, which will contribute to the fire danger. Firefighters should consider this fire hazard before they enter the community.

### **Recommended Fuel Treatments and Fire Services**

Three fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) Fuel treatment should be implemented in dense areas of sagebrush, especially south of County Road 200, on the hillsides on the north side of County Road 82 past the intersection with County Road 7, and near homes adjacent to Cedar Mountain, especially in Cedar Mountain Gulch.
- (2) Rubber tires that are stored in dense sagebrush at a home located near the end of County Road 203 should be removed.
- (3) All landowners in the community should be encouraged to maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) A large water storage tank (10,000 gallons or more) should be installed within the community at the intersection of County Roads 7 and 15. Water would need to be trucked to these tanks initially. Because a source of water would be available at the north end of the community, fire crews could focus more directly on fighting the fire, rather than waiting for water supplies to be replenished.

## Craig

The Craig community is at a low risk from wildland fire. It is currently partially defendable against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety, and the community would become fully defendable. Important features related to the hazard rating and defendability of this community are shown in **Figure 10**.

### Hazard Rating

Access is good on through roads to most of the community; however, County Roads 105 and 205 are dead ends, making access difficult in these areas. Roads in the community generally have sufficient widths, slight to moderate grades, adequate turnarounds, and well-posted street signs. Lots vary in size from 1 to 10 acres. Structures on lots under 5 acres would be relatively easy to defend because the fuel loads on the lots are not high and they are not located in steep terrain. Lots bigger than 5 acres are large enough to allow fire crews to defend single structures. There are no bridges in the community and, therefore, there are no weight limits for firefighting equipment.

The primary vegetation type is sagebrush, which poses a moderate fire hazard; however, there are areas of grazed grassland and agricultural land uses, which pose lower fire hazards. Pockets of dense sagebrush on the hillsides along County Roads 105 and 205 are the main areas where fuel loads pose a moderate fire hazard. Many fuel breaks, such as irrigated hayfields, grazed sagebrush, and roads, occur throughout the community. These fuel breaks help divide the denser fuels on steeper slopes.

The majority of the structures currently have adequate defensible space. Slopes are variable, but overall pose a moderate risk. Slopes are steeper along County Roads 105 and 205, while slopes are mild in the rest of the community. Roofs and siding are non-combustible on some houses in this community, but there are also homes with combustible roofs, combustible siding, or both. Potential staging areas in the community include the southwest corner of the intersection of State Highway 13 and County Road 105 and the northwest corner of the intersection of County Roads 31 and 7. Numerous potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Bottomlands along Fortification Creek and State Highway 13 could serve as a major safety zone in the middle of the community. Many of the potential safety zones are not shown on **Figure 10**.

Utilities in the community consist of buried pipelines and power lines that are above ground. Most of the power lines are carried on wooden poles. Many areas of the community are within 1,000 feet of a hydrant, but for some areas, the closest identified water source would require up to a 20-minute round trip. Many hydrants could be accessed south of the community (south of County Road 183) within the Craig municipal limits. Many hydrants are also located within the Craig community along County Road 7. The entire community is within the response boundaries of the Craig Rural Fire Department. Response time to the community from Craig is approximately 10 minutes.

**Figure 10 – Craig Community**

## Defendability/Survivability

The Craig community is currently partially defendable against wildland fire. In general, response time is short and access to the community is good; however, County Road 105 and County Road 205 are both relatively short, dead end roads that pass through areas with moderate fuel loads and steeper slopes. Dead end roads can cause problems for fire response teams because of the potential for entrapment. Entrapment can occur if the fire burns across a dead end road, blocking firefighters.

Additionally, fuels within the community tend to be relatively dense on hillsides, where fires can spread much more quickly than on flat areas with the same density of fuel. Slopes exceed 20 percent on terrain along much of County Roads 105 and 205. The grade decreases and the terrain flattens as both roads wind to the top of the mesa. Between County Roads 183, 105, and 205, slopes are steep and the sagebrush is moderate in density. Because many of the homes are at the top of these steep hillsides, they are at a higher risk from wildland fire.

Fortification Creek and State Highway 13 could serve as fuel breaks in the middle of the community. County Roads 105, 205, and connected roads also represent potential fuel breaks.

## Recommended Fuel Treatments and Fire Services

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes, especially in the areas surrounding County Roads 105 and 205.

Additional fire services that would increase community defendability include:

- (1) Connecting County Road 205 to County Road 105 through Girard Lane. This connection would make both County Roads 105 and 205 through streets, reducing the potential for entrapment.
- (2) Connecting County Road 205 to State Highway 13 through Dunn Drive. This connection would make County Road 205 a through street, reducing the potential for entrapment.

## Craig North

The Craig North community is at a low risk from wildland fire. It is currently defendable against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 11**.

## Hazard Rating

Access is good on through roads for the entire community. The primary roads have sufficient widths, slight grades, and well-posted street signs. Most of the lots exceed 5 acres and are large enough to allow fire crews to defend single structures. Turnarounds are adequate, although some secondary roads (County Roads 78, 78a, 78b, and 210) are dead end. There are some posted weight limits on bridges, but firefighting equipment can use these bridges. One bridge, which accesses the community from the north on County Road 18 and crosses Fortification Creek, has the following posted weight limits: 2 axles/22 tons; 3 axles/34 tons; 4 axles/35 tons. Another bridge is located on County Road 18S, approximately 1/4 mile east of State Highway 13. No weight restrictions are posted for this bridge, and the bridge is wide and well maintained. Three smaller bridges are also located within the community, but none has posted

**Figure 11 – Craig North Community**

weight limits. These bridges are located 0.7 and 1.2 miles west of State Highway 13 on County Road 22 and 0.8 miles north of County Road 22 on County Road 103. These bridges are narrow; however, they appear wide enough for medium-sized fire equipment.

The primary vegetation type is sagebrush, which is generally sparse, although there are some moderate and dense patches. The sagebrush poses a low to moderate hazard, depending on density. Many fuel breaks, such as hayfields, grazed sagebrush, and roads, occur throughout the community. These fuel breaks help divide areas of contiguous fuels. Much of the community is grazed by livestock, which reduces fuel loads.

Defensible space is adequate for the majority of the structures. Defensible space should be improved for some structures, however. Slopes are variable, but overall pose a low risk. Roofs are non-combustible and the siding is combustible on some houses in this community, while roofs are combustible and the siding non-combustible on others. Several open, flat spaces at the intersections of County Roads 22 and 78 with State Highway 13 could be used as staging areas. The flat area between State Highway 13 and Fortification Creek could serve as a safety zone, depending on the nature and location of the fire. Numerous potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 11**.

Utilities in the community consist of buried pipelines and power lines that are above ground. Most of the power lines are carried on wooden poles. The source of water closest to the community is Fortification Creek, which runs through the central portion of the community and is up to a 20-minute round trip. Firefighters could draft from this source and potentially from other creeks within the community (tributaries of Sand Gulch, Hayden Cutoff Draw, and Wymore Gulch), depending on the time of year. Additionally, many hydrants can be accessed in the City of Craig, 2.5 miles from the southern portion of the community. The entire community is within the boundaries of the Craig Rural Fire Department. Response time to the community from Craig is approximately 15 minutes.

### **Defendability/Survivability**

The Craig North community is currently defendable. The network of through roads is good, and fuel loads are generally low, although a few patches are moderate to dense. There are many fuel breaks, including roads, agricultural fields, areas where vegetation has been cleared, and numerous drainages with light fuel loads. Response time is short and access to the community is excellent because of its close proximity to Craig and the network of roads.

Much of the community is exposed to west and northwesterly winds. The potential for fire to spread across the rolling sagebrush hillsides is high if wind is forecast within this community.

### **Recommended Fuel Treatments and Fire Services**

Two fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) Patches of dense sagebrush should be treated, especially in the gulch west of the intersection of County Roads 22 and 103.
- (2) All landowners in the community should be encouraged to maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) A dry hydrant should be installed along County Road 18S, approximately ¼ mile from State Highway 13. The source of water for this hydrant would be a tributary of Fortification Creek.

## Elkhead

The Elkhead community is at a low risk from wildland fire. Furthermore, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 12**.

### Hazard Rating

Access is good on through roads for the entire community. The primary roads have sufficient widths and slight grades. County roads in the community are well signed, but private roads are not. Average lots are more than 5 acres and are large enough to allow fire crews to defend single structures. The turnarounds are adequate on most roads, although space for turnarounds on some secondary roads is limited. These turnarounds include the pullouts along County Road 28 and the private roads. One private road in the center of the community is dead end and exceeds 200 feet in length. No weight limits are posted for one private bridge; it is narrow, but is maintained. This bridge could be a problem for some fire equipment. In addition, the long, narrow bridge that crosses the dam for the Elkhead Reservoir north of the community may not be accessible for all fire equipment.

The primary vegetation type is sagebrush and hay pasture. The sagebrush is generally sparse and poses a low fire hazard. There are no notable pockets of dense sagebrush. Many fuel breaks, such as County Roads 28 and 29 and irrigated pasture, occur throughout the community. These fuel breaks help divide natural areas with contiguous fuels. Much of the land is used for pasture and is heavily grazed.

Defensible space currently is adequate for all of the structures. Slopes are variable and overall pose a low to moderate risk. Roofs are non-combustible and the siding is combustible on most houses in this community. The open, flat space east of County Road 29 where the private road branches off would make a good staging area. The area along County Road 28 could serve as a safety zone, depending on the nature and location of the fire. Numerous potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 12**.

Utilities in the community consist of buried pipelines and power lines that are above ground. Most of the power lines are carried on wooden poles. The closest source of water is up to a 20-minute round trip. The closest hydrant is 7 miles south of the community, on U.S. Highway 40. The tributaries from Elkhead Reservoir and Elkhead Reservoir could be used for drafting. The entire community is within the boundaries of the Craig Rural Fire Department. Response time to the community from Craig is approximately 30 minutes.

### Defendability/Survivability

The Elkhead community is currently defensible. The network of through roads is good, and fuel loads are generally low, although a few patches are moderate to dense. There are many fuel breaks, including roads and agricultural fields. Because of dead end private roads that exceed 200 feet in the center of the community, risk to firefighters is increased. Long, dead end roads can cause problems for fire response teams because of potential for entrapment. Entrapment can occur if the fire burns across a dead-end road, blocking firefighters.

Much of the community is exposed to west and northwesterly winds. The potential for fire to spread across the rolling sagebrush hillsides is high if wind is forecast within this community.

**Figure 12 – Elkhead Community**

## Recommended Fuel Treatments and Fire Services

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) Road signs should be installed on the private road system, and loops and dead ends within the private road system should be marked.

## Freeman Gulch

The Freeman Gulch community is at a low risk from wildland fire. In addition, it is currently defendable against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 13**.

### Hazard Rating

Access is good on through roads for the entire community. The roads have sufficient width and slight grades. The lots in the community are large (more than 10 acres) when compared with other communities within the Phase III area. As a result, firefighters would be able to defend individual structures. The community was identified as an area of concern primarily because of a hunting lodge — the R & R Ranch, which can house up to 45 temporary residents, depending on the season. County roads and access to the lodge are well signed. All of the county and private roads are graveled. Turnarounds within the community are adequate, although the roads are narrow. There are no bridges and therefore no weight limitations.

A major fire in 1988 burned across almost all of the community. The primary vegetation types are sagebrush and juniper, which posed a moderate hazard before the fire. The area has revegetated with sparse native grasses, forbs, and sagebrush seedlings, which currently pose a low fire hazard. There are no notable pockets of dense sagebrush. Because of the fire history, the fuel loads are minimal. Additionally, the landowner regularly cuts the vegetation around the lodge and along roads and fences. A bulldozer for the work is located near the lodge. Livestock graze within the community, which helps to reduce fuels.

Defensible space is currently adequate for the majority of the structures. Slopes are steep, and if the vegetation increases in density, would pose a moderately high risk. The roof of the lodge is non-combustible and the siding is combustible. The intersection of County Roads 57 and 59S could be used as a staging area. Areas between the private roads could serve as safety zones, depending on the nature and location of the fire. Numerous potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 13**.

Utilities in the community consist of buried pipelines and buried power lines. The source of water closest to the community is up to a 20-minute round trip. A 36,000-gallon storage tank located at the lodge could be used as an emergency source of water. A well is also available for emergencies. Cedar Springs Draw, west of the community, might be available for drafting, depending on the season. The closest available firefighting equipment to the community is in Craig. Response time to the community from Craig is

**Figure 13 – Freeman Gulch Community**

approximately 60 minutes. The Maybell Volunteer Fire Department could respond to this community in 30 to 40 minutes. The response time for firefighters from Rio Blanco County and Meeker may be slightly less than from the Moffat County Sheriff's department.

### **Defendability/Survivability**

The Freeman Gulch community is currently defendable, however; the response time to this community for most emergency response crews is long. Although there is a good network of through roads, initial attack using aircraft may be the most timely response, particularly in the event of dangerous fire conditions. Aside from the long response time, the community is defendable under favorable weather conditions because the fuel loads are generally low, with few patches of moderate to dense fuel loads. There are many fuel breaks, including roads, existing vegetation reduction projects, and grazed pasture. Because the lodge is located at the top of Cedar Knob, the structure and surrounding wildlands are subject to strong westerly winds. The valley created by Wild Horse Draw may also be prone to up valley winds, which can lead to fires with a chimney effect. Firefighters should consider these winds in fire planning.

Some cattle guards may be difficult to cross with large firefighting equipment because the private road to the lodge is narrow; however, the terrain is flat and equipment could travel off road and pass through cut fences. There are relatively few structures in this community; therefore, fewer resources would be needed for structure protection, effectively increasing community defendability.

### **Recommended Fuel Treatments and Fire Services**

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Existing fuel breaks should be maintained, especially around the lodge.

Additional fire services that would increase community defendability include:

- (1) The opportunity for improved agreement and coordination with the Maybell Volunteer Fire Department or other adjacent county or city emergency response agencies should be explored.

### **Freeman Reservoir**

The Freeman Reservoir community is at a moderate risk from wildland fire. In addition, it is currently partially defendable against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community; however, it would remain partially defendable. Important features related to the hazard rating and defendability of this community are shown in **Figure 14**.

### **Hazard Rating**

This community is accessed by a long, good-quality, dead end road to Freeman Reservoir. The final ¼ mile to the community is on a moderate-quality road that is slightly narrower than is ideal. Road grades are slight to moderate, but should not pose a problem for firefighters in accessing the community. Turnarounds are adequate along the access road as far as Freeman Reservoir, but appear to be narrow and limited within the community. Some lots in the community are small enough that individual structures could not be defended under some fire conditions. These structures would be easily defended as a group under most fire conditions, however. Street signs are not present within the community. There are no bridges in the community and, therefore, no weight limits for firefighting equipment.

**Figure 14 – Freeman Reservoir Community**

The primary vegetation type is aspen. Throughout the community, varying amounts of spruce/fir (primarily subalpine fir) are invading the aspen. Significant mortality of the subalpine fir was noted. This vegetation type poses a moderate fire hazard. The spruce/fir becomes denser north and east of the community. In these areas, large accumulations of standing dead subalpine fir and heavy ground and ladder fuels pose a high fire hazard.

Defensible space is not adequate for some of the structures. Slopes are slight to moderate. Most structures have combustible wood siding and non-combustible metal roofs. The primary staging area would be adjacent to the community at the Freeman Reservoir campground on Forest Service lands (**Figure 14**). Depending on the location of the fire, other potential staging areas would be available farther down County Road 11. The Freeman Reservoir area also provides a large potential safety zone (**Figure 14**), and other open areas farther down County Road 11 could also be used as safety zones, depending on location and behavior of the fire.

There are no utilities. Water is available at Freeman Reservoir, a short round trip from the community. The closest available firefighting equipment is in Craig. Response time to the community from Craig averages 60 minutes.

### **Defendability/Survivability**

The Freeman Reservoir community is currently partially defendable against wildland fire. Response time is long. If a fire were to start to the west, the only access route may be blocked or unsafe for use by firefighters.

Low- to moderate-intensity wildland fires tend to spread slowly, if at all, in the aspen vegetation type. Humidity and fuel moisture are typically high and ladder fuels are minimal. The community would be defendable against this type of fire. High-intensity fire could spread into this community from oak brush and mountain shrub vegetation that grows downslope to the west and south, however.

Recreational use of the Freeman Reservoir campground and other facilities poses a risk of human-caused fires. Fire could easily spread through the dense spruce/fir vegetation between the reservoir and the community. Fire crews may not be able to safely access the community if high-intensity fire is present or predicted because the primary escape route and safety zones are through dense spruce/fir with heavy fuel loading. The community may not be defendable against this type of fire.

### **Recommended Fuel Treatments and Fire Services**

Three fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to create, improve, and maintain adequate defensible space around their homes.
- (2) Within the community, but beyond the maintained defensible space around each structure, landowners should be encouraged to remove both live and dead conifers, as well as any significant accumulations of ground fuels. The goal of this treatment is to create a shaded fuel break throughout the community. There should be an overstory of large, healthy aspen and an understory of low, green, herbaceous plants. Aspen regeneration should be encouraged in openings to maintain a high canopy closure.

- (3) A fuel break should be created on Forest Service lands along the ridgeline north and east of the community. The treatment should focus on removing dead and dying subalpine fir and accumulations of ground fuel while promoting regeneration of aspen. This fuel break would prevent fire from spreading between Freeman Reservoir and the community and improve the safety of firefighters who would need to cross this area to access the community.

Additional fire services that would increase defendability of the community include:

- (1) An educational program for landowners that uses community meetings, mailings, or a combination of these efforts should be designed. The focus of the program should be: (1) methods to create, improve, and maintain defensible space that are appropriate for a community where many landowners are present on a part-time or occasional basis; and (2) prevention of human-caused fires.
- (2) The access road between Freeman Reservoir and the community should be improved and turnarounds created as needed within the community. Access roads could be improved in conjunction with the fuel break on Forest Service lands discussed above.

## Great Divide

The Great Divide community is at a low risk from wildland fire. It is currently partially defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community; however, it would remain partially defensible. Important features related to the hazard rating and defendability of this community are shown in **Figure 15**.

### Hazard Rating

Access is good on through roads for the entire community. The primary roads are accessible, with sufficient widths, moderate grades, and average lots that are large enough to allow fire crews to defend single structures. Street signs are posted on county roads. Turnarounds are adequate on secondary roads, although County Road 5 is narrow and space for turnarounds is less than adequate. There are no bridges in the community and therefore no weight limitations.

The primary vegetation type is sagebrush, which is moderate in density and poses a moderate fire hazard. The sagebrush within the community appears to be lightly grazed by livestock and wildlife, which reduces the fuel loading within the community and therefore the overall fire hazard. The various county and access roads for oil and gas development that cross the community serve as fuel breaks that may be used as fire lines, depending on the location and direction of the fire. These graveled surfaces help break up the areas of contiguous fuels.

The majority of the structures currently have adequate defensible space. Slopes are variable, and overall pose a low to moderate risk. Roofs and siding are non-combustible on most houses in this community. The Moffat County maintenance building could be used as a staging area. The depression south of the intersection of County Roads 9 and 7 would serve as a potential safety zone. There are several fuel breaks at this location, including both county roads and Bighole Gulch. Several other potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 15**.

**Figure 15 – Great Divide Community**

Utilities in the community consist of buried pipelines, aboveground oil and gas wells, and power lines that are above ground. Most of the power lines are carried on wooden poles. The source of water closest to this community is at least a 45-minute round trip. Bighole Gulch and other surrounding perennial creeks could be used for drafting, depending on the season. The time to obtain water would vary depending how much water is flowing in each creek and on access to the creek. The closest available firefighting equipment to the community is in Craig. Response time to the community from Craig is approximately 60 minutes.

### **Defendability/Survivability**

The Great Divide community is currently partially defensible against wildland fire. The network of through roads is good. Fuel loads are moderate, and there are numerous fuel breaks. Response time to the community is the primary concern, which is why the community is not considered fully defensible against wildland fire. Although the network of through roads is good, initial attack using aircraft may be the most timely response, particularly in the event of dangerous fire conditions. Lack of nearby water is also a significant concern for this community.

The area is known for strong prevailing westerly and northwesterly winds. These winds could substantially alter and augment fire behavior in and around the community. CRP lands west of the community have the potential to fuel a fast-burning fire that could quickly enter the community if strong winds are blowing. There are relatively few structures in this community; therefore, fewer resources would be needed for structure protection, effectively increasing community defendability.

Oil and gas wells and storage tanks could limit firefighting in some parts of the community. In areas of sparse fuel and with light winds, well pads and access roads may serve as fuel breaks; however, under more difficult conditions, firefighters would avoid these areas because the wells could catch fire.

### **Recommended Fuel Treatments and Fire Services**

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Continued livestock grazing would assist in maintaining low to moderate fuel loads around the community.

Additional fire services that would increase community defendability include:

- (1) A large-capacity (at least 10,000 gallons) water storage tank should be constructed near the Moffat County maintenance building. Water would have to be trucked to the site or a well or catchment system built.

### **Gun Club Road**

The Gun Club Road community is at a low risk from wildland fire. Furthermore, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 16**.

**Figure 16 – Gun Club Road Community**

## Hazard Rating

Access is good on through roads for the entire community. The primary roads have sufficient widths and slight grades. The size of lots varies; some are large enough to allow fire crews to defend single structures (more than 5 acres), while others are smaller and would be defended as a group. Street signs are posted on county roads, except on an extension of County Road 207 and private roads west of County Road 15 in the northern portion of the community, which are not marked. Turnarounds are adequate on the roads throughout the community, although they are narrower than would be ideal along County Roads 207, 204, and 16. There are no bridges and therefore no weight limitations.

The primary vegetation type is sagebrush, which moderate in density and poses a moderate fire hazard. Roads in this community act as fuel breaks, as do cultivated fields, drainages, and rock outcrops. These breaks help divide areas of contiguous fuels.

The majority of the structures currently have adequate defensible space. Slopes are variable and overall pose a low to moderate risk. Roofs are non-combustible and the siding is combustible on most houses in this community. The open spaces at the intersection of County Road 64 (Gun Club Road) and County Road 207 on the south side of the community could be used for staging, as could the intersection where County Road 15 turns north into a network of private roads on the north side of the community. County Road 15 and Gun Club Road could serve as safety zones because they are wide and graveled. Several other potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 16**.

Utilities in the community consist of buried pipelines and power lines that are above ground. Most of the power lines are carried on wooden poles. The source of water closest to the community is a 20- to 45-minute round trip. The closest hydrant to the community is located at the intersection of County Road 30 and U.S. Highway 40. This hydrant is more than a 45-minute round trip from the northwestern part of this community. The closest available firefighting equipment to the community is in Craig. The eastern half and northwestern corner of this community are within the response boundaries of the Craig Rural Fire Department. Response time to the community from Craig is 15 minutes to the south end of the community and up to 30 minutes to the north end of the community.

## Defendability/Survivability

The Gun Club Road community is currently defendable. The network of through roads is good. Fuel loads are moderate and there are numerous fuel breaks. Defensible space for houses in the area is good. Response time to the community is also relatively short.

## Recommended Fuel Treatments and Fire Services

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) A large capacity (at least 10,000 gallons) water storage tank should be constructed in the northwestern portion of the community, possibly near the marshy area at the end of County Road 15. Water would have to be trucked to the site or a well or catchment system built.

## Knez Divide

The Knez Divide community is at a high risk from wildland fire. In addition, it is not currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defensibility of the community; however, it would remain partially defensible. Important features related to the hazard rating and defensibility of this community are shown in **Figure 17**.

### Hazard Rating

Access is limited because the community is located in a narrow canyon and there is only one ungated through road (County Road 33). County Road 35, on the west side of the community, is gated at the community boundary. Access in this portion of the community was not observed since legal access was not available; however, maps indicate that County Road 35 connects with other through roads 1 mile south of the gate. Primary roads have sufficient widths and have moderate grades. Turnarounds on secondary roads are not adequate because they are narrow and the grade is steep, especially County Road 206; however, driveways for some homes could be used as turnarounds. The lots throughout most of the community (beyond County Road 206) are large enough to allow fire crews to defend single structures. Lots along County Road 206 are smaller and steeper, which may prevent firefighters from defending individual structures. Streets are well signed. There are no bridges and therefore no weight limitations.

The primary vegetation type is moderate to dense oakbrush, which poses a moderate fire hazard. The area is used by wildlife for browsing and grazing, which slightly reduces fuel loads. There are very few fuel breaks in this community. Roads within the community could act as fuel breaks under some conditions; however, fire could easily jump them because fuels on either side of most roads are dense and contiguous.

The defensible space for the majority of the structures currently is not adequate, and many are located on ridge tops and hilltops. Slopes are moderate to steep in much of the community and pose a high risk. Roofs are non-combustible and the siding is combustible for some houses in this community; and the roofs and siding on others are combustible. The intersection of County Road 33 and County Road 394 would serve as a good staging area. The northern portion of the community, along County Road 33 in the lower, wetter area, could serve as a safety zone, depending on the nature and location of the fire. Several other potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 17**.

Utilities in the community consist of buried pipelines and power lines that are above ground. The low-voltage power lines are carried on wooden poles. Two sets of high-voltage power lines run parallel to each other across the south end of the community and cross County Road 33. One of the sets of these high-voltage power lines has metal structures and the other has wooden poles. The source of water closest to this community is more than a 45-minute round trip for most of the community. The time needed to obtain water varies considerably within the community because of the length and grade of the access roads. Sources of water include the Yampa River, a hydrant within the Craig City limits (1 mile north of the northern boundary of the community), and a medium-size stock pond on the north side of the community along County Road 35. The entire community is within the response boundaries of the Craig Rural Fire Department. Response time to the center portion of the Knez Divide community from Craig is 20 minutes.

**Figure 17 – Knez Divide Community**

## Defendability/Survivability

The Knez Divide community is currently not defendable. It is located in a narrow canyon with heavy fuel loads, limited access, and a relatively long distance to water. In addition, turnarounds are small, and defensible space around most structures is not adequate. The terrain is steep in areas, increasing the potential for extreme fire behavior and making access difficult for firefighting equipment. Response time to the north end (near most of the homes) of the community is relatively short, but increases substantially to homes on the south end of the community.

Two high-voltage power lines could be threatened by a wildland fire, and a large coal mine is adjacent to the community. Upslope and up-valley winds are likely during the afternoon heating period because of the high ridges and deep valleys within this community. Portions of the community along and near County Road 35 and 206 are prone to chimney-effect fires.

## Recommended Fuel Treatments and Fire Services

Two fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) A large area of opportunity for fuel reduction was identified on **Figure 17**. No specific locations were identified for reduction because the fuels are contiguous over a large area and no obvious topographic or vegetation breaks could be used as fuel breaks. The actual location of any fuel reduction projects or fuel breaks would need to be discussed by members of the community, Moffat County, and other agencies.
- (2) All landowners in the community should be encouraged to create and maintain adequate defensible space around their homes. Landowners should be contacted and advised of ways to create defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) Turnarounds along community roads should be increased in quantity and width, especially in conjunction with private landowners along County Road 206.
- (2) A large capacity (at least 10,000 gallons) water storage tank should be constructed near County Road 206. Water would be trucked to the site or a well or catchment system built.
- (3) A large capacity (at least 10,000 gallons) water storage tank should be constructed at the intersection of County Road 33 and County Road 394. Water would be trucked to the site or a well or catchment system built.
- (4) Representatives from the community and Moffat County should meet with personnel from Trapper Mine. A cooperative agreement could be drafted with the mine that would allow use of mine water and equipment in the event of a wildland fire. A system of coordinating initial attack against a wildland fire between the sheriff's department and the mine could be developed to allow timely response to any nearby fires.
- (5) Maps of power lines and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that firefighter safety is not jeopardized.

## Lay

The Lay community is at a low risk from wildland fire. In addition, it is currently partially defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community; however, it would remain partially defensible. Important features related to the hazard rating and defendability of this community are shown in **Figure 18**.

### Hazard Rating

Access is good on through roads, including U.S. Highway 40 and County Road 17. The primary roads generally have sufficient widths, slight grades, and well-posted street signs. Furthermore, the average lot exceeds 5 acres, which is large enough to allow fire crews to defend single structures. County Road 175 is the only dead end road. Turnarounds are generally adequate on the secondary roads, although the radius on County Road 175 may be narrower than is ideal. Bridges are present on U.S. Highway 40 and on County Road 17, south of U.S. 40. There are no weight limits on the bridges for firefighting equipment.

The primary vegetation type is sparse to moderately dense sagebrush, which poses a moderate fire hazard. Fuels are sparse to dense and are particularly heavy just west of the community. Livestock graze throughout the community, partially reducing fuel loads.

Defensible space is adequate for the majority of the structures. Slopes are variable, but overall pose a low risk. Either the roofs are combustible and the siding is non-combustible or the roofs are non-combustible and the siding is combustible on most houses in this community. The turnoff to Juniper Mountain at the intersection of County Road 17 and U.S. 40 could be used as a staging area. Safety zones include the area south of U.S. 40 and County Road 17, as well as Lay Creek, north of U.S. 40 and County Road 17, depending on the nature and location of the fire. Several other potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 18**.

Utilities in the community consist of buried pipelines and power lines that are carried on aboveground wood poles. A round trip to the closest identified source of water for fire equipment, portions of Lay Creek or the Yampa River, is between 20 and 45 minutes. The closest available firefighting equipment to the community is in Craig. Response time to the community from Craig is approximately 20 minutes.

### Defendability/Survivability

The Lay community is currently partially defensible against wildland fire. In general, access to the community is good and the terrain is flat; however, County Road 175 is a relatively short, dead end road. Dead end roads can cause problems for fire response teams because of the potential for entrapment. Entrapment can occur if the fire burns across a dead-end road, blocking firefighters.

Based on a discussion with the community representative, the response time for the Maybell Volunteer Fire Department could exceed 45 minutes. Additionally, according to the community representative, fire that starts closer to Maybell after multiple lightning strikes in the Maybell or Lay area would likely receive higher priority than a fire that starts near Lay.

**Figure 18 – Lay Community**

The community is prone to westerly and northwesterly winds year round because of the relatively flat terrain. These winds may pose a significant hazard to firefighters and should be considered in fire planning. U.S. Highway 40 is a relatively heavily traveled road that transects this rural community. The community is concerned that passing motorists may discard cigarettes or other burning materials along U.S. Highway 40 and start a fire.

Oil and gas wells are located approximately 2 miles west of the community. Tanks for produced water from oil and gas wells (15 to 20) are located on the south side of U.S. 40 at the turnoff to County Road 17. These tanks may be explosive, depending on the amount of flammable material they contain.

## Recommended Fuel Treatments and Fire Services

Three fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) Fuel reduction treatment should be implemented on hillsides west of Lay. This project would reduce the potential for fires to start west of Lay and blow into town on the prevailing winds.
- (2) A fuel reduction project should be implemented south of the County Road 175 loop.
- (3) All landowners in the community should be encouraged to create and maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) A large capacity (at least 10,000 gallons) water storage tank should be constructed on the north side of the intersection of County Road 17 and U.S. Highway 40. Water would have to be trucked to the site or a well or catchment system built.
- (2) The schoolhouse property on the south side of the intersection of U. S. 40 and County Road 17 could serve as a location for a volunteer fire department or storage of fire equipment, according to a community representative. Staging fire equipment in Lay would significantly decrease the response time to Lay, would provide additional resources to the Maybell Volunteer Fire Department, and may aid in fighting fires in other nearby communities.

## Maybell

The Maybell community is at a low risk from wildland fire. In addition, it is currently defendable against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 19**.

## Hazard Rating

There are several through roads in the Maybell community, including U.S. Highway 40, State Highway 318, County Roads 19, 57, and 59, and streets in the town of Maybell. There are also several dead end roads in Maybell and out onto ranches in the surrounding area. The primary and secondary roads are generally accessible to firefighting equipment, with sufficient widths, slight grades, and well-posted street signs. Turnarounds are adequate on primary roads, but are limited by width on some secondary roads. Lots in town are generally small and it could be difficult to protect some individual homes. The lots are larger outside of town, allowing defense of individual homes. Weight limits on bridges would not restrict access by firefighting equipment.

**Figure 19 – Maybell Community**

The primary vegetation type on wildlands outside of the town of Maybell is sagebrush, with scattered areas of bitterbrush. State lands south of town are part of the Bitterbrush State Wildlife Area. Part of this area burned in the past and fire hazard is low. Other areas, however, present a moderate fire hazard, particularly just south of the town of Maybell. The bottomlands along the Yampa River are typically hay meadows.

Either the roofs or the siding is combustible on most houses in this community. Landowners generally maintain adequate defensible space. Slopes are variable, but overall pose a low risk. The primary staging area in this community is the park in Maybell. Limited space for staging is also available at the intersection of U.S. Highway 40 and County Road 57 and just north of the County Road 19 bridge over the Yampa River. Numerous safety zones are present in this community including, but not limited to: open maintained areas in the town of Maybell (such as the park), the major highways and county roads in the community, and the large areas of hay fields along the Yampa River, including the river itself. Many potential safety zones are not shown in **Figure 19**.

Utilities in the community consist of buried pipelines, and power lines that are above ground. The closest identified source of water for fire equipment is within 5 minutes, at a 1½-inch standpipe in the park in Maybell. In addition to the standpipe, the Maybell Ditch can be drafted in several places around town, and there is some access to the Yampa River. Equipment available to the Maybell Fire Department, which could respond to a wildland fire in less than 15 minutes, is discussed in Chapter 4. In addition, the BLM generally stages an engine in the park in Maybell to reduce the response time to the surrounding area. Additional firefighters and equipment are available in Craig; the response time to this community is about 40 minutes.

### **Defendability/Survivability**

The Maybell community is currently defensible. In general, access to the community is good, but off-road access and the use of off-road areas as turnarounds could be difficult because of the sandy soils. The hay meadows along the Yampa River form a broad fuel break against any fires that might approach from the north. Fuels within the community vary from sparse to dense, but areas of dense fuel are not large or contiguous, except on the south side of town. Community representatives and residents at the public meeting in Maybell voiced strong concern that fire could start south of town in the Bitterbrush State Wildlife Area and sweep into Maybell. The substation that supplies power to Maybell is located on the south side of town, adjacent to the Bitterbrush State Wildlife Area. Damage to this substation could cause loss of power to the town, including the pump that supplies water to the standpipe.

Slope and topography are not likely to play a large role in the spread of wildland fire in this community. Wind would be a concern if a fire south of town were to occur during strong north winds, which are common in this area. Absentee owners hold small percentage of the lots and homes in town and do not adequately control grass and weeds on the lots; however, residents who live in town generally do a good job of controlling vegetation and maintaining defensible space.

### **Recommended Fuel Treatments and Fire Services**

Two fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) A fuel break should be constructed on state lands that are part of the Bitterbrush State Wildlife Area on the south side of Maybell. This fuel break would help prevent any fire that starts south of Maybell from spreading into the community. The west end of the fuel break should be located in the center of section 31 on the south side of U.S. Highway 40, about a mile west of Maybell. The fuel break should then run east along the northern border of state lands for 2 miles, then run south along the east edge of state lands to County Road 57. The most important part of the fuel break would be immediately adjacent to the town, particularly near the substation.

- (2) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Small lots with overgrown vegetation in town present a potential problem for defendability if a fire were to occur in or near town. Community members should work together to encourage or assist absentee landowners, or residents who are unable to maintain the lots, to arrange to control vegetation on overgrown lots in town.

Additional fire services that would increase community defendability include:

- (1) A dry hydrant could be installed on the east side of town at a pond adjacent to U.S. Highway 40 on Bruce and Joyce Barnes' ranch, as discussed with the Maybell Fire Department
- (2) Drafting sites should be examined to identify any that are accessible to fire equipment and those that need improvements to be accessible.

## Morapos Creek

The Morapos Creek community is at a moderate risk from wildland fire. In addition, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 20**.

### Hazard Rating

Both primary access roads in this community (County Roads 41 and 43) are long and dead end. The primary roads have sufficient widths, slight grades, and adequate turnarounds. Average lots in this community are large enough to allow fire crews to defend single structures. There are no visible street signs, although their absence is not a problem in this community because of the limited number of roads. No weight limits on bridges would restrict access by firefighting equipment.

Bottomlands along Morapos Creek and Deer Creek are generally hay meadows, presenting a low fire hazard. Uncultivated open areas and lower slopes are typically sagebrush that varies from sparse to dense and presents a moderate fire hazard. Upper slopes and ridges are a mixture of oakbrush, mountain shrub, and sagebrush. These patches are open and scattered in some areas and dense and contiguous in others, especially toward the south end of the community. Overall, areas of oakbrush and mountain shrub pose a moderate fire hazard.

Defensible space is adequate for the majority of the structures. Most homes are adjacent to or surrounded by hay meadows. No homes were observed in areas of heavy fuels. Roofs on most houses in this community are non-combustible (metal) roofs but siding is combustible. Slopes around homes are generally slight, but they are moderate and occasionally steep in other parts of the community. The best potential staging areas for this community are at Hamilton (outside of the community), at the intersection of State Highway 13 and County Road 41, and at the intersection of County Roads 41 and 43. Numerous potential safety zones are located throughout this community, including many of the residences that are surrounded by large, cleared areas. Many of the hay fields could be used as safety zones under the right conditions. Several locations along County Roads 41 and 43 also could be used as safety zones under the right conditions because they are wide and fuels are sparse. Many of these potential safety zones are not shown on **Figure 20**.

**Figure 20 – Morapos Creek Community**

Utilities in the community consist of buried pipelines and power lines that are above ground. The closest identified source of water for fire equipment (drafting from the Williams Fork in Hamilton) is a round trip of 20 and 45 minutes, depending on where the water is needed. The closest firefighting equipment available to the community is in Craig. Response time to the community from Craig is approximately 40 minutes.

### **Defendability/Survivability**

The Morapos Creek community is currently defensible. Roads in the community provide good access, but are long and dead end. Dead end roads can cause problems for firefighters because of the potential for entrapment. Entrapment can occur if the fire burns across a dead end road, blocking firefighters. Long, dead end roads, such as County Roads 41 and 43, are of particular concern because firefighters cannot easily observe the entire length of the road.

Community representatives expressed concern that high fuel loads on parcels surrounding the community could cause large, uncontrollable fires to burn into the community. Of particular concern is a state parcel in Section 36, Township 4 north, Range 92 west, which is on the west side of the community. Fires could also spread from the adjacent White River National Forest into the community if they were propelled by a north or northwest wind.

Most homes and other improvements in this community are located in the valley bottoms, where access is good and fuel loads are light. In addition, slopes are slight, defensible space is adequate for most homes, and most are surrounded by open fields or pastureland.

Several high-voltage power lines cross this community. A 230-kilovolt (kV) power line on metal poles crosses the middle of the community, and a 115-kV power line on wood poles crosses the lower edge of the community. Gas production wells are located northeast and southwest of the community. Several gas pipelines run through the southwest part of the community, west of County Road 41. A gas pumping station is located adjacent to County Road 41 in the middle of the community.

### **Recommended Fuel Treatments and Fire Services**

Four fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) A fuel break should be constructed on state and private lands, roughly along the eastern edge of the state parcel in Section 36, Township 4 north, Range 92 west. The northern end of the fuel break should be anchored by steep slopes on the south side of Monument Butte. The fuel break should run south to a private road that runs east-west along Stinking Gulch. This fuel break would help isolate the community for areas of heavy fuels on the state parcel.
- (2) A fuel break should be constructed on private lands from the end of County Road 43 to the southwest, connecting with County Road 41 approximately 2 miles south of the Morapos School. Both ends of this break would be anchored by hay fields along Deer Creek and Morapos Creek. The only part of the break that would need to be constructed would cross the ridge between the two valleys, where vegetation is oak brush and mountain shrub. This fuel break would help prevent fire from moving down off the White River National Forest into most of the community.
- (3) A fuel break should be constructed on private lands and should follow an existing private road through Section 15, Township 3 north, Range 91 west. The east end of the fuel break would be County Road 41, approximately ½ mile north of the Moffat-Rio Blanco county line. The fuel break would then follow the existing road west for ¾ mile, ending in a large, open area of hay

fields. This fuel break would help prevent fire from moving from the White River National Forest into most of the community.

- (4) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Several homes are located in windrows or patches of trees that are isolated from wildland fuels by hay fields. Landowners should be encouraged to remove all dead fuels in the windrows and patches of trees and to make sure that live fuels are kept away from homes and other improvements.

Additional fire services that would increase community defendability include:

- (1) A potential site for a dry hydrant was identified on private lands at the crossing of County Road 41 near the north end of the community. This site would also require construction to increase the volume of a pond. Wetlands at this site may be adversely affected by this improvement.
- (2) A water storage tank could be developed on private land along County Road 41 near the old Morapos School. This location is near the south end of the community. Water would be trucked to the site or a catchment system built.
- (3) Two potential emergency access routes were identified that would connect County Road 41 to County Road 45 west of the community. These roads would provide emergency access to and from the south end of the community in the event of a fire farther north. No emergency access to homes along County Road 43 was identified. Both emergency access routes would require the cooperation of multiple private landowners to be viable. Road improvements would also likely be needed to allow passenger cars to travel these routes. The northern route is shorter and more direct; the southern route is longer, but may be more valuable to landowners in the southern part of the community (for example, if a fire were to occur near the northern route).
- (4) Maps of power lines, gas pipelines, and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that firefighter safety is not jeopardized.

## Pagoda

The Pagoda community is at a low risk from wildland fire. In addition, it is currently defendable against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 21**.

## Hazard Rating

There are two through roads (State Highway 317 and County Road 33) and several dead end roads (County Roads 37 and 179 and several private roads) in the Pagoda community. The primary roads have sufficient widths, sufficient turnarounds, slight grades, and well-posted street signs. Average lots are large enough to allow fire crews to defend single structures. No weight limits on bridges would restrict access by firefighting equipment.

The vegetation types near structures are hay fields, natural grasslands, and maintained windrows of trees, posing a low fire hazard. Sagebrush, mountain shrub, oakbrush, and juniper grow on the surrounding hillsides, posing a moderate fire hazard.

**Figure 21 – Pagoda Community**

Defensible space is adequate for the majority of the structures. Slopes are relatively flat near and around structures, but are steeper on hillsides around the valley. Roofs are non-combustible and the siding is combustible on most houses in this community. Staging areas in the community are limited to wide spots at road junctions, such as State Highway 317 and County Road 33, State Highway 317 and County Road 37, and the point where winter maintenance of County Road 37 ends. The town of Hamilton could also be used as a staging area if a large fire were burning in the Williams Fork valley around the Pagoda community. Several potential safety zones are located throughout this community, including at many of the residences, which are surrounded by large, cleared areas. Many of the hay fields could be used as safety zones under the right conditions. Several locations along State Highway 317 and County Road 37 also could be used as safety zones under the right conditions because they are wide and fuels are sparse. Many of these potential safety zones are not shown on **Figure 21**.

Utilities in the community consist of buried pipelines and power lines that are above ground. The closest identified source of water for fire equipment (drafting from the Williams Fork in Hamilton) is within a 20-minute round trip. Some equipment may also be able to draft from the County Road 37 bridge over the Williams Fork. The closest firefighting equipment available to the community is in Craig. Response time to the community from Craig is approximately 40 minutes.

### **Defendability/Survivability**

The Pagoda community is currently defendable. Roads in the community provide good access, and most of the homes are in the valley bottom where they are surrounded by agriculture and light fuels. The fuel loads are heavy on hills on the south side of the valley, but these areas are isolated from structures and would not affect the defendability of the community. There are also relatively few structures in this community; therefore, fewer resources would be needed for structure protection, effectively increasing community defendability.

County Roads 37 and 179 are dead end. Dead end roads can cause problems for firefighters because of the potential for entrapment. Entrapment can occur if the fire burns across a dead end road, blocking firefighters. County Road 37 is not a major concern because it crosses light fuels on slight slopes and the potential for entrapment within the community is minimal. County Road 179 is narrow and crosses moderate to heavy fuels; however, no structures are on this road, so community defendability would not be jeopardized if safety concerns prevented firefighters from using this road.

A 230-kV power line on metal poles crosses the middle of the community. Oil production wells are located in the southeast corner of the community.

### **Recommended Fuel Treatments and Fire Services**

One fuel reduction measure is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Several homes are located in windrows or patches of trees that are isolated from wildland fuels by hay fields. Landowners should be encouraged to remove all dead fuels in the windrows and patches of trees and to make sure that live fuels are kept away from homes and other improvements.

Additional fire services that would increase community defendability include:

- (1) The suitability as a drafting site of the crossing of the Williams Fork by County Road 37 should be examined. If necessary, this location should be improved to allow drafting.

- (2) A drafting site could be developed on the Williams Fork where State Highway 317 crosses a small area of BLM lands. Both the river and the highway are on BLM lands, but a road cut down a steep bank to the river would be needed.
- (3) Maps of power lines, oil wells, and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that firefighter safety is not jeopardized.

## **Power Plant**

The Power Plant community is at a low risk from wildland fire. In addition, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defensibility of the community. Important features related to the hazard rating and defensibility of this community are shown in **Figure 22**.

## **Hazard Rating**

One through road (County Road 107) accesses the Power Plant (northern) portion of the community, and one dead end road (County Road 93) accesses the Trapper Mine (southern) portion of the community. These roads have sufficient widths, slight grades, and adequate turnarounds, and are well signed. There are no weight limits on bridges for fire equipment.

The primary vegetation type is grassland with sparse sagebrush, which poses a low fire hazard. Routine spraying, mowing, and brush beating occur around structures to reduce vegetation and maintain defensible space.

Defensible space is adequate for all structures. Slopes are variable, but overall pose a low risk because they are relatively flat near and around structures. Roofs and siding are non-combustible on most structures in this community. The intersections of County Roads 93 and 107 with State Highway 13 could be used as staging areas. Large cleared areas at the power plant and Trapper Mine could be used for staging and safety zones, depending on location and behavior of the fire. Several other potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of the potential safety zones are not shown on **Figure 22**.

Utilities in the community consist of buried pipelines and power lines that are above ground. Multiple high-voltage power lines cross the community on tall metal structures. The closest identified source of water for fire equipment is within 1,000 feet. The power plant has a dedicated fire pump, fire hydrants within and outside the facility that are routinely tested, and several ponds, including a large pond for raw water in the northwest corner. Trapper Mine has equipment such as dozers and a fire team that responds to fires started by coal blasts on mine property. The entire community is within the response boundaries of the Craig Rural Fire Department. Response time to the Power Plant community from Craig is approximately 15 minutes.

## **Defendability/Survivability**

The Power Plant community is currently defensible. In general, access to the power plant and Trapper Mine is limited for safety reasons. Firefighters should enter through the front gate to the power plant or through the gate to Trapper Mine, and personnel will guide them to the fire. Fuel loads are light, contributing to the overall defensibility of the community. Response time to the community is short. Trained personnel and equipment are available at all times for firefighting at the Power Plant and Trapper Mine.

**Figure 22 – Power Plant Community**

## Recommended Fuel Treatments and Fire Services

One fuel reduction measure is recommended to reduce the risk of wildfire to the community:

- (1) Adequate defensible space should be maintained around all structures and facilities in this community.

Additional fire services that would increase community defendability include:

- (1) Although they are not open to public use, it is possible to drive from the Trapper Mine to the power plant along private roads. Employees of the power plant and mine, as well as firefighters, should be made aware of this potential escape route in the event that a fire were to burn across County Road 93.
- (2) Maps of power plant, power lines, mine, and other related facilities should be made available to all fire departments that would respond to this community. Coordinated training should be conducted that involves personnel from the power plant, mine, and county fire crews so that all crews are familiar with the hazards present in this community and the appropriate responses.

## Price Creek

The Price Creek community is at a low risk from wildland fire. In addition, it is currently partially defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community; however, it would remain partially defensible. Important features related to the hazard rating and defendability of this community are shown in **Figure 23**.

## Hazard Rating

There are several through roads within the community, allowing for good access. County Road 57 runs north-south through the community, and the private road to Keystone Ranch is a through road. The primary roads have sufficient widths, slight grades, and well-posted street signs. Lots are large enough to allow fire crews to defend single structures. Turnarounds are adequate on secondary roads and private roads, although some are less than the ideal width. There are no bridges within the community and therefore no size limits for firefighting equipment.

The primary vegetation type is moderately dense sagebrush, juniper, and oakbrush on the hillsides (among rock outcrops), which poses a moderate fire hazard. The vegetation in the large valley along County Road 57 is irrigated and dry land hayfields and pasture, which poses a low fire hazard.

Defensible space is adequate for the majority of the structures. Slopes are flat to steep, but the risk to structures is low because most structures are in the flat valley bottom. Roofs are non-combustible and the siding is combustible on most structures in this community. Several areas would offer good staging areas and safety zones, including a pullout just south of the Moffat-Rio Blanco county line on County Road 57 and several locations along the irrigated valley floor.

**Figure 23 – Price Creek Community**

Utilities in the community consist of buried pipelines and power lines. The closest identified source of water for fire equipment is within a 20-minute round trip. Ponds that can be used for drafting are located near Keystone Ranch. The closest firefighting equipment available to the community is in Craig. Response time to the community from Craig is approximately 45 minutes. The Maybell Volunteer Fire Department could respond to this community in 30 to 40 minutes. The response time for firefighters from Rio Blanco County and Meeker may be slightly less than of the Moffat County Sheriff's department.

### **Defendability/Survivability**

The Price Creek community is currently defensible. Access to the community is good, although the response time is long. There are dense pockets of oakbrush that, combined with the westerly winds in this area, could pose a significant threat under some conditions; however, most structures are located away from these accumulations of fuel. Defensible space is adequate for structures in this community, and the valley where structures are located is relatively wet in most years. Response time to the community is long from the Moffat County Sheriff's Department in Craig; however, response from Meeker and Rio Blanco County may be an option in an emergency.

The winds in this community generally blow from the west. Fuel breaks such as Price Creek and associated tributaries, County Road 57, and the irrigated pastureland on both sides of County Road 57 will hinder wildland fire that moves west to east. These fuel breaks will aid in protection of structures along County Road 57.

### **Recommended Fuel Treatments and Fire Services**

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Existing fuel breaks should be maintained.

Additional fire services that would increase community defendability include:

- (1) The opportunity for improved agreement and coordination with the Maybell Volunteer Fire Department or other adjacent county or city emergency response agencies should be explored.

### **Round Bottom**

The Round Bottom community is at a low risk from wildland fire. In addition, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 24**.

### **Hazard Rating**

County Road 30 is the primary access road to the community and is dead end. There are no through roads in the community. The primary roads generally have sufficient width, slight grades, and well-posted street signs; furthermore, the lots are large enough to allow fire crews to defend single structures. Turnarounds are adequate on secondary roads. There are no bridges and therefore no weight limits for firefighting equipment.

**Figure 24 – Round Bottom Community**

The primary vegetation types are sparse sagebrush, with small pockets of dense vegetation, grassland, and agriculture, which pose a low to moderate fire hazard. Much of the community is grazed by livestock, which considerably reduces fuel loads.

Defensible space is adequate for the majority of the structures. Slopes are mild and overall pose a low risk. Roofs are non-combustible and the siding is combustible on some structures in this community, while roofs and siding are combustible on others. The open, flat pastures along County Road 30, at the intersection of County Road 30 and 218, and near the water storage tank on County Road 30 could be used as staging areas. The Yampa River and north end of County Road 30 could serve as safety zones, depending on the nature and location of the fire. Several additional potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of these potential safety zones are not shown on **Figure 24**.

Utilities in the community consist of underground pipelines, oil and gas wells, and power lines on wooden poles that are above ground. The closest identified source of water for fire equipment is up to a 20 minutes round trip. The source of water on the northern end of the community is a hydrant that is 8.4 miles from the south end of County Road 30 and ½ mile from the intersection of County Road 30 and U.S. Highway 40. A source of water on the south end of the community is the Yampa River. There is also a large water storage tank on the hill west of County Road 30, about 1 mile from U.S. Highway 40; however, emergency responders believe that domestic sources of water are not available for firefighting use because of a concern about contamination. The majority of the community is within the response boundaries of the Craig Rural Fire Department; however, the western edge of the community is beyond the boundary of the fire district. Average response time to the community from Craig is approximately 30 minutes.

### **Defendability/Survivability**

The Round Bottom community is currently defendable. Access to the community is poor because the primary access route is a dead end road. Dead end roads can cause problems for firefighters because of the potential for entrapment. Entrapment can occur if the fire burns across a dead end road, blocking firefighters. The community is prone to westerly winds year round because of the relatively flat terrain. These winds may pose a hazard to firefighters and should be considered in fire planning.

The terrain varies between flat and rolling hills and the fuels are light, as much of the land is used for agriculture. Most of the structures in the community are surrounded by agricultural fields that serve as large fuel breaks between smaller patches of dense sagebrush. Defensible space is adequate around structures that are not surrounded by agriculture. Response time to the community is moderate because the only way to reach the south end is to take County Road 30 for 9 miles to the large turnaround at the end of the road, near the Yampa River.

### **Recommended Fuel Treatments and Fire Services**

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Existing fuel breaks and livestock grazing should be maintained.

No additional fire services were identified that would help reduce the wildland fire risk level.

## Sand Spring

The Sand Spring community is at a low risk from wildland fire. In addition, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defensibility of the community. Important features related to the hazard rating and defensibility of this community are shown in **Figure 25**.

### Hazard Rating

There is one through road (County Road 174) and four dead end roads (County Roads 81 and 202 and Pronghorn Road and Behrman Road), resulting in good access to the community. The primary roads generally have sufficient widths and slight grades. Turnarounds are adequate on secondary roads in the community, although County Roads 212 and 81 and Pronghorn Road and Behrman Road are dead ends with turnarounds that are narrower than is ideal. Pronghorn Road and Behrman Road run south outside the community and are not well marked by street signs. Other roads in the community are clearly marked with street signs. The lots throughout most of the community are large enough to allow fire crews to defend single structures. Some lots south of County Road 74 and Behrman Road are smaller and would be defended as small groups. There are no bridges and therefore weight limits for firefighting equipment.

The primary vegetation type is sparse to moderate sagebrush, which poses a low to medium fire hazard, depending on density. Livestock graze some portions of the community, but the majority of the community is not grazed.

Defensible space is adequate for the majority of the structures. Slopes are mild and pose a low risk. Roofs are non-combustible and the siding is combustible on some structures in this community, while the reverse is true for others. Staging could occur among the structures located just north of U.S. 40 and east of County Road 81. This area is accessible to vehicles, and vegetation is reduced in these areas because of defensible space created by landowners. U.S. 40 could serve as a safety zone because of its width, depending on the nature and location of the fire. The highway would be closed to traffic before it could be used as a safety zone. Several additional potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of these potential safety zones are not shown on **Figure 25**.

Utilities in the community consist of buried pipelines and power lines that are above ground. The closest identified source of water for fire equipment is a round trip of between 20 and 45 minutes. The closest hydrant is located at the intersection of County Road 30 and U.S. Highway 40. The eastern quarter of the community is located within the response boundaries of the Craig Rural Fire Department. Response time to the community from Craig is approximately 15 minutes.

### Defendability/Survivability

The Sand Spring community is currently defensible. In general, access to the community is good because the primary access route is a through road, although there are four dead end roads. Additionally, it is located adjacent to U.S. Highway 40, which increases its accessibility. The community is also located relatively close to a source of water (a hydrant 5 miles east of the eastern end of the community). The community is prone to westerly and northwesterly winds year round because of the relatively flat terrain. These winds may pose a hazard to firefighters and should be considered in fire planning.

**Figure 25 – Sand Spring Community**

Fuels within the community occur in scattered pockets and are not particularly dense. Fuel reduction is recommended in the surrounding area, where there are dense, homogenous stands of sagebrush. Multiple roads could serve as firebreaks within the community. The terrain varies between flat and rolling hills, further increasing the defendability of the community.

## Recommended Fuel Treatments and Fire Services

Three fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) Fuel reduction treatments are recommended in moderately dense patches of sagebrush along County Road 174 in the center part of the community near a few homes, west of County Road 174, and south of U.S. Highway 40. Implementing these treatments would increase defendability of these parts of the community.
- (2) A fuel break should be developed along the west side of the community. This fuel break would prevent the prevailing winds in the area from pushing a fire through dense stands of sagebrush and into the community.
- (3) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Existing fuel breaks and livestock grazing should be maintained.

Additional fire services that would increase community defendability include:

- (1) Street signs should be added to Pronghorn and Behrman Roads.

## Santisteven

The Santisteven community is at a moderate risk from wildland fire. In addition, it is currently partially defendable against wildland fire. Implementation of all recommended fuel treatments and fire services would greatly improve firefighter safety and the community would become fully defendable. Important features related to the hazard rating and defendability of this community are shown in **Figure 26**.

## Hazard Rating

There are no through roads, resulting in poor access to the community. There are four private dead end roads. Signs were posted for three of these dead end roads as Walter Way, Yoleta Trail, and Courtney Run. The fourth dead end road was not marked, but forked to the east 1/4 mile north of U.S. Highway 40 from Johnson Road. Access is poor along primary roads, which have insufficient widths, moderate to steep grades, poor drainage, poor maintenance in low areas where water collects, and no turnarounds, and are dead end roads up to 1/2 mile long. Most roads are well marked by street signs, and average lots are large enough to allow fire crews to defend single structures. There are no bridges and therefore no weight limits for firefighting equipment.

The primary vegetation type is agriculture with some patches of grazed sparse sagebrush and cut grass, which pose a low to medium fire hazard. Defensible space is adequate for the majority of the structures. Slopes are moderate and pose a moderate risk. The roofs are non-combustible and the siding is combustible on some structures in this community, while the siding is non-combustible and the roof is combustible on others. The intersection of East Victory Way and Johnson Road could be used as a staging area. The southern portion of Johnson Road could serve as a safety zone, depending on the nature and location of the fire. Several additional potential safety zones are located throughout this community, but their use would depend on conditions during the fire. Many of these potential safety zones are not shown on **Figure 26**.

**Figure 26 – Santisteven Community**

Utilities in the community consist of pipelines that are both buried and above ground, and power lines on wood poles that are above ground. The closest identified source of water for fire equipment is a round trip of 20 minutes or less; the closest hydrant is located approximately 1/4 mile south of the community and south of East Victory Way, within the Craig city limits. The entire community is within the response boundaries of the Craig Rural Fire Department. Response time to the community from Craig is approximately 10 minutes.

### **Defendability/Survivability**

The Santisteven community is currently partially defensible against wildland fire. In general, access to the community is poor because the primary access route is a dead end road. Dead end roads can cause problems for fire response teams because of potential for entrapment. Entrapment can occur if the fire burns across a dead-end road, blocking firefighters. The roads are also narrow.

Fuel loads are generally light but can be moderately dense depending on the time of year, if livestock are not grazing, or crops have not been harvested. The fuels are dispersed and broken, and multiple roads serve as firebreaks within the community. The terrain is moderately steep, further decreasing the defendability of the community.

Response time to the community is short. The community is prone to westerly and northwesterly winds year round because of the relatively flat terrain. These winds may pose a hazard to firefighters and should be considered in fire planning.

### **Recommended Fuel Treatments and Fire Services**

One fuel reduction project is recommended to reduce the risk of wildfire to the community:

- (1) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Existing fuel breaks and livestock grazing should be maintained.

Additional fire services that would increase community defendability include:

- (1) A large water storage tank (10,000 gallons or more) should be installed within the community. An ideal location would be at the intersection of Yoleta Trail and Walter Way. Water would be trucked to the tank initially. By providing a source of water in the community, fire crews could focus more directly on fighting the fire, rather than on waiting for water supplies to be replenished.
- (2) Existing roads should be improved to allow better access to firefighting equipment. Specifically, all roads should be widened by at least 10 feet, drainage should be improved, roads should be graveled, road grades should be reduced where possible, and turnarounds of adequate width should be created.
- (3) The possibility of creating at least one through road should be examined. The combination of poor quality and dead end roads poses significant safety issues to firefighters.

### **Sunbeam**

The Sunbeam community is at a low risk from wildland fire. In addition, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve

firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 27**.

## Hazard Rating

There are several through roads, including State Highway 318 and U.S. Highway 40. The primary roads are generally accessible, with sufficient widths, well-marked street signs, and slight grades. The secondary roads, which are private roads or driveways that are not identified on the map, have narrow turnarounds, and are dead ends less than 200 feet in length. Most of the lots within the community are large enough to allow fire crews to defend single structures. Some of the lots in the town of Sunbeam are smaller, which would require them to be defended as a group. One bridge spans the Yampa River in this community; however, no weight limits would prevent its use by fire equipment.

The primary vegetation type is moderately dense sagebrush, which poses a moderate fire hazard. Sagebrush and other vegetation (primarily grasses) are sparse within the center portion of the community; however, sagebrush and juniper are moderate to dense on the perimeter of the community, which poses a moderate to high fire danger. Fuels within the community are grazed by livestock, which has slightly reduced fuel loads.

Defensible space is adequate for the majority of the structures. Slopes are mild and overall pose a low risk. Roofs are non-combustible and the siding is combustible on most structures in this community. Staging could occur within the town of Sunbeam on the north side of U.S. Highway 40. Numerous safety zones are present in this community including, but not limited to: open maintained areas in the town of Sunbeam, the major highways and county roads in the community, and the large areas of hay fields along the Yampa River, including the river itself. Many potential safety zones are not shown in **Figure 27**.

Utilities in the community consist of buried pipelines and low-voltage power lines that are above ground. A major pipeline transects the community and connects to pumping stations within the community. The closest identified source of water for fire equipment, which is the Yampa River, is a round trip of 20 minutes or less. Equipment available to the Maybell Fire Department, which could respond to a wildland fire within 20 minutes, is discussed in Chapter 4. In addition, the BLM generally stages an engine in the park in Maybell to reduce response time to the surrounding area. Additional firefighters and equipment are available in Craig; response time to this community is 60 minutes.

## Defendability/Survivability

The Sunbeam community is currently defendable. In general, access to the community is good. Several dead end roads or driveways lead to residences set back from State Highway 318, which are not identified on the map. These dead end roads reduce the defendability of structures. Firefighters may elect not to travel on a dead end road or driveway if safety would be compromised.

Fuel loads are generally moderate in the community, but loads on BLM land to the south and State of Colorado land to the north are moderately dense and pose a high fire hazard to the community. The community is partially protected by the large, open Yampa River valley along State Highway 318. The fuels are dispersed and broken, and multiple roads serve as fire breaks within the community. The terrain is relatively mild, further increasing the defendability of the community. The community is prone to westerly and northwesterly winds year round because of the relatively flat terrain. These winds may pose a hazard to firefighters and should be considered in fire planning.

**Figure 27 – Sunbeam Community**

Response time to the community from Craig is long, which contributes additional overall risk. In most instances, the Maybell Volunteer Fire Department would be the first responder to any report of wildland fire.

## Recommended Fuel Treatments and Fire Services

Five fuel reduction measures are recommended to reduce the risk of wildfire to the community:

- (1) Fuels should be reduced on BLM and state lands near the community, especially the areas of pinyon/juniper and sagebrush vegetation types. Reduction would be best accomplished using mechanical methods.
- (2) Fuels should be reduced on BLM land north and south of the community. Prescribed fire could be used to accomplish this project because County Road 23 could serve as a fuel break.
- (3) Fuels should be reduced on private lands on the periphery of the community where needed.
- (4) Fuels should be reduced on the state lease northwest of the community. Mechanical methods or prescribed fire could be used to accomplish this treatment.
- (5) All landowners in the community should be encouraged to maintain adequate defensible space around their homes.

No additional fire services that would help reduce the wildland fire risk level have been identified.

## Western Knolls

The Western Knolls community is at a moderate risk from wildland fire. In addition, it is currently defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defendability of the community. Important features related to the hazard rating and defendability of this community are shown in **Figure 28**.

### Hazard Rating

Access is limited to one road that connects the community to U.S. Highway 40. There are no through roads, although several of the roads loop through the community. There are also six dead end spur roads. The primary roads have sufficient widths, moderate grades, adequate turnaround space, and clearly marked street signs. Most lots are large enough to allow fire crews to defend single structures, although some structures are close together and would be defended as a group. No weight limits on bridges would restrict the use of fire equipment.

The primary vegetation type is native and cultivated grasslands with sagebrush of sparse to moderate density. Landscape plantings, such as lawns, surround many homes. Similar vegetation grows on the larger parcels surrounding the community.

Defensible space is adequate for the majority of the structures. Slopes are moderate, posing a low to moderate risk in the fuel types that are present. Roofs are non-combustible and the siding is combustible on most structures in this community. The best staging area is at the entrance to the community at the junction of U.S. Highway 40 and County Road 201. Several potential safety zones are located throughout this community, including the large, cleared areas that surround many homes. Many of these potential safety zones are not shown on **Figure 28**.

**Figure 28 – Western Knolls Community**

Utilities in the community consist of buried pipelines and power lines that are above ground. The closest identified source of water for fire equipment is a round trip of between 20 and 45 minutes in Craig. The closest available firefighting equipment to the community is in Craig. Response time to the community from Craig is approximately 15 minutes.

### **Defendability/Survivability**

The Western Knolls community is currently defensible. Roads are generally in good condition. Still, the entire road system is essentially a long, dead end road, even though some roads within the community are connected. Because access to the community is limited to a single road, the safety of firefighters and residents could be compromised. Dead end roads can cause problems for firefighters because of the potential for entrapment. Entrapment can occur if the fire burns across a dead end road, blocking firefighters.

Community representatives identified the high winds that regularly occur in this community as a significant concern, particularly because of the long response time for fire crews. With the flashy fuels that are found in this community, fire could spread across a large area before fire crews arrive. The long round trip to replenish water supplies is also a concern.

Fuels within the community and on surrounding parcels are relatively light. It appears that agricultural practices and livestock grazing are assisting in keeping fuel loading low. Some people in the community regularly clear brush, mow grass, and burn off excess fuels. Defensible space is generally good around homes, so that fire crews should be able to defend all homes against fire within the community.

### **Recommended Fuel Treatments and Fire Services**

Two fuel reduction measures are recommended to reduce the risk of wildfire to the community:

- (1) Fuel loads on parcels that border the west side of the community should be monitored. They are currently low because of livestock grazing and agriculture. If they increase in the future, a fuel break may be needed along the western edge of the community to prevent fire from entering the community. (The prevailing winds in the community are from the west.)
- (2) All landowners in the community should be encouraged to maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) A large water storage tank (10,000 gallons or more) should be installed within the community. An ideal location would be at the intersection of Western Avenue and Knoll Avenue. Water would need to be trucked to the tank initially. By providing a source of water in the community, fire crews could focus more directly on fighting the fire, rather than having to wait for water supplies to be replenished.

A staging area should also be constructed at the same location as the water tank. A staging area within the community would allow for safer and more responsive incident command. A large area is not needed; a wide spot in the road or turnout for parking a few vehicles and allowing space for equipment to draw water from the water tank is needed.

## Wilderness Ranch

The Wilderness Ranch community is at a moderate risk from wildland fire. In addition, it is currently partially defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety and the defensibility of the community; however, it would remain partially defensible. Important features related to the hazard rating and defensibility of this community are shown in **Figure 29**.

### Hazard Rating

Access is good on through roads to most of this community. There are three primary entry/exit routes, including County Road 38 west to State Highway 13, County Road 38 east to County Road 1 (Slater Creek Road), and County Road 70 northwest to County Road 101. Many of the roads are of sufficient widths, exhibit slight to moderate grades, and loop around and connect with other roads, although a substantial number are dead ends. Several loop roads no longer connect because landslides have damaged these roads. Turnarounds are adequate on most of the dead end roads; however, some are too narrow for larger fire equipment. A few roads are narrow or grades are steeper. The current spacing would allow firefighters to defend individual structures; however, many of the lots are smaller. Defense of individual structures would be difficult if structures were built on all of the lots. Few of the roads are marked with street signs, and addresses are rarely posted. There are no bridges and, therefore, no weight limits for firefighting equipment.

Vegetation is a mosaic of grassland, sagebrush, mountain shrub, oak brush, aspen, and spruce/fir. Grasslands and sagebrush are most common on the northern end of the community and at lower elevations. As the elevation increases, oak brush and mountain shrub mix with sagebrush and grass, then begin to form dense stands toward the middle of the community. Higher and farther south, aspen mixes with oak brush and mountain shrub, eventually becoming dominant at the higher elevations and in moister areas. Spruce/fir is found only on the southern end of the community at the highest elevations and is invading aspen stands in some of these areas. The grasslands and sparse areas of sagebrush pose a low fire hazard, while the denser sagebrush, mountain shrub, and oak brush pose a moderate fire hazard. Aspen tends to pose a low hazard, except under extremely dry conditions. Spruce/fir poses a moderate to high fire hazard depending on density and amount of ground fuels. Many of the spruce/fir stands in this community show significant mortality of subalpine fir and heavy ground and ladder fuels, posing a high hazard.

Defensible space is not adequate for many structures. Slopes are variable throughout the community, but generally pose a low risk to existing structures. Structures generally have not been built in the steeper parts of the community. Areas of steeper slopes in the southwestern part of the community are an exception, and slopes there pose a moderate risk. Most structures have combustible wood siding and non-combustible metal roofs. Several intersections could be used as staging areas, depending on the location of the fire. Key staging areas include: (1) the intersections of County Road 38 and Forest Service Road 109 in the southwest corner of the community; (2) County Road 70 shortly after it enters the northwestern corner of the community; (3) the intersection of County Road 38 and Second Creek Lane in the east-central part of the community; and (4) the intersection of County Roads 1 and 38 in the northeastern corner of the community. These and other potential staging areas are shown in **Figure 29**. Numerous potential safety zones are located in areas of open vegetation, low fuels, slight slopes, ponds, wet meadows, and other features. Use of these areas would depend on conditions during the fire. Some of these potential safety zones are shown on **Figure 29**, while many others are not.

**Figure 29 – Wilderness Ranch Community**

There are no utilities. Numerous small ponds and streams are found throughout the community. Some may provide water all year, but others may dry up by mid-summer. One dry hydrant is located within the community, one is located ½ mile north on BLM lands, and another is located 4 miles west along County Road 38. On average, water is available within a 20- to 30-minute round trip from all structures and may be significantly closer in some areas. The closest available firefighting equipment is in Craig. Response time to the community from Craig averages 60 minutes. Response time may be reduced to 45 minutes on the western edge of the community along County Road 38, but may be as much as 75 minutes for the eastern edge of the community.

### **Defendability/Survivability**

The Wilderness Ranch community is currently partially defensible against wildland fire. Many structures in the brush fuel types would be difficult to defend because of limited defensible space. Many structures in the aspen fuel type would be defensible, despite the inadequate defensible space, because of the generally low rate of fire spread in aspen. Structures located in spruce/fir would generally not be defensible, with the exception of a few structures that are surrounded by large areas of defensible space.

Response time is long, although the access roads are generally of good quality. Firefighters may have difficulty locating a fire because of the many unsigned roads. Firefighters would have to carefully scout any fire to identify its location before they enter some of the longer dead end roads. Scouting would be required to reduce the risk of entrapment, especially in areas where turnarounds are limited or narrow. Washed-out loop roads are of particular concern because there are no turnarounds at the washouts. Firefighters may also have difficulty obtaining water because some sources may dry up and because others are not marked or access is limited.

### **Recommended Fuel Treatments and Fire Services**

Two fuel reduction projects are recommended to reduce the risk of wildfire to the community:

- (1) Concentrations of fuel along roads should be cleared to improve the potential for their use as fuel breaks and control lines in the event of a fire. These efforts should be focused in the more dangerous fuel types, such as mountain shrub and oak brush. The focus should also be on through roads that run across, rather than up and down, slopes. This focus would serve to slow or stop fires from moving upslope in the community. Several roads are identified on **Figure 29** as priorities for brush clearing, based on orientation, fuel conditions, and location of residences. Two short segments of fuel break are also identified between Timberland Loop Road and Sprout Drive that would connect roads with brush clearing and provide a fuel break across the entire northern end of the community.
- (2) All landowners in the community should be encouraged to create, improve, and maintain adequate defensible space around their homes.

Additional fire services that would increase community defendability include:

- (1) An evacuation plan for the entire community should be developed. This plan should be coordinated among the Moffat County Sheriff's Department, BLM, Forest Service, community representatives, and any other interested groups and individuals. The plan should include contingencies depending on the location of the fire and a discussion of how to identify and use safety zones in the event that evacuation is not possible.

- (2) An educational program for landowners that uses community meetings, mailings, or a combination of these efforts should be designed. The focus of the program should be: (1) methods to create, improve, and maintain defensible space that are appropriate for a community where many landowners are present on a part-time or occasional basis; (2) prevention of human-caused fires; and (3) a thorough explanation of the evacuation plan.
- (3) Road signs should be posted at all intersections, and complete maps of the road system should be provided to all responding agencies. The Sheriff's Department and BLM should make extra copies of the maps available to any out-of-area crews that are assigned to fires in this area.
- (4) All dead end roads should be inspected for adequacy of turnarounds. Turnarounds are adequate on most dead end roads, but not on some. Where inspections find that turnarounds are inadequate, they should be reconstructed if possible. If it is not possible to reconstruct turnarounds to be adequate, these locations should be noted on road maps of the community and in the evacuation plan.
- (5) Washed-out sections of through (loop) roads should be repaired to improve access and reduce the number of dead end roads. As an alternative, adequate turnarounds should be constructed on both sides of each washout.

## **Williams Fork**

The Williams Fork community is at a low risk from wildland fire. In addition, it is currently partially defensible against wildland fire. Implementation of the recommended fuel treatments and fire services would improve firefighter safety defensibility, making the community fully defensible against wildland fire. Important features related to the hazard rating and defensibility of this community are shown in **Figure 30**.

### **Hazard Rating**

Two through roads (State Highways 13 and 317) and one dead end road (County Road 39) provide adequate access to this community. The primary roads have sufficient widths, slight grades, and adequate turnarounds. Average lots in this community are large enough to allow fire crews to defend single structures. One exception is within the town of Hamilton, where lots are generally small and would present difficulties for protecting some individual homes. Most roads have posted street signs. No weight limits on bridges would restrict access by firefighting equipment on primary roads. Private bridges that access individual homes may not be adequate for all fire equipment.

Bottomlands along Morapos Creek and Williams Fork are generally hay meadows and native riparian vegetation, presenting a low fire hazard. Uncultivated open areas and lower slopes are typically sagebrush that varies from sparse to dense and presents a moderate fire hazard. Upper slopes and ridges are a mixture of juniper, oakbrush, mountain shrub, and sagebrush. These patches are open and scattered in some areas and are dense and contiguous in others. Overall, areas of juniper, oakbrush, and mountain shrub pose a moderate fire hazard.

Defensible space is adequate for most of the structures in this community. Slopes around homes are generally slight but are moderate to steep on the hillsides surrounding the community. Defensible space does not appear adequate in several structures at the southern end of the community, near the end of County Road 39. These structures are surrounded by oakbrush and are on moderately steep slopes. Roofs are non-combustible (metal) but the siding is combustible on most houses in this community. The best

**Figure 30 – Williams Fork Community**

potential staging areas for this community are at Hamilton (along State Highway 13) and at the intersection of State Highway 13 and County Road 41. Numerous potential safety zones are located throughout this community, including the large, cleared areas that surround many of the residences. Many of the hay fields could be used as safety zones under the right conditions. Several locations along State Highways 13, and 317 and County Road 39 also could be used as safety zones under the right conditions because they are wide and fuels are sparse. Many of these potential safety zones are not shown on **Figure 30**.

Utilities in the community consist of buried pipelines and power lines that are above ground. In several places, gas pipelines are above ground. The closest identified source of water for fire equipment (drafting from the Williams Fork in Hamilton) is within 20 minutes, round trip. The closest firefighting equipment available to the community is in Craig. Response time to the community from Craig is approximately 30 minutes.

### **Defendability/Survivability**

The Williams Fork community is currently partially defensible. In general, access to the community is good and most structures are in the valley bottoms, surrounded by agriculture and light fuels. The fuel loads are higher on the hills that surround the valleys, but these areas are isolated from structures and would not affect the defendability of most of the community. Several structures at the end of County Road 39 are not defensible because of thick surrounding oakbrush, moderately steep slopes, dead end access, and adjacent oil wells.

County Road 39 is dead end. Dead end roads can cause problems for firefighters because of the potential for entrapment. Entrapment can occur if the fire burns across a dead end road, blocking firefighters. Most of County Road 39 is not a major concern because it crosses light fuels on slight slopes and the potential for entrapment within the community is minimal. The last mile of this road crosses an area of moderate slopes with patches of thick oakbrush. Under some fire and weather conditions, firefighters may not be able to safely enter this area.

A 115-kV power line on wood poles crosses the middle of the community. Oil production wells are located at the southern end of the community.

### **Recommended Fuel Treatments and Fire Services**

Two fuel reduction measures are recommended to reduce the risk of wildfire to the community:

- (1) The need for a fuel break on BLM and state lands on the southern end of the community should be assessed. This break would follow an existing unimproved road. The amount of clearing needed is currently unknown. The recommended treatment is to improve the existing road as necessary to allow access for fire equipment and to remove enough vegetation on the north side of this road to allow its use as primary or secondary fire line. This fuel break would protect the community from wildland fire that could spread from the south. It would also reduce the risk to oil wells and homes at the southern end of the community.
- (2) All landowners in the community should be encouraged to maintain adequate defensible space around their homes. Those landowners with homes at the south end of the community should be contacted and advised of ways to create defensible space. Once adequate defensible space is created at the south end of the community, it should be considered fully defensible against wildland fire.

Additional fire services that would increase community defendability include:

- (1) The suitability as a drafting site of the crossing of the Williams Fork by State Highway 13 should be examined. If necessary, this location should be improved to allow drafting.
- (2) Maps of power lines, oil wells, and other related facilities should be made available to all fire departments that would respond to this community. Fire crews should be trained in the hazards of these facilities so that firefighter safety is not jeopardized.