

April 19, 2022

Mountain Springs Ranch Community Wildfire Protection Plan 2022

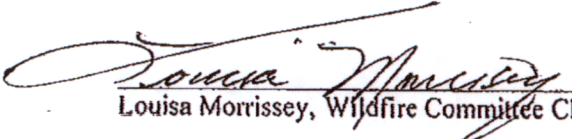


March 16, 2022

Approvals

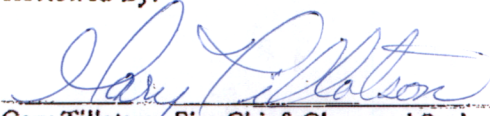
The Colorado State Forest Service has reviewed this Community Wildfire Protection Plan (CWPP) and approves its content and certifies it meets or exceeds Colorado State Forest Service CWPP minimum standards.

Written By:


Louisa Morrissey, Wildfire Committee Chair, Mountain Springs Ranch

April 13, 2022
Date

Reviewed By:

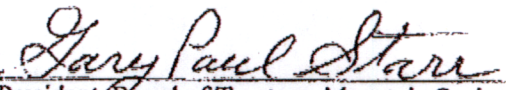

Gary Tillotson, Fire Chief, Glenwood Springs Fire Protection District

April 18, 2022
Date

 Technical Specialist
Patrick Kieran, Fire Management Specialist
Upper Colorado River, Bureau of Land Management

04-13-2022
Date

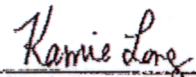
Approved By:


President, Board of Trustees, Mountain Springs Ranch

4-8-22
Date


Chris Bornholdt, Emergency Manager, Garfield County

4-6-22
Date


Kamie Long, Supervisory Forester, Colorado State Forest Service

03/16/2022
Date

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Acronym Key

BLM—Bureau of Land Management
CPW—Colorado Parks and Wildlife
CRS—Colorado Revised Statutes
CSFS—Colorado State Forest Service
CR 117—Four Mile Road
CR 127—Three Mile Road or 3-Mile Road
CWPP—Community Wildfire Protection Plan
DFPC—(Colorado) Division of Fire Protection and Control
FEMA—Federal Emergency Management Agency
FPD—Fire Protection District
FRCC—Fire Regime Condition Class
GIS—Geographic Information Systems database
GSFPD—Glenwood Springs Fire Protection District
HOA—Homeowners’ Association
HFRA—Healthy Forests Restoration Act
ICS—Incident Command System
IGA—Intergovernmental Agreement
MSR—Mountain Springs Ranch
MSR HOA—Mountain Springs Ranch Homeowners’ Association
NFPA—National Fire Protection Association
NHMP—Natural Hazards Mitigation Plan
NWCG—National Wildfire Coordinating Group
PPE—Personal Protective Equipment
Three Mile Road—Colorado Road 127
WUI—Wildland-Urban Interface

Background, Description and History of Mountain Springs Ranch

Mountain Springs Ranch (MSR) is in Garfield County, two miles west, southwest of Glenwood Springs, Colorado. Access to Mountain Springs Ranch from Glenwood Springs is south on Midland Avenue, then west on County Road 127 (County Road 127 [CR 127] and Three Mile Road are used interchangeably in this document), and then a three-mile dirt road to MSR, which is a gated community. The MSR Homeowners Association (HOA) holds an easement on the single access road to MSR, which begins at the end of the pavement of CR 127 and includes all the roads in MSR, a total of approximately 7.5 linear miles (Figure 1). Mountain Springs Ranch's legal geographic description is Township 6 south, Range 89 West, with Sections 17-20, 29 and 30 within or on the perimeter (Figure 2.), and a decimal/degree location of located at 107 (degrees) 21' 00" longitude, 39 (degrees) 30' 20" latitude. Mountain Springs Ranch's elevation ranges from 7,070-8,480 feet with slopes ranging from 5% to greater than 60%. Mountain Springs Ranch is a planned community totaling approximately 1,500 acres that is divided into forty-three (43), 35- to 40-acre lots.

Figure 1. Mountain Springs Ranch General Vicinity and Proximity Map

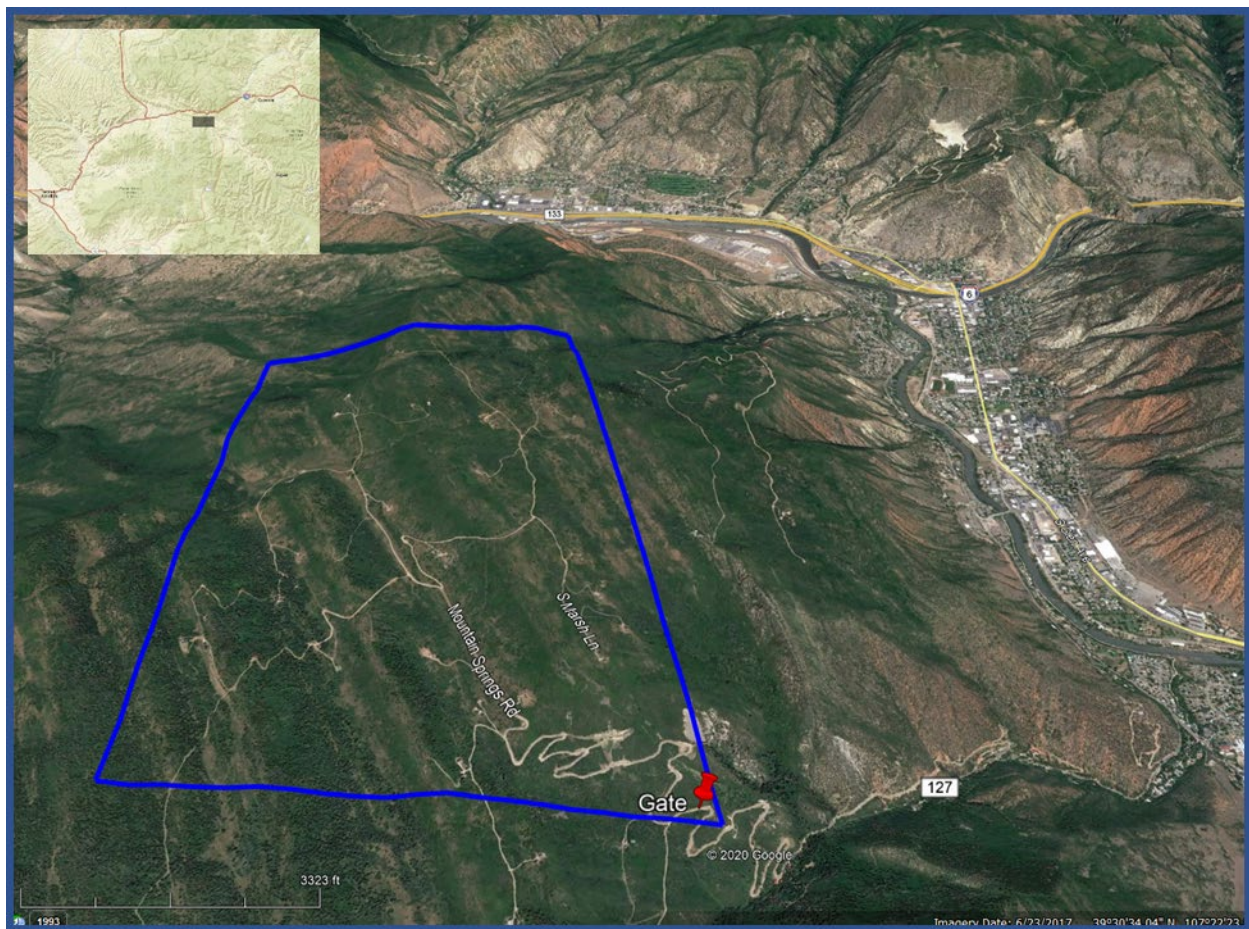
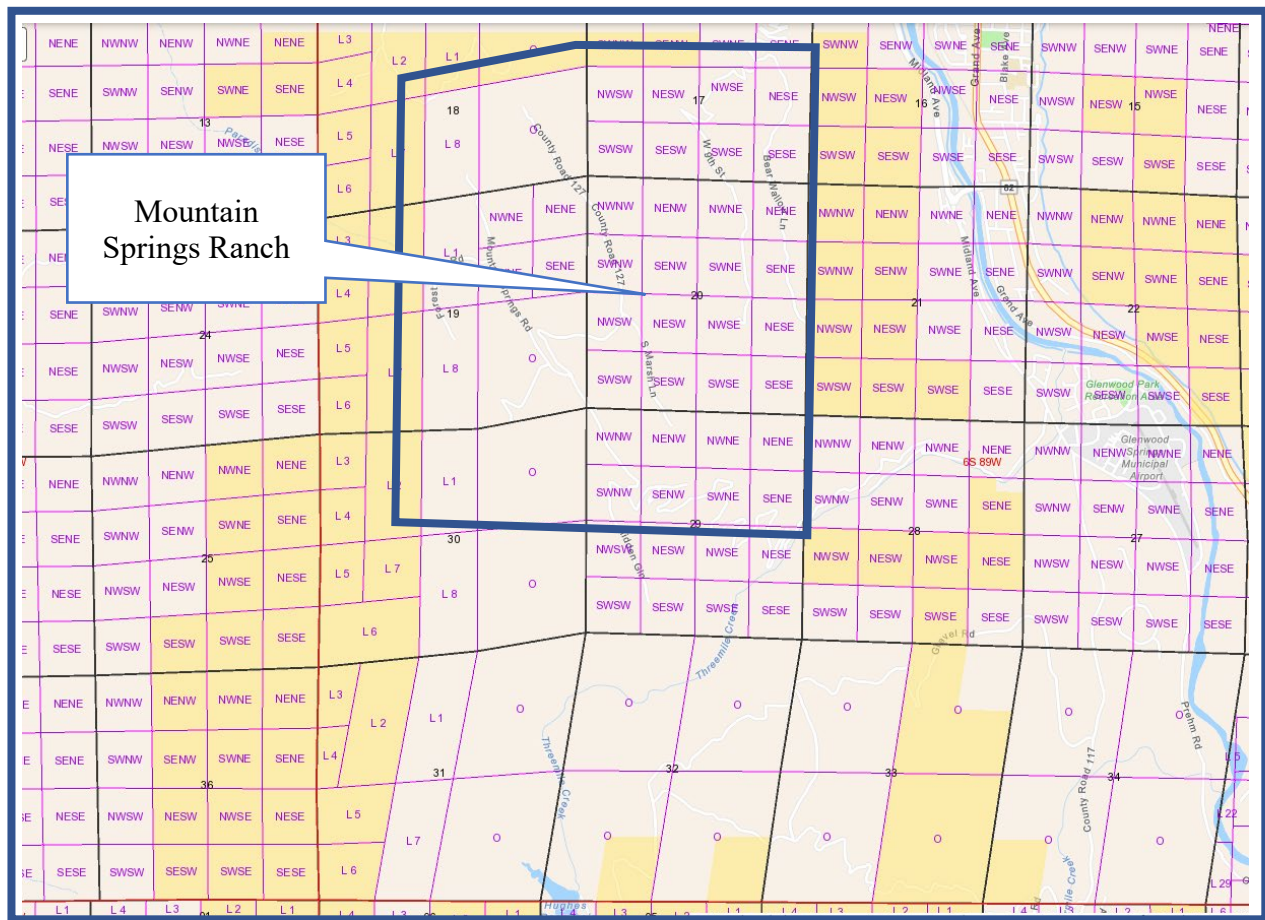


Figure 2. Mountain Springs Ranch Public Land Survey System Map



Summer temperatures range from average highs of 85 degrees to average lows of 50 degrees in July. The average rainfall per year is around 16 inches with an average of 1.2 inches in the months from June through September.

Wildfires are common in Western Colorado both human-caused and naturally occurring, they are part of the ecology of MSR and its surrounding area. MSR has been threatened historically from momentous wildfires, including the recent 2020 Grizzly Creek fire (32,631 acres). Several other significant wildfires have occurred over the past three decades including the 1994 South Canyon fire, also known as the Storm King fire (2,115 acres). This was one of Glenwood Springs most tragic events when it occurred on July 6, 1994, with 14 firefighters perishing as a wall of flames swept over them in a matter of seconds. The South Canyon (Storm King) fire began as a lightning strike on July 2 near the base of Storm King Mountain just west of Glenwood Springs in South Canyon, which immediately borders MSR to the west.

This tragic fire was followed by the 2002 Coal Seam Fire (12,209 acres) when a coal seam fire in June 2002 breached the surface and the wildfire event consumed 43 structures which included 29 primary homes. Additionally, all three fires led to severe mudslides due to the severity of the fires and subsequent lack of vegetation to stabilize soil when precipitation occurred and resulting with the closure of Interstate 70 for multiple days. Lastly, the South Canyon and Coal Seam

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fires caused mass evacuations of West Glenwood neighborhoods as well as state-wide and county-wide mutual aid responses.

The area surrounding the MSR has also been threatened by smaller wildfires in recent years to include the 2018 Hughes Reservoir Fire (.10 acres) and the 2020 3-Mile Fire (.25 acres). The more recent wildfires are roughly 50/50 human and naturally caused fires.

Garfield County and Glenwood Springs Fire Protection District (GSFPD) both completed CWPPs, 2012 and 2007 respectively, and both ranked the MSR in the Very High Hazard Rating of communities the fire district protects. MSR varies from Fire Regime Condition Class (FRCC) 2 and 3 to a smaller percent in FRCC in Condition Class 1 realized in the higher elevations. Historic fire regimes have been moderately to substantially changed in FRCC 2 and 3; consequently, wildfires are likely to be larger, more severe and have altered burn patterns from those expected under historic fire regimes (FRCC1). See Figure 8 for a detailed description of these class conditions.

The MSR community contains a mix of Gambel oak, aspen, Douglas-fir, ponderosa and pinon pine, Engelmann and blue spruce, subalpine fir, juniper species and miscellaneous forbs and grasses in open meadows. Seasonal and annual springs may be found across the community which support a rich and varied habitat. The land supports a rich abundance of wildlife including turkeys, great horned owls, flammulated owls, dusky grouse, white-tailed ptarmigan, evening and pine grosbeaks, mountain chickadees, white-breasted and red-breasted nuthatches, several species of hummingbirds, and many raptors. Moose, mountain lions, bobcats, foxes, coyotes, ermine, pine martens, deer, elk, and black bear, as well as small rodents, also enjoy the habitat of MSR. The MSR Habitat Committee is devoted to preserving the native habitat and protecting it from invasive weeds that arise from development and road traffic.

There remains a rich historical value to the lands within Mountain Springs Ranch. The land was originally home to the Ute Nation and Native American artifacts can still be found. The area was also historically used as a summer grazing area for local cattle ranchers. Historical cabins created by the cattlemen remain on these lands.

The MSR consists of forty-three 35 to 40 acre lots. Twenty-four of these lots have permanent structures and two lots are under construction. Another lot contains a yurt. Land uses are strictly residential with both full-time and part-time residents.

The primary access to this community is via a steep dirt road through heavy loads of shrubs, principally Gambel oak brush. This access could easily be compromised by ignitions occurring along Three Mile Road (CR 127). The community has several secondary roads which branch from the primary access road used to access homes throughout. There is a secondary egress route available however it is a rough track that runs behind the Glenwood Springs city water tank on the northeast portion of the community and may be four-wheel-drive only under some conditions.

The MSR community has a history of wildfire awareness and preparedness. In 2002 several members of the community volunteered to explore and create new egress routes through BLM

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land in collaboration with the Glen Park community; established safety zones; suggested amendments to the MSR covenants to require fire-resistant building materials and defensible space around homes; and educated homeowners for fire preparedness.

From 2006 the Fire Committee continued this work and started to plan for a CWPP. Collaborations between the committee, the GSFPD and BLM identified areas along the MSR roadways that needed clearing and further identified safety zones and egress routes. The secondary egress route through the Rippys' property, who are part of MRS, exiting onto Red Mountain Road was finalized. Research into usable water sources continued. The committee developed educational materials and in 2010 presented a photo documentation to the community about the 2002 Coal Seam fire to alert homeowners about wildfire threats and realities. Homeowners participated in fuels reduction projects and began to organize the use of beetle pheromones to protect the Douglas-fir and spruce trees.

The MSR CWPP Process

The current Wildfire Committee was re-formed in 2015. The committee successfully applied for Firewise Community status in 2015 with help from Ron Biggers of the GSFPD. MSR has more than achieved the yearly required hours of community volunteer mitigation each year that it has remained a Firewise Community.

The Fire Committee completed a survey of the MSR community to assess the stakeholders' interests and values regarding the development of a CWPP. The Wildfire Committee has focused its efforts from the survey results which include, but not limited to, community and homeowner education, creation of defensible spaces around homes, neighborhood fuels reduction efforts and chipper days.

In the past year, the Wildfire Committee has begun the process of developing a comprehensive CWPP in collaboration with partners including the CSFS, BLM, Garfield County Emergency Operations and the GSFPD. It is the Wildfire Committee's goal to develop a comprehensive CWPP in collaboration with these agencies by the spring of 2022.

Description of Partners and Committees

MSR HOA was founded in 1980. Mountain Springs Ranch has had a very active Board of Trustees as well as a complement of working committees that include the Wildfire Committee, a Road Committee, a Habitat Committee and an Architecture and Design Committee. The Wildfire Committee is an engaged and progressive committee and has a long history of working on mitigation, education and prevention activities that include, but not limited to, the following wildfire mitigation efforts:

- Firewise certification
- Annual fuels-chipping day(s)
- Mowing along rights-of-way
- Individual homeowner defensible space and home assessments
- Noxious weed committee to prevent spread of flammable / exotic weeds
- Fuels breaks-grants (CSFS/BLM)
- Validation of Knox Box-Glenwood Springs Fire Department

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- Research about inclusion into the Glenwood Springs Rural Fire Protection District
- Addressing and mitigating missing or inadequate street signage and addresses
- Evacuation routes identification and improvement
- Identification of shelter in place areas
- Water supply identification, development, and maintenance
- Pre-attack plan
- Development of a CWPP
- Neighborhood survey to establish values and priorities for the CWPP

The Wildfire Committee has reached out to the GSFPD, Garfield County Sheriff's Department, BLM and the CSFS to form collaborations and partnerships.

Meetings with Partners

July 20, 2020:

The MSR Wildfire Committee had a primary meeting with the Colorado State Forest Service (Kamie Long) and the BLM (Patrick Kieran). In attendance were:

- MSR Fire Committee: Louisa Morrissey (chair), Jeff Fedrizzi, Susan Starr, Julie Coy, Mary Noone.
- CSFS: Kamie Long
- BLM: Patrick Kieran
- Garfield County Emergency Operations: Chris Bornholdt: Invited to July meeting but did not respond.
- Glenwood Springs Fire Department: Chief Gary Tillotson: Invited to July meeting but was unable to attend.

Initial introductions were made and planning for CWPP development initiated.

The MSR Wildfire Committee also shared some of the ongoing community fire mitigation activities including the upcoming community-wide chipper day, investigation into using goats for fire mitigation, mowing of roadsides and fire escape route, emergency contact list update, and the possibility of developing additional fire escape routes to Glen Park (east) and the BLM to South Canyon (west). The Committee continues to work with the CSFS and BLM to develop the CWPP. The Wildfire Committee and MSR HOA will work with the CSFS and the BLM to apply for future grants to help with capacity and fire mitigation in our neighborhood.

August 8, 2020, and November 18, 2020:

Julie Coy, Jerry and Jan Fedrizzi, Patrick Kieran (BLM), Louisa Morrissey, and Susan Starr met at MSR and did a tour of 4 homes for fire hardiness. Members of the Fire Committee collected information regarding creating a defensible space around homes and fire-hardening houses to share with the rest of the neighborhood residents. Wildfire Committee members Julie Coy and Louisa Morrissey met again with Patrick Kieran on November 18, 2020, to visit two more homes. Information learned from these visits was shared through the HOA with all the neighborhood residents. Patrick Kieran shared information about the BLM community assistance program.

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April 1, 2021:

Louisa Morrissey and Julie Coy (MSR Fire Committee) met via zoom with Kamie Long (CSFS), Patrick Kieran (BLM), Chief Gary Tillotson and Greg Bak (GSFD) and Chris Bornholdt (Garfield County). The group reviewed the MSR CWPP draft and work to date. Copies of the draft were sent to all agency representatives for comments and feedback. Due date for comments was set at April 15, 2021.

May 21, 2021

Jeff Fedrizzi (MSR Fire Committee) met with Matt Provost, C. Lawrence, and C. Smith of Garfield Country emergency response/911 regarding mapping of MSR addresses, focusing on the discrepancies of addresses within the MSR community. Additionally, Glenwood Springs Fire Department Chief Tillotson discussed the process of incorporating MSR into the Glenwood Springs Fire Protection District.

September 10, 2021

Louisa Morrissey (MSR Fire Committee) met with Kamie Long (CSFS) and Patrick Kieran (BLM) met via zoom to go over the current draft of the CWPP. Kamie and Patrick both made suggestions to include more information regarding home hardening and fuels mitigation.

November 3, 2021

Louisa Morrissey and Jeff Fedrizzi (MSR Fire Committee) met Chief Tillotson (GSFPD) and Richard J. Peterson-Cremer (Attorney for GSFPD). We discussed the details of what is involved for MSR to petition for inclusion into the fire protection district.

The Community Wildfire Protection Plan Area

This CWPP covers the MSR, tiers to, draws from and is consistent with the goals and strategies described in both the Garfield County CWPP approved in November 2012 and the Glenwood Springs Fire Protection District CWPP approved in April 2007. This MSR CWPP provides further strategic and tactical direction specific to wildfire protection and mitigation while referencing these master CWPPs to stay nimble, contemporary, and relevant.

Mountain Springs Ranch is a low-density area with homes on large lots. Some of the homes are located mid-slope in heavy fuels and on ridge tops. The total area is approximately 2,181 acres and consists of 43 parcels ranging in size from 35 to 40 acres. As of October 2020, there are 24 homes, one remote cabin, two homes under construction, one additional home in the planning stage and one yurt. There are 14 homes with full time residents and 11 homes with weekend or part time residents. Issues have been identified in the community with many homes having flammable vegetation touching or very close to the structures and wood and other flammable items are being stored too close to some of the homes.

The primary access to this community is via the County Road 127, (Three Mile Road) that is a steep, dirt road with numerous switchbacks through heavy loads of shrubs, principally oak brush. This access could easily be compromised by ignitions occurring along or below the road. The secondary access is a rough track located in the northeastern part of the community that runs

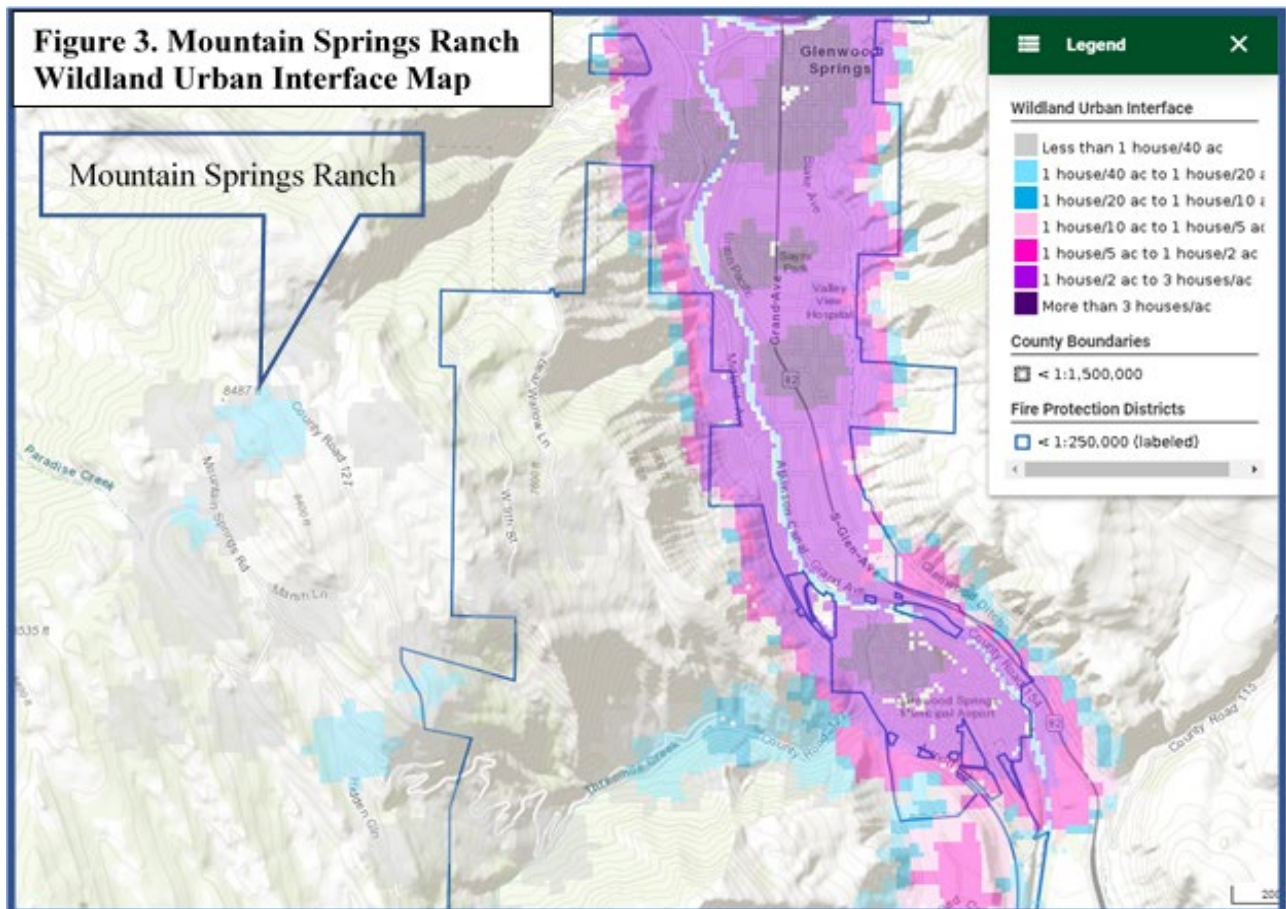
behind the Glenwood Springs water tank and may be four-wheel-drive only, depending on conditions.

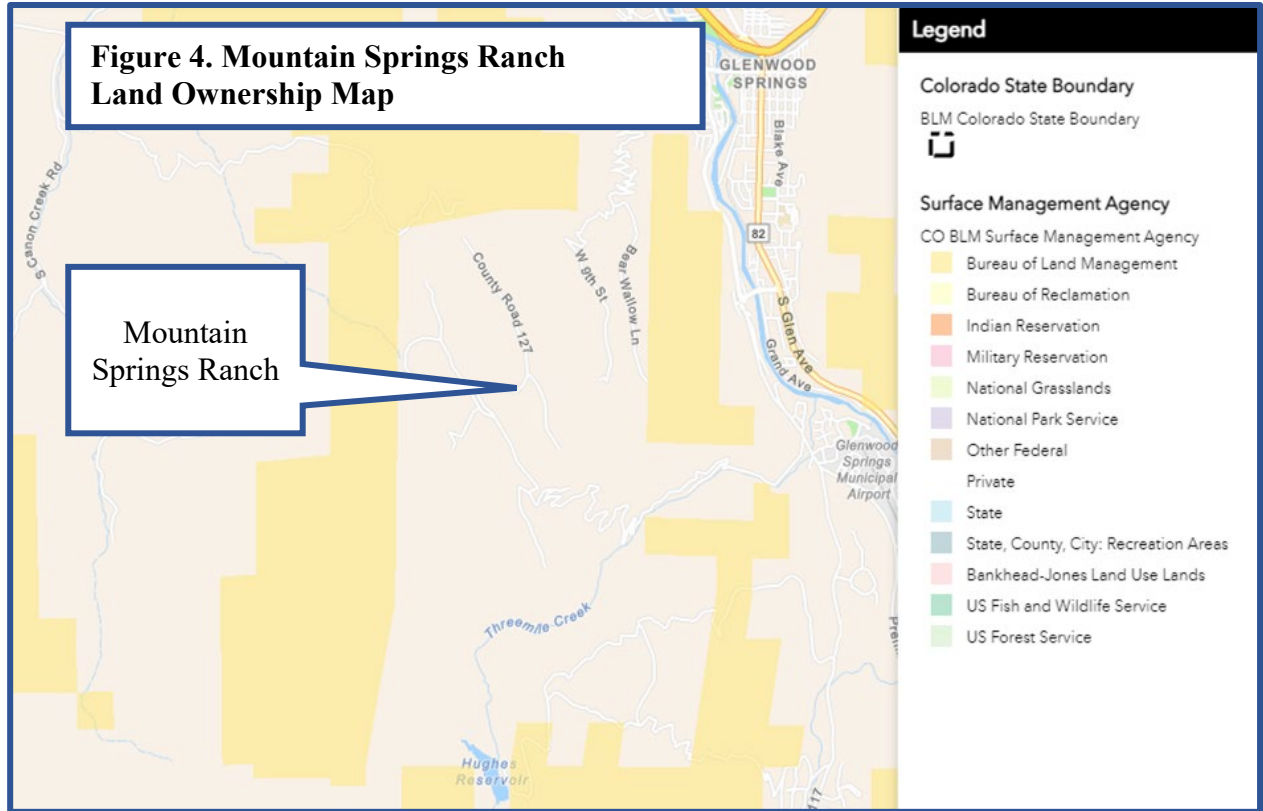
The MSR is bordered on its entire west and east sides by the U.S. Bureau of Land Management (BLM) and has its north border again with the BLM. On the northwest and the northeast are City of Glenwood Springs (160 acres) property. Numerous private land parcels border the southern boundary of MSR and host the primary access road to MSR. Two very large private land parcels (883 acres and 1,034 acres, respectively) bracket many of the smaller southern private land parcels but do not directly border the MSR. They will be key landowners with whom to collaborate on fuel breaks, water sources (to include the 21-acre Hughes Reservoir), additional road access, and utility corridors.

Another critical land parcel intertwined with these two southern large parcels is another BLM parcel; BLM accounts for nearly 3,500 acres surrounding MSR (Table 1. and Figure 3 and 4).

Table 1.

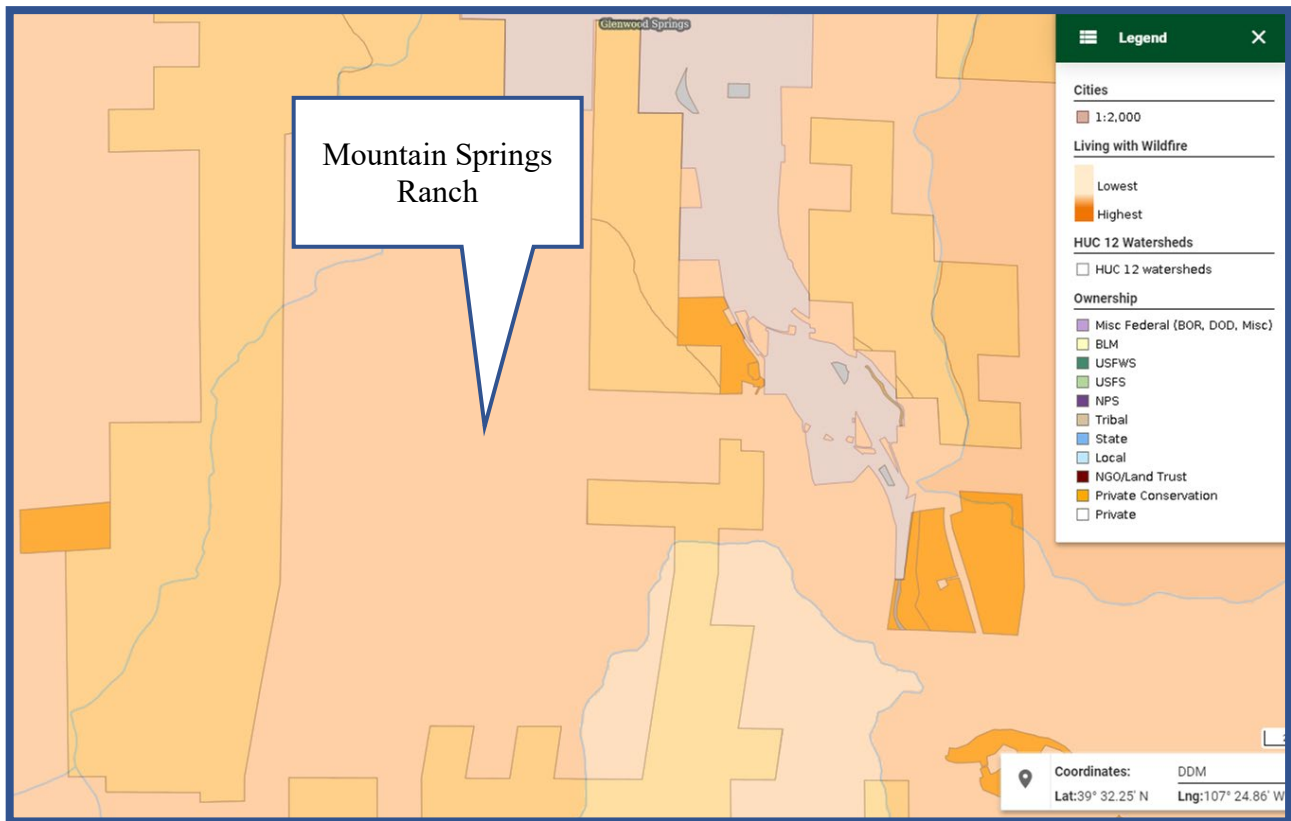
| Ownership | Acres | Percent of Total |
|-----------------------------------|-------|---------------------------|
| MSR (private) | 2,181 | 37% |
| U.S. Bureau of Land Management | 3,500 | 60% |
| City of Glenwood Springs | 160 | 3% |
| Private land parcels - two owners | 1,917 | Not calculated into total |





MSR represents a priority area where opportunities exist to promote community fire adaptation, reduce the risk of uncharacteristic wildfire, and promote the role of fire in ecological processes. Wildfire plays a critical role in maintaining the health of many ecosystems in Colorado and MSR is no exception. In the historic fire regime, frequent, low-intensity fires burned in the lower elevation montane forests to reduce understory vegetation, while high-intensity fire helps with regeneration in some high-elevation forest types, such as fir, pine, and spruce species. A long legacy of fire suppression has altered historic fire cycles and led to the dangerous buildup of fuels in and around MSR. Fire suppression coupled with the effects of climate change make living with wildfire a challenge in Colorado. Risk reduction practices must be promoted as populations increase in the wildland urban interface (Figure 5).

Figure 5. Living with Wildfire Map



Wildfire Risk Assessment

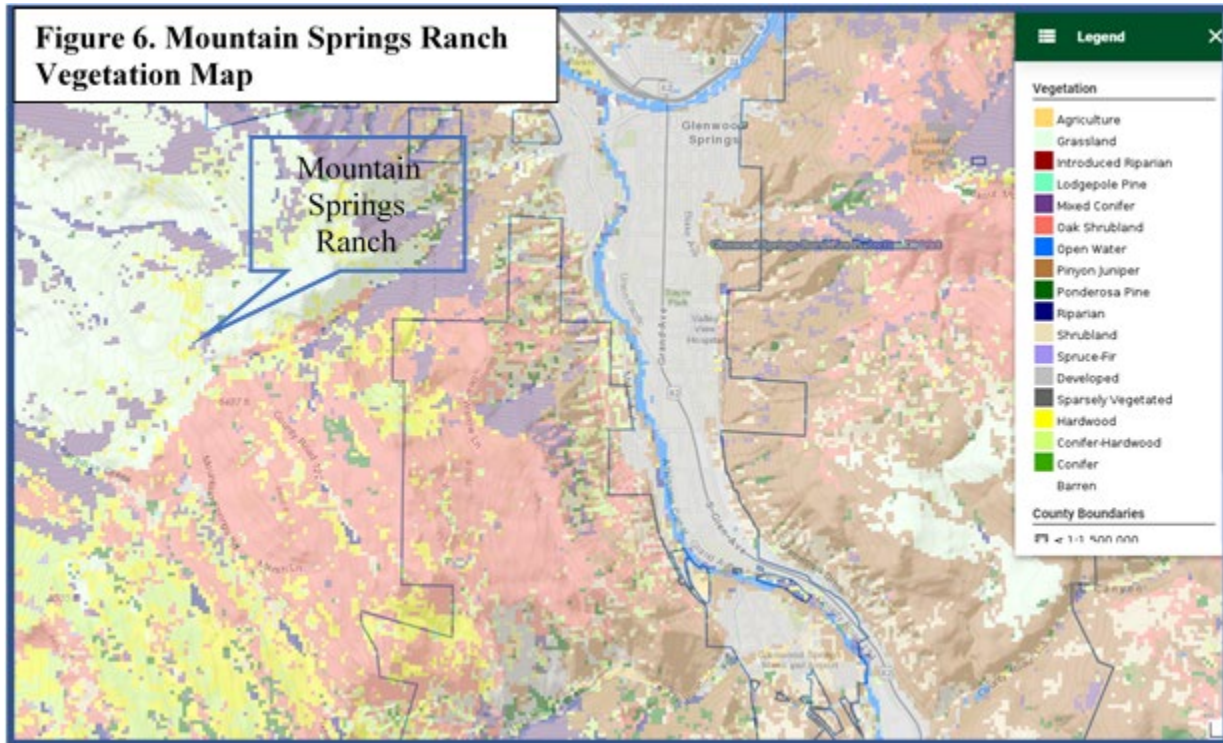
Wildfire Hazard

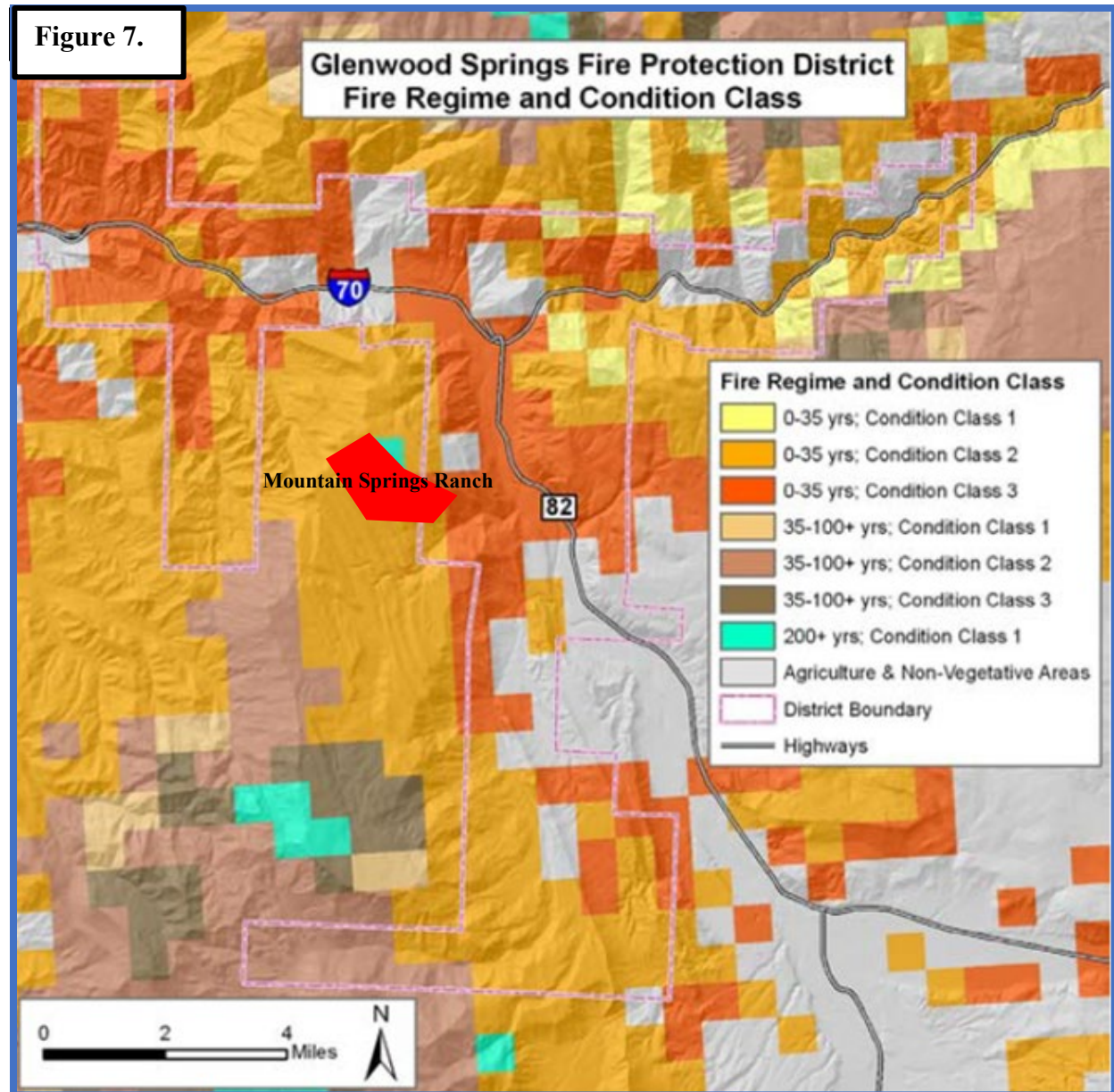
Existing MSR vegetation is the fuel source for wildfire and has a direct effect on its behavior and varies greatly with both aspect, slope, and elevation within the MSR. Understanding the potential fire behavior characteristics of different vegetation types is paramount to predicting severity of a wildfire and the need for vegetation-fuels management. Detailed wildfire risk assessment has been and can be referenced from the GSFPD CWPP, Appendix A, Fire Behavior Potential Analysis Methodology, with a short summary of the MSR in the sections below.

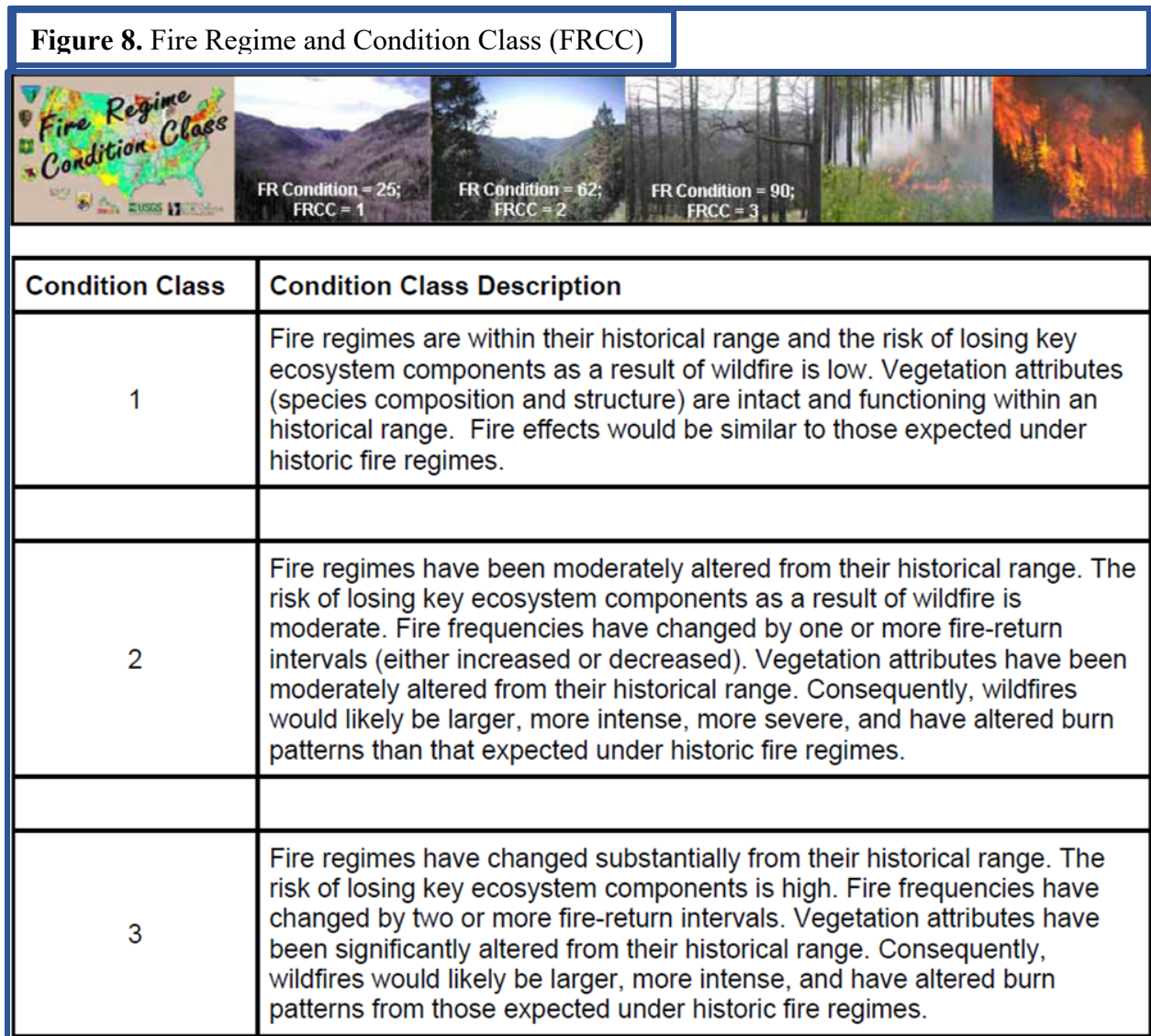
The access to the MSR is through thick and decadent Gambel oak interspersed with pinon pine and juniper (Mature Shrub-High Hazard). Upon reaching the summit and MSR proper, vegetation becomes interspersed with aspen (Closed Timber Litter-High Hazard) and then with more change in elevation and aspect, Douglas-fir and subalpine fir dominate (Mature Timber and Understory -Low Hazard), with a moderate to thick understory of shrubs from chokecherry and serviceberry (Young Brush-High Hazard). Native perennial grasses and forbs are ubiquitous with a small amount of encroaching exotic annual grasses to include cheatgrass (Short Grass-Moderate Hazard) (Figure 6). This combination of aspect, slope, and ladder fuels are a perfect formula for fast-moving ground fires that can transition to crown fires even without wind.

The topography of MSR varies from 0 % to greater than 60% slope. The Fire Regime Condition Class (FRCC) is a metric that classifies current vegetation cover according to its departure from

an acceptable reference condition such as conditions prior to European settlement (Figure 7). Vegetation changes from the historical conditions have resulted because of disturbances caused by European settlers and an aggressive fire exclusion policy. The MSR varies from Fire Regime Condition Class (FRCC) 2 and 3 to a smaller percent in FRCC in Condition Class 1 realized in the higher elevations (Figure 7). By definition, historic fire regimes have been moderately to substantially changed in FRCC 2 and 3; consequently, wildfires are likely to be larger, more severe and have altered burn patterns from those expected under historic fire regimes FRCC1 (Figure 8.).



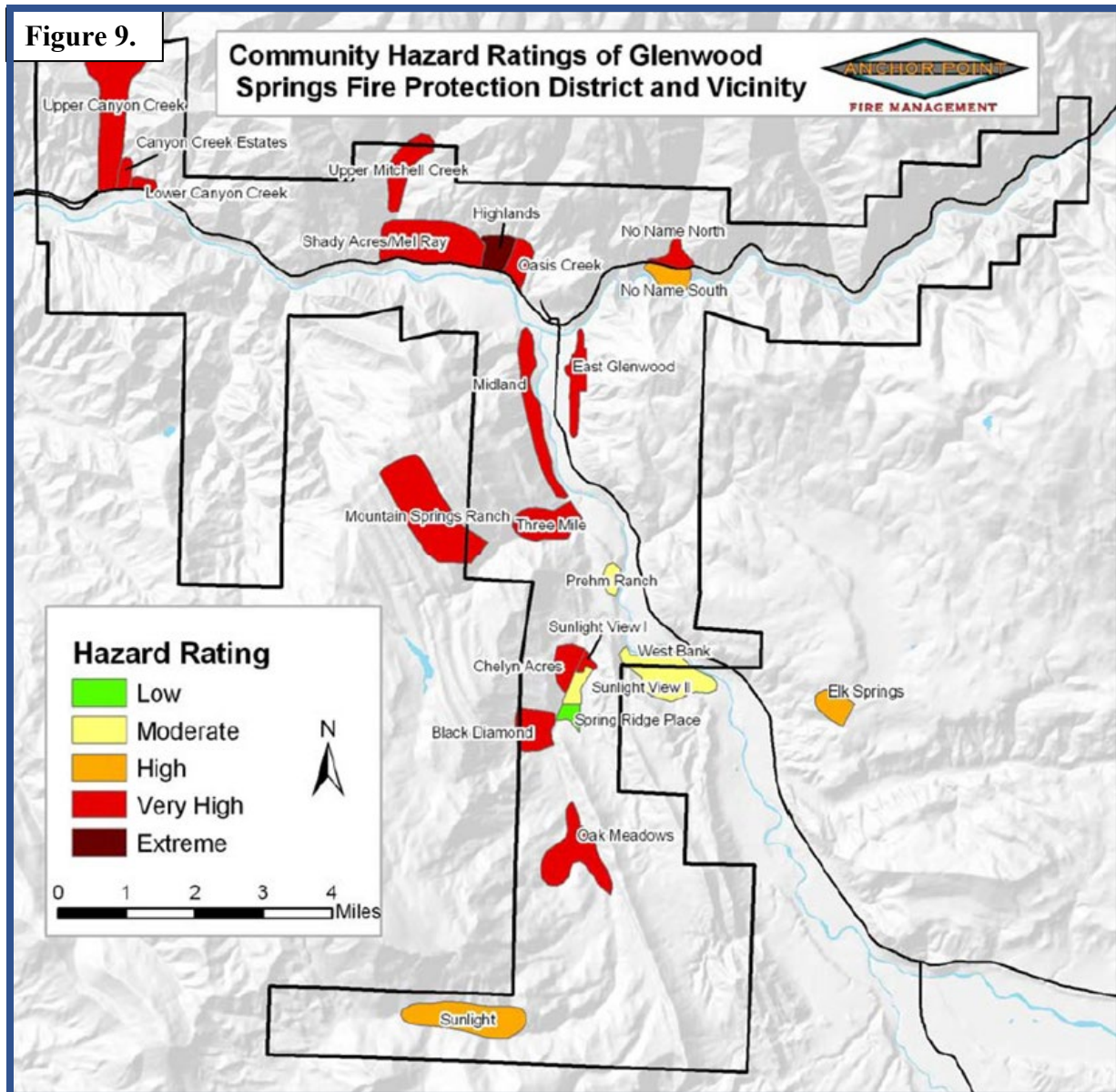




Wildfire Threat

Typical weather is a drier spring and then a green-up through May that creates a small yet feasible fire season until a normal seasonal monsoonal push from the Four Corners area in early July and brings precipitation throughout the month. Hot temperatures persist through August and begin to taper down in September; this period through October is yet another dry season with lightning dissipating in September and replaced by campfire ignitions from the fall hunting seasons.

The Wildland Urban Interface Wildfire Risk for the Glenwood Springs and Carbondale areas, per the Garfield County CWPP, were assessed as overall extreme wildfire risk. The GSFPD CWPP assessed the MSR at a Very High Hazard Rating (Figure 9.).



Wildfire History

Wildfire occurrence throughout Garfield County is common. Fires occur in all Garfield County FPDs with lightning strikes being the primary cause. The large, catastrophic fires have mainly occurred south of the Colorado River and east of Battlement Mesa on BLM and private lands below 6,500 feet due to tremendous amounts of oak brush, sagebrush, grass, and pinon and juniper vegetation. However, large fires have also occurred in the conifer forests in the northeastern portion of the County on USFS lands. Large wildfires have been particularly catastrophic because of the loss of firefighters' lives, the large number of acres burned, and the loss of homes and other resources in Garfield County, again magnified with the catastrophic Grizzly Creek fire in 2020. The scars of these fires are evident on the landscape (Figure 10 and Figure 11).

During the years of 2002 through 2020, there were approximately 400 fires that occurred in the County for an average of 22 fires per year (Table 2). During the 20-year period there were 231,859 acres burned for an average of 11,592 acres per year. Approximately 79.5 % of all wildfires burned were less than 9.9 acres per fire, regardless of ignition source, while 3.75 % of all fires burned were over 1,000 acres. Natural fire sources include lightning strikes and coal-fire seam ignitions and account for most of all fires, 50.5 %. Twenty percent of all fires were human caused, which calculates to four per year.

| Wildfire Name | Acres | Year |
|----------------------|-----------------------------|-------------|
| Big Fish | 17,041.0 | 2002 |
| Coal Seam | 12,206.0 | 2002 |
| Spring Creek | 13,489.0 | 2002 |
| Pine Gulch | 119,758 (Garfield Co acres) | 2020 |
| Grizzly Creek | 32,631.0 | 2020 |
| Bid Dog | 20.0 | 2020 |
| MM84 | 19.0 | 2020 |
| Red Canyon | 50.0 | 2020 |
| Coulter | 28.7 | 2020 |
| 83 Command | 15.0 | 2020 |
| 7300 | 27.0 | 2020 |
| Sweetwater | 5.3 | 2021 |
| West Elk | 3.0 | 2021 |

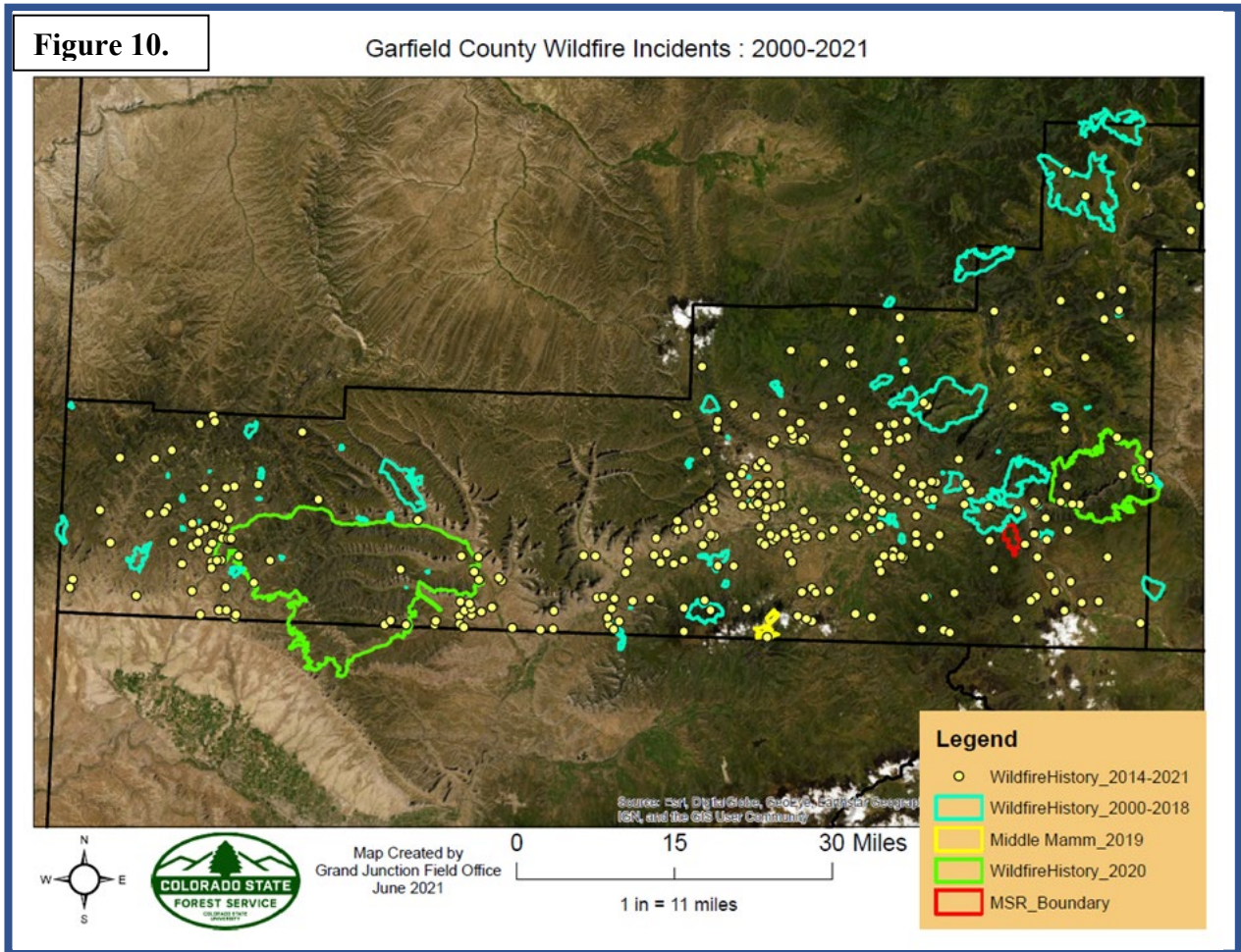
Values at Risk

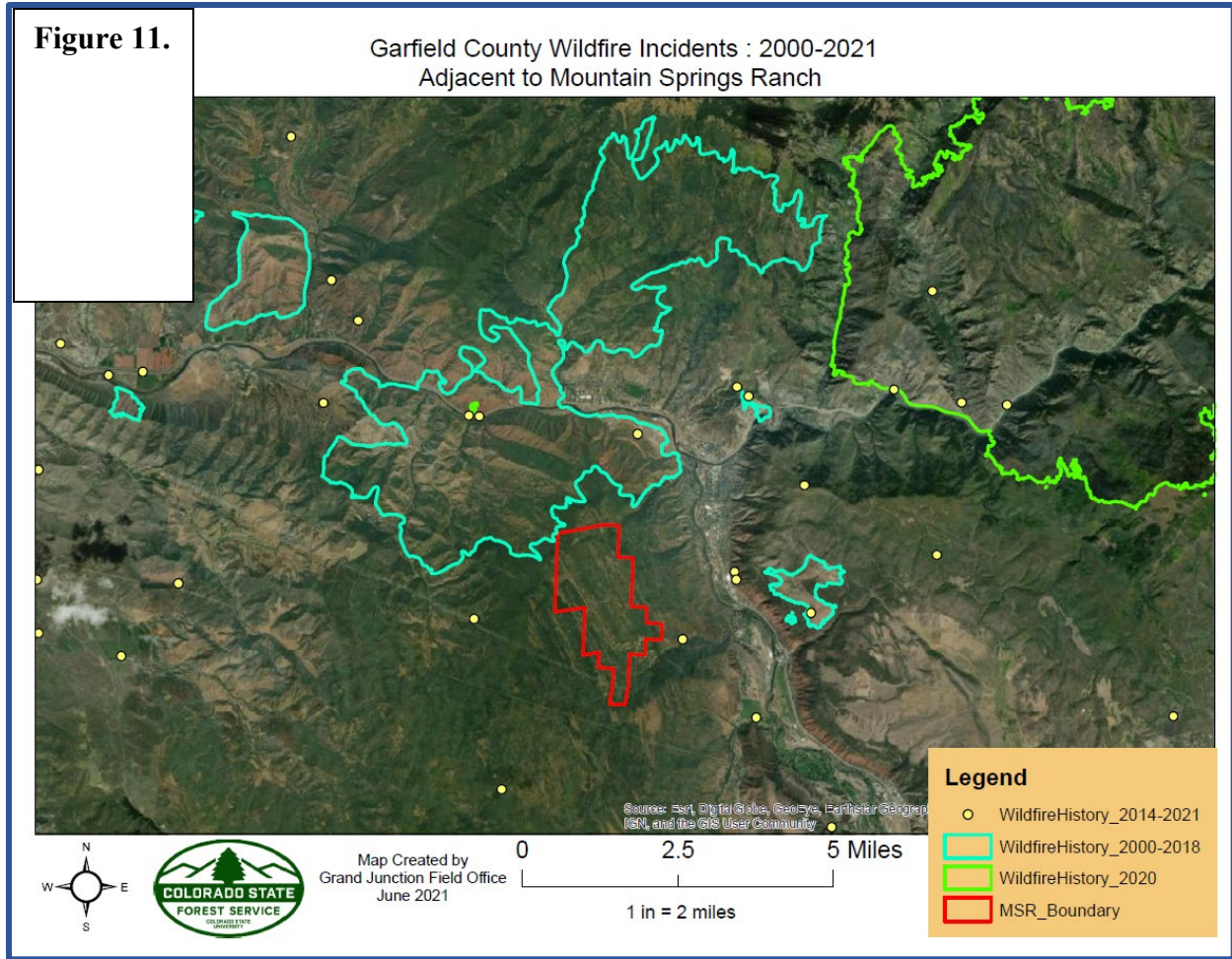
Structural and property values in MSR total an estimated \$19,208,260. The community has 24 homes with about 50 to 60 full or part-time residents and their pets.

Environmental values at risk include the preservation of wildlife, which is important to the quality of life of the area. The White River National Forest- and bordering Bureau of Land Management-administered lands provide critical habitat to several species of concern including Canada lynx, Colorado River cutthroat trout, boreal toad, leopard frog, Townsend’s big-eared bat, dusky grouse, and others. Grouse protection and habitat enhancement is a high priority for the federal land management agencies’ fire management program.

However, firefighter and public safety is the priority on every fire and takes precedence over natural resource protection. When unplanned ignition occurs in GUSG habitat, the appropriate federal land management agency will be immediately notified. Habitat effectiveness is defined as the degree to which habitat is free of human disturbance and available for wildlife to use. The BLM has made improving habitat effectiveness and ensuring the viability of these species one of their district-wide objectives. Wildfire, specifically severe wildfire, can have significant adverse effects on habitat effectiveness and species viability.

The GSFPD CWPP addressed and was in concert with the guiding principles of environmental stewardship. Through public involvement, local support and a regional perspective, the fuels reduction elements described in this document can and should enhance and protect the values of the study area.





Fire Policies and Programs

Wildland fire knows no boundaries and therefore an umbrella of agency cooperation, policies, coordination, and funding is required from the federal, state, county, and local level. These elements are reflected and highlighted in this section to ensure all cooperators with responsibilities within the MSR as well as property owners and residents of the MSR are aware, committed and coordinated to ensure the success and continued updating their roles and responsibilities within this CWPP. The MSR is committed to the development of this CWPP to reduce the wildland fire risk and promote healthier ecosystems.

Healthy Forests Restoration Act

The MSR CWPP has been developed in response to and under the framework of the federal Healthy Forests Restoration Act of 2003 (HFRA), the 2009 Colorado State Revised Statute (CRS) 23-31-312 Community wildfire preparedness plans and the 2016 Colorado Revised Statutes 30-15-401.7, Determination of fire hazard area, community wildfire protection plans, adoption, legislative declaration, and definitions.

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This legislation established unprecedented incentives for communities to develop comprehensive wildfire protection in a collaborative, inclusive process. Furthermore, the HFRA legislation directs the federal Departments of Interior (BLM around MSR) and Agriculture to address local community priorities in fuels reduction treatments on both federal and non-federal lands.

The HFRA emphasizes the need for federal agencies to collaborate with communities in developing hazardous fuels reduction projects, and places priority on treatment areas identified by communities through development of a CWPP. Priority areas include the wildland-urban interface (WUI), municipal watersheds and other local values at risk, areas impacted by wind throw or insect or disease epidemics, and critical wildlife habitat that would be negatively impacted by a catastrophic wildfire. In compliance with Title 1 of the HFRA, the CWPP requires agreement among the local government, local fire departments and the state agency responsible for forest management (the Colorado State Forest Service). The CWPP also must be developed in consultation with interested parties and the applicable federal agency managing lands surrounding at-risk communities.

The HFRA also requires the Colorado State Forest Service (CSFS) to establish minimum standards for development of CWPPs in Colorado, and the CSFS must approve all CWPPs to ensure that they meet these minimum standards.

The State of Colorado Forest Improvement District House Bill 07-1168

This bill provides for the creation of forest improvement districts for wildland fire management including vegetation-fuel management.

Garfield County Natural Hazards Mitigation Plan and CWPP

The 2010 Garfield County CWPP is a strategic plan that identifies specific wildland fire risks facing communities and neighborhoods and provides prioritized mitigation recommendations designed to reduce those risks. The CWPP is a component of the Garfield County Natural Hazards Mitigation Plan (NHMP). The CWPP and the NHMP each require similar risk, vulnerability, and mitigation plan information. At the same time, the two plans have different scopes of influence. The NHMP addresses all possible hazards while the CWPP is focused on wildfire and provides the County with access to different financial resources for risk reduction. To reduce administrative overlap and assure that the best and most current data are available in both plans; the two planning processes must be coordinated.

The NHMP calls for participation in the ongoing development of an updated CWPP and assures that future updates to the NHMP and the CWPP are coordinated to reflect the best available data and a comprehensive set of risk reduction actions. The Garfield County NHMP and the CWPP identify many wildfire mitigation action items that are beneficial for the MSR to include, but not limited to:

- Develop Firewise programs in vulnerable communities.
- Address ingress/egress access issues in vulnerable subdivisions.
- Increase coordination among mitigation planning efforts and actions with the soon-to-be developed County-wide CWPP. Coordinate future updates of the mitigation plan with the CWPP updates.
- Ensure that all areas of Garfield County are served by a fire protection district.
- Identify and prioritize fire authority needs to improve response capacity.

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- Build relationships among federal, state, and county agencies, Fire Protection Districts (FPDs), and communities.
- Identify and prioritize vegetation-fuel treatment projects.
- Develop strategies to strengthen wildfire emergency management, response, and evacuation capabilities.
- Promote public outreach and cooperation for all fuel reduction projects to solicit community involvement and private landowner cooperation.
- Enable local communities to link their respective CWPP to the Garfield County CWPP as an overarching CWPP.

Garfield County Wildfire Protection Authorities and Responsibilities

Wildland fire management in Garfield County is an interagency effort because it cannot be accomplished by one authority, due to the complex fire risk and the public and private land ownership patterns. Its management is governed by a variety of federal policies, state statutes, and cooperative agreements between jurisdictional agencies' authorities.

The MSR community is in an unincorporated area of Garfield County and therefore wildfire protection is provided through the following:

- Specifically, subject to the provisions of the community wildfire protection plan prepared by the county in accordance with section 30-15-401.7, the sheriff of every county, in addition to other duties, shall act as fire warden of his or her respective county and is responsible for the coordination of fire suppression efforts in case of prairie, forest, or wild land fires or wildfires occurring in the unincorporated area of the county outside the boundaries of a fire protection district or that exceed the capabilities of the fire protection district to control or extinguish, as is directed by the 2016 CRS, § 30-10-512.
- Per the Garfield County CWPP, as well as Garfield County's Wildfire Annual Operation Plan, within the fire protection districts (FPD), the fire chief has authority for wildfire suppression on all state and private lands unless or until that authority is delegated to the county sheriff. The county sheriff has authority for all state and private lands outside of the FPDs. Currently, the Garfield County Sheriff is working under a policy of full suppression for all wildfires within his jurisdiction. However, the County Sheriff has very little actual suppression capability. The County Sheriff relies largely on the FPDs or the County Road and Bridge Department for county resources as needed.
- On July 1, 2012, the Division of Fire Protection and Control (DFPC) assumed the responsibilities for wild land fire prevention and protection as provided by House Bill 12-1283. Prior to July 1, 2012, it was the obligation of the Colorado State Forest Service (CSFS) to provide wild land fire prevention and protection.
- DFPC can assume suppression authority under state emergency fire fund procedures.
- The federal Upper Colorado River Interagency Fire Management Unit is responsible for responding to wildfires on adjacent federal lands to MSR.

In summary, wildfire protection within the MSR is based upon cooperation and coordination as identified and coordinated through Garfield County's Wildfire Annual Operation Plan. This plan identifies both by statute, authority, and responsibility that the Garfield County Sheriff is the primary agent for wildfire suppression in MSR, which is unincorporated private lands. The Garfield County Sheriff accomplishes this protection through countywide mutual-aid wildfire protection among all fire authorities that operate in the County. It is agreed that there should be

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no delay in initial attack pending determination of the precise location of the fire, land ownership, or responsibility.

Emergency Management

Emergency management planning is the coordination and management of resources and responsibilities pertaining to the mitigation of, preparedness for, response to, and recovery from an emergency. This includes the gathering, management, and analysis of big data for the purpose of integrating a data-driven approach into each phase of the emergency management cycle.

Authorities, Agreements and Annual Operating Plans

Glenwood Springs Rural Fire District provides the primary local suppression services for the Garfield County Sheriff through the annual operating plan, in accordance with CRS § 29 -22.5-104(1). Subsequently, the 2021 Garfield County Wildfire Annual Operating Plan allows the Sheriff to enter into cooperative agreements for fire protection with federal firefighting agencies. This is accomplished through an Interagency Cooperative Fire Protection Agreement, signed between the federal agencies (Upper Colorado River Interagency Fire Management Unit (specifically for MSR, the BLM) (Agreement Number BLM-MOU-CO-538)) and the Colorado State Division of Fire Prevention and Control. Garfield County does enter an annual Memorandum of Understanding for Participation in the Colorado Emergency Fire Fund.

The Colorado State Division of Fire Prevention and Control (DFPC) does not have jurisdiction on any lands, until authority and responsibility are transferred by mutual consent from the County Sheriff to DFPC. In accordance with CRS § 29- 22.5- 103(3) (a), the DFPC is designated the lead Colorado State Agency for wildland fire suppression as identified in the Colorado State emergency operations plan.

A 1991 Intergovernmental Agreement (IGA) was made and entered into between the City of Glenwood Springs, Colorado (“City”) and the Glenwood Springs Rural Fire Protection District (“District”) for fire protection and ambulance services that effectively detailed the combining of two separate fire departments and the city run Ambulance Service, their stations, equipment, and workforce into one department operated by the city.

Mutual Aid Agreements

In emergency services, mutual aid is an agreement among emergency responders to lend assistance across jurisdictional boundaries. This may occur due to an emergency response that exceeds local resources, such as a disaster or a multiple-alarm fire. Mutual aid may be ad hoc, requested only when such an emergency occurs; regardless, mutual aid is agreed upon with cooperators’ master agreements and then defined parameters within the supporting annual operating plan.

The Garfield County Wildfire Operating Plan is between the Garfield County Sheriff’s Office, the Bureau of Land Management-Northwest District, U.S. Forest Service-White River National Forest, and the Colorado Division of Fire Prevention & Control.

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Protection Capabilities

The GSFPD department has three fire stations. Station One is in West Glenwood on Mel Ray Drive, Station Two is in downtown Glenwood Springs on 8th Street and Cooper Avenue and Station Three is located on Four Mile Road (County Road 117) south of the intersection with Midland Ave. Average response times would be in the vicinity of 30 minutes.

Mutual aid is available from the Basalt, Carbondale and Rural Fire Protection District, Colorado River Fire Rescue, and the Aspen Fire Department. The GSFPD maintains three type 1 engines, one 100' aerial apparatus, one type 3 interface engine, two 1,800-gallon water tenders, both with foam capability, two type 6 engines, three command vehicles, three ambulances, and a hazardous materials response trailer.

The GSFPD employs 23 full time career, 12 part-time reserve, and one volunteer firefighters. All GSFPD firefighters have the National Wildfire Coordinating Group (NWCG) S-130/190 basic wild land fire fighter training and fire behavior training. Two firefighters are qualified as a Single Resource (Crew Boss/Engine Boss level or higher).

Although there are four fire departments in Garfield County (Glenwood Springs Fire Department/GSFPD, Carbondale and Rural Fire Protection District, Colorado River Fire Rescue, and the Grand Valley Fire Protection District) only 33% of the county is within a fire department's jurisdiction. There are areas of increasing growth near Glenwood Springs, such as Spring Valley and most of Mountain Springs Ranch, which are not within a fire department service area. These situations result in reduced service to residents and complications for responding agencies. The need for more firefighters and equipment is clear. The ability to add and adequately train additional firefighters will be critical to the successful defense of this rapidly growing and increasingly complex Wildland Urban Interface.

The MSR is outside of the GSFPD and continues to work on an assessment within this plan to determine feasibility and costs of being incorporated into the GSFPD which would provide the MSR with structural fire protection, as well as eliminate any confusion as to the MSR's primary wildfire protection agency.

Access

Overall, the access to and within the MSR community is good. However, the primary access, amount of traffic up and down the MSR access road; coupled with the number of homes both within the MSR and the number of homes below in the Three-mile drainage, increase the severity of the effect of a wildland fire. Human-caused wildfires represent the highest risk to the community. Road improvements to include the secondary and tertiary access and/or evacuation routes, larger turnarounds within driveways for fire suppression equipment, more and larger pullouts along the switchbacks accessing the MSR, as well as fuels reduction along roads are critical. Areas of concern would be ingress of fire suppression equipment to a wildfire in the MSR while the egress of residents would create a bottleneck on the southern aspect switchbacks off the Three Mile Road. There are turnouts, but these are limited and would cause delay to responding emergency vehicles due to the evacuation from residents. On top of the mesa and generally throughout the MSR access is easy to moderate with plenty of turnarounds, pullouts, etc. Driveways are mostly narrow and thus would limit traffic to one-way.

Structural Risk Assessment

The MSR is a low-density area with homes on large lots. Construction type, condition, age, the fuel-loading of the structure/contents and position on the slope are contributing factors in making homes more susceptible to ignition under even moderate burning conditions. There is also a likelihood of rapid-fire growth and spread, whether through direct flame impingement or with embers, in these areas due to steep topography, fast burning or flashy fuel components and other topographic features that contribute to channeling winds and promotion of extreme fire behavior.

The completion of a parcel level wildfire vulnerability analysis of all structures is recommended and is a priority for the MSR Wildfire Committee, as well as the lot owners. This effort will continue until all lots are assessed, as well as developing protocols for new construction and management of vegetation growth.

In the fall of 2020, the BLM made recommendations to homeowners regarding fire hardening of their homes. These included:

- Home material construction: stucco, metal roofs or asphalt shingle roofs are excellent materials for home construction. Other materials may be used including metal siding, and fire-resistant membranes. Cedar shake shingles are NOT recommended.
- Vents should be screened to prevent embers from entering the structure. Areas underneath decks should be kept clear of flammable debris such as leaves, dry grass, wood, and needles.
- A minimum of 30 feet surrounding a home should have non-flammable vegetation or no vegetation at all. Vegetation should be kept mowed and irrigated if possible.
- The area 30 to 100 feet from a home should be kept trimmed to break up the fuel continuity. Oak brush should be thinned to prevent a fire being able to spread through the crowns of the trees. Ground fuels (dead trees, wood) should be cleared. Live aspen trees do not typically burn.
- Oak is very flammable. It can burn in March and April in dry years. It is not as volatile when it is green (May and June) but can become very volatile again in August until significant snowfall and moisture reduce the risk of fire.
- It is good to have septic fields marked so that firefighting personnel and equipment do not damage them.
- It is recommended to bury propane tanks and do not have tanks next to the home. In the event of a fire, turn off the propane gas at the source, i.e., propane tank.
- Driveways (even single lane) need to be passable by a fire truck; adjacent overhanging branches, shrubbery and flammable materials need to be removed for clear access.
- Other items recommended were sprinklers that can be turned on in the event of a fire to create an irrigated zone with higher humidity. Electric generators also may be a good idea in case the electricity is cut off.

The GSFPD Fire Marshall performed structural risk assessments of several homes in MSR during the summer of 2021. Assessments included:

- Positioning of the structure in relationship to severe fire behavior;
- Type of construction;

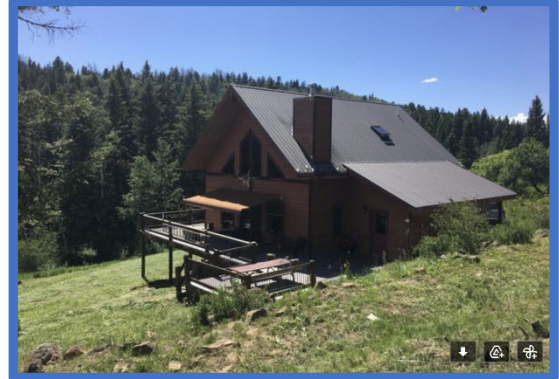
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- Type of roofing material;
- Gutters or litter on the roof, eaves;
- Vents and crawl spaces;
- Windows;
- Decks;
- Flammable materials stored next to structures;
- Propane tanks;
- Landscaping;
- Driveways and accessibility.

Several of these homes were constructed of wood frame and siding and others had stucco exteriors. All homes had either metal or asphalt composite roofs. Most homes had decks. Most propane tanks were underground, but a few remained above ground.

In general, MSR has some homes located mid-slope in heavy fuels and on ridge tops. There are many homes with vegetation touching the structures. Wood and other flammable items are being stored too close to some of the homes. To mitigate these wildfire factors, the MSR HOA needs to ensure homeowners will clean up around their respective structures to include debris, rubbish, and flammable vegetation. This includes but is not limited to removing and/or limbing trees touching structures. Most homes in this area need greater defensible space. The Fire Committee will focus educational projects on outreach to residents regarding home hardening and creation of defensible space.

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Road Signs and Addresses

Standardized, accurate and reflective address and street signage have recently been installed. The recent completion of locating all MSR structures via latitudinal and longitudinal degrees is an important step for wildfire agencies and their aircraft. The MSR Wildfire Committee is working to validate all physical addresses within the MSR to add to MSR's structure location database.



Water Sources

As the MSR continues to see constant construction, more and larger water supplies are needed. MSR homes exist more than 1,000 feet from the nearest water source or hydrant. At the current level of development, the area could be covered by three or four large (10,000 to 20,000 gallons)

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cisterns or by individual (1,800-to-2,500-gallon) on-site cisterns for homes located more than 1,000 feet from draftable ponds. If development continues, a comprehensive pre-plan including water sources should be considered for this community.

Fire Safety zones and helicopter landing areas

Mountain Springs ranch has several meadowed areas which could function as safe zones if residents cannot escape from a wildfire. The largest of these meadows is located at the intersection of Mountain Springs Road and Forest Glen. The lot owner has agreed to let the community use the meadow on his property as a safe zone and a helicopter landing zone (helispot).

Training and Fire Suppression Resource Needs

As identified in the GSFPD CWPP, the following are high priority training recommendations for the GSFPD:

Training:

- NWCG S-130/190 for all department members.
- Annual wildland fire refresher and pack test (physical standards test).
- S-215 Fire - Operations in the Urban Interface.
- S-290 - Intermediate Fire Behavior.
- I-200 and I-300 - Basic and Intermediate ICS.

Equipment:

- Priority level: High. Continue to ensure all firefighters have wildland Personal Protective Equipment (PPE). (See NFPA Standard 1977 for requirements).
- Priority level: High. Provide gear bags for both wild land and bunker gear to be placed on engines responding to fire calls. This will help ensure that firefighters have both bunker gear and wildland PPE available when the fire situation changes.
- Priority level: Moderate. Consider the purchase of an additional type VI (4WD) engine.

As identified in the GSFPD CWPP, the following are a moderate priority level:

- Provide and maintain a ten-person wildland fire cache in addition to the tools on the apparatus. The contents of the cache should be sufficient to outfit two squads for handline construction and direct fire attack.

Living with Wildfire

Wildfire plays a critical role in maintaining the health of many ecosystems in Colorado. Frequent, low-intensity fires burn in lower elevation montane forests to reduce understory vegetation, while high-intensity fire helps with regeneration in some high-elevation forest types, such as fir, pine, and spruce. A long legacy of fire suppression has altered historic fire cycles and led to the dangerous buildup of fuels in some areas. Coupled with the effects of climate change, this makes living with wildfire a challenge in Colorado. Risk reduction practices within the MSR exist due to the awareness and commitment from the MSR community members, experience with past wildfires, committed partner agencies, and numerous and various risk reduction opportunities throughout the community and adjacent lands.

Policies and Covenants

The MSR covenants (see attached) govern the architectural development of the number of buildings per lot. The covenants ensure the nature of development to be with harmony with the natural surroundings. To date, the covenants do not require the use of fire-resistant materials in construction, the creation of a defensible space, the use of home fire extinguishers or home sprinkler systems and prevent the removal of trees unless for development of a defensible space surrounding the home. All lots contain a large amount of decadent fuel, especially dead and dying aspen trees that are throughout the lots, and not just in the 100-foot zone around homes. These fuels comprise a high risk of extreme fire behavior.

The covenants are currently being evaluated and updated by the MSR Board of Directors in preparation for renewal in 2024. The MSR Fire Committee has recommended to the Board that language be updated to require all new construction to have fire resistant roofing material and a 30-foot defensible space around homes per Firewise recommendations. The Fire Committee has suggested the removal on restrictions for cutting down trees to encourage residents to clean out dead and decadent fuels throughout their properties to reduce risk of extreme fire behavior and encourage forest health.

Mitigation and Implementation

Education and Community Outreach

Since 2015 MSR has been a recognized Firewise USA site. Typically, the volunteer hours reported by members of the community approach a value of \$10,000 based on the value of volunteer hours.

True to the Firewise mission, the Fire Committee has shared information with the MSR community concerning construction materials, how to harden homes against wildfire and the development of defensible space around homes. The MSR Fire Committee has historically presented Firewise informational material regarding home construction and defensible space with the community at the annual community picnic or the Annual HOA meeting. Due to COVID restrictions, the annual community picnic was not held in 2020. However, the Fire Committee continued to give information to the neighborhood via email communications.

The Fire Committee has developed a neighborhood opt-in emergency contact list, and map to the emergency egress that is continually updated and distributed to all lot owners. Community members were invited to homesite evaluations by the BLM, and information learned from these homesite visits has been shared to the community at large. Valuable links to educational material pertaining to home construction and defensible space are also continually updated and distributed to all HOA members via email and newsletters.

Fuels Reduction

The objective of fuels mitigation work is to protect life and property, as well as the secondary benefit of improving forest and shrubland health. By altering the fuels accumulation on the

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landscape, Mountain Springs Ranch can reduce the chance of catastrophic wildfire, thus protecting structures and infrastructure alike.

Many landowners have completed exemplary thinning for forest health, habitat improvement, and defensible space around homes, but many parts of the MSR community still exhibit very high to extreme risk to accesses and structures. Community fuel breaks on private and public lands are not considered to be a substitute for management within the home ignition zone.

Relevant to this CWPP, studies have shown that most homes burn down from embers igniting receptive fuels on or near structures during a wildfire. It is highly recommended that all homes have a defensible space where trees and brush have been thinned to reduce fire intensity near the home, but the creation of defensible space will not be enough



Removal of decadent and dead fuel around a MSR structure.

to keep homes in the community from burning during a wildfire. Outreach will focus on homeowner attention to all fuels in and around the home, not just native vegetation. Potential ignitable fuels around homes include:

- Outdoor furniture (flammable materials, pillows, cushions)
- Leaves and pine needles in gutters
- Stacks of firewood
- Wood chip and bark mulch
- Rugs and carpet
- Project lumber
- Tires
- Wood fences connected to structures
- Straw
- Wooden decks and porches
- Fire prone foundation plantings (ornamental)
- Wooden steps
- Weeds
- Cardboard boxes
- Trash of all kinds.

In addition to fuels in the home ignition zone, there may be opportunities for embers to enter the home and find receptive fuels inside through open windows and unscreened vents (attic, crawl space, range, chimney, and dryer). It is recommended that vents should be covered with metal screens with openings less than $\frac{1}{8}$ inch. Most windows have vinyl screens that are also ignitable, so windows left open during warmer months are recommended to have non-combustible screening to prevent embers from melting the screen and gaining access to the inside of the house. Exposed wooden eaves are common and the importance of keeping combustibles away from these will be stressed. Fire-resistant enclosures or screens are suggested for crawl spaces, wooden decks, and steps to prevent fire from getting underneath the house.

Community education and outreach to homeowners may reduce the amount of combustible items within the home ignition zone. This will remain a focus for the MSR Fire Committee.

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Since 2016 the MSR Fire Committee has organized an annual chipper day for the community. This encourages residents to clear brush from their homes as an aid to fire mitigation. Residents are encouraged to follow the Firewise model of mitigation by using nonflammable materials (stone or gravel) within the immediate zone of zero to five feet perimeter of the home; thinning of trees and shrubs to 18 feet between crowns and removal of ladder fuels in the intermediate zone of five to 30 feet from the home; and thinning of trees to six feet between crowns and removal of dead timber fuels in the extended zone of 30 to 100 feet from the home.



In 2016 the MSR HOA and Fire Committee partnered with the Glenwood Springs Fire Department in a FEMA grant to remove fuels from the main Mountain Springs Ranch Road to make the road safer for both ingress of firefighting teams and egress of residents. Fire Committee volunteers also mow the roads of the community in the early summer to reduce the chance of sparks from vehicles igniting a wildfire.

In 2015 the BLM conducted a 37.6-acre fuels reduction project on the BLM land to the west of MSR towards South Canyon (Figure 12). This project's objective was to reduce fuels on the western edge of MSR to reduce fuel loading and fire intensity. The MSR fire committee would like to collaborate with the BLM to determine a maintenance schedule for that fuels treatment as well as identify the next phases of fuels reduction projects on the western and northern borders of the community that border BLM lands. Additionally, MSR will partner with the BLM on Community Assistance funded projects, provided through assistance agreements, to assist with fuels management and community fire assistance program activities to reduce the risk and impact of catastrophic wildfires through coordination, reducing the amount of hazardous fuels, and furthering the education of landowners about wildfire prevention and mitigation (Figure 13).

The fire committee would propose work with the cooperating agencies and MSR community members to reduce fuels along the roadsides to harden the main ingress and egress routes in the community. Next, the fire committee recommends private property owners to remove dead and decadent aspen and conifers as well as encroaching and mature Gable's Oak brush around their structures that meet Firewise standards. Property owners are also encouraged to collaborate with each other, the HOA, the BLM, and other cooperators to create larger swaths of land for fuel mitigation projects. Lastly, the fire committee proposes working with the BLM and the City of Glenwood to provide strategic fuels reduction projects on the border of MSR private and these agencies' lands.

Community members who participate are eligible for tax reductions and grants, as is the community with grants, to help with the costs of these projects.

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This MSR CWPP goal is to have a more strategic and coordinated fuels program that will be based on:

- Collaboration between the MSR community's and partners' input and assistance
- Science and data
- Iterative and evaluated research
- Nimble to act on all appropriate opportunities

The MSR Fire Committee's fuel's reduction objectives are multifaceted:

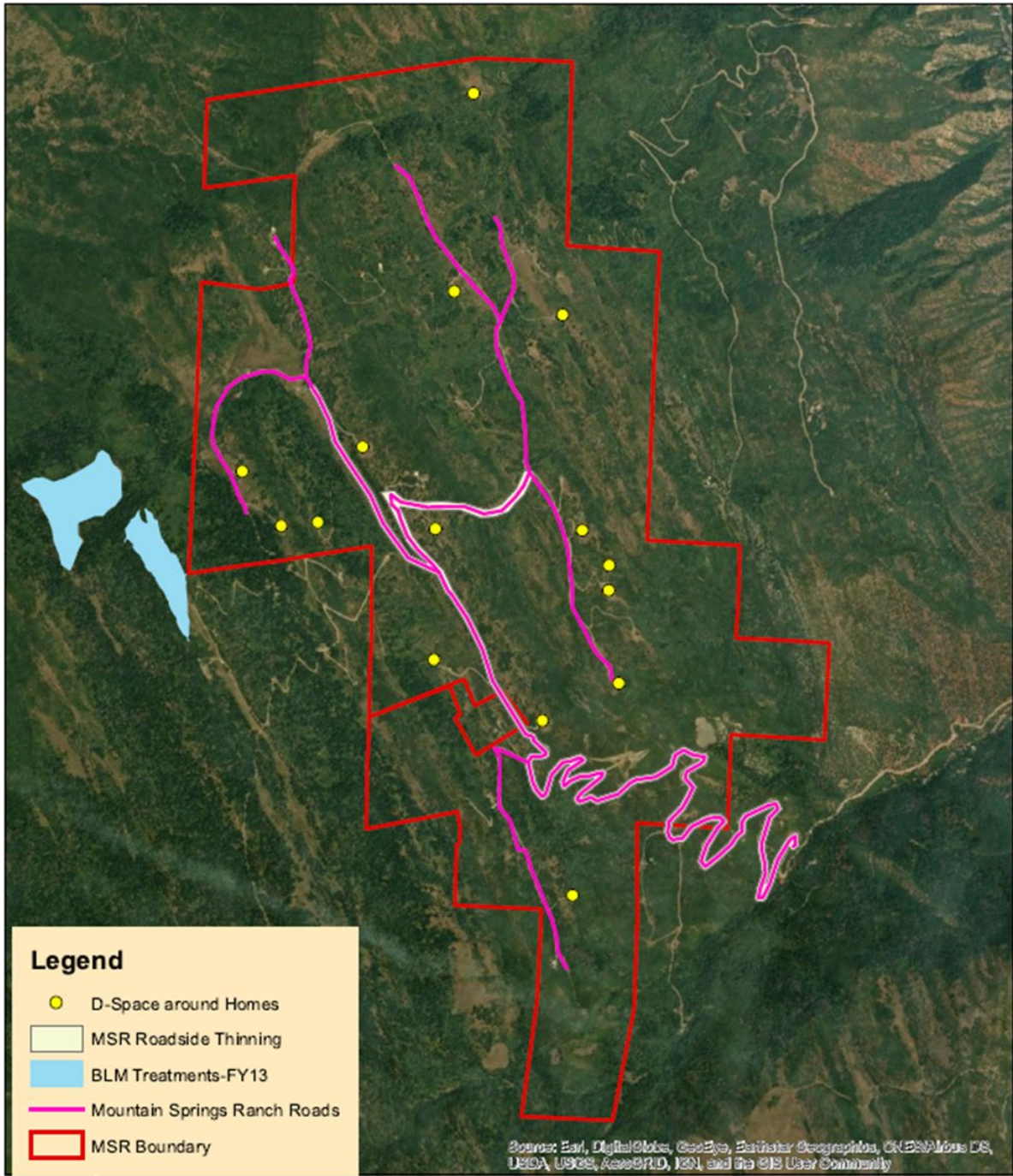
- Reducing structural ignitability for existing homes and educating new landowners about building fire-resistant structures.
- Structural ignition zones
- Evacuation Routes
- Maintenance
- Ingress and egress vehicle routes
- Safety zones for residence to take shelter
- Fuel breaks

These objectives will be implemented in phases defined by priority, effectiveness, available resources to include funding, and will be associated with targeted years:

| Phase | Timeline |
|--------------|-------------------------|
| I | 1-2 years (2021 - 2023) |
| II | 2-3 years (2023 - 2024) |
| III | 3-5 years (2024 – 2026) |

Figure 12.

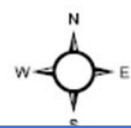
Mt Springs Ranch - Wildfire Mitigation Treatments



Legend

- D-Space around Homes
- MSR Roadside Thinning
- BLM Treatments-FY13
- Mountain Springs Ranch Roads
- MSR Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Map Created by
Colorado State Forest Service
Grand Junction Field Office
August 2021

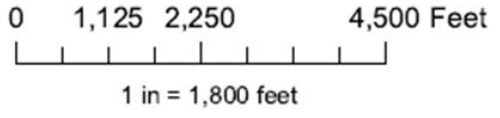
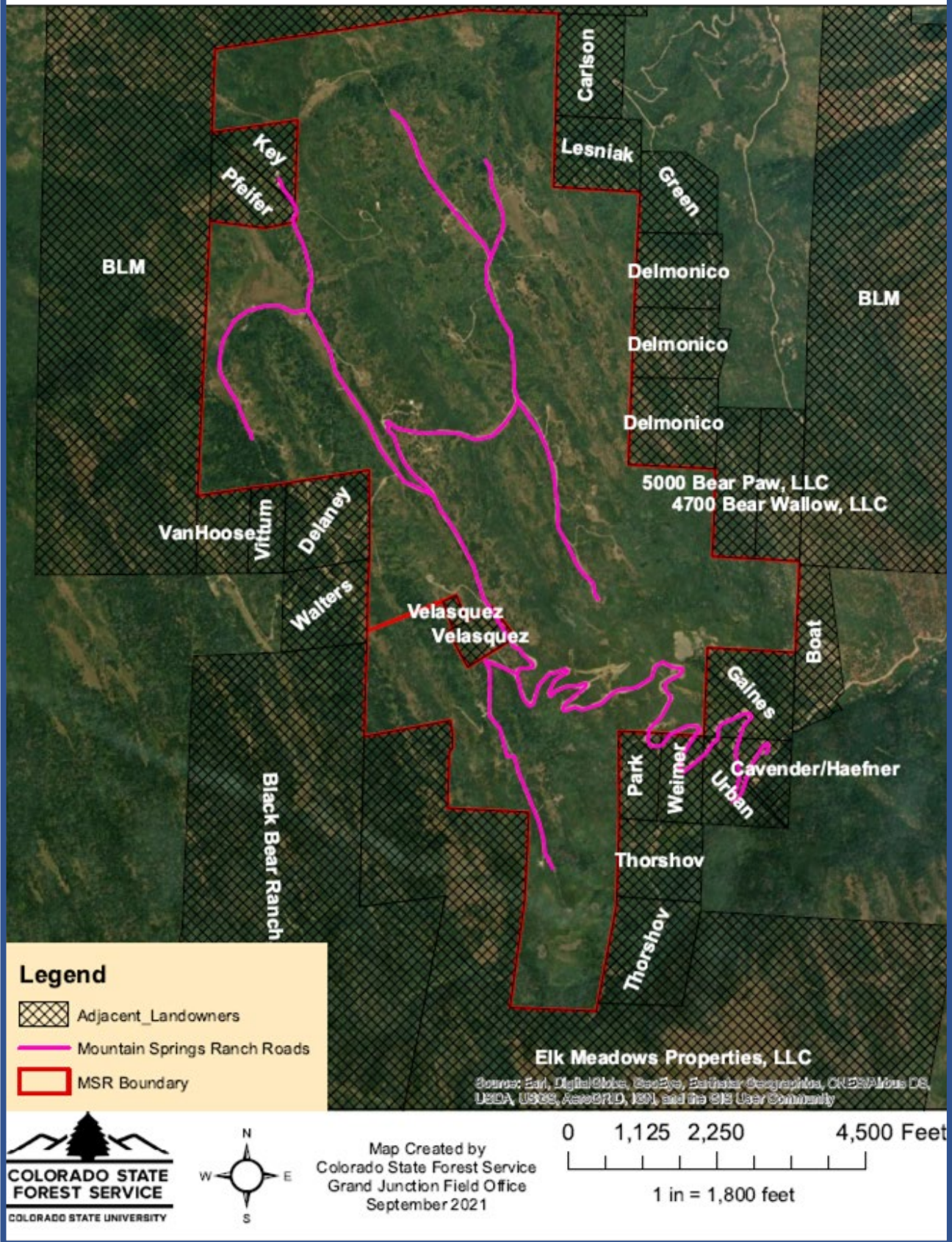


Figure 13.

Mt Springs Ranch - Adjacent Landowners



Mitigation and Implementation Plan

Goal: Education and Community Outreach

Strategy: Educate current and incoming landowners on the need and benefits of living in a fire adapted and resilient community.

| Objective: | Action: | Description: | Assigned to: | Due Date / Status: | Priority |
|--|--|--|-------------------------------------|---|----------|
| Determine MSR residents’ wildfire awareness and CWPP Objectives through a formal survey by April 2021. | Develop and send wildfire mitigation and protection survey to all MSR lot owners. | | Wildfire Committee | Completed 3/15/21 | High |
| Develop a plan for updating and keeping the community and community involved. | Provide education regarding fire mitigation practices and development of defensible spaces through educational literature and presentations. (89% support) | | Wildfire Committee | Ongoing | High |
| Validate MSR’s currency with Firewise and any needs to stay compliant by April 2021. | Work through CSFS to validate compliance, and benefits of maintaining certification. | Update yearly renew applications, update Community wildfire assessment for 2021 | Wildfire Committee GSFPD | Ongoing | High |
| Red Flag Warning Program | Work with BLM and GSFPD Fire Prevention on the development of a Red Flag Warning program within MSR based on NWS program. | BLM Burns Oregon CWPP has program for example | Wildfire Committee | 5/1/22 | High |
| Newsletter | Wildfire Committee to develop a semi-annual Wildfire Newsletter | Newsletter to educate community residents about fire mitigation, FireWise, defensible space and preparation for wildfire | Wildfire Committee | 10/30/21 First letter sent out 11/1/21 | Medium |
| Complete a defensible space assessment of all interested lot owners. | Work with MSR CWPP sponsor agencies on completing all lots by May of 2022. | Assess structural fire hardening of homes. Identify and mark vegetation for removal. | Wildfire Committee GSFD, and BLM | 5/31/2022 | High |

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| | | | | | |
|---|--|--|--|----------------|---------------|
| <p>Make detailed home wildfire risk assessments available to all homeowners and residents available upon request.</p> | <p>Collaborate with the GSFDP to evaluate individual homes for fire hardening and defensible space.</p> | <p>Notify homeowners of results via email.</p> | <p>Wildfire Committee and HOA board,</p> | <p>Ongoing</p> | <p>High</p> |
| <p>Notify residents of available financial incentives for fuel reduction.</p> | <p>Research grants and tax incentives for fuel reduction. Include this information in the newsletter and emails.</p> | | <p>Wildfire committee</p> | <p>Ongoing</p> | <p>Medium</p> |

Goal: Fuels Management

Strategy: Reduce the risk of wildfire transitioning from within and outside of MSR

| Objective: | Action: | Description: | Assigned to: | Due Date / Status: | Priority |
|--|--|---|--------------------------------------|--|-------------------------------------|
| Identify and map of past and/or current fuels reduction projects. | Research past and current fuels reduction projects via landowners and agencies and create iterative GIS database. | Need geospatial and metadata from GSFPD, BLM, CSFS and homeowners' fuels projects | GSFPD, BLM, CSFS, and Fire Committee | Completed: 9/1/2021 | High |
| Identify fuels management partners and program funding | Complete fuel risk assessments and apply for CSFS, USFS, FEMA, County and BLM grants and/or community assistance funds. | | BLM, CSFS, GSFPD, Fire Committee | 10/31/2021 | |
| Identify and develop prioritized future fuels management projects, to include maintenance of existing/past projects, and estimate of project costs and resources needed. | <p>Develop a vegetation management cycle of previous projects. Retreat areas every 5-8 years, or sooner depending on growth rate.</p> <p>Phase I: Clear vegetation up to 20' off the shoulder of Mountain Springs Ranch Road, where practical, for community egress and first responder ingress.</p> <p>Prioritize the Immediate Home Ignition Zones for fuels mitigation work. Goal: 80% of homes in MSR compliant.</p> <p>Phase II: Prioritize fuels mitigation in the intermediate zones 5 to 30 feet from homes. Goal: 80 % of homes in MSR.</p> <p>Work with BLM to maintain fuels reduction projects in the BLM property surrounding MSR</p> | Identify and describe high-priority future projects: location, size, purpose, prescription of fuels treatments, disposal plan for wood residue (trees, branches, and other woody debris). | Fire Committee and BLM | <p>Phase I: 10/31/2023</p> <p>Phase II: 10/31/2024</p> <p>Phase III:</p> | <p>High</p> <p>High</p> <p>High</p> |

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| | | | | | |
|--|--|--------------------------------------|--|-----------------------|--------|
| | Phase III: Mitigate Extended Zone once Immediate and Intermediate Zones are complete. Goal: 80% of MSR homes compliant. Work with BLM to extend fuels reduction within the BLM federal lands that surround MSR. | | | 10/31/2026 | High |
| Chipping Days | Increase the number of annual chipping days (67% support). | Conduct spring and fall chipper days | Fire Committee | 10/31/2021 Ongoing | High |
| Increase mechanical fuels reduction equipment. | Provide more capable equipment to landowners for fuels reduction, e.g., pull-behind mower, chippers, masticator, etc. | | Fire Committee and MSR HOA | 10/31/2026 | Medium |
| Increase the knowledge and use of biological fuels reduction methods | Share the knowledge of the use goats (72% support) and encourage us lot owners to utilize. | | Fire Committee and individual landowners | 10/31/2026 | Medium |
| Coordinate efforts between different MSR Committees. | Coordinate with Habitat Committee on invasive weed management. (83% support) | | MSR committees and HOA | Each May | High |
| Reduce fuels and decadent vegetation on all properties in MSR. | All property owners complete some fuel treatment on their properties, whether there are structures or not. | | Fire committee and property owners | Ongoing | High |
| Harden homes/structures against fire embers | All property owners complete assessment on steps they can take to harden the home against fire embers. Begin taking steps identified. | | | | |

Goal: Policies, Covenants, Fire Suppression Plans
Strategy: Identify existing and needed policies to enhance MSR wildfire resiliency to include grants, state, and federal policies, as well as MSR covenants.

| Objective: | Action: | Description: | Assigned to: | Due Date / Status: | Priority |
|---|---|---|---------------------------------|---------------------|----------|
| Describe existing wildfire protection authorities | Described within the MSR CWPP narrative. Need confirmation from agencies on respective responsibilities and authorities. | | Fire Committee | Completed: 9/1/2021 | |
| Identify land use, MSR covenants, and fuels management authorities | Architectural Committee develop policies to encourage wildfire resistant building materials, landscaping, and an overall fire mitigation plan. (77% support) | Recommend additional polices needed to reduce wildfire risk | MSR HOA Board of Trustees (BOT) | 10/31/2024 | High |
| Identification and pursuit of financial assistance, grants and/or incentives | Research available all hazard and other available grants, e.g., wildlife habitat improvement/water development, to diversify the portfolio of funds available for wildfire mitigation. | | Fire Committee | 3/31/2022 | High |
| Research current Insurance Services Office (ISO) ratings for MSR; work to improve MSR's ISO rating. | Work with GSFPD to identify current MSR ISO rating and identify areas that need to be improved and/or mitigated. Integrate these findings into the MSR CWPP Mitigation and Implementation Plan. | ISO ratings calculate how well-equipped fire departments and provides this score to homeowners' insurance companies. The insurers then use it to help set homeowners insurance rates. | Fire Committee | 12/31/2022 | Medium |
| Fire-hardening of structures | Homes are constructed of fire-resistant materials and existing homes have appropriate modification to strengthen fire resistance. | Conduct home risk assessments and make suggestions to homeowners for improvement. | Fire committee, GSFPD and BOT | Ongoing | High |

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| | | Add language to the MSR covenants that encourages homeowners to use fire resistant building materials and create defensible space zones. | | | |
| Promote Firewise | Encourage residents to follow CSFS defensible space guidelines and focus on ember ignition hazards (Appendix E). | Provide Firewise educational materials regarding creation of defensible space and landscaping. | Fire Committee | Ongoing | High |
| Promote Firewise | Provide CSFS publication “FireWise Construction: Site Design & Building Materials” to homeowners when new construction or remodeling occurs (Appendix E). | Include Firewise Construction materials in the architectural requirements and policies. | Fire Committee and BOT | 11/15/22 | High |

Goal: Wildfire Protection
Strategy: Improve and increase fire protection capabilities within and surrounding the MSR.

| Objective: | Action: | Description: | Assigned to: | Due Date / Status: | Priority |
|---|---|---|--|---|----------|
| Educate landowners on wildfire and structural authorities to better inform decisions. | Catalogue all relevant wildfire protection plans associated for and/or around MSR | | Fire Committee | 12/31/2021 | |
| Research incorporation into GSFPD ISO Rating. | Contact GSFPD Board of Directors on concept and property tax assessment costs. | 05/17/2021: Spoke with Mina and she will set up a meeting with the Chief on a Friday afternoon to discuss Incorporation into GSFPD. | Fire Committee | On-going 5/21/2021 | High |
| Research fire suppression equipment and station potential. | Work with CSFS, County and BLM on requirements for fire district incorporation, and/or other authorities to acquire fire suppression equipment/training. | | Fire Committee | 10/31/26 | Medium |
| Knox Box verification | Annually (spring) validate the operation and functionality of the Knox Box on the MSR gate. | | Fire Committee GSFPD, Xcel Energy | May 31 of each year | High |
| Develop interagency “Pre-Suppression” Plan | Develop a pre-planned suppression plan for MSR, e.g., incident command post location(s), safe zone, ingress/egress, communication plan, Firetruck turn around areas, etc. | Safe Zone: Identify and develop a safe zone and helispot at the large meadow at lots 7 and 1 in MSR. | Fire Committee With GSFPD, Garfield County and BLM | Safe zone: 10/31/2021 Suppression Plan: 10/31/2022 Ingress/egress routes: | High |

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| | | <p>Research and develop additional ingress/egress routes.</p> <p>Develop an all-risk emergency response/pre-suppression plan.</p> | | 10/31/2023 | |
| <p>Attain and/or maintain NWCG wildfire certifications and WUI wildland firefighting and incident command training</p> | <p>Identify necessary training needs for appropriate wildland fire response.</p> <p>Seek grant funding/cooperative training/BLM Local Cooperative Assistance funding for wildland and ICS training.</p> | | <p>GSFPD, Garfield County Sheriff's Office</p> | | <p>Medium</p> |

Goal: Community Infrastructure
Strategy: Assess and build identified MSR infrastructure with appropriate partners.

| Objective: | Action: | Description: | Assigned to: | Due Date / Status: | Priority |
|---------------|---|---|--|---|---------------------------|
| Water Sources | Identify available and needed water sources for fire suppression. (78% have no water supply for fire suppression; 44% stated ideas of water supply development) | <p>Agreement with the Black Bear Ranch for use of the Hughes reservoir.</p> <p>Researching capturing spring runoff from the Paradise Creek headwaters into a holding pond for fire suppression.</p> | Kamie Long and the Fire Committee | <p>Hughes reservoir: 10/31/2021</p> <p>Paradise creek headwaters: 6/30/2022</p> | Medium |
| Signage | <p>Update existing MSR road signs to uniform, fire resistant, reflective easy to read signs.</p> <p>Verify MSR lots' legal physical addresses and erect associated double sided and reflective address signs. (89% support)</p> <p>National Emergency Number Association: MSAG: A database of street names and house number ranges within their communities defining Emergency Service Zones (ESZs) and their associated Emergency Service Numbers (ESNs) to enable proper routing of 911 calls.</p> <p>Garfield County Community Development: 970-945-8212</p> | <p>Geographic Information Systems (GIS)</p> <p>Phone: 970-874-2119, 970-874-2131</p> <p>Grid county, Master Street Address Guide, per foot range and order, and then assigning the addresses.</p> | <p>Fire Committee</p> <p>GarCo 911</p> | <p>Completed: 10/9/2021</p> <p>Update Legal addresses and GIS map: 10/31/2022</p> | <p>High</p> <p>Medium</p> |

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| | | NENA addressing standards Andrea Grygo, Garfield County GIS Office 1-970-945-1377 ex.2455 Jeannie Koenig, GIS Administrator, 970-384-6439, jennie.koenig@cog s.us, Left message on 5/17/2021 | | | |
| Communications assessment | Ensure Fire Departments' communications have interoperability and reception/transmission | Test 700/800 MHz, VHF, and cellular communication systems. Map coverage. | Fire Committee, GSFPD, Garfield County | May of each year | Medium |
| Additional ingress and egress routes (See Pre-Suppression plan). | Identify, secure, construct, communicate and maintain secondary and tertiary evacuation routes. (67% state inadequacy of alternative evacuation routes) | | Fire Committee, Individual landowners, BLM, GSFPD | 10/31/2024 | Medium |
| Structure location | Locate every structure via latitude and longitude for aerial emergency management purposes, e.g., EMS, fire, etc. | | Fire Committee Kamie Long | Completed: 09/01/2021 | |
| Mapping of community infrastructure, assets, and hazards | Complete an assessment of aerial and ground assets and hazards. Input into GIS database. | | | | Medium |

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| Emergency Alert System/Reverse 911 system capability assessment | Validate the effectiveness and efficiency of these public alert systems in MSR. | | | | High |
| Garfield County Emergency Notification System. | Inform MSR community members on the system and importance to register for fire, road, crime, and air quality alerts. | Registry: https://garco911.com/emergency-notification-system/ | Fire Committee | 9/1/2021 | High |

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Goal: Monitoring and Evaluation
Strategy: Annually review and evaluate successes and challenges and implement identified modifications.

| Objective: | Action: | Description: | Assigned to: | Due Date / Status: | Priority |
|---|--|---------------------|----------------------|---|-----------------|
| Monitoring | List multi-party (diverse stakeholder) monitoring (who and what). | | MSR CWPP Cooperators | Annually | Medium |
| Progress Update | Measure progress using benchmarks and indicators | | MSR CWPP Cooperators | Annually | High |
| Evaluation and Lessons Learned from annual action plan | | | MSR CWPP Cooperators | Annually | Medium |
| Annual progress update and CWPP maintenance | | | MSR CWPP Cooperators | Annually | High |
| Scheduled BOT updates on Wildfire Committee actions. | File reports of Fire Committee’s work for each MSR HOA BOT meeting | | Fire Committee | On-going: 1/14/2021 2/25/2021 3/18/2021 4/29/2021 6/10/2021 7/14/2021 | High |

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Appendices and Links

- Garfield County Land Explorer: <https://maps.garfield-county.com/landexplorer/>
- BLM Interactive Map: <https://blm-egis.maps.arcgis.com/apps/webappviewer/index.html?id=59bfb9b9406d4a409e2f510bda9e409f>
- Garfield County Property Search: <https://qpublic.schneidercorp.com/Application.aspx?AppID=1038&LayerID=22381&PageTypeID=1&PageID=9444&KeyValue=R070104#>
- Colorado Forest Atlas: <https://coloradoforestatlas.org/>
- Colorado State Forest Service, Wildfire Mitigation: <https://csfs.colostate.edu/wildfire-mitigation/>
- BLM Landscape Approach Data Portal:
<https://landscape.blm.gov/geoportal/rest/find/document?searchText=isPartOf%3ANATL&contentType=downloadableData&start=1&max=10&orderBy=title&f=searchpage>
- BLM Rapid Ecoregional Assessments: <https://landscape.blm.gov/geoportal/catalog/REAs/REAs.page>
- BLM National Metadata and Downloadable Data: <https://blm-egis.maps.arcgis.com/apps/webappviewer/index.html?id=6f0da4c7931440a8a80bfe20eddd7550>
- Garfield County CWPP: <https://www.garfield-county.com/emergency-management/files/sites/15/2019/07/Garfield-County-Community-Wildfire-Protection-Plan.pdf>
- Glenwood Springs Fire Protection District CWPP: <https://www.gwsco.gov/DocumentCenter/View/4656/Wildland-Urban-Interface-Community-Wildfire-Protection-Plan>