4.4 FIRE MANAGEMENT

Management common to all alternatives would include the restoration of natural fire regimes using prescribed fire, mechanical treatment, chemical treatments, and wildland fire. Fire Condition Classes and Fire Management Categories have been designated throughout the VPA to indicate fire treatment priorities and are described in Chapter 3.

Prescribed fire, mechanical treatments, and chemical treatments would be used in the Fire Management Category Areas every decade, as described below in Table 4.4.1. Mechanical and chemical treatments would primarily be applied on additional acres, however, some overlap could occur with the acres designated for prescribed burning.

TABLE 4.4.1. ACREAGES IN THE VPA RECEIVING VARIOUS TREATMENTS PER DECADE, BY FIRE MANAGEMENT CATEGORY

Fire Management Category	Prescribed Fire	Mechanical	Chemical
A	1,000	5,000	5,000
B	19,570	10,000	10,000
C	82,738	20,000	20,000
D	53,117	0	0

Four Wildland Urban Interface (WUI) areas were identified within the VPA and assigned a Fire Management Category: Dry Fork, Category B; Diamond Mountain, Category C; Deep Creek, Category B; and Browns Park, Category B. Special attention would be directed to each of these areas because they present a high risk associated with human safety.

In addition to the acres listed above, naturally occurring wildland fires would be used for fire management, when feasible, in the category areas as described below, in Table 4.4.2. This treatment would be applied under all of the alternatives, as determined by site-specific conditions. Naturally occurring wildland fires would be allowed to burn as many acres per category area as described below:

TABLE 4.4.2. ACREAGES IN THE VPA TO RECEIVE TREATMENT VIA NATURAL WILDLAND FIRES, BY FIRE MANAGEMENT CATEGORY

Fire Management Category	Acres Targeted	Acres Allowed to Burn
A	0	2,100
B	0	21,000
C	75,000	151,500
D	30,000	30,000

4.4.1 Impacts Common to All Alternatives

In order to analyze the impacts of various management decisions on fire management, two key elements have been considered: 1) the risks of fire ignition from vehicles, humans, or other sources and 2) fuel loading.

Ignition risk would occur primarily from oil and gas development activities. Management Common to All would include mineral leasing on approximately 188,500 acres of the Hill Creek Extension (see Chapter 2). In the short term, this action would create a potential fire-ignition risk from vehicles and construction activities. In the long term, fire risk would be present during mineral development activities, site maintenance, and machinery and vehicle operations. The presence of large mainline and feeder natural gas lines, primarily those greater than eight inches in diameter, would potentially impede the movement of fire suppression vehicles and equipment across these lines.

Recreation management decisions under all alternatives would draw visitors onto public lands within the VPA. Under all of the alternatives, motorized vehicles would be allowed to travel up to 300 feet from a designated travel route in order to access a camping location. Additionally, areas (generally areas where disturbances to vegetation and soils would be deemed acceptable) would be designated to accommodate intensive cross-country travel. These activities would increase fire risk associated with vehicle- and human-caused ignitions. Recreation management decisions would include maintenance and possible expansion of all recreational sites. These activities would increase fire risk due to increased visitation, construction, and maintenance activities. The limitations on fire treatments within developed recreation areas and intense-use recreational areas would maintain hazardous fuel loads in these areas.

Visual resource decisions, under all of the alternatives, would affect fire management. Restrictions on management activities that would degrade scenic quality, as described in the VRM I and VRM II Class objectives, could limit the use of fire management in some areas. Those areas most likely to be affected within the VPA would include areas designated as eligible for consideration under the Wild and Scenic River System, special designation areas, riparian corridors, and cultural sites that possess scenic quality (e.g., rock art and prehistoric structures) and could be damaged by fire.

Fire management would be affected by wildlife and special status species management actions for all of the alternatives. Spatial and timing restrictions for raptors and sage grouse, and surface disturbing restrictions for wildlife would determine when, where, and to what degree fire management treatments would be applied.

Vegetation treatments would occur under all rangeland improvement management decisions, and would use prescribed fire, mechanical, and/or chemical treatments. For analysis purposes, it is assumed that the greater the number of acres treated, the greater the direct long term, beneficial impacts to fire management because more of the fire management goals and objectives would be achieved.

4.4.2 Alternative Impacts

The impacts of various management decisions on fire management are quantitatively and/or qualitatively determined, depending on the management action. Impacts are discussed in terms of the risk of fire from ignition, fuel loading, and limitations on the use of prescribed fire due to implementation of other resource management decisions. In analyzing the impacts of the

proposed RMP management actions on fire management, an assumption was made that there would be a relationship between the increased presence of humans and human activities within the VPA and an increase in the risks of wildland fire.

Management actions associated with paleontology, lands and realty, forage, livestock grazing, soils and watershed, and wild horses resources would have negligible impacts on fire management and, therefore, are not discussed further in this section.

4.4.2.1 Effects of Fire Decisions on Fire Management

Implementation of fire management strategies and treatments would be based on Fire Management Categories, Fire Regimes, and Fire Condition Classes, which are depicted in Figures 2, 3 and 4.

Fire Regimes are the patterns of wildland fires that include factors such as fire frequency, extent, and severity, and vegetation type. Regimes vary by ecosystem because each ecosystem has a different composition and structure determined by climatic conditions, vegetation types, and ignition sources.

As described in Chapter 3, Fire Condition Classes represent the degree to which an area has departed from historic fire conditions. Fire Condition Classes 1, 2, or 3 are assigned to areas depending on wildland fire risk, potential fire intensity and severity, and ecological integrity, compared to the historic fire regime, which is based on the stand density, the density of forest understory and fuel loads, and ecological conditions prior to the implementation of a policy of fire suppression (USDA and USDI 2001). Class 1 represents a relatively low risk for a catastrophic wildland fire event, and Class 3 represents a relatively high risk.

Fire Management Categories designate the type and extent of fire treatments in an area. The categories range from Category A, where full suppression of fire would be applied and the protection of areas where fire is not desired, to Category D in which planned wildland fires and prescribed fires would be used for resource benefit and where there are few constraints on fire use.

4.4.2.1.1 Alternatives A, B, and C

In the long term, the proposed use of prescribed fire on 156,425 acres within the VPA per decade would directly benefit fire management by reducing fuel loads and stand densities and, subsequently, the risks of large-scale, catastrophic wildland fires. Management actions under these alternatives would reduce the risk of catastrophic wildland fire within the VPA, when compared to Alternative D – No Action.

4.4.2.1.2 Alternative D – No Action

This alternative would designate prescribed fire on 50,900 acres of the VPA (27,950 within the Book Cliffs area and 22,950 in pinyon-juniper and sagebrush communities within the Diamond Mountain area). This alternative would not provide the fuel load reductions that would occur under the action alternatives. Therefore, the fire risks associated with Alternative D – No Action would be higher than for Alternatives A, B, and C.

4.4.2.2 Effects of Mineral Development Decisions on Fire Management

Wildland fire risks would be limited to Standard Stipulations and Timing and Controlled Surface Use areas. No Surface Occupancy and Closed category areas would not be available for surface

development and, therefore, would not be sources of wildland fire risk from minerals development activities.

4.4.2.2.1 Alternative A

Approximately 18,971 acres of surface disturbance would pose a greater risk for wildland fire due to minerals development (and surface disturbances) within the BLM administered areas of the VPA, in the short term and long term. Surface disturbances would include seismic exploration, access road and well pad construction, pipeline construction, and the construction of support facilities. Short-term surface disturbances within this area would increase the risk of wildland fire, particularly during clearing and blading of well pads and access roads, with long-term adverse impacts on fire management because of limitations on prescribed fire treatments in these areas. The potential risks would be created by spark or heat ignition from vehicles, construction equipment, and construction personnel. Compared to Alternative D – No Action, Alternative A would potentially disturb approximately 759 more acres through minerals surface disturbances (with an associated increase in fire risks) in the short term and long term.

4.4.2.2.2 Alternative B

Minerals development under this alternative would disturb approximately 19,033 acres throughout the BLM administered areas of the VPA from minerals-related surface disturbances, in the short term and long term. The impacts would be similar to those described under Alternative A. Compared to Alternative D – No Action, Alternative B would potentially disturb approximately 821 more acres in the short term and long term.

4.4.2.2.3 Alternative C

Minerals development under Alternative C would disturb approximately 18,757 acres throughout the BLM administered areas of the VPA in the short term and long term from minerals-related surface disturbances. The impacts would be similar to those described under Alternative A. Compared to Alternative D – No Action, Alternative C would potentially disturb approximately 545 more acres in the short term and long term.

4.4.2.2.4 Alternative D – No Action

Under this alternative, minerals development would disturb approximately 18,212 acres throughout the BLM administered areas of the VPA from minerals-related surface disturbances in the short term and long term. The impacts would be similar to those described under Alternative A.

In summary, the relative risks of fire from surface disturbance associated with minerals development would be highest under Alternative B, followed by Alternative A, then C. Alternative D would pose the lowest relative risk of fire from minerals surface disturbances.

4.4.2.3 Effects of Rangeland Improvement Decisions on Fire Management

4.4.2.3.1 Alternative A

Vegetation treatments for rangeland improvements under Alternative A would occur on 34,640 acres. Therefore, this alternative would be less beneficial to fire management than Alternative D – No Action because under Alternative A 5,750 fewer acres would be treated than under Alternative D.

4.4.2.3.2 Alternative B

Vegetation treatments for rangeland improvements under Alternative B would occur on 50,900 acres. This alternative would result in long-term benefits to fire management, when compared with Alternative D – No Action because 10,510 more acres would have vegetation treatments under this alternative than under Alternative D.

4.4.2.3.3 Alternative C

Vegetation treatments for rangeland improvements under Alternative C would occur on 45,860 acres. This alternative would have beneficial impacts on fire management, compared to Alternative D – No Action, because 5,470 more acres would have vegetation treatments than under Alternative D.

4.4.2.3.4 Alternative D – No Action

Rangeland improvement vegetation treatments under Alternative D would occur on 40,390 acres. Alternative D would benefit fire management more than Alternative A, but less than Alternatives B and C.

4.4.2.4 Effects of Recreation Decisions on Fire Management

Recreation opportunities included in all of the proposed alternatives would draw visitors onto public lands within the VPA. It is assumed that increased visitation would produce an increased risk and potential for human- and/or vehicle-caused fire. In addition, visitation would potentially impede the BLM's ability to control fuel loading using prescribed fire treatments in areas with high recreational use.

4.4.2.4.1 Alternative A

Alternative A would manage the following seven SRMAs:

- 42,758 acres on Blue Mountain
- 273,486 acres in the Book Cliffs
- 52,720 acres in Browns Park
- 24,183 acres along the White River
- 81,168 acres in Nine Mile Canyon
- 24,285 acres on Red Mountain-Dry Fork
- 1,020 acres around Pelican Lake

Alternative A also proposes to create 400 miles of non-motorized trails and 800 miles of motorized trails would be developed and/or improved. These management actions would increase recreation-related visitation. Increased visitation would cause indirect long-term, adverse impacts in the form of increased wildland fire risks from human- and vehicle-caused ignitions. Remote and dispersed camping fires within the existing and proposed SRMAs would pose a particularly high risk of wildland fire. Alternative A would result in higher human-caused fire risks than Alternative D – No Action, but with slightly lower risks than Alternative C.

4.4.2.4.2 Alternative B

Alternative B would not manage new SRMAs and would not establish new non-motorized trails, but would continue to manage four existing SRMAs: Browns Park (18,474 acres), Nine Mile

Canyon (44,181 acres), Pelican Lake (1,020 acres), and Red Mountain (24,285 acres). Recreation in the Book Cliffs area would be unlimited and unconfined. However, 800 miles of motorized trails would be developed and/or improved. These management actions would maintain or increase recreation-related visitation and their associated wildland fire risks, which would be less than Alternatives A and C, but greater than Alternative D – No Action.

4.4.2.4.3 Alternative C

Alternative C would manage the following eight SRMAs:

- 42,758 acres on Blue Mountain
- 273,486 acres in the Book Cliffs
- 52,720 acres in Browns Park
- 69 acres in Fantasy Canyon
- 47,130 acres along the White River
- 81,168 acres in Nine Mile Canyon
- 24,285 acres on Red Mountain-Dry Fork
- 1,020 acres around Pelican Lake

Under Alternative C, 400 miles of non-motorized trails would be created, with no improvements or development of 800 miles of motorized trails. The impacts would be similar to those for Alternative A, but Alternative C would result in the highest human-caused fire risks, compared to the other action alternatives and to Alternative D – No Action based on the increased number of acres designated as SRMAs.

4.4.2.4.4 Alternative D – No Action

Alternative D would manage the following recreation areas (the same as Alternative B):

- Unlimited and unconfined recreation in the Book Cliffs
- 18,474 acres in Browns Park
- 44,181 acres in Nine Mile Canyon
- 24,285 acres on Red Mountain
- 1,020 acres around Pelican Lake

In addition, Alternative D would create 55 miles of hiking and/or horseback trails, two miles of mountain bicycling trails, and one non-motorized trail of an unspecified length along Sears Canyon. This alternative would not develop or improve 400 miles of non-motorized trails nor would it develop or improve 800 miles of motorized trails. Based on the analytical assumption that increased visitation would increase the human-caused risks of wildland fire, Alternative D would have lower fire risks compared to the action alternatives.

4.4.2.5 Effects of Woodland and Forest Decisions on Fire Management

4.4.2.5.1 Alternatives A and C

Under Alternatives A and C, forests and woodlands would be managed to promote biodiversity, and multiple use/sustained yield. In addition, woodlands and forests within the VPA would be managed so that disturbances would not exceed levels normally expected within healthy woodland and forest ecosystems. Woodland and forest harvesting would reduce stand densities,

and salvaging of dead or downed wood would reduce fuel loads, which would have direct, long-term, beneficial impacts on fire management. With 552,663 acres of forest and woodland proposed for treatments under the action alternatives, Alternatives A and C would have more long-term direct beneficial impacts on fire management than Alternative D – No Action.

4.4.2.5.2 Alternative B

Under this alternative 554,108 acres of forest and woodlands would be open to treatments or harvesting. The impacts of this management action on fire management would be similar to those described above for Alternatives A and C, but on a slightly larger scale. This alternative would have more long-term direct beneficial impacts on fire management than Alternative D – No Action.

4.4.2.5.3 Alternative D – No Action

Under Alternative D, up to 288,200 acres (88,200 acres of forest and 200,100 acres of woodland) would be designated for treatments or be harvested, but public use of the resource and woodland salvaging is unspecified. Alternative D would have some long-term direct beneficial impacts on fire management from harvesting and treatments, but less than those resulting from the action alternatives.

4.4.2.6 Summary

4.4.2.6.1 Alternative A

Under Alternative A, fire risk would be second highest due to minerals development. Rangeland improvements would result in fewer beneficial impacts than under Alternative D – No Action. Recreation decisions would result in the second highest level of risk when compared to Alternative D.

4.4.2.6.2 Alternative B

Under Alternative B, risk of wildland fire due to minerals development would be the highest. Rangeland improvements would be the most beneficial under Alternative B, when compared to Alternative D. Recreation decisions would result in a lower risk of fire than Alternative D.

4.4.2.6.3 Alternative C

Under Alternative C, the risk of wildland fire due to minerals development would be lower than Alternatives A and B. Rangeland improvements would be most beneficial when compared to Alternative D, though not as beneficial as those under Alternative B. Recreation decisions would result in the highest risk of wildland fire, when compared to Alternative D.

4.4.2.6.4 Alternative D – No Action

Minerals development proposed under Alternative D would cause the risk of wildland fire to be lower than the risks under Alternatives A and B, and C. Rangeland vegetation improvements under Alternative D would be more beneficial than those of Alternative A, but less than those of Alternatives B and C. Recreation decisions would pose less of a wildland fire risk than Alternatives A. B and C.

4.4.3 Mitigation Measures

- To ensure timely access to and escape from wildland fire or prescribed burns for fire suppression equipment and personnel, berm or bury pipelines at road crossings to ensure

that fire equipment and personnel would not be impeded or obstructed by cross-country natural gas or liquid petroleum pipelines.

- To reduce fire risk, vehicles used to transport personnel and equipment to treatment areas would be restricted to authorized routes or equipped with spark arresters.
- Prescriptive treatments would be managed in high-use recreation areas and during special seasons (e.g., big-game rifle hunting in the fall) to reduce or eliminate resource use conflicts.
- To reduce wildland fire risk, after prescribed burning, chemicals and seed with shrub/grass/forbs would be used to reduce cheatgrass, tamarisk, and other noxious weeds and non-native species.

4.4.4 Unavoidable Adverse Impacts

Wildland fire ignition risks associated with minerals development would be an unavoidable adverse impact.

Recreation decisions would have unavoidable adverse impacts on fire management by increasing visitation, but reducing the ability of the BLM to control fuel loading through the use of prescribed fire or other treatments.

4.4.5 Short-term Use Versus Long-term Productivity

Short-term development of mineral exploration and extraction sites would have long-term impacts on fire management, including increasing the wildland fire ignition risk and increasing the difficulty of restoring desired natural Fire Regimes and Fire Condition Classes.

Recreation decisions would potentially result in long-term impacts to fire management by increasing wildland fire ignition risks that result from increased visitor use in recreation areas and, due to an increased human presence in VPA recreation areas, decreasing the ability to control fuel loading through prescribed fire.

4.4.6 Irreversible and Irretrievable Impacts

The creation of designated recreation routes and areas, and minerals development would create irretrievable impacts by producing limitations and restrictions on the restoration of natural fire regimes in some areas. However, these actions would not be irreversible.