Mineral County, MT Community Wildfire Protection Plan

March 2018
Draft

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Signature Page

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Executive Summary

CWPP Overview

Mineral County's 2018 Community Wildfire Protection Plan (CWPP) is an update to the County's 2005 CWPP. Like the 2005 plan, the 2018 CWPP update is intended to assist Mineral County in planning for wildfire and minimizing it's impacts to the community. CWPP's were originally authorized under the 2003 Healthy Forest Restoration Act (HFRA), which established provisions for wildfire risk to communities. While CWPPs tend to cover a range of topics, under the HFRA they must meet the following three criteria:

1. Be developed collaboratively between local governments, fire departments and state agencies in consultation with federal land management agencies and other interested parties;
2. Identify and prioritize areas for hazardous fuel reduction treatments; and
3. Recommend measures to reduce structural ignitability.

In addition to addressing the requirements of the HFRA, Mineral County's 2018 CWPP was developed to also address the National Cohesive Strategy Wildland Fire Management Strategy which resulted from the Federal Land Assistance, Management, Enhancement (FLAME) Act of 2009. The National Cohesive Strategy is a national effort to work collaboratively to address wildland fire. At its core, the National Cohesive Strategy is focused on three broad goals:

1. Resilient Landscapes
2. Fire Adapted Communities
3. Safe and Effective Wildfire Response

CWPP Update Process

Mineral County's 2018 CWPP update was developed over the course of late 2017 and into the spring of 2018. The process was led by Mineral County with close coordination with local stakeholders. The development of the plan was informed largely through input from a CWPP steering committee made up of representatives from the Mineral County planning department; Montana Department of Natural Resources and Conservation; U.S. Forest Service; local fire districts; Weyerhaeuser; Montana Rail Link; Mineral County Disaster and Emergency Services; Idaho Forest Group, and Montana Fish Wildfire, and Parks. Through working with the CWPP steering committee an initial draft CWPP was developed in winter of 2018. The first draft of the CWPP was then submitted to other local stakeholders for review and comment. Once the CWPP had been reviewed by local stakeholders, and revised based on their feedback, it went through public review and comment at four public open house meetings in De Borgia, St. Regis, Superior, and Alberton. Following public review and comment, the plan was revised once more before going before the Mineral County Commissioners for final review and adoption in May of 2018.

CWPP Contents

Mineral County's CWPP update is organized into eight chapters which are broadly described below. The 2018 update builds on the foundation laid in 2005 by updating the risk assessment and action plan and providing additional guidance on local tools for creating a resilient landscapes and fire adapted communities in Mineral County.

Chapter 1 - Mineral County Overview

Chapter one provides a high-level overview of Mineral County and includes information on demographics, climate, fire protection, topography, land use patterns, vegetation, and fire behavior. Chapter one also discusses Mineral County's fire history and how it influences present day conditions.

Chapter 2 - Wildland-Urban Interface

Chapter two defines and maps the wildland-urban interface in Mineral County.

Chapter 3 - Local Planning Tools

Chapter three describes local land use and other planning tools available to Montana communities. This chapter discusses which tools Mineral County is currently using and also highlights other available planning tools which are not currently being utilized in Mineral County.

Chapter 4 - Resilient Landscapes in Mineral County

Chapter four discusses resilient landscapes in Mineral County, including a description of what a resilient landscape is, why it is important, and ongoing efforts to create resilient landscapes in Mineral County. Chapter four also provides a discussion of Fire Regime Groups in Mineral County.

Chapter 5 - Fire Adapted Mineral County

Chapter five covers fire adapted communities and discusses what it means for a community to work towards becoming fire adapted. This chapter provides several available resources to assist Mineral County in becoming fire adapted. One critical component of this chapter is the focus on private landowners' responsibility in reducing wildfire risk. Chapter five also identifies community values and assets to be considered when developing fire adaptive strategies in Mineral County.

Chapter 6 – Coordination

Chapter six addresses the importance of multi-stakeholder coordination when addressing wildfire risk in Mineral County. This chapter discusses current coordinating efforts in Mineral County and provides broad guidance for strengthening those efforts.

Chapter 7 - Risk Assessment

Chapter seven provides a wildfire risk assessment in Mineral County and identifies priority at-risk communities in the County. The risk assessment uses a combination of risk mapping done by the Lolo National Forest and local knowledge of on-the-ground conditions. Chapter seven also identifies several local factors that contribute to wildfire risk in Mineral County.

Chapter 8 - Action Plan

Chapter eight attempts to bring the entire CWPP together for how to address the issues laid out in the preceding seven chapters. The action plan is laid out in a series of goals and specific action items and includes implementation partners as well as priority rankings for each action.

Mineral County Overview

Community Background

Mineral County is located in northwest Montana, stretching from the Idaho border, roughly 70 miles east along Interstate-90, to its border with Missoula County. The County is characterized by expansive conifer forests over 90% of which are publicly owned by the State of Montana and United States Forest Service (USFS) – see Figure 1. The communities of Mineral County are strung along the I-90 corridor with over one third of the county's residents residing in Superior, Alberton, and St. Regis. The remainder of Mineral County residents are spread out through the small communities dotting I-90 and the Clark Fork River Valley – see Figure 2. At 3.5 people per square mile, Mineral County has a low population density with development patterns outside of established communities characterized by low density subdivisions and isolated home-sites. As of 2016 Mineral County's population was estimated at 4,223 – a 10% increase since 2000.[1] However, looking out over the next 20-years Mineral County's population is projected to decrease slightly.[2]

Climate

Mineral County lies in a heavily forested region of Montana and includes a diverse range of topography and climatic conditions characteristic of the northern Rocky Mountains. Compared to the rest of the state, Mineral County's climate is more mild and moist due to greater influence from Pacific maritime weather systems. This is especially true in the western portion of the County where annual precipitation averages over 30 inches near Haugan, compared to 16 inches and 18 inches annually in Superior and Alberton, respectively. In the western portion of the County, where elevations are higher, the wettest months are November – January when precipitation often comes in the form of snow. At lower elevations, along the Clark Fork River in the eastern portion of the County, the wettest months are May and June when spring rains come. Temperatures in Mineral County are characteristic of much of western Montana – warm dry summers with average maximum temperatures in the upper 80's and cold winters with average winter temperatures well below freezing.[3]

Mineral County Wildfire History

Wildfire has always been a recurring event in Mineral County. Perhaps the most well-known wildland fire in Mineral County's history is the Great Burn of 1910, which burned three million acres in Idaho and Montana, over 200,000 acres of which were in Mineral County. The aftermath of the 1910 fire brought about changes in the way the United States managed wildfire, resulting in policies for aggressive fire suppression.

Figure 3 displays Mineral County's fire history from 1910 to 1980, showing the scale of the 1910 fire as well as occurrences of large and small fires throughout the period. During this 70-year period roughly 330,000 acres burned in Mineral County (42% of total land area), with the vast majority (92%) of those fire taking place between 1910 and 1920. Between 1920 and 1980 only about 18,000 of Mineral County's 782,000 acres burned, with most of those fires being less than 1,000 acres in size.

Figure 1 - Mineral County Land Ownership

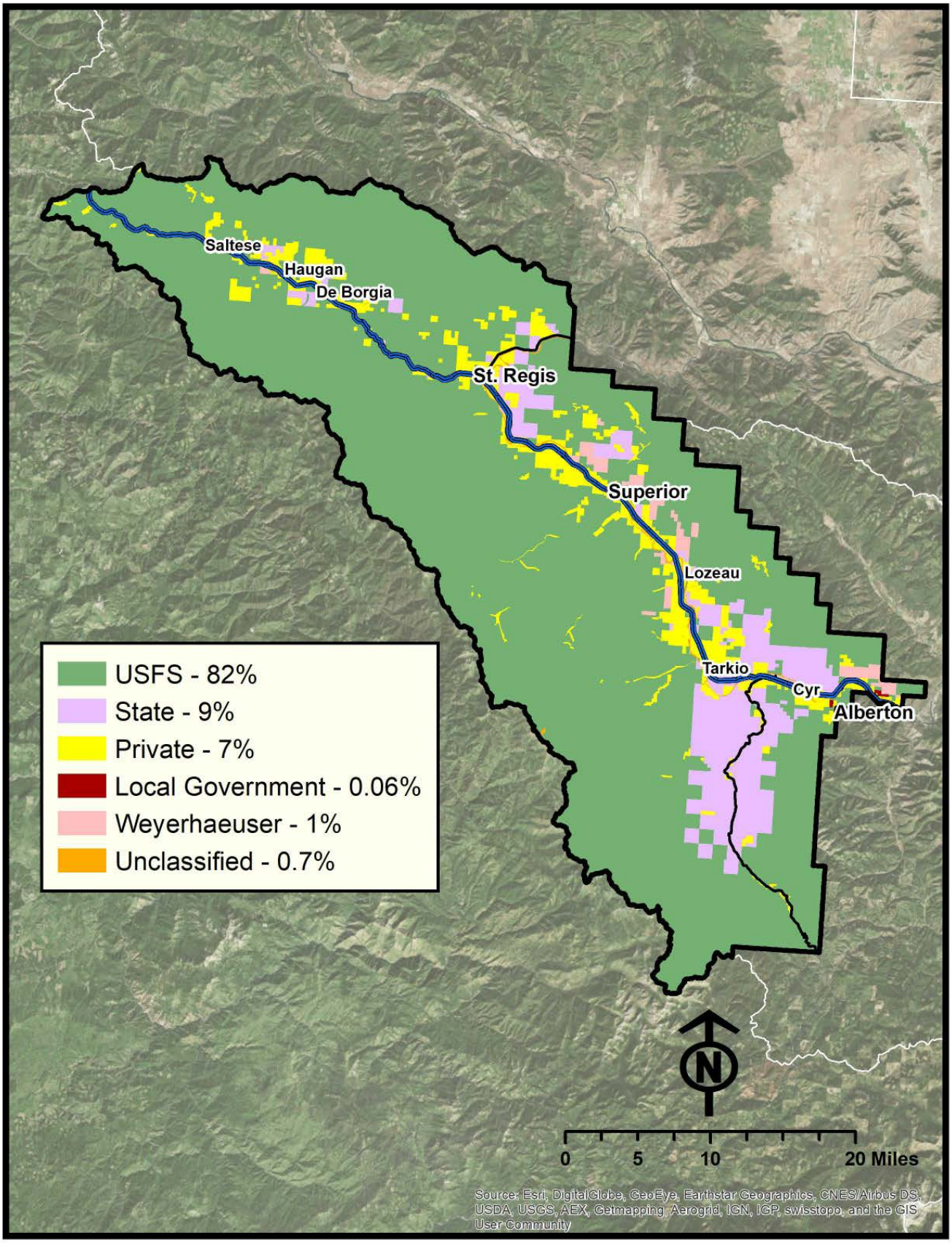


Figure 2 - Mineral County Communities and Structures

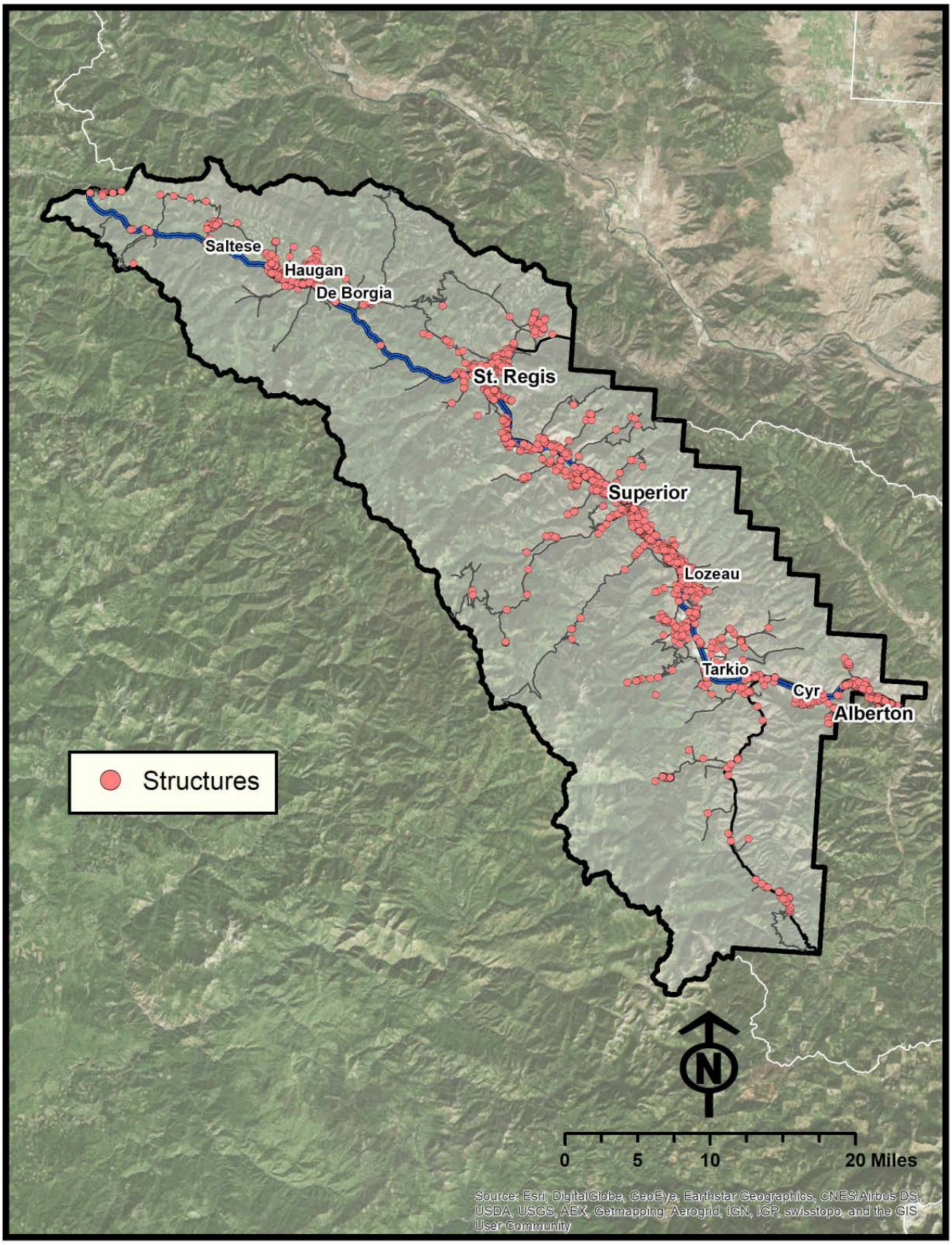
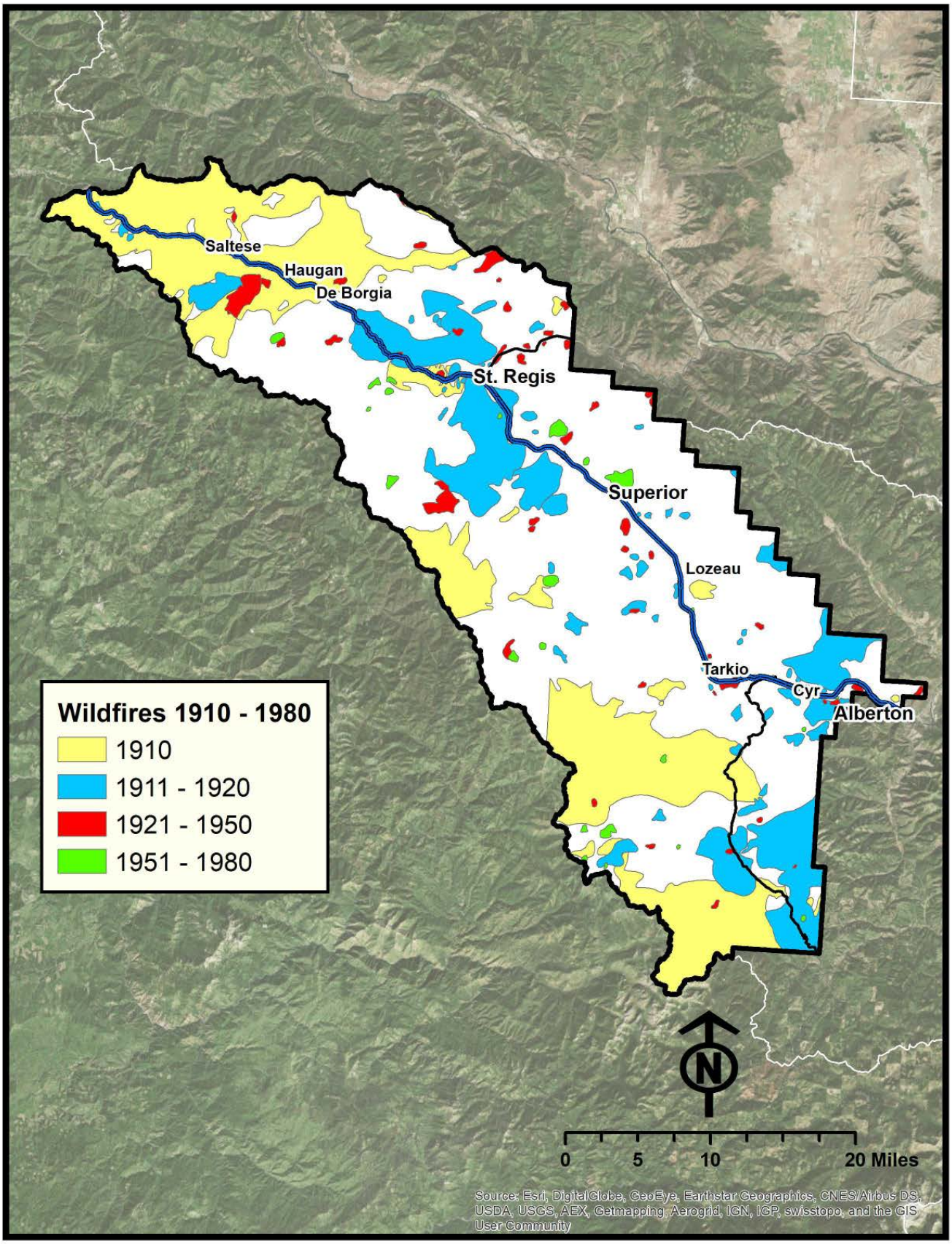


Figure 3 - Mineral County Wildfires 1910 - 1980



Over the course of much of the 20th century, the absence of frequent wildfires in Mineral County has resulted in built-up fuels in forested areas. Coupled with disease and bug kill trees, this has resulted in an increased risk of large stand replacement fires. Due in part to these factors, the occurrence of large fires (over 1,000 acres) has increased in Mineral County. From 1980 to 2017, wildland fires burned roughly 134,000 acres in Mineral County (17% of total land area), with approximately 130,000 of those acres having burned in fires greater than 1,000 acres. As Figure 4 shows, the occurrence of large fires has been especially pronounced since 2000. Between 2000 and 2017, fires over 1,000 acres burnt over 128,000 acres. Since 2013, three fires (West Mullan, West Fork Fish Creek, and Sunrise) have burnt nearly 50,000 acres in Mineral County. One evident feature of Figure 4 is the lack of recent wildfires in the west end of the County, which has not experienced a large fire since before 1920. This fact, coupled with over mature forests, dead and dying trees, and dense ground fuels has resulted in forests that are highly susceptible to a large fire. In the event a fire were to get well established in the west end, it would be difficult to suppress due to the aforementioned factors, lack of access, and steep terrain.

Fire Behavior

Weather patterns in Mineral County typically flow from southwest to northeast, which corresponds with the alignment of the canyons in the County. When fires do start, they tend to get pushed out of these canyons with prevailing winds from the southwest. Large fires tend to burn over a period of weeks and months, but daily variations occur that make fire spread unpredictable. A higher than average winter snow pack may not correspond to a more moderate fire season and may lead to greater amounts of fine flashy fuels due to increased grass production. The more realistic determinate for fire season intensity is the amount, duration, and timing of precipitation in late spring and summer months.

Fire behavior is dependent on fuel, weather and topography. On relatively calm days a fire will follow slope and fuels, burning generally uphill and up canyon, burning hot and fast where slopes are steepest, and fuels are driest. While most fires will be contained quickly by initial attack resources, periods of drought, or instances when resources are limited, can result in large high intensity fires that quickly grow out of control. A major contributor to rapid fire spread is short and long-rang spotting which can put additional risk on homes and established communities ahead of a fire. It is under these conditions that life and property are at greatest risk, and that large catastrophic fires such as the Sunrise Fire in 2017 can occur.

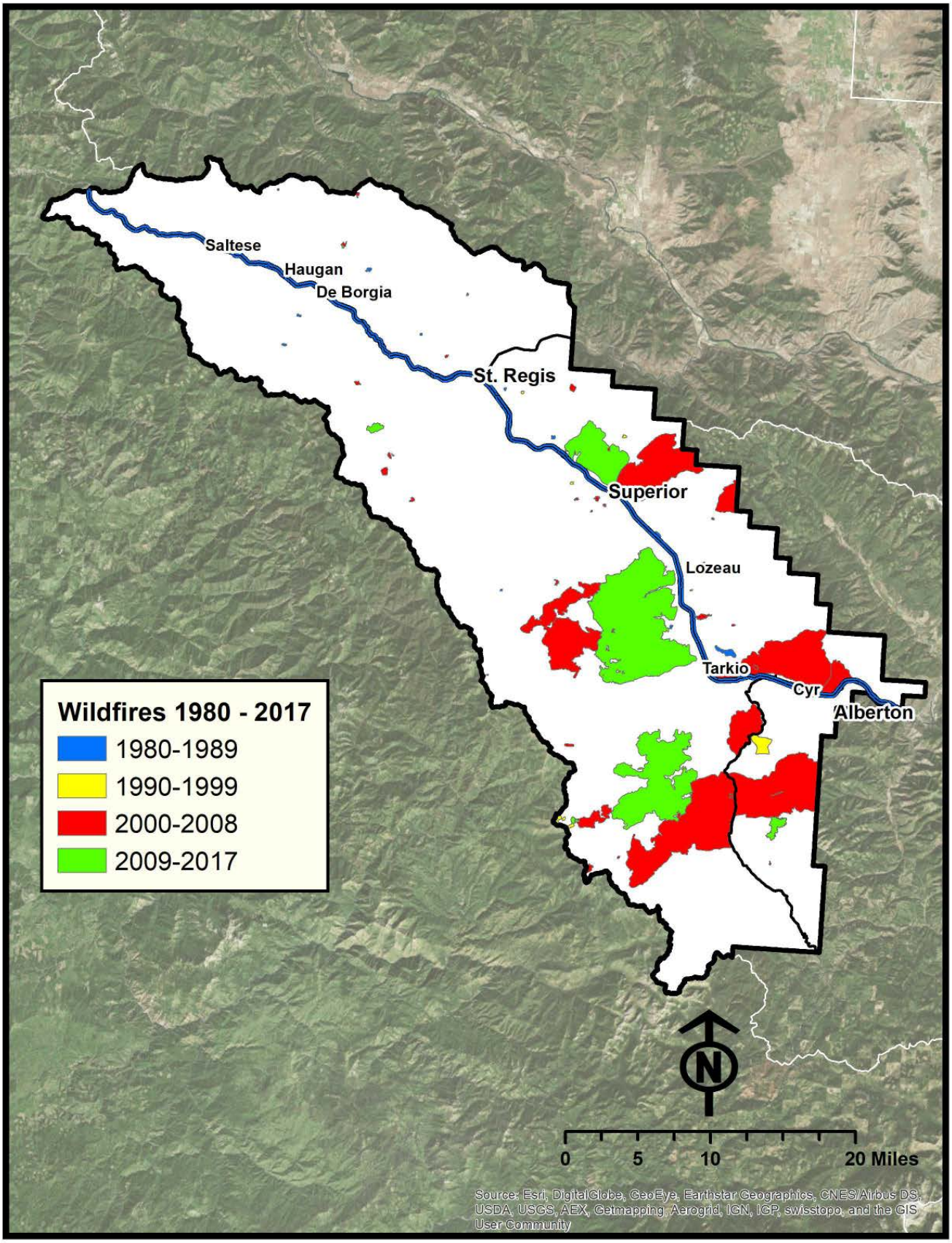
Fire Ignition

The majority (67%) of wildfires in Mineral County are caused by lighting – see Table 1. However, human caused ignitions also make up a sizable share of wildfire ignitions; primarily escaped debris burns and campfires. Currently burn permits are required outside of the open burning period, however, during open burning there is no system for landowners to notify local fire districts that they will be burning. Strategies for reducing escaped debris burns include increasing education efforts on how to safely burn debris and developing a system for notifying fire districts during the open burn period.

Table 1 - Wildfire Ignition Sources, 1992 - 2015

Source	% of Total
Lightning	67%
Miscellaneous	12%
Campfire	7%
Debris Burning	7%
Railroad	3%
Equipment Use	3%
Smoking	0.8%
Arson	0.5%

Figure 4 - Mineral County Wildfires 1980 - 2017



Fire Protection Resources

Community fire protection in Mineral County is provided by four rural fire districts and one city department – West End, St. Regis, Superior (rural and city), and Frenchtown (covering the Alberton area), see Figure 5. As Figure 5 shows the Tarkio area is not covered by a fire district. While surrounding rural fire districts will respond to fires and other emergencies in this area, the lack of a fire district is a concern for residents. While past efforts to annex this area into the Superior Rural Fire District, or to create a fire service area, have fallen through, it remains a priority to ensure residents of the Tarkio area have dedicated fire protection coverage.

With the exception of Frenchtown, fire districts in Mineral County have struggled to recruit and maintain sufficient staffing. This is a result of a number of factors, including a small population pool from which to draw volunteers, an aging population, and working residents who are unable to commit to being a volunteer fire fighter. Staffing has been a particular challenge in the West End Rural Fire District. This is issue will likely persist as Mineral County's population is projected to decrease, and with an increasing share of individuals over the age of 65.[4] As such, Mineral County will need to work with rural fire districts on developing targeted campaigns to recruit volunteers for not only firefighting duties but also for outreach and education tasks as well.

On public lands in Mineral County fire suppression is the responsibility of the Lolo National Forest's Superior and Ninemile Ranger Districts. A Cooperative Fire Management Annual Operating Plan is in effect between the U.S. Forest Service, state agencies and Mineral County fire districts to provide for coordinated fire suppression responses in urban interface areas.

Land Use Patterns

Land use patterns play a substantial role in wildfire risk. As Figure 1 on page 4 shows, the majority of land in Mineral County is under public ownership, primarily the U.S. Forest Service. Excluding Weyerhaeuser land, private lands in Mineral County account roughly for 7% of the total land area. Of that 7% of land in private ownership, the majority (75%) is in agricultural use followed by residential – see Table 2.

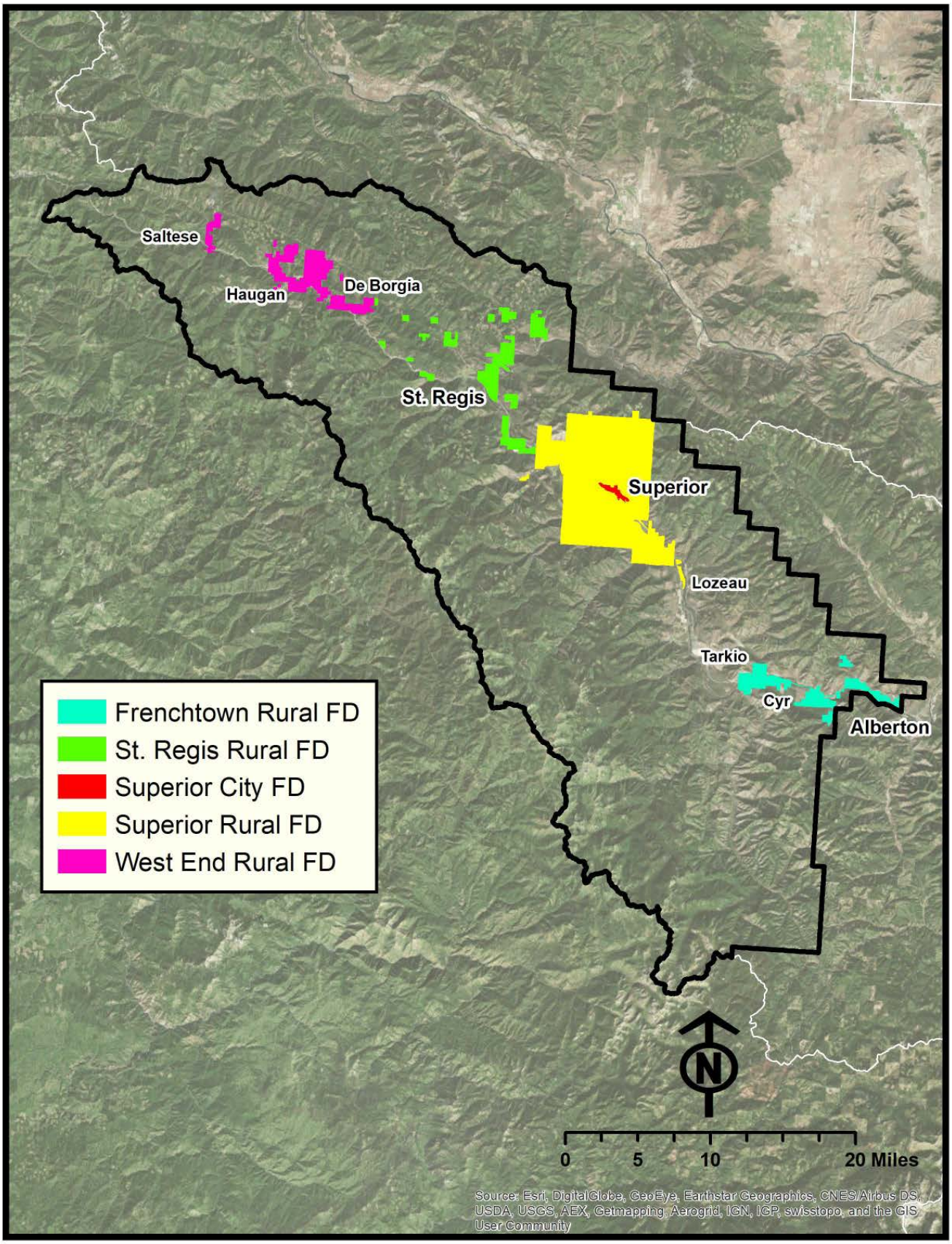
Residential development in Mineral County is centered along the I-90 corridor in nine communities including Alberton, Cyr, Tarkio, Lozeau, Superior, St. Regis, De Borgia, Haugan, and Saltese. The incorporated towns of Alberton and Superior and the community of St. Regis have the highest concentrations of development. Outside of these areas development is generally located within one to two miles of the Clark Fork River where the majority of private land is located.

Table 2 - Land Uses on Private Land

Use	Acres	% of Private Land
Agriculture	44,229	75%
Residential	10,039	17%
Vacant	3,372	6%
Commercial/Industrial	627	1%
Other*	607	1%

*Other includes exempt, non-valued, and centrally assessed properties
Source: Montana Department of Revenue

Figure 5 - Mineral County Fire Districts



Vegetation

The distribution of vegetation and fuels across a landscape is a critical component of fire behavior. An overview of vegetation, and its relation to wildfire, is helpful in understanding the natural role fire plays in forest ecosystems in Mineral County. For purposes of this CWPP vegetation has been broadly classified in seven distinct groups based on existing vegetation type and biophysical settings data from Landscape Fire and Resource Management Planning Tools (LANDFIRE). As Figure 6 shows, four vegetation groups make up 98% of Mineral County's landscape. These four vegetation groups are described in greater detail below.

Dry-Moist Mixed Conifer Forests

Dry-moist mixed conifer forests are the predominant forest type in Mineral County, covering roughly 39% of the land area. These forests areas are dominated by a mix of Douglas-fir and Ponderosa Pine as well as dispersed Lodgepole Pine, Grand-Fir, and Engelmann Spruce. Prior to human settlement and regular fire suppression these areas were characterized by frequent, low-intensity ground fires that maintained relatively open stands of a mix of fire-resistant species. Today these forests are increasingly characterized by multi-layered stands of Douglas-Fir, Ponderosa Pine, and Grand-Fir, which act as ladder fuels, making these forests more susceptible to high-intensity, stand-replacing fires.[5] Dry-moist mixed conifer forests are found throughout low to mid elevations in Mineral County.

Subalpine Wet Mixed Conifer Forests

These higher elevation forests are dominated by Engelmann Spruce and Subalpine Fir with dispersed Lodgepole Pine. Subalpine wet mixed conifer forests cover roughly 28% of Mineral County. Generally, these forests have dense, lush undergrowth which usually serves as an effective barrier to fire. However, in times of drought these forests are susceptible to moderate to high intensity fires due to their thick vegetative cover. In Mineral County these forests are primarily found at higher elevations, though they can extend down in elevation below the subalpine zone in places where northerly and easterly aspects predominate.[6]

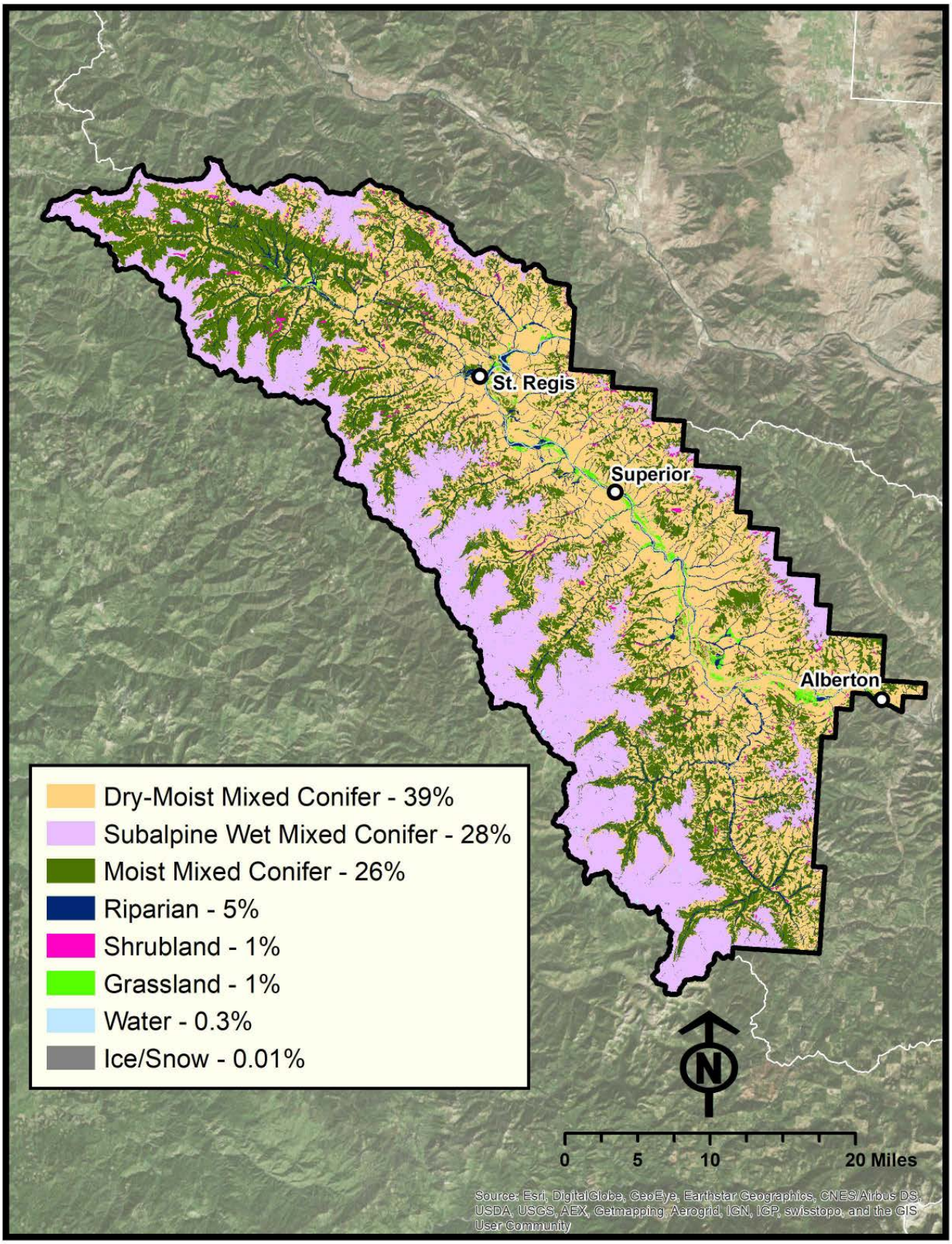
Moist Mixed Conifer Forests

Moist mixed conifer forests are dominated by Douglas Fir, Western Hemlock, and Western Red Cedar, with dispersed areas of Western Larch, and Grand-Fir. While moist mixed conifer forests are found throughout Mineral County, occupying 26% of the total land area, they are concentrated in the west end of the County. Typically, stand-replacement, fire-return intervals are 150-500 years, with moderate-severity fire intervals of 50-100 years.

Riparian

Riparian areas of Mineral County are found along the rivers, creeks, and streams throughout the County and occupy roughly 5% of the total land area. These areas are characterized by a broad mix of deciduous trees and shrubs including Cottonwood, Aspen, and Alder. Because riparian areas are in wet locations they typically resist burning, though under dry conditions fire can burn at high intensity.

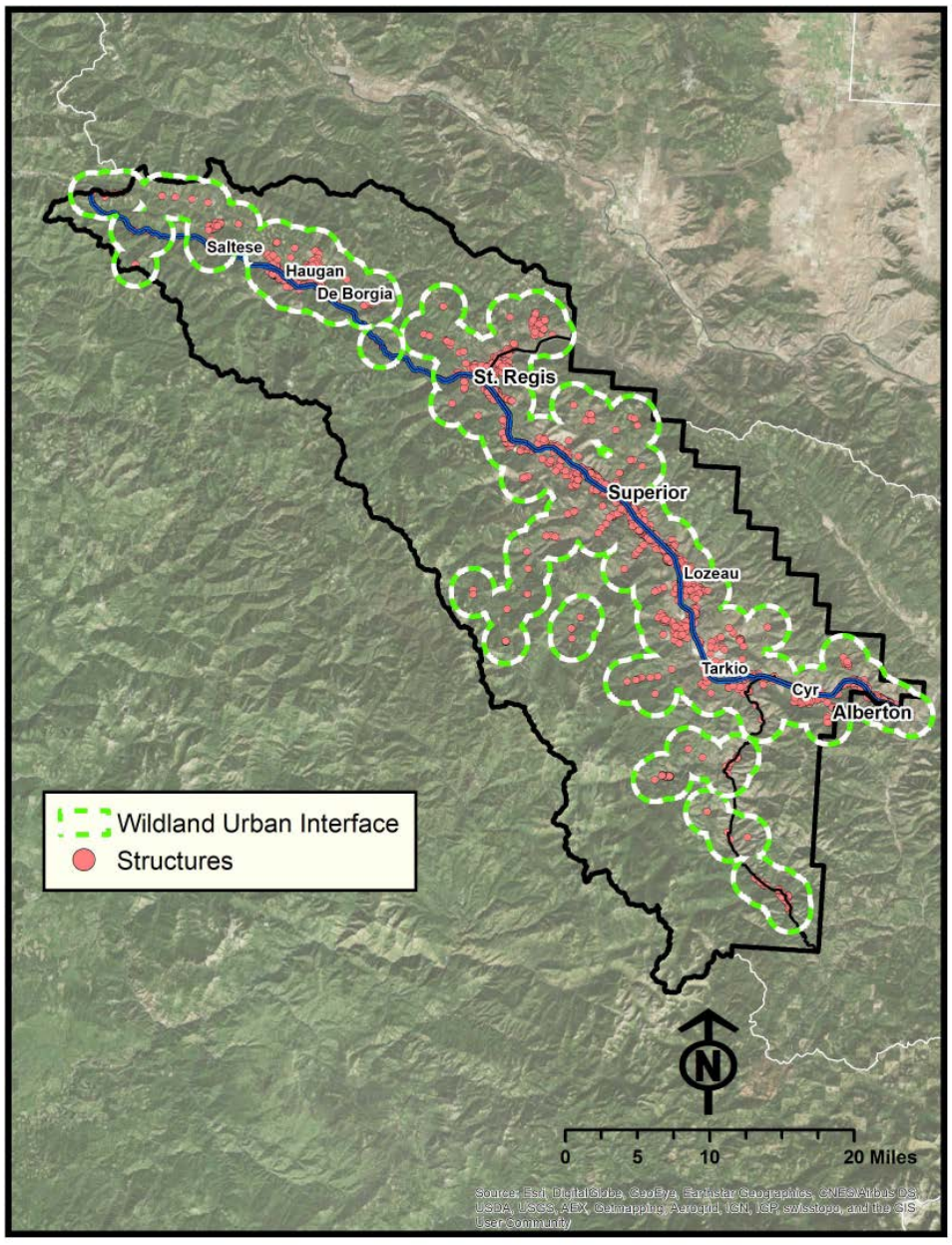
Figure 6 - Mineral County Vegetation



Wildland-Urban Interface

Mineral County's 2018 CWPP defines the wildland-urban interface (WUI) as: *Locations where the proximity of human development to natural vegetation has the potential to result in adverse impacts to life and property in the event of a wildfire.* Based on this definition the WUI in Mineral County correlates to the area 1.5 miles surrounding structures – see Figure 7. In identifying the WUI in Mineral County, the CWPP steering committee felt that focusing mitigation efforts on areas within 1.5 miles of structures would provide the best approach for reducing wildfire risk across the County. On the ground however, there may be instances where the WUI (based on the definition above) will go beyond the 1.5-mile threshold based on localized factors including slope, aspect, fuel loads, and structural ignitability.

Figure 7 - Mineral County Wildland-Urban Interface



Local Planning Tools

Land use planning can serve as important tool for reducing the risk of wildfire. Under Montana law there are two general planning approaches for addressing wildfire risk.

1. **Plans**, including growth polices, neighborhood plans, and pre-disaster mitigation plans
2. **Regulations**, including subdivision regulations, zoning and building codes

Below is a description of the tools available under these two approaches and how Mineral County is currently utilizing some of them to address wildfire risk.

Plans

Mineral County Growth Policy

Mineral County's growth policy was adopted in 2015 and also covers the towns of Alberton and Superior. In Montana growth policies serve as long range comprehensive plans for cities and counties. While local governments are not required to adopt growth policies, state law does require that growth policies contain certain elements, including "an evaluation of the potential for fire and wildland fire in the jurisdictional area, including whether there is a need to delineate the wildland-urban interface (WUI) and adopt [additional] regulations…"[7] Mineral County's growth policy identifies a generalized WUI based on parcel mapping done by the Montana Department of Natural Resources and Conservation (DNRC). The growth policy also highlights the importance of fuels reduction on private lands and states that projects adjacent to U.S. Forest Service lands should be given priority. One project specifically called out as a priority is fuels reduction around Alberton's water supply.

Mineral County Pre-Disaster Mitigation Plan

Mineral County's Pre-Disaster Mitigation Plan (PDM) was adopted in 2012 as "a tool for assessing and prioritizing projects for mitigating damage and casualties from disasters."[8] In addressing wildfire, the PDM plan largely references Mineral County's 2005 CWPP and indicates that there is a high potential for structural damage related to wildfire. The PDM plan identifies wildfire as the highest priority hazard in the County and notes that the potential impact to the community is very high. In the plan's mitigation strategy, the following projects are called out related to reducing wildfire risk.

- Provide/prepare educational materials to inform the public about wildfire risks.
- Map/locate structures within WUI.
- Encourage/provide financial incentives for fuels reduction around homes.
- Encourage/support fuels mitigation projects on federal lands.
- Implement fuels mitigation projects as designated in the CWPP.
- Develop safe ingress/egress routes for homes in the Wildland-Urban Interface

Regulations

Mineral County Subdivision Regulations

Mineral County's subdivision regulations are the primary means for regulating development in the County as well as the Towns of Superior and Alberton. Subdivision regulations address the creation of new subdivisions and are not retroactive. In addressing risks associated with wildfire, the design and improvement standards in the County's subdivision regulations require that all subdivisions be "planned, designed, constructed, and maintained so as to minimize the risk of fire and to permit the effective and efficient suppression of fires in order to protect persons, property, and forested areas."[9] To address this requirement, the design and improvement standards state that measures applied to new subdivisions "may include"

- The placement of structures so as to minimize the potential for flame spread and to permit adequate access for firefighting equipment;
- The presence of adequate firefighting facilities on site, when required by the governing body;
- An adequate water supply and water distribution system to fight fires on site, when required by the governing body;
- The availability, through a fire protection district or other means, of fire protection services, adequate to respond to fires that may occur within a subdivision;
- Provision for a second emergency exit; and
- That any bridge constructed for access to a proposed subdivision have a minimum load design of 25 tons.

The design and improvement standards outline additional special requirements for subdivisions proposed in high fire hazard areas identified by the United States Forest Service, DNRC, a local fire protection authority, or a local growth policy. These requirements include:

- A Fire Prevention and Control Plan which must include an analysis of the wildfire hazards on the site, a map showing the areas that are to be cleared of vegetation, map of areas that are to be thinned, and the identification of roads, driveways, and bridges that are sufficient for emergency vehicle access and fire suppression activities.
- At least two entrances/exits.
- Road rights-of-way must be cleared of slash.
- Building sites may not be located on slopes greater than 25 percent or at the apex of "fire chimneys."
- A water supply of sufficient volume for effective fire control.

While Mineral County's subdivision regulations provide good general standards for reducing wildfire risk, there areas where the regulations, particularly the design and improvement standards, could be strengthened. Additional updates to address wildfire risk could include:

- Make fire protection measures a requirement rather than identify what measures "may" include.
- Require a fire prevention and control plan for all subdivisions in the County that documents

how fire protection standards will be met.

- Use the CWPP as a tool for identifying high risk areas where additional requirements exist.
- Require improvement districts that ensure continual operation, annual testing and maintenance of water supply and fire protection features.
- Require two access points, located as far away from each other as possible, for all major and subsequent minor subdivisions.
- For subdivisions in high risk areas require roadside vegetation to be cleared to improve fire fighter safety for access and to reduce risk in the event of an evacuation.
- Provide specific guidance for fuels reduction and defensible space, including thorough descriptions as well as photos and diagrams which show what creating defensible space looks like in Mineral County.
- Require the use of fire-resistant construction materials in high risk areas, including roof design, windows, vents, doors and gutters, decks, and other items.

Zoning

Zoning regulates the use and scale of development. Zoning regulations range in detail and complexity from highly prescriptive (regulating lot sizes, land uses, and a host of other factors) to very simple (regulating only the density of development or a very limited number of factors). In Mineral County there is no county wide zoning, Alberton is the only incorporated community with adopted zoning. Alberton's zoning code does not explicitly address wildfire risk, though it does include requirements for minimum lot sizes, setbacks, and access which can play a role in the spread of and response to wildfire. County wide zoning is not anticipated at this time, nor is an expansion of zoning in other areas of Mineral County.

Building Codes

In Montana cities and counties are authorized to adopt and enforce building codes that have been adopted by the Montana Department of Labor and Industry (DLI). The Uniform Building Code, International Building Code, International Residential Code, and the Wildland-Urban Interface Code (with modifications) are adopted by DLI and may be adopted by local governments. The Wildland-Urban Interface Code primarily addresses fire-resistant construction materials such as noncombustible roof coverings, walls, windows, vent coverings, and similar matters, but also includes a wide-ranging appendix covering vegetation management and certain land use practices. Where local building codes have not been adopted, DLI administers building codes (including the WUI code) for all commercial structures, plumbing and electrical permits for all structures, and also construction materials and techniques for residential structures consisting of five or more units. However, because much of the development in the WUI consists of single-family residential homes, DLI does not have authority to address fire-related construction issues in most instances. Mineral County does not have locally adopted building codes, nor are they anticipated to be adopted.

Resilient Landscapes in Mineral County

Throughout history, wildfires have played a significant role in shaping the landscape. In fire dependent ecosystems, such as those in Mineral County, fire is a critical element in creating healthy forests. Generally, frequent wildfires result in less intense burns, whereas infrequent fires result in higher intensity, stand replacement fires. Prior to human settlement fires burned more regularly with less extreme intensities. These regular fires served to reduce the build-up of ground fuels and created a more diverse age class of trees. The absence of fires burning at regular intervals and at varying intensities in fire dependent ecosystems has created unhealthy forests with high levels of ground and ladder fuels and a more uniform age class of trees. These factors, coupled with increases in dead and diseased trees, have resulted in an increased likelihood of larger high intensity, stand replacement fires.

Fire Regime Groups

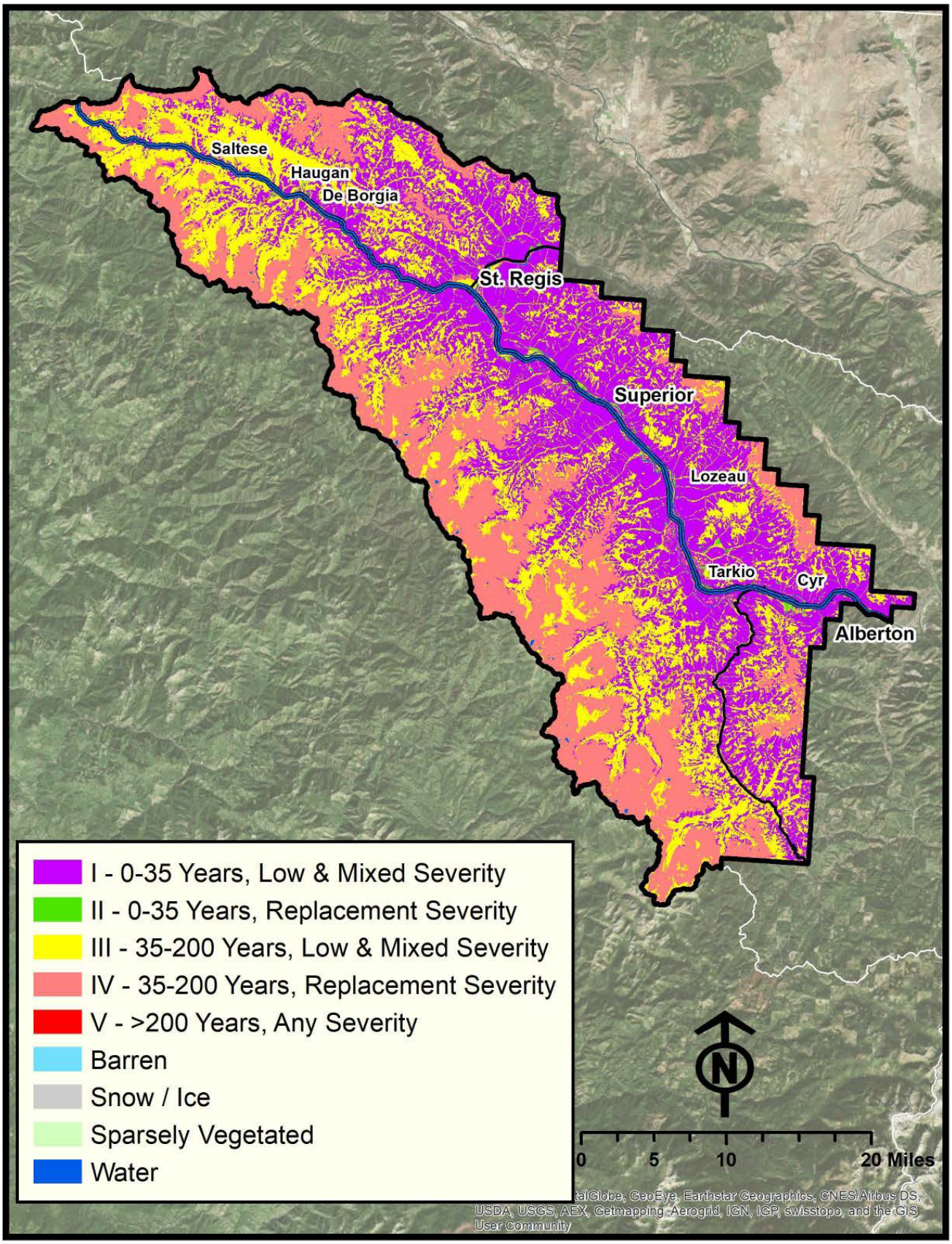
Fire scientists and ecologists use fire regime groups to describe the historical frequency and intensity of fires over time and the impacts of fire on the landscape – see Table 3 for a description of Fire Regime Groups. Figure 8 shows the distribution of fire regime groups in Mineral County. Of interest on Figure 8 is the prevalence of Fire Regime Groups I & II, which average 35 years between fires. These two groups cover over 40% (315,757 acres) of Mineral County and over 75% of structures in Mineral County are located in or adjacent to (within 100 feet) these two fire groups. Assuming that these areas historically experienced a fire interval of 35-years (upper end), roughly 9,000 acres (lower end) would have burned on average each year in these two Fire Regime Groups. Based on available wildfire data, in the last 35 years, 57,500 acres in Fire Regime Groups I & II have burned in Mineral County, an average of 1,600 acres annually, or 17% of the historic lower end. These figures are helpful in estimating how the role and frequency of fires has changed in Mineral County compared to historical norms. The result of increasing fire intervals is that fires are increasingly high severity, with greater potential impacts to surrounding communities.

Table 3 - Fire Regime Groups

Group	Frequency	Severity	Description
I	0 – 35 years	Low/mixed	Generally low-severity fires replacing less than 25% of the dominant overstory vegetation; can include mixed-severity fires that replace up to 75% of the overstory.
II	0 – 35 years	Replacement	High-severity fires replacing greater than 75% of the dominant overstory vegetation.
III	35 – 200 years	Low/mixed	Generally mixed-severity; can also include low-severity fires.
IV	35 – 200 years	Replacement	High-severity fires
V	200+ years	Any severity	Generally replacement-severity; can include any severity type in this frequency range

Source: Interagency Fire Regime Condition Class Guidebook

Figure 8 - Mineral County Fire Regime Groups



Creating Resilient Landscapes in Mineral County

The overall goal in restoring Mineral County's forests to resilient landscapes is to create ecosystems that are less vulnerable to extreme fires that destroy communities and habitat and risk lives. Resilient landscapes in Mineral County will be better able to resist damage from wildfire and recover from its impacts as well as adapt to changing climatic conditions, invasive species, and disease infestations.

In the past both public and private land owners have been active in treating forest lands in Mineral County to reduce fuels and the risk of wildfire. Since Mineral County's first CWPP was adopted in 2005 both the Superior and Ninemile Ranger Districts of the Lolo National Forest have effectively used a variety of treatment methods to reduce fuels on National Forest lands, with additional projects planned - see Figure 9. One substantial ongoing project is the I-90 corridor community wildfire protection project which will result in over 3,000 acres of treated lands along I-90 from Missoula to St. Regis. On the private side, landowners in Mineral County have taken advantage of fuels reduction cost-share grants offered through the DNRC as part of the Western States grants program. In Mineral County alone cost-share grants have resulted in fuels reduction on over 1,000 acres of private lands. Additionally, Mineral County has recently been utilizing the County's Title III money to fund fuels reduction projects on private land, with 27 projects completed as of February 2018, with additional projects planned for completion.

While completing fuels reduction projects on forested land is crucial to creating resilient landscapes in Mineral County, it is equally important to ensure ongoing maintenance of areas that have been treated in the past. This will require regular follow up evaluations of treated areas to see if additional treatments are needed in the future. Maintaining treatments over time is especially important on private lands where changes in ownership or lack of resources can result in treated lands reverting to pre-treatment conditions.

Fuels Treatment Methods

Creating resilient landscapes in Mineral County will require a broad approach to forest management that incorporates a range of treatment methods, several of which are described below.

Prescribed Burning - Areas are treated with hand or aerial ignition to reduce stand density, ground fuels, and ladder fuels. Prescribed burning is widely recognized as an important tool for reducing fuel loads and restoring the ecological function of landscapes. When performing prescribed burns it is important to plan for and manage the impact of smoke on nearby communities. It is also important to incorporate a public education component to ensure the public is aware of the benefits and intended outcomes as well as when and where prescribed burns will be occurring.

Slashing and Underburning - Trees less than six inches in diameter are felled, left on site to cure and the area is underburned.

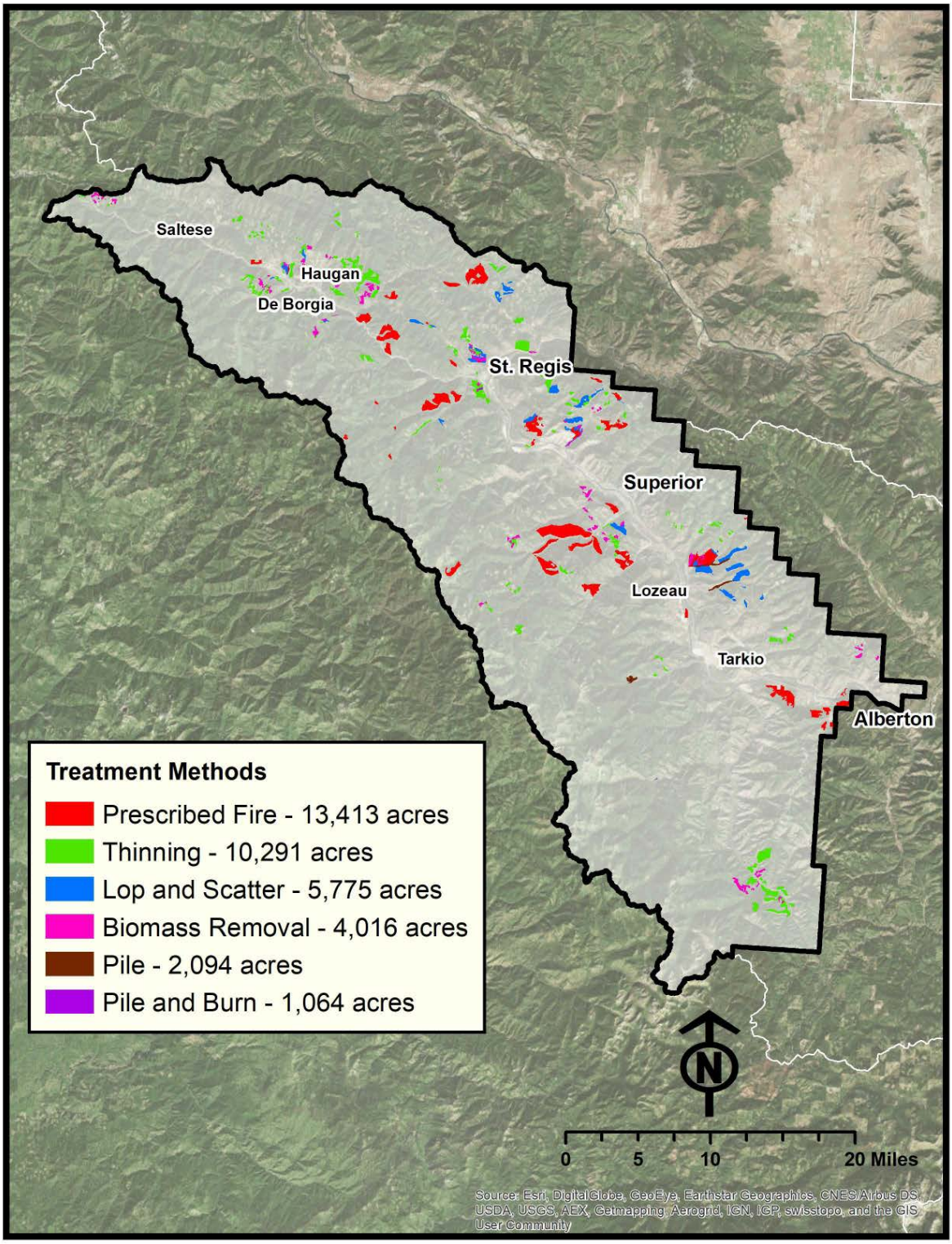
Slashing and Pile Burning - Trees less than six inches in diameter are felled, piled on site, and burned.

Thinning - Areas are thinned to spacing and species specifications to reduce fuel loading and improve conditions for growth of remaining trees. Thinned trees can remain on site to be underburned or decompose.

Commercial Harvest - Trees of merchantable diameter are harvested while remaining fuels can be piled and burned, underburned, chipped, or left on site to decompose.

Commercial Harvest with Helicopters - Trees of merchantable diameter are harvested with helicopters and remaining fuels are underburned or left on site to decompose. This method is generally the most costly due to the use of helicopters.

Figure 9 - Fuels Treatments on Public Lands, 2005 - 2017



Fire Adapted Mineral County

Fire adapted communities recognize the reality of living with wildfire and proactively take steps to prepare for, respond to, and recover from its impacts. There is no one definitive path to becoming a fire adapted community, the process needs to be tailored to the unique circumstances in Mineral County. There are many actions communities at all scales in the County can take to become more fire adapted – see Figure 10. The more actions a community takes the more prepared it will be to withstand the impacts of wildfire. Becoming more fire adapted is an ongoing process that brings together a variety of projects, programs, and resources aimed at reducing wildfire risk. In providing tailored guidance for Mineral County several fire adaptive resources are described later in this section.

Figure 10 - Fire Adapted Communities Sunrise Diagram

Community Assets and Values

Mineral County has many community assets and values that could face potential impacts from wildfire. When developing and implementing actions to become more fire adapted it is important to consider how such actions will impact the community assets and values listed below:

- Homes and businesses
- Bonneville Power Administration (BPA) and NorthWestern Energy transmission lines
- Watersheds in Alberton and Superior
- Montana Rail Link Rail Lines
- Air quality
- Wildlife habitat
- Recreation sites

- Historical sites
- Roads and other transportation facilities
- Superior Airport
- Timber industry

Community Responsibility

Fundamental to becoming a fire adapted community is engaging and educating private citizens on their role in reducing the risks associated with, and impacts from, wildfire. From the 500-acre ranch to the 1-acre subdivision lot, everyone plays a role in making Mineral County a fire adapted community. One family's neglect of the vegetation around their home does not only impact their own wildfire risk but that of their neighbors as well. In order for Mineral County to become truly fire adapted it is crucial that residents know their own risk, what they need to do to mitigate that risk, and the resources available to help them achieve theirs and the County's goals for reducing wildfire risk.

Resources & Tools

Firewise Communities

The Firewise Communities program teaches communities how to adapt to wildfire and take actions to reduce their own risk and that of their neighbors. Firewise Community designation is available at varying scales from incorporated cities and towns down to individual subdivisions or small clusters of homes, but it is not however available at the county level. In the past Mineral County had three designated Firewise Communities (Superior, West End, and St. Regis), though those designations have since lapsed requiring new applications for each community. To become a designated Firewise Community, communities must go through a five-step process that involves 1.) obtaining a wildfire risk assessment, 2.) forming a board or committee, 3.) developing an action plan, 4) holding an educational outreach event, and 5.) making a minimum investment in risk reduction projects. To start the process in Mineral County communities will need to reach out to the state Firewise liaison with the DNRC office in Missoula. More information can be found at: https://www.nfpa.org/Public-Education/By-topic/Wildfire/Firewise-USA.

FireSafe Montana

FireSafe Montana is a statewide organization whose aim is to coordinate and support "a statewide coalition of diverse interests working together to help Montanans make their homes, neighborhoods, and communities fire safe."[10] The organization works with local Montana communities to develop FireSafe councils that work to raise public awareness of local wildland fire threats and issues, motivate residents to take positive action, and provide access to the expertise and resources homeowners need to reduce their wildfire risk. While Mineral County does not have a FireSafe Council, there are currently 16 FireSafe councils across the state. In addition to supporting the development of FireSafe councils, FireSafe Montana also provides resources to home and landowners on how they can take actions to reduce their wildfire risk, available at http://firesafemt.org/.

Home Assessments

A home assessment is a tool for assessing an individual home or property's wildfire risk and providing recommendations for ways to reduce that risk. In many cases home assessments are done by local fire district staff or DNRC employees as part of private land fuels reduction grants. However, they can also be done independent of grant funding as a tool to guide homeowners on what they need to do to reduce wildfire risk on their property.

Another method is the self-assessment, where home and landowners are given a standardized method for assessing their wildfire risk. While it is best practice to have a trained wildfire professional conduct a home assessment, self-assessments can be useful in getting homeowners to begin thinking about wildfire risk and encouraging them to explore other resources for reducing that risk. In Mineral County home assessments are available to private land owners through the Frenchtown Rural Fire District and DNRC as part of grant funding for fuels treatment on private lands. There are many ways to conduct home assessments. Currently, Frenchtown Fire uses a web-based method integrated with Google Earth. Another method is using Situation Analyst Montana which provides a standardized web-based model for home assessments in Montana.

Financial Resources

In many cases the task of completing fuels reduction on private lands can be too large or too expensive for homeowners to tackle on their own. Fortunately, there are financial resources available to private land owners in Mineral County to cover a portion, or all, of the costs to complete fuels reduction work.

Cost Share Grants

The DNRC awards cost share grants for fuels reduction on private lands through the Western States grant program. In Mineral County DNRC cost-share grants come through the Bitterroot RC&D and are administrated locally through the DNRC (county-wide) and Frenchtown Fire (only in the Alberton area). Typically cost-share grants require a 50% match, either in-kind or financial, but in Mineral County the requirement is only 25% for financial matches. To qualify for the grant landowners must get a home assessment and prescription for fuels reduction work needed. After the work has been completed, according to the prescription, by the homeowner (or through a contractor) they are then reimbursed.

Title III Funding

Title III is part of Secure Rural Schools funding distributed to Mineral County. Title III money can be used for wildfire related education or assisting homeowners with fuels reduction on their property. As of 2018 Mineral County has been utilizing the County's Title III money to fund fuels reduction work on private land, though it is unknown if these funds will be available in future funding cycles. Permanent Title III money would provide a sustainable source of funding for fuels mitigation projects in Mineral County. The lack of dedicated funding creates uncertainty with regard to how private lands fuel reduction work will be funded in the future and can hamper the County's abilities to effectively coordinate with state and federal agencies on reducing wildfire risk in Mineral County.

Coordination

Sufficiently addressing wildfire risk in Mineral County requires coordination among many public and private actors including local, state, and federal agencies as well as private entities and individual property owners. Recognizing the diverse array of agencies and organizations involved, coordination, cooperation, and communication are essential to successfully addressing and responding to wildfire. Fortunately, Mineral County has a solid foundation of coordination from which to build from through the Local Emergency Planning Committee (LEPC) and Mineral County Fire Council. The LEPC is made up of a diverse array of local stakeholders representing local, federal, and state agencies; schools; the hospital; local fire districts; law enforcement; and private businesses and citizens. The LEPC addresses Mineral County's capabilities to prepare for and respond to disasters in the County, including wildfire.

As the name implies, Mineral County's Fire Council is focused on fire and is comprised of representatives from the County, USFS, DNRC, and local fire districts. The Fire Council serves as a forum to discuss matters related to fire management, effective fire protection, equipment needs, and to provide a means of communication between Mineral County and state and federal agencies. As they are focused exclusively on fire, Mineral County's Fire Council is the primary forum for addressing risks related to wildfire

Strengthening Coordination in Mineral County

Often it is easier to talk about coordination than to engage in meaningful and effective coordination. While effective coordination happens during emergency events, coordination efforts can languish when there is not an immediate need. In working on strengthening coordination efforts it is important to be realistic and recognize resource and capacity constraints. Organizational budgets, staffing, and competing priorities are all factors that need to be considered when coordinating efforts to address wildfire risk.

Through the development of this plan, the plan's steering committee addressed several areas where coordination could be improved in Mineral County. Coordination with local fire districts was highlighted as one such area. With the exception of Frenchtown Fire, rural fire districts in Mineral County do not play a significant role in educating homeowners on risks posed by wildfires. Coordinating with local fire districts to disseminate information on wildfire risk and available resources is one way that Mineral County can more effectively reach out to homeowners on their role in reducing wildfire risk. It was also highlighted by the steering committee that coordination could be improved between the USFS, DNRC, Mineral County, and local fire districts with regard to the location and timing of fuels reduction work on private and public lands. Coordinating when and where fuels reduction work is taking place could help in prioritizing work on private land based on the location of recently completed or planned work on public lands, and vice versa.

Risk Assessment

Wildfire risk is a function of the likelihood a fire will occur, fire intensity, and the potential impact to community assets or high valued resources – see Figure 11.[11] Wildfire risk assessments are a means of measuring and identifying the level of risk across an area. By themselves they are not decision-making tools, but instead are intended to aid in the process of deciding where to devote resources to mitigate or reduce risk. Recognizing resource and capacity limitations, Mineral County's risk assessment is intended to be used as a guide for where to focus risk mitigation efforts in the County. Mineral County's risk assessment was done using risk mapping completed by the Lolo National Forest coupled with input from local, state, and federal agencies with knowledge of on-the-ground conditions in the County.

Figure 11 - Wildfire Risk Triangle

Risk Factors

While risk is an overall function of likelihood, intensity, and susceptibility/impact, there are many localized factors that contribute to fire intensity and impact as well as the ability of residents and firefighters to respond to and evacuate from fire events. Below is a brief description of these risk factors in Mineral County.

Access

Access, or lack thereof, can contribute to wildfire risk in a variety of ways. First and foremost, limited access routes to and from residential areas can serve to impede residents' ability to safely and quickly evacuate in the event of a fire. Access constraints can also place limits on firefighters' abilities to suppress wildfires and compromise firefighter safety. There are residential areas throughout Mineral County with only one way in and one way out. In the event those access routes are blocked or are not safe for travel, residents and firefighters' abilities to safely evacuate could be compromised.

Additionally, steep terrain and/or a lack of roads can restrict land managers ability to access areas for fuels treatments. This situation is common throughout Mineral County, notably in the west end and on the north facing slopes south of Superior, where steep terrain and limited road networks make fuels treatments unfeasible, unsafe, or too costly to complete.

Limited Fire Response Resources

While many of Mineral County's residents are served by a local fire department, as mentioned previously, the Tarkio area is not in a fire district. While nearby departments will respond to emergency situations in this area, it can result in long response times. Even for areas served by a local fire department, staffing constraints and dispersed development patterns can also result in long response times during emergency situations.

Structure Density

High structure density contributes to risk due to the potential higher cumulative impacts from fire in comparison to lower density development patterns. Additionally, high structural density can also result in structure-to-structure ignition in the event one or more structures catch fire.

High Fuel Loads

High levels of live and/or dead fuels can increase fire intensity and compromise firefighters' ability to safely respond to a fire.

Lack of Water

A lack of sufficient water supply or pressure can hinder firefighters' ability to respond to and suppress wildfires. This is especially relevant during the initial attack phase and during structure protection scenarios. There are areas of Mineral County where existing wells have insufficient water supply or pressure to effectively respond to wildfires and where turnaround times to refill engines or water tenders are long. This issue is particularly concentrated west of St. Regis. While there are numerous draft sites (ponds, streams, rivers, lakes, etc.) throughout the County, firefighters are not always aware of where they are located.

Lack of Defensible Space

A lack of defensible space around a structure can result in increased fire intensity, reduce a structures chance of surviving wildfire, and can put neighboring structures at risk. Additionally, a lack of defensible space can also compromise firefighter safety during structure protection scenarios.

Lolo National Forest Risk Mapping

The Lolo National Forest recently completed a wildfire risk assessment on National Forest lands across the entire forest, which encompasses all of Mineral County. The wildfire risk assessment is intended to support wildfire and fuels management decisions. The assessment incorporated a variety of data sources including local calibrated fuels data, weather, fire history, and highly valued resources and assets to produce the following inputs

1. *Likelihood* – The probability that a piece of ground will burn
2. *Intensity* – How hot the fire is likely to burn.
3. *Impacts* – How highly valued resources and assets will be impacted at different intensity levels.

Together these inputs resulted in the wildfire risk assessment shown in Figure 12. Wildfire risk is displayed in four categories, described as strategic fire management zones – see Table 4. While the risk assessment does not cover private or state lands it is useful for the purposes of this plan for identifying areas in Mineral County that area adjacent to high risk areas. Of note when looking at Figure 12 is the fact that Mineral County's identified WUI roughly aligns with the areas identified as highest risk.

Figure 12 - Lolo National Forest Wildfire Risk Map

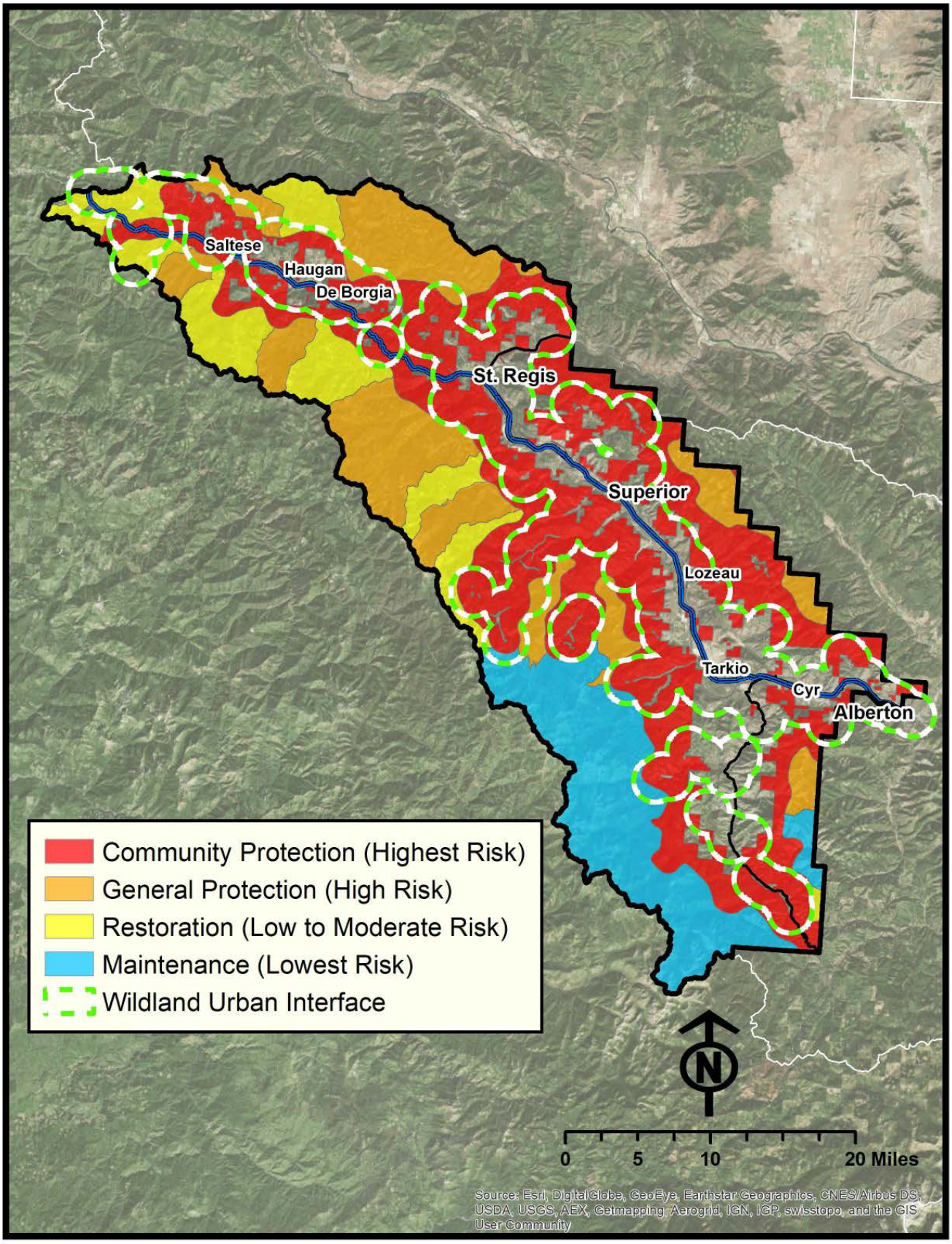


Table 4 - Lolo National Forest Risk Mapping, Strategic Fire Management Zones

Community Wildfire Protection	This area identifies the highest risk to communities and community assets including concentrated human habitation, major infrastructure, high use recreational areas and inholdings with improvements. Delineation of this area may help prioritize fuel treatments and fire management activities.
General Wildfire Protection	This area identifies a high risk to communities and natural resources that would see a negative impact from wildland fire including major infrastructure, watersheds, critical habitat, timber values, recreational infrastructure, ecological structure and function. Delineation of this area may be used in the future forest plan revision to help prioritize ecological restoration projects to achieve desired conditions.
Restoration	This area identifies a low to moderate risk to mostly natural resource values and some isolated U.S. Forest Service owned assets including critical habitats not negatively impacted by wildfire, dispersed recreational opportunities, ecological structure and function. Delineation of this may be used in the future forest plan revision to help prioritize ecological restoration projects to achieve desired conditions.
Wildfire Maintenance	This area identifies a very low risk and where wildfires will very likely maintain or help achieve long range desired conditions including wilderness or proposed wilderness areas, inventoried roadless areas, ecological structure and function, and some isolated backcountry Forest Service owned assets. Management of wildfires may be used to achieve resource objectives.

Source: Lolo National Forest

Priority at Risk Communities

Identifying priority at-risk communities in Mineral County involved using the Lolo National Forests' risk assessment map in conjunction with input from CWPP steering committee members. For ease of reference the priority at-risk communities have been broken into four county sub-regions, described in more detail below. Figure 13 shows the priority at-risk communities in Mineral County overlain on the risk assessment map.

West End

At-risk communities in the West End of Mineral County include Saltese, Haugan, De Borgia, and Cabin City. Access is an issue in each of these communities with several residential developments having only one way in and one way out. All of these communities are covered by the West End rural fire district, however, recruiting volunteer firefighters has been a challenge, which can limit

fire response capabilities. Furthermore, water supply is an issue in the West End with under-performing wells and a lack of dip sites for water to respond to wildfires. Since 2005 there have been several fuels treatment projects (thinning and prescribed burning) done on public and private lands in the West End. Even with these treatments however, there remain high fuel loads on public lands and a lack of defensible space around structures on private lands.

St Regis Area

At risk communities in the St. Regis area include the community center of St. Regis as well as the Seven Mile residential area the Cougar Meadows subdivision. While there have been numerous fuels treatment projects completed around St. Regis since 2005, the high structure density in the community center of St. Regis is a concern in the event a large fire were to get established in the canyons south of town. In the Seven Mile community access is the primary concern as there is only one way in and one way out. Additionally, both Seven Mile and the Cougar Meadows subdivision have a lack of defensible space around structures and could benefit from additional fuels reduction on adjacent public lands.

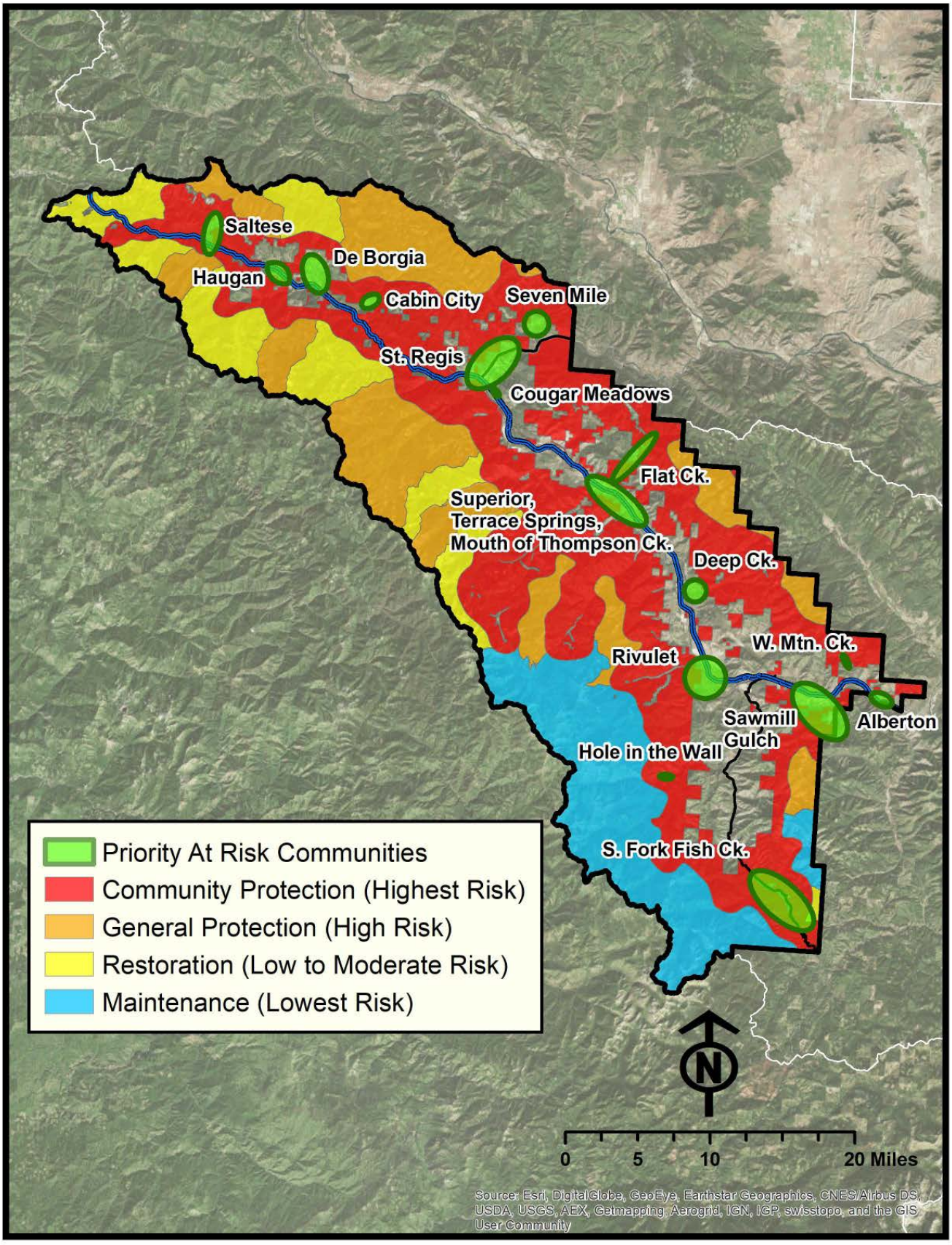
Superior Area

At-risk communities in the Superior area include the Town of Superior, Terrace Springs, the mouth of Thompson Creek, and the Superior water supply up Flat Creek. Terrace Springs and the mouth of Thompson Creek, located south of the Clark Fork river, have limited access routes, a need for defensible space around structures, and are bordered by high fuel loads on public lands. The north facing slopes south of Superior have high fuel loads and are difficult to access for fuels treatments due to steep terrain and a lack of roads. While fuels treatments have been completed south of this area, if a fire were to get established it could present a risk to homes and property in the Town of Superior where there is high structure density. Lastly, Superior's water supply is located up Flat Creek and, while wildfires have burned in this area in 2000 and 2013, it remains a priority to minimize wildfire impacts to the Town's water supply and quality.

Alberton/Tarkio Area

At-risk communities in the Alberton/Tarkio area include Deep Creek, West Mountain Creek, Rivulet, Sawmill Gulch, the Town of Alberton and its water supply, South Fork of Fish Creek, and Hole in the Wall. One primary concern in this area is the lack of a fire district covering the area around Tarkio (Rivulet and Deep Creek) as well as Hole in the Wall and the South Fork of Fish Creek. As a result these areas can experience long response times during emergency events. Limited access is a concern in West Mountain Creek, Sawmill Gulch, South Fork of Fish Creek, and Hole in the Wall. The area around the South Fish Creek has high fuel loads and could benefit from additional fuels treatments. Lastly, while the area immediately surrounding the Town of Alberton has had past fuels treatments, high structure density could result in more pronounced impact to homes and property in the event of a large fire south of town.

Figure 13 - Mineral County Priority At-Risk Communities



Action Plan

Mineral County's CWPP is intended to be an actionable and achievable document that is implemented over time to assist the County and its partners in preparing for wildfires. The goals and actions outlined below provide Mineral County and its partners with a framework for how to move forward. The priority column for each action is intended to be used as a tool for prioritizing the allocation of limited resources. The priority rankings reflect where the County should be investing its time and resources. As resources are limited, implementation of each action will be incumbent upon availability of staff and funding.

Updating the Plan

Mineral County's current CWPP was adopted in 2005. During the 2018 CWPP update process, it was widely recognized by the plan's steering committee that 13 years between updates was too long and that the plan needs to be updated on a more regularly basis. Mineral County's 2018 CWPP is intended to be a living document that undergoes regular revisions and updates to ensure the plan remains relevant and sufficiently addresses wildfire risk in the County. Ideally, a cursory review should be done on an annual basis to gauge progress and to identify whether minor revisions are needed. At least once every five years the CWPP should undergo a more thorough review to evaluate whether a major update is needed to reflect changing conditions and circumstances. Conditions that may warrant a major update include, but are not limited to, major fires that significantly impact community assets and values; rapid population growth or decline; significant changes to resources dedicated to wildfire risk reduction or response; significant land use changes that impact wildfire risk; or changes to local, state, and/or federal laws pertaining to planning for wildfire.

Goal #1: Provide Knowledge and Resources to Community Members on the Risks of Living with Wildfire and their Role in Reducing Risk

	Actions	Partners	Priority
1.1	Identify a primary point of contact or create a new position to lead and coordinate outreach and education efforts.	Mineral County Fire Council	High
1.2	Proactively reach out to homeowners in high risk communities to inform them on their role in reducing wildfire risk in Mineral County and what they can do to create defensible space on their property.	Local Fire Departments, Mineral County Fire Warden, Mineral County Health Department, DNRC	High
1.3	Work with local communities and homeowners associations on becoming certified Firewise Communities.	Mineral County Planning Department, Mineral County Fire Warden, DNRC, Alberton, Superior, St. Regis, other Mineral County Communities, Homeowners associations	High
1.4	Work with local fire departments to inform citizens on available resources for reducing wildfire risk, including Firewise, funding for fuels reduction on private lands, and FireSafe Montana.	Mineral County Fire Warden, Local Fire Departments, LEPC, DNRC	High
1.5	Develop a centralized website where Mineral County residents can go to learn about becoming fire adapted.	Mineral County Fire Warden, Mineral County Fire Council, Mineral County Health Department	High

	Actions	Partners	Priority
1.6	Mail a wildfire self-assessment form, (with paid return postage) to all Mineral County residents to evaluate how private citizens view their own wildfire risk and to get an idea of which residents are interested in taking steps to become fire adapted.	Mineral County Fire Warden, DNRC	Medium
1.7	Develop a proactive marketing campaign, utilizing radio, TV, print, social media, and/or digital media to inform homeowners of wildfire risk and available resources.	Mineral County Fire Warden, DNRC	Medium
1.8	Organize community workshops where residents can learn about their role and benefits of reducing wildfire risk and the resources available to them.	Mineral County Fire Warden, Local Fire Departments, USFS, DNRC	Medium
1.9	Set up informational booths at events where community members can learn about reducing wildfire risk in Mineral County.	Mineral County Fire Warden, DNRC, Local Fire Departments, USFS	Medium
1.10	Develop a system that allows landowners to notify local fire districts that they will be burning during the open burning period.	Local fire districts, DNRC, Mineral County Fire Warden	Medium

Goal #2: Ensure Coordination Among Organizations Involved in Wildfire Risk Reduction and Public Outreach

	Actions	Partners	Priority
2.1	Provide for coordination between the USFS, Mineral County, Local Fire Departments, DNRC, FWP, MRL, and BPA with regard to the location of fuels reduction projects.	Mineral County, USFS, DNRC, Local Fire Departments, FWP, MRL, BPA	High

	Actions	Partners	Priority
2.2	Prioritize private land fuels reduction projects in areas where work has been done on adjacent public and/or private lands	Mineral County Fire Warden, Local Fire Departments, LEPC, DNRC	High
2.3	Work with the Forest Service on getting advance notice of fuels reduction projects on public lands to enable targeted outreach to adjacent private landowners.	Mineral County, USFS, DNRC, Mineral County Fire Council	High
2.4	Utilize the Mineral County Fire Council as a forum for coordinating outreach efforts.	Mineral County Fire Council	High
2.5	Develop a coordinated and consistent message for public outreach, that is used by all organizations interfacing with the public.	Local Fire Departments, Mineral County Fire Warden, DNRC, USFS	High
2.6	Create a centralized database and map displaying the location of completed and planned fuels treatments on public and private lands.	Mineral County Fire Council, DNRC, local fire districts	High
2.7	Create a uniform method for assessing wildfire risk on private property - Situation Analyst Montana or similar method.	Mineral County Planning Department, Local Fire Departments, DNRC	Medium
2.8	Work with adjacent counties in Montana and Idaho on coordinating outreach and wildfire mitigation efforts.	Mineral County, adjacent Counties, Mineral County Fire Council	Medium

Goal #3: Reduce Wildfire Risk in Mineral County through Forest Treatments that Create Resilient Landscapes

	Actions	Partners	Priority
3.1	Target fuels treatments in and adjacent to: • Priority at risk communities • Areas where access constraints exist • Areas identified as highest risk in the wildfire risk assessment.	USFS, DNRC, Local Fire Departments, FWP	High
3.2	Ensure ongoing maintenance of treated areas on public and private lands.	Mineral County, USFS, DNRC	High
3.3	Continue to seek out grant funding for fuels reduction work on private lands.	Mineral County, DNRC, Local Fire Departments, Bitterroot RC&D	High
3.4	Where feasible utilize commercial timber harvest as a fuels management treatment to reduce fuel loads and offset costs.	Mineral County, USFS	Medium

Goal #4: Enhance Regulatory Tools for Reducing Wildfire Risk

	Actions	Partners	Priority
4.1	Update subdivision regulations to: • Provide more detailed requirements and guidance for creating defensible space. • Require the use of fire-resistant construction materials in high risk areas, including roof design windows, vents, doors and gutters, and other items. • Require a fire prevention and control plan for all subdivisions. • Require annual testing and maintenance of water supplies	Mineral County	High

Goal #5: Ensure Fire Departments Have Sufficient Resources to Respond to Fires

	Actions	Partners	Priority
5.1	Work with homeowners associations and local communities on developing additional water supplies and secondary access routes.	Mineral County, Homeowners Associations, Local fire departments, Mineral County Cities and Communities.	High
5.2	Develop new methods for recruiting and retaining volunteer fire fighters.	Local fire departments, LEPC, Mineral County Fire Council	High
5.3	Work with local fire departments on ensuring their firefighters have sufficient qualifications for responding to wildfires – e.g. red cards.	Local fire departments, DNRC	High
5.4	Work with local residents to provide fire coverage in the area around Tarkio, either through annexing into an existing fire district or through the creation of a fire service area.	Mineral County, property owners, adjacent local fire districts	High

	Actions	Partners	Priority
5.5	Work with local fire districts on inventorying their resource needs and providing assistance to ensure adequate resources are available.	Mineral County, DNRC, Local fire districts	Medium
5.6	Map available water supplies throughout Mineral County including but not limited to: • Wells; • Streams and creeks (large and small); • Ponds; • Dip sites; and • Other potential draft sites	Mineral County, DNRC, USFS, Local Fire Districts, private property owners	High

(Endnotes)

1 American Community Survey

2 Montana Census and Economic Information Center

3 https://wrcc.dri.edu/

4 Mineral County Growth Policy

5 LANDFIRE/GAP Land Cover Map Unit Descriptions

6 LANDFIRE/GAP Land Cover Map Unit Descriptions

7 Montana Code Annotated

8 Mineral County Pre-Disaster Mitigation Plan

9 Mineral County Subdivision Regulations

10 http://firesafemt.org/about

11 https://www.fs.fed.us/rm/pubs/rmrs_gtr349.pdf