



Eagle County Community Wildfire Protection Plan

December, 2023



Table of Contents

Adoption	3
Executive Summary	4
Introduction	6
• Purpose and need for a Community Wildfire Protection Plan	6
• Community and Stakeholder engagement	7
Plan Goals	9
• Reducing risks to public health and safety posed by wildfire disaster	9
• Reducing structure ignitability and improving community wildfire resilience	9
• Protecting critical infrastructure from negative wildfire impacts	9
• Protecting ecosystems & natural resources by decreasing the probability of landscape scale, high severity wildfire events	9
Assessment of Current Conditions	10
• Community description	10
• Fuel and forest conditions	14
• Fire condition class and fire regime.....	16
• Community vulnerabilities to wildfire	17
• Fire response and Emergency Management capacity	23
• Wildland Urban Interface (WUI)	24
• Wildfire activity	25
Assessment of Wildfire Risk in Eagle County	26
Recommended Actions	28
• Reduction of structural ignitability and infrastructure protection	28
• Community preparedness for wildfire	31
• Emergency response capability and evacuation	33
• Post-fire planning	34
• Landscape scale vegetation management	37
Areas of Recommended Landscape Scale Vegetation Management	41
• Lower Gore Creek	42
• Middle Gore Creek	43
• Benchmark / Mushroom Bowl	44
• Eagle’s Nest / Lower Game Creek	45
• Highway 24	46
• Mid-Valley North	47
• Mid-Valley South	48
• Wolcott	49
• Eagle	50
• Gypsum North	51
• Gypsum South	52
• Roaring Fork	53
Acronyms	54
References	55
Appendixes	56
• Stakeholder engagement	57
• Sub-area wildfire risk assessments	60
• Mitigation services	83
• Fuel treatment history in Eagle County	87

Adoption

The Colorado State Forest Service has reviewed this Community Wildfire Protection Plan, approves its content, and certifies that it meets or exceeds CSFS Community Wildfire Protection Plan minimum standards. The planning group signatories below adopt the following plan.

DocuSigned by:  SDD787CDA9E4E1...	12/14/2023
Ron Cousineau, Colorado State Forest Service	Date
DocuSigned by:  6A97E56340E241E...	12/11/2023
Birch Barron, Eagle County Emergency Management	Date
DocuSigned by:  D0B9E430688D475...	12/11/2023
Mark Novak, Vail Fire & Emergency Services	Date
DocuSigned by:  83E1B65BDAC6489...	12/11/2023
Karl Bauer, Eagle River Fire Protection District	Date
DocuSigned by:  63DAE2796372492...	12/13/2023
Doug Cupp, Greater Eagle Fire Protection District	Date
DocuSigned by:  ED4C18AAE87748C...	12/12/2023
Justin Kirkland, Gypsum Fire Protection District	Date
DocuSigned by:  93750BEF91F9423...	12/14/2023
Scott Thompson, Roaring Fork Fire & Rescue	Date
DocuSigned by:  83EFCBC9963245D...	12/11/2023
Brita Horn, Rock Creek Volunteer Fire Department	Date
DocuSigned by:  416A841AF7E3415...	12/11/2023
Scott Fitzwilliams, White River National Forest	Date
DocuSigned by:  A717CC89FDF4F6...	12/12/2023
Larry Sandoval, BLM Colorado River Valley Field Office	Date

Executive Summary

Eagle County comprises 1,700 square miles of primarily mountainous terrain in central Colorado. Geographic constraints coupled with rapid population growth has forced a great deal of new development into the County's wildlands and away from centrally located fire protection services. This pattern of development has substantially increased the probability of catastrophic losses from wildfire across the county.

The risk of severe wildfires in Eagle County poses an immediate threat to the health and safety of its residents. Large scale, high severity wildfires can lead to a host of negative long-term impacts related to the destruction of private property and infrastructure, suppression costs, loss of natural resources, and reductions in water quality. Much has been accomplished in an effort to address wildfire risk in Eagle County over the last decade, but more can be done to unite existing plans and efforts under the umbrella of community fire adaptation.



Photo courtesy of Todd Winslow Pierce.

The 2023 Eagle County Community Wildfire Protection Plan (CWPP) stands as a robust and comprehensive blueprint, thoroughly designed to safeguard our community against the escalating threat of wildfires. Formulated through a collective effort, this plan not only outlines strategic processes but also highlights the unwavering commitment we hold for the well-being of our community.

At the heart of the CWPP is a deeply ingrained belief that within our community we possess the capacity to influence the outcomes of future wildfires. This plan, with its overarching theme, underscores the collective strength and resilience of our community. It is not just a response to challenges, but a proactive initiative in shaping our shared future.

The plan's strength lies in the collaborative partnerships formed with local organizations, government entities, and the active engagement of our community through public input sessions. This CWPP is a testament to our commitment to resilience, providing a clear roadmap for effective implementation and paving the way for a safer, more secure future. This CWPP is not destined for a shelf, it will actively guide and adapt to evolving circumstances. It is a living document that reflects our ongoing commitment to community safety, and serves as a flexible tool for effective wildfire management.



Photo courtesy of Todd Winslow Pierce.

Acknowledgements

The success of the CWPP owes much to the dedication and expertise of the core planning team, a group of individuals committed to the safety and prosperity of our community. Special gratitude is extended to:

Eric Lovgren - Eagle County Emergency Management
Katie Jenkins - Eagle County Emergency Management
Marcia Gilles - Eagle County Natural Resources Department
Paul Cada - Vail Fire and Emergency Services
Hugh Fairfield-Smith - Eagle Valley Wildland
Katie Scott - Eagle Valley Wildland
Ross Wilmore - Eagle Valley Wildland
Justin Conrad - USDA Forest Service
Matt Walls - USDA Forest Service
Chad Sewell - Bureau of Land Management
Matt Schlitz - Colorado State Forest Service
Carolina Manriquez - Colorado State Forest Service
Stacey Todd - Eagle County Wildfire Collaborative

Their collaboration and commitment underscore the importance of proactive measures in wildfire management, ensuring that our community is well-prepared and resilient in the face of potential challenges.

Purpose and Need for a Community Wildfire Protection Plan

Community Wildfire Protection Plans (CWPPs) help communities assess local hazards and identify strategic investments to mitigate risk and promote preparedness. Assessments and discussions during the planning process can assist responders with fire operations in the event of a wildfire and help residents prioritize mitigation actions. CWPPs were directed by the Healthy Forests Restoration Act of 2003 (HFRA). The legislation established incentives for communities to develop comprehensive wildfire

protection plans and directed the Departments of Interior and Agriculture to address local community priorities in fuels reduction treatments on federal and non-federal lands. In compliance with Title 1 of the HFRA, the CWPP requires agreement among local government, local fire departments and the state agency responsible for forest management (the Colorado State Forest Service). The Bipartisan Infrastructure Law of 2021 (BIL) provides a significant investment of grant funds through 2026 for further development and implementation of CWPPs.

Recognition of Past and On-going Work

Wildfires pose the highest risk of catastrophic loss from any hazard to the communities of Eagle County. Recognizing this significant hazard, Eagle County adopted its first CWPP in 2004 and has been working extensively to mitigate potential risks ever since. The wildfire risk is not borne by any one jurisdiction within Eagle County, and therefore the mitigations must be addressed by a large number of organizations at all levels working in a coordinated fashion. Since the adoption of the first CWPP, a coordinated effort of local and county government, federal and state land management agencies, and non-profit organizations have implemented over 38,000 acres of fuels reduction treatments, adopted and strengthened local building and planning codes, implemented innovative public outreach and education programs, and developed redundant and robust emergency response and evacuation plans to ensure safe and effective wildfire response. The Eagle County Wildfire Collaborative was reinvigorated in 2022 in an effort to develop higher levels of coordination between the large number of organizations addressing wildfire risk within the county and to meaningfully address risk at a pace and scale to protect the community and guests of Eagle County. A detailed summary of previously completed wildfire risk reduction activity can be found in **Appendix D-Fuels Treatment History in Eagle County.**



Photo courtesy of Eagle Valley Wildland



Photo courtesy of Eagle Valley Wildland

Since the adoption of Eagle County's 2011 CWPP update, there have been many changes to population and development dynamics in Eagle County, the adoption of sub-area CWPPs, the completion of a variety of mitigation projects, and long-term impacts from wildfires themselves.

In addition to the County's CWPP, six other communities have created CWPPs to prepare for and mitigate wildfire risk. The Cordillera Property Owners Association in Edwards published a CWPP in 2004. Followed by Beaver Creek Resort in 2007, Arrowhead and Bachelor Gulch in 2008, Eagle River Fire Protection District in 2019, and Vail in 2020. Each of these plans serve as an area-specific supplement to the goals of the Eagle County CWPP, and further prepare these communities for the inevitability of a catastrophic wildfire event. It is hoped that over the next few years, the above mentioned CWPPs will be integrated into this plan.

Source Water Protection Plans (SWPP) have also been completed for the Town of Gypsum in 2018, Town of Eagle in 2020, and Eagle River Water & Sanitation in 2022. Source water protection plans include a wide variety of actions and activities aimed at safeguarding, maintaining or improving the quality and/or quantity of sources of drinking water and their contributing areas. Many of those actions have been included in this plan, and remain an integral part of maintaining the quantity and quality of drinking water in Eagle County.

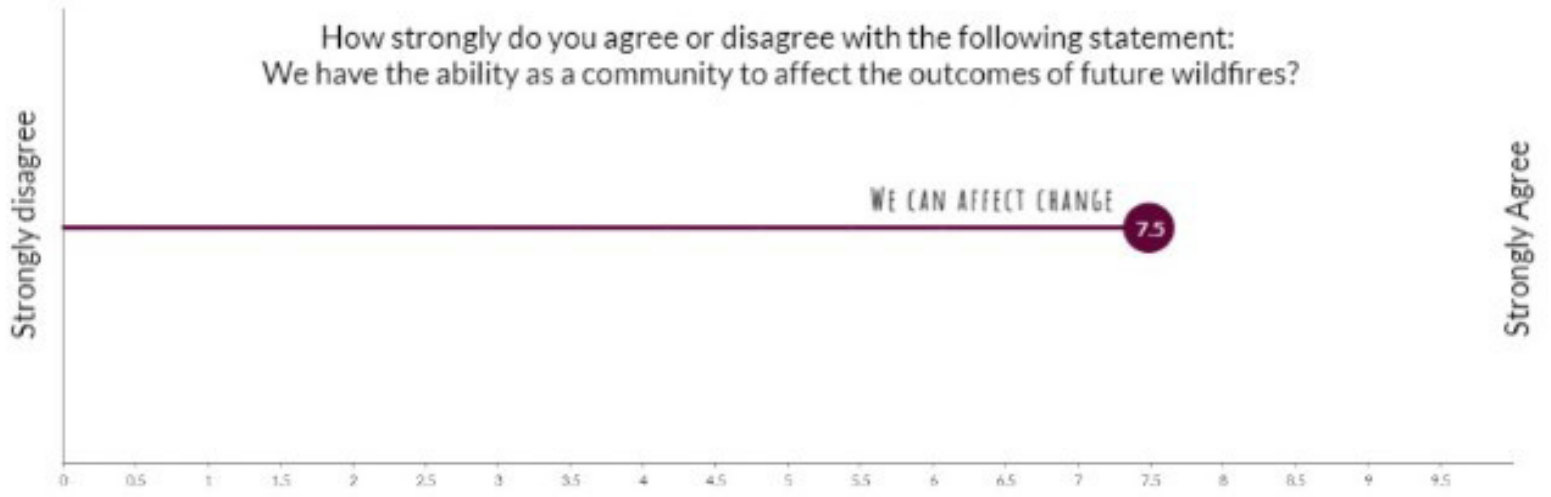
This plan also supplements the wildfire hazards section and is adopted by reference within the 2024 Eagle County Natural Hazards Mitigation Plan.

Community and Stakeholder Engagement

Eagle County began the process of updating the Community Wildfire Protection Plan (CWPP) in 2018 with a group of stakeholders comprising the Eagle County Wildfire Council. The goal was to create a collaborative, community-driven CWPP that identifies wildfire risks and outlines strategies to mitigate those risks. Over the next several years we brought together residents, landowners, state and federal agencies, municipalities/metro districts, fire districts, non-profits, utility providers, conservation groups and others to assess the risks specific to Eagle County, and develop a plan to reduce the potential impact of wildfires. In 2023, stakeholders were formally tasked with providing unique knowledge and perspectives relative to their areas of expertise in order to help identify risks and develop effective mitigation strategies.



Left: Stakeholders were engaged through community meetings and surveys to better understand their perspective on potential wildfire impacts and support for different mitigation actions. They were asked a series of questions to better understand their concerns and values throughout Eagle County. A detailed summary of stakeholder values and contributors to this plan can be found in **Appendix A - Stakeholder Engagement**.



The development of the goals set forth in this CWPP was guided by input from dozens of stakeholders representing a wide-ranging set of public, private, academic and non-profit organizations. The high-level nature of the strategies and actions in the plan outline an ongoing journey to improve the resilience of our community, and a proactive investment in reducing wildfire risk in Eagle County. They are intended to motivate and empower local government, communities, and property owners to organize, plan, and take action on issues impacting the safety and resilience of values at risk in the WUI. These strategies and actions should be further developed, implemented, and refined over time in order to facilitate the transfer of practical knowledge through collaboration between stakeholders.

GOAL 1

Reducing risks to public health and safety posed by wildfire disasters

As climate change exacerbates the size, intensity, and duration of wildfires, there is the possibility of catastrophic impacts to the health of Eagle County's residents and visitors. As wildfires can rapidly change the face of a landscape by burning down homes and entire neighborhoods, access to safe evacuation routes and resources to support individuals and families during and after an evacuation is crucial. Poor air quality and a lack of safe and sanitary drinking water due to wildfire can cause serious health concerns in the community and can disproportionately impact vulnerable populations.

GOAL 2

Reducing structure ignitability and improving community wildfire resilience

Eagle County is a diverse community of over 55,000 full-time residents and millions of visitors annually. It is also a growing community, with a projected 2040 population of 71,000 people. Just as diverse as the ecosystems of the county, so is the building stock. Eagle County has nearly every type of development from low density rural landscapes, to areas of high density urban development (and everything in between). Additionally, the age of structures ranges widely from historical mining and ranching buildings built in the late 1800s, to modern construction built to the latest building codes. As a desired end goal, every structure within Eagle County will be built and maintained in a condition where it will stand alone without the need for firefighter intervention in the face of a wildfire. If every structure is resistant to wildfire threat, then every community will be as well.

GOAL 3

Protecting critical infrastructure from negative wildfire impacts

The critical infrastructure of Eagle County is more than just the roads, resorts, and homes; it also consists of a complex system of transmission lines for energy, water storage and transport infrastructure, and natural systems, such as watersheds and rivers, that the County relies upon for services and community health. As Eagle County continues to grow, the demand on the complex interdependent infrastructure to provide water, electricity, transportation, and recreational and business services will follow suit. In the aftermath of the fire, mud-flow runoff and debris events have occurred in the area, along with elevated risk of future events which pose a direct threat to the stability and vitality of Eagle County.

GOAL 4

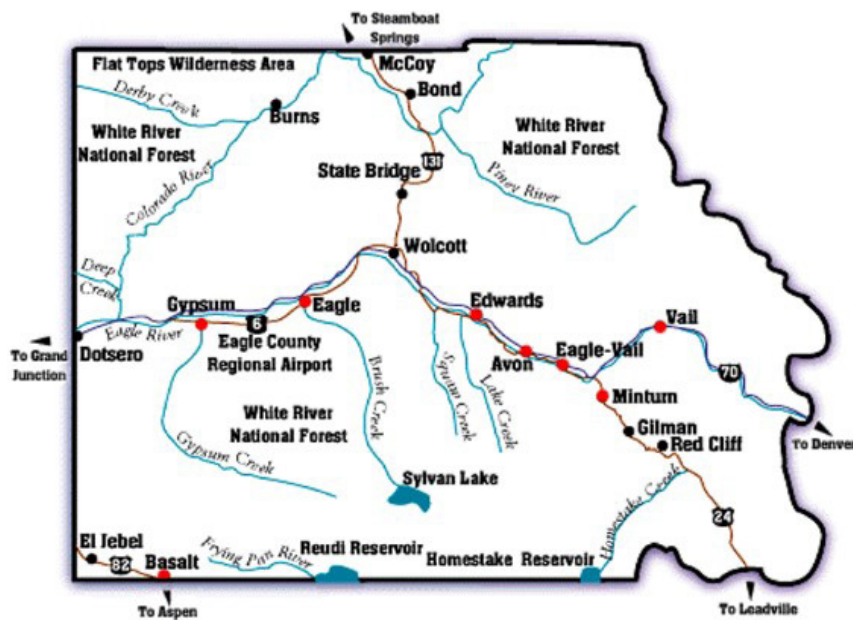
Protecting ecosystems and natural resources by decreasing the probability of landscape scale, high severity wildfire events

Although wildfire is an essential tool in managing ecosystem health, historically high and continuous fuel loads, increased potential for human ignitions due to recreation, and climate change is exacerbating the size, intensity, and duration of wildfires. High severity wildfires over large areas can have devastating impacts on important habitat and vital ecosystem functions; this includes damaging or destroying sensitive wetland and riparian areas, imperiling threatened and endangered species, encouraging invasive species, and endangering native plant communities. Wildfires can also fragment and reduce habitat, compromising foraging areas and protective cover for prey animals, thereby increasing predator pressures.

Assessment of Current Conditions

Communities

Eagle County, located in central Colorado, encompasses more than 1,700 square miles of unique and stunning mountainous terrain, valleys, rivers, and forests. It comprises nine communities that are as unique and diverse as the people who live in them. The communities range from the high elevation mountainous alpine resort areas of Vail and Beaver Creek, to the rangelands of Burns. Eagle County spans from Vail Pass on its eastern boundary, to the entrance of Glenwood Canyon on the western boundary. It encompasses the Camp Hale National Monument, with Tennessee Pass summit on the southern boundary, and extends to the McCoy on the northern boundary.



More than 80% of Eagle County's land is public and includes National Forests, wilderness areas, U.S. Bureau of Land Management (BLM) properties, and state and local public lands, with approximately 20% private lands.



Photo courtesy of Eagle County

The headwaters of the Eagle River are found along with the Colorado River, and a multitude of creeks flow through the County. The Colorado River provides water to communities on the Front Range of Colorado, as well as adjacent states. Eagle County hosts two internationally recognized ski resorts, along with other recreational assets providing 45% of jobs in the county and billions of dollars in revenue each year to the State of Colorado.

Eagle County Quick Facts

- Population: 2020 US
- Census - 55,285
- Number of housing units - 33,902
- Median home value - \$640,000



Photo courtesy of Eagle County

Assessment of Current Conditions

Communities

(Right) Vail is home to 5,305 permanent residents, plus another 5,000 part-time residents of vacation properties. Vail enjoys bountiful recreational and cultural opportunities, and also takes pride in a quality of life that provides alpine living at its best. From hiking in the summer to skiing in the winter, there's always something to do in Vail. Visitors and residents alike enjoy the 1,100 acres of open space accounting for 50% of Vail's town-owned land; 350,000 surrounding acres of national forest, crowned by 5,289 skiable acres on one of the largest and best ski mountains in the world; 17 miles of recreation paths; countless special events, the highest botanical gardens in the world and an outdoor amphitheater named for Vail's most famous resident, President Gerald R. Ford.



Photo courtesy of Town of Vail



Photo courtesy of Town of Minturn

(Right) Red Cliff is the oldest town in Eagle County. It was the first County Seat for Summit County, which included the current areas of Summit and Eagle Counties. At 8,650 feet above sea level, Red Cliff boomed at the turn of the century as a mining town with saloons, a bank, sawmills and even an opera house. The town, established in 1879, was mapped and patented in 1883 by the U.S. Government. Today it is a quaint mountain community that continues to attract rugged individualists from business entrepreneurs to outdoor enthusiasts. From Red Cliff, you get close-up views and easy access to the Mount of the Holy Cross and the surrounding White River National Forest. Red Cliff is located off the Colorado Scenic Byway, Highway 24. The census of 2020 reported that Red Cliff had 257 people living in 109 households.

(Left) Minturn burst to life during Eagle County's mining boom in the late 1800s and was an essential railroad division point. Located just around the corner from Vail, Minturn is an old and friendly town. A new town center, fire station and other development stand amid historic homes with character and modern amenities. Like Vail, Minturn is surrounded on three sides by White River National Forest, with the Holy Cross Wilderness bordering the southwest side of the town. forcing all development to the Highway 24 corridor. The census of 2020 reported that Minturn had 1,033 people living in 365 households.



Photo courtesy of Town of Red Cliff

Assessment of Current Conditions

Communities

(Right) The Town of **Eagle**, the county seat, is located west of the center of Eagle County in Eagle River valley. The town limits extend southward along the banks of Brush Creek. U.S. Route 6 passes through the center of town, and Interstate 70 passes through the northern side of town. New has risen next to historic in Eagle from the town hall to a large residential development south of town known as Eagle Ranch. The town has an extensive trail system for mountain biking, hiking and trail running. Eagle is the gateway to the Western Slope of Colorado, characterized by semi-arid climatic conditions. The climate of Eagle is characterized by cold winters, hot summers, and relatively little precipitation. The census of 2020 had the population of Eagle as 7,511.



Photo courtesy of Town of Eagle



Photo courtesy of visitvailvalley.com

(Right) The Town of **Avon** continues to revere its ranching and agricultural heritage, while growing its reputation as a commercial hub in the heart of the County. Avon sits at the base of the Beaver Creek Ski Resort and along the banks of the Eagle River. Though most of the residential and commercial development in Avon is on the valley floor, several communities ring the town's upper boundaries. The census of 2020 reported that Avon had 5,561 people living in 1,890 households.

(Left) Edwards is an unincorporated town, and a census-designated place (CDP) located in and governed by Eagle County. Edwards is in the valley of the Eagle River and extends southwards up the valleys of Lake Creek and Colorow Creek, at the north end of the Sawatch Range. It is bordered to the east by the town of Avon. U.S. Route 6 runs through the center of Edwards on the south side of the Eagle River, while Interstate 70 runs through the area north of the river. The Edwards community is truly a locals' community, comprising several neighborhoods where residents focus on family, outdoor recreation and enjoying the amenities that are offered. Undeveloped meadows, hillsides, ridge lines, stream corridors and back-country areas enhance the views and are valued natural attributes. The census of 2020 had the population of the Edwards CDP as 11,246. The Edwards Metropolitan District provides services for this area



Photo courtesy of Colorado.com

Assessment of Current Conditions

Communities



Photo courtesy of Town of Gypsum

(Left) The Town of **Gypsum** is situated along the Eagle River and the I-70 corridor. Outdoor activities are very popular including hiking, fishing, camping, biking, skiing, hunting, and off-highway recreation. Gypsum sits at an elevation of 6,300 feet, where a primary economic driver in the region is mining of local gypsum deposits. Residents enjoy affordable family housing in a great mountain valley setting. The census of 2020 had the population of Gypsum as 8,116.

(Right) The Town of **Basalt** is situated in both Eagle and Pitkin counties. Basalt is located along State Highway 82, and at the confluence of the Frying Pan and Roaring Fork rivers. The town was named for the basaltic rock formation on Basalt Mountain, and began as a railroad town. The town was impacted by the 2018 Lake Christine Fire. The town population was 3,984 at the 2020 census with 2,917 residing in Eagle County and 1,067 residing in Pitkin County.

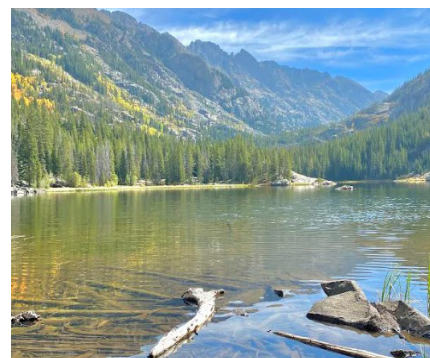


Photo courtesy of Eagle County

Unincorporated Eagle County

El Jebel is a growing residential community near Basalt in the southwestern corner of Eagle County. Its location in the Roaring Fork Valley provides some of the most spectacular scenery in the world. Above El Jebel is a large residential area known as **Missouri Heights**.

Hundreds more Eagle County residents live in the unincorporated areas of **EagleVail, Dotsero, Wolcott** and in Colorado River communities such as **McCoy, State Bridge, Burns** and **Bond**. Small residential enclaves can also be found in the remote historic mining town of **Fulford** and near the Ski Cooper Resort on Tennessee Pass.



All above photos courtesy of Eagle County

Assessment of Current Conditions

Fuels and Forest Health

Wildland fuels in Eagle County consist of a mix of grasses, sagebrush, gambel oak and pinyon-juniper woodlands in the lower elevations and aspen, lodgepole pine, mountain shrub, alpine meadow, and mixed conifer forests at higher elevations. Site specific fuels are driven both by elevation and aspect. The diversity of ecosystem types in the county is beneficial in creating heterogeneity across the landscape; however, it also is a primary cause of the variety of native forest disturbance experienced in the county over the past 20 years.



Photo credit to Eagle County

Nearly every ecosystem type within the county has been affected by historic, and/or ongoing insect and disease disturbance. Beginning in the early 2000s, a prolonged drought incited an epidemic of sudden aspen decline (SAD) in aspen stands across the county. This was followed by an epidemic of mountain pine beetle (MPB) which lasted from approximately 2007-2015, and affected most of the lodgepole stands in the county. Over the past 20 years, pinyon ips beetles have caused localized but significant impacts within the pinyon-juniper stands. Beginning around 2015 and continuing today, spruce beetle has made localized but significant impacts on the mixed conifer stands in the higher elevations. Much of the spruce beetle activity is localized to river corridors in areas such as Gypsum Creek, Tigwan and Lake Creek damage is more widespread. The insect and disease activity seen throughout the county varies greatly from minor impacts to near total mortality. Areas impacted by insect and disease have higher surface fuel loading of dead and down logs, as well as higher than average grass and shrub fuel loading due to higher resource availability.

Lack of disturbance is also an issue in Eagle County. Some ecosystems are undergoing type conversion. Many of the higher elevation grass meadows have been encroached up by mountain shrub communities and aspen stands. Similarly, in lower elevations juniper has encroached upon areas that were traditionally more sage steppe ecosystems.



Photo courtesy of projectupland.com

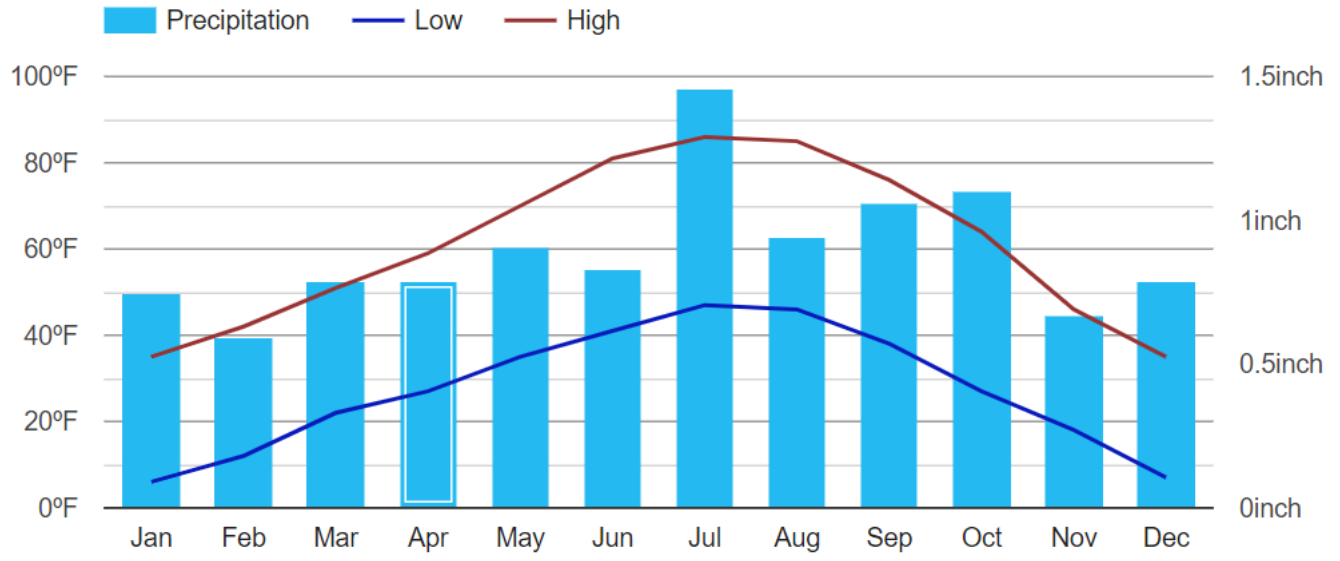
Non-native invasive plants are also making significant changes to the ecosystem. Cheatgrass has been present in Eagle County for multiple decades. Areas of high disturbance (roadways, development, overgrazing, wildfire) are especially susceptible to invasion of cheatgrass. Cheatgrass is increasing fire frequency in sage steppe and pinyon-juniper across the western United States. Post-fire these highly disturbed landscapes become monocultures of cheatgrass and other invasive species. This type of negative feedback loop is creating vast landscapes of fire prone, highly disturbed low quality ecosystems.

The combination of disturbance, lack of disturbance, and invasive plants has caused an altered fuel state throughout Eagle County. The level of departure from normal varies throughout the county. A measure of departure from historic conditions is discussed in the fire regime condition class section of this plan. It should be noted that while many of the higher elevation ecosystems are still within their historic range of variability, many of them have altered fuel conditions (more large woody debris and large accumulations of surface fuels) from traditional fuel models.

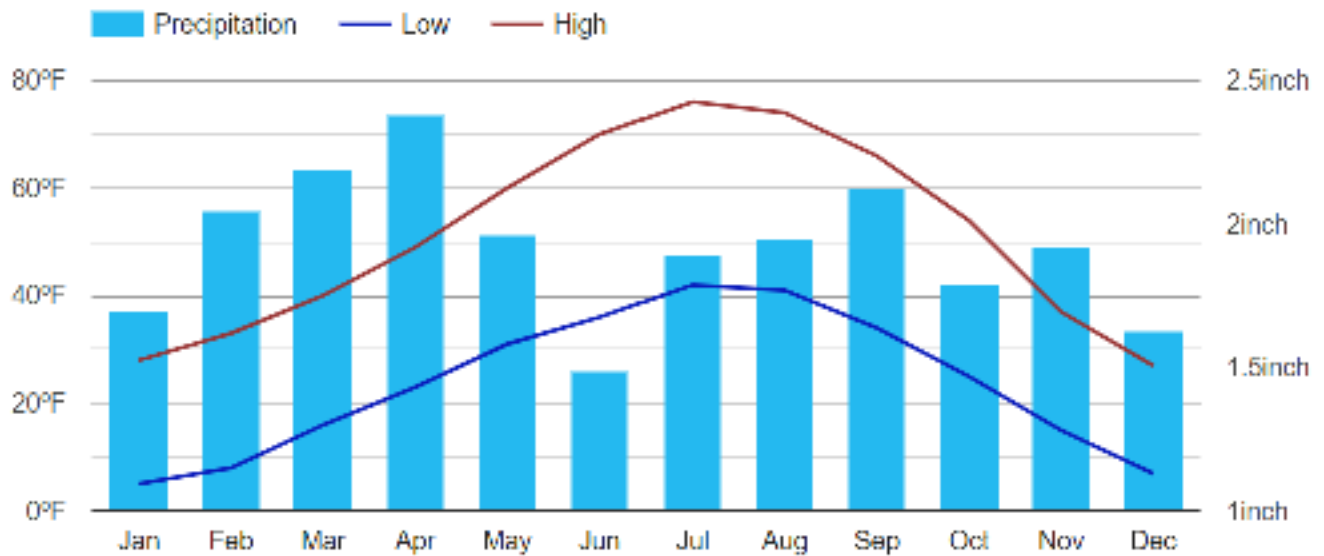


Photo credit to Eagle County

Eagle Climate Graph - Colorado Climate Chart



Vail Climate Graph - Colorado Climate Chart



Assessment of Current Conditions

Fire Condition Class and Fire Regime

Fire Regime Condition Class (FRCC) is an assessment tool to understand historical reference landscapes, current conditions and ecological departure <https://www.landfire.gov/frcc/frcchome.php>. FRCC is derived from the national Landfire dataset maintained by the USFS and BLM. Ecosystems are first categorized into fire regime groups by fire frequency and severity. FRCC then rates landscapes on a scale from 1 (low departure from historic conditions) to 3 (high departure from historic conditions).

Due to the large variation in elevation and topography Eagle County has a large variation in fire regime groups. Below is a table showing fire regime groups and the ecosystem types represented in Eagle County:

Fire Regime Group	Fire Frequency (fire return interval)	Fire Severity	Representative Ecosystems in Eagle County
1	0 - 35 Years	Low to Mixed	Aspen
2	0 - 35 Years	Replacement	No representative ecosystems in Eagle County
3	35 - 200 Years	Low to Mixed	Mountain shrub, pinyon-juniper, Gambel Oak
4	35 - 200 Years	Replacement	Sagebrush steppe
5	200 + Years	Replacement / Any Severity	Mixed conifer, lodgepole pine

Fire history in Eagle County is detailed in the fire history section of this plan, but it is important to note that while large fire occurrence is increasing across the county, wildfires in Eagle County have historically, and continue today, to be aggressively managed to reduce impacts to values at risk. Over the past 100 years this aggressive lean towards fire suppression has minimized wildfires' natural role as a disturbance on the landscape. Most of Eagle County has not seen natural or prescribed fire in over 100 years. The effects of this fire suppression approach are seen at various levels throughout the county. In ecosystems with historically frequent fire return intervals (1 and 2) the lack of fire creates unnaturally high fuel accumulations and successive changes in plant species composition. When fires do occur in these types of ecosystems they tend to burn with uncharacteristically high severity. In ecosystems with longer fire return intervals (3, 4, and 5) we are likely still within the historic range of variability. Significant fire in these types of ecosystems typically occur when a combination of fuel accumulation, drought, and critical weather align to create critical fire conditions. An example of this is during the 2021 Sylvan Lake Fire in lodgepole pine and mixed conifer fuels, and the 2020 Grizzly Creek in gambel oak, pinyon-juniper fuels.

Existing Building Stock and Condition

Eagle County is a diverse community of over 55,000 full-time residents and millions of visitors annually. It is also a growing community, with a projected 2040 population of 71,000 people. Eagle County has nearly every type of development from low density rural landscapes, to areas of high density urban development (and everything in between). Additionally, the age of structures ranges widely from historical mining and ranching buildings built in the late 1800s, to modern construction built to the latest building codes.

In March of 2022 The National Institute of Standards and Technology (NIST) released Technical Note 2205 WUI Structure/ Parcel/ Community Fire Hazard Mitigation Methodology <https://nvlpubs.nist.gov/nistpubs/TechnicalNotes/NIST.TN.2205.pdf>. This technical report synthesized over 20 years of lab experiments and post fire analysis to evaluate wildfire risk within developed parcels particularly in the context of structure to structure ignitions. The report identifies a methodology to categorize development based on structure separation distance (SSD) see table below.

This analysis shows that the majority of structures in the county are located in higher density development. This information is important to consider with regards to the shared risk, if one burns the likelihood of the other to burn is high, that each structure has and points to the need for community wide solutions.

WUI Type Number	Density	SSD	Structure Count
1, 2	High Density	6-30 ft	14,844
3, 4, 5	Medium Density	30-100 ft	6,991
6, 7	Low Density	100+ ft	2,954

Table 2. WUI Types classified by structure separation distance (SSD) and typical parcel size.

Type #	WUI Type Name	SSD (ft)	Typical Parcel Size (ac)	Typical Housing Density (struct/ac)
1	High Density Interface – Perimeter	6 ^a to 30	< 0.5	2 to 8 +
2	High Density Interface – Interior ^b	6 ^a to 30	< 0.5	2 to 8 +
3	Medium Density Interface – Perimeter	30 to 100	0.5 to 1+	< 2
4	Medium Density Interface – Interior ^b	30 to 100	0.5 to 1+	< 2
5	Medium Density Intermix	30 to 100	0.5 to 1+	< 2
6	Low Density Interface	100+	1+	< 1
7	Low Density Intermix	100+	1+	< 1

For SI: 1 ft = 0.305 m, 1 ac = 0.4 ha

^a representative of parcels with a 3 ft setback (common for new construction of sprinklered residences)

^b interior of community defined as > 0.25 mi (400 m) from wildlands

Existing Building Stock and Condition

Table 3. Structure and parcel hardening effectiveness.

#	WUI Type	Probability of Structure Survivability if Neighboring Structure Ignites	Potential Fire ^a Exposure from Burning Neighboring Structure	Exposure from Other Parcel Fuels	Exposure ^b from Wildlands	Impact of Structure Ignition on Fire spread in Community	Likely Effectiveness of Partial Structure/ Parcel Hardening	Community/ Neighborhood Participation
1	HD Interface – Perimeter	Low	High	$f(\text{fuels, dist.})^c$	Variable	High	Low	Necessary
2	HD Interface – Interior	Low	High	$f(\text{fuels, dist.})^c$	Low	High	Low	Necessary
3	MD Interface – Perimeter	$f(\text{hardening})$	Moderate	$f(\text{fuels, dist.})^e$	Variable	Moderate	$f(\text{wildland fuels, parcel fuels})$	Desired
4	MD Interface – Interior	$f(\text{hardening})$	Moderate	$f(\text{fuels, dist.})^e$	Low	Moderate	$f(\text{parcel fuels})^d$	Desired
5	MD Intermix	$f(\text{hardening})$	Moderate	$f(\text{fuels, dist.})^e$	Variable	Moderate	$f(\text{wildland fuels, parcel fuels})$	Desired
6	LD Interface	$f(\text{hardening})$	Low	$f(\text{fuels, dist.})^e$	Variable	Low ^f	$f(\text{parcel fuels})$	Desired
7	LD Intermix	$f(\text{hardening})$	Low	$f(\text{fuels, dist.})^e$	Variable	Low ^f	$f(\text{parcel fuels})$	Desired

HD = high density, MD = medium density, LD = low density

$f(X)$ indicates “a function of X ” (e.g., the level of exposure from other parcel fuels is a function of the fuels and distance from the target structure)

^a flames and radiation

^b based on fire history, fuel loading, wind, and topography/aspect; wildland fuel treatments may not be at the control of the community

^c parcel-level mitigation will have limited impact if nearby upwind structures catch on fire

^d would be a function of wildland fuel treatment AND hardening of most/all perimeter structures and parcels

^e parcel-level mitigation, including wildland fuel treatment, together with home hardening, will enhance structure ignition resistance

^f ignitions due to embers from burning residential structures have been observed as far as 200 ft to 300 ft downwind

Existing Building Stock and Condition

No comprehensive inventory of structural ignitability components exists for Eagle County; however, a large sample size of voluntary wildfire hazard assessments exists for select areas of the county. Due to the cold environment, and the emphasis placed on aesthetics, many structures have incorporated some (if not most) best practices for structure hardening including: enclosed eaves, double pane windows and ignition resistant siding materials. Much of the mid and upper Eagle Valley were approved and developed before wildfire was widely recognized as a significant hazard. For mostly aesthetic reasons communities such as Vail, Singletree, Beaver Creek, Bachelor Gulch and others adopted development standards which required the use of wood shake roofs on both residential and commercial structures. Additional legacy standards which create high wildfire hazards include requirements to install dense landscaping within the home ignition zone.

In 2004 Eagle County adopted wildfire regulations to address structural ignitability from wildfire. The regulations address both structure hardening, and vegetation management in the home ignition zone. The Eagle County code utilizes a site specific hazard rating to determine required mitigation actions based on the assessed hazard. The Eagle County code applies to all new construction within unincorporated Eagle County. In 2007, the Town of Vail adopted building regulations that require the use of Class A roofs for all new construction and reroofing projects. In 2018, the Town again modified codes to require structure hardening and ignition resistant landscaping in the home ignition zone. The Town of Vail code applies to new construction and additions or modifications to the exterior of a structure. In 2006, the Cordillera Property Owners Association adopted an ordinance requiring Class A roofing for all new construction, and defensible space requirements for all structures within the community.



Photo courtesy of Eagle County

To address the large percentage of structures built pre-wildfire code, several programs have been developed and implemented to educate property owners on how to best address structural ignitability. For more than 20 years, nearly every partner represented in this plan has conducted site visits with property owners to provide recommendations and connections to resources. Eagle County and the Vail Board of Realtors developed REALFire: a wildfire risk reduction

program that provides homeowners in Eagle County with an opportunity to take action on their property. The program provides free property assessments to educate residents on how their home and landscaping may be susceptible to wildfire and specific ways to reduce wildfire threat. Vail Fire and Emergency Services, Eagle River Fire Protection District and Eagle Valley Wildland have assessed thousands of structures and provided recommendations to property owners throughout the county. In addition to technical assistance, residents have also had access to a variety of cost share programs funded through federal, state and local programs.



Photo courtesy of Dylan Brown

While Eagle County is ahead of many communities in the nation with regards to code adoption, access to professionals and financial assistance it should be noted that many structures in the community are still poorly prepared for wildfire.

Housing Crisis

Eagle County is known worldwide as a premier resort destination. The draw of Vail and Beaver Creek Ski areas and the abundant access to public land for recreation make the area a highly desirable area to visit and live. Availability and affordability of housing in the area has been a long standing issue but has reached crisis status in the last 10 years due to a number of factors. Increases in remote work forces, low interest rates on secondary properties, and large scale investments in short term rental properties have strained the housing market for local workers to a near breaking point. The lack of available and affordable workforce housing is identified as one of the most important issues affecting economic stability and sustainability in the county. Many employers throughout the county continually have unfilled positions due to the lack of attainable housing for their current and future employees.

To survive in this environment much of the local workforce is forced to endure less than ideal conditions of paying high rents, working multiple jobs to afford living expenses, high occupancy per housing units, long commutes, poor housing conditions and in general much of the workforce identifies that they are consistently living on the edge of housing insecurity. County housing officials are aware of a shortfall of roughly 6,000 units, half for rent and the other half for sale, and the market is not bringing affordable options to most residents. Given this current situation, the loss of an affordable housing stock would have significant impacts on the County's workforce.



Communities across Eagle County are actively addressing the housing crisis through numerous large scale and innovative programs, however these types of efforts will take time to show meaningful change. Special effort should be given to develop programs to address structural ignitability in the workforce housing. These types of programs may need to look very different from traditional assistance programs to address the specific needs of the community's workforce.



Photo courtesy of Valley Home Store

Social Vulnerability

A widely used and readily available model of social vulnerability is the CDC Social Vulnerability Index (SVI) <https://www.earthdata.nasa.gov/learn/articles/sedac-social-vulnerability-dataset>. This data is compiled at a US Census Tract level and provides an index rating incorporating socioeconomic status, household composition and disability, minority status and language and housing type and transportation. This data is incorporated into risk models as the Colorado Wildfire Risk Assessment and is also used in prioritizing funding in many grant programs.

While this type of information provides valuable, consistent data at a national scale; the census tract level of this information does not adequately represent the vulnerabilities of Eagle County. Across the County, disparities in income levels and access to vital resources vary significantly — in a community where the average household income is above \$106,000 annually, over nine percent of the population lives below the poverty line. Vulnerable populations within the county are spatially distributed in a way where areas of high networth washout social vulnerability. An example of this exists in the Edwards area where Eagle River Village, a high density mobile home park, sits between Cordillera, Arrowhead and several other developments of largely secondary properties.

Concentrated areas of social vulnerability can be found throughout the county. These areas tend to be in areas of high wildfire risk, and also tend to be properties that are least prepared for wildfire due to factors like overcrowding, lack of infrastructure, difficulty to replace property, etc. If structure loss occurs in these areas, this population is least likely to be able to rebuild, and will likely have a disproportionately high impact on the function of the local economy due to the high percentage of local workforce living in WUI areas.

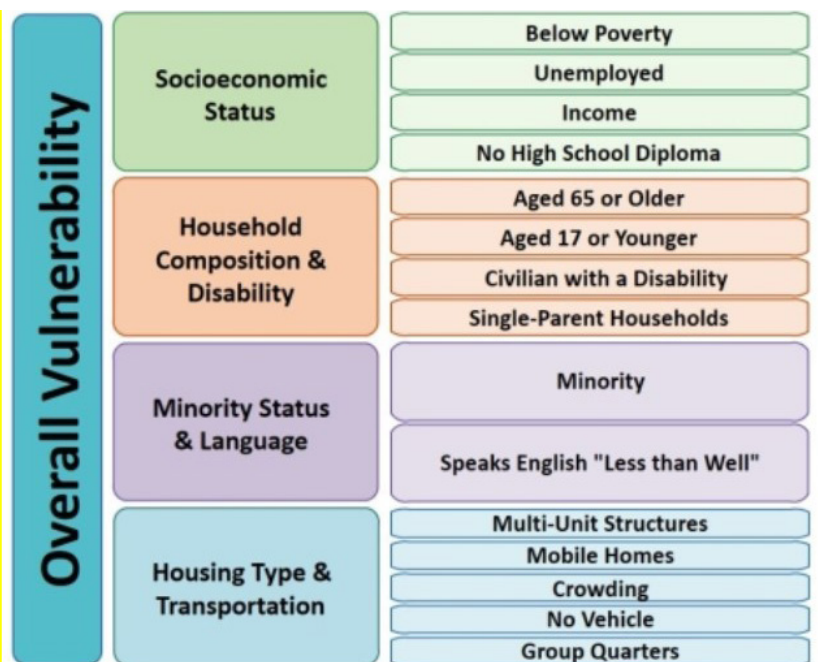


Photo courtesy of the Vail Daily

Eagle County already has a high level of transient populations due to the seasonal nature of work, and the high cost of living. If these populations are forced from their homes or lose work due to wildfire, these transient populations are more likely to move on to different communities rather than stay. This could have potentially devastating effects on post fire recovery of the economy of the county due to a lack of available employees/workers.

For the purposes of developing support programs, and to more accurately depict vulnerability for grant purposes across the county, it is recommended that Eagle County develop a finer scale vulnerability rating as it relates to the social determinants of health for our residents. For example, most homeowners have insurance that qualifies for loss replacement from wildfire (as required by their mortgage), which would pay for new construction and loss of personal property. However, renters or owners of less permanent homes (tiny house, mobile home, camper, etc.) are more likely to be under or uninsured, and unable to replace property lost to wildfire.

Infrastructure

The stakeholders of this plan identify electricity, natural gas, transportation corridors, communication, water collection sanitation and distribution as critical community infrastructure. Specific critical infrastructure in the county include electrical transmission and distribution lines, regionally significant gas pipelines, Interstate 70, Highways 6, 24, and 82, cell towers, public safety radio towers, AM/FM radio towers, interstate fiber optic lines, the headwaters of the Colorado River, ski areas, water collection structures, water treatment facilities and water distribution infrastructure. Each infrastructure type has its specific risks posed by either direct threat from fire or post fire effects. Every infrastructure provider has to some extent evaluated the potential risks posed by fire and has identified potential pre-fire mitigation and post fire recovery actions that can be taken. Actions identified later in this plan address some known vulnerabilities with critical infrastructure in this county and should be considered high priority for funding and implementation.

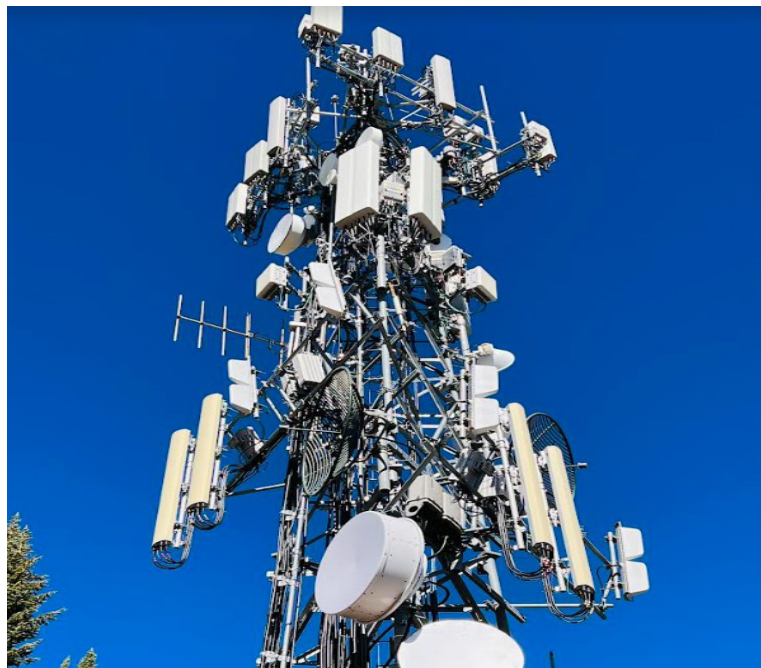


Photo courtesy of Eagle County

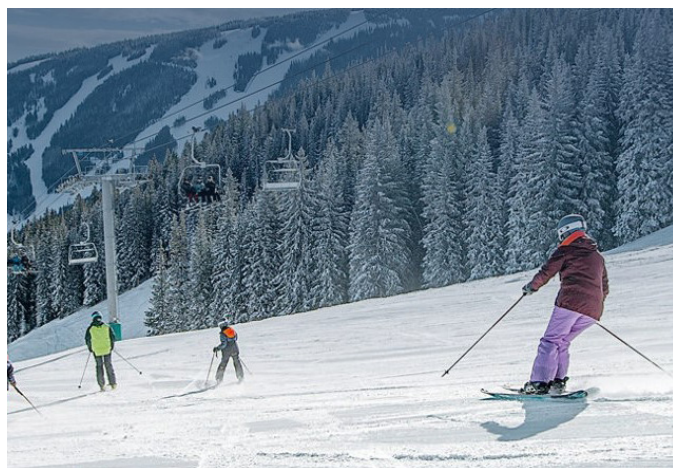


Photo courtesy of Beaver Creek Resort

Economy

The well-being and livelihoods of residents, and the economy of Eagle County are deeply connected to the region's abundant rivers, forests, and snow-capped mountains. Eagle County's rivers and snowmelt runoff not only support farming and ranching but also a vibrant recreation economy in both the summer and winter months. The ski industry is an iconic and integral part of the Eagle County economy, providing thousands of jobs and billions of dollars in economic revenue. The ski industry is intimately connected to other vital industries in Eagle County including accommodation, food services, retail, and real estate and rentals. In addition, the Eagle Valley is a popular area for second home owners, vacation rentals, and getaways.

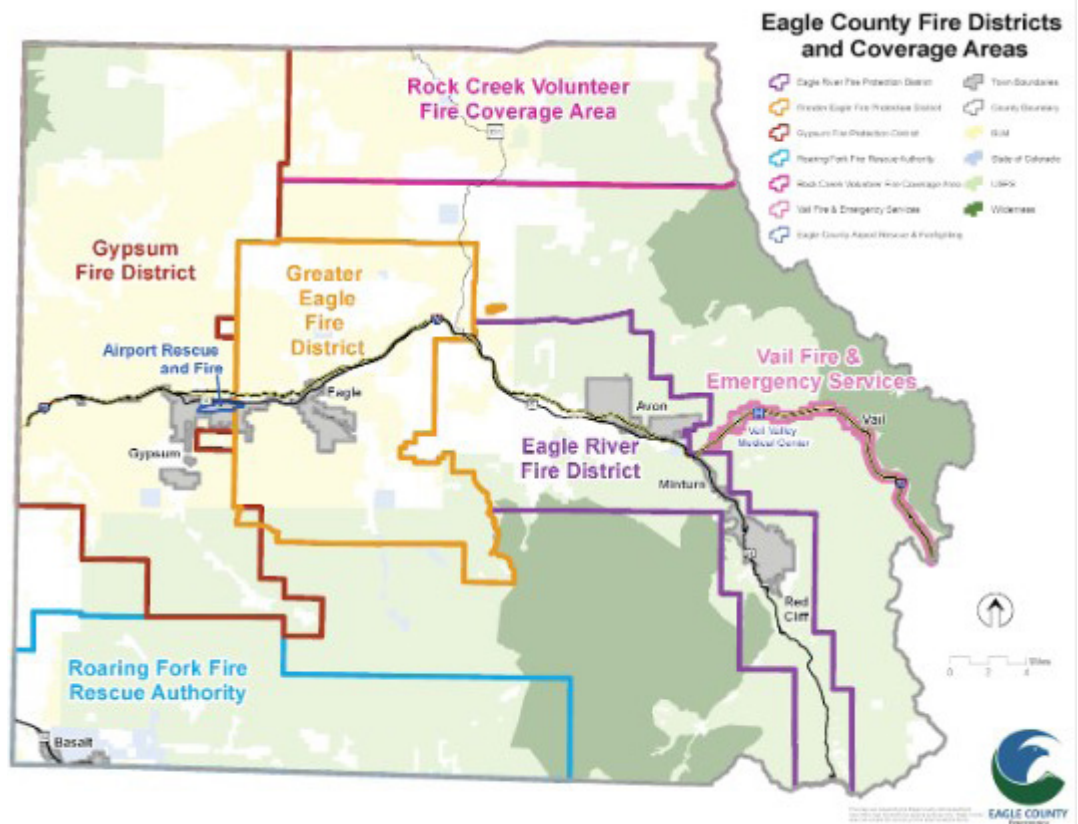


Photo courtesy of ucsf.edu

Wildfires jeopardize the health and safety, as well as economic viability, of Eagle county. Wildfires can cause closures to public lands, resulting in lost revenue from tourism. Property values and tax revenue may also decrease in the wake of wildfires and directly impact the local economy. Interruptions to interstate commerce can result in millions of dollars in lost revenue across the region. Wildfire damage to infrastructure (ski areas, campgrounds, trails, visitor facilities, etc) can result in prolonged economic hardships for local businesses, residents and visitors. Wildfire smoke impacts and area closures cause people not to visit the area resulting in further negative economic impacts. Loss of access to hunting and fishing grounds can impact license revenue and management of wildlife populations. Post-wildfire hazards like burned trees, falling rocks, and severe erosion may lead to further loss of access to hunting, fishing, and other recreation opportunities. Negative impacts to watersheds and rangelands also affect agriculture and the ranching community.

Fire Response and Emergency Management Capacity

Fire response on non-federal lands is the responsibility of the fire protection district and/or fire department service area in which the fire takes place, unless this responsibility is transferred by mutual consent to the County Sheriff. Eagle County is served by the following fire districts and coverage areas: Vail Fire and Emergency Services, Eagle River Fire Protection District, Greater Eagle Fire Protection District, Gypsum Fire Protection District, Eagle County Airport Rescue and Fire Fighting, Rock Creek Volunteer Fire Department, and Roaring Fork Fire & Rescue Authority. Federal agencies have responsibility for wildfire protection on federal lands. Fire response on federal lands in Eagle County is served by the Upper Colorado River Fire Management Unit.



When the needs of an incident expand beyond the capacity of Eagle County's local fire response resources, the Mountain Area Mutual Aid (MAMA) Operating Plan

establishes mutual aid between local fire and EMS agencies within Eagle, Garfield, Grand, Lake, Pitkin, Rio Blanco, Routt, and Summit counties in the Mountain Area Region. When Mountain Area Mutual Aid is implemented, resources who respond under MAMA may be assigned to the incident and placed on a resource order for extended attack if needed and available.

The Eagle County Department of Emergency Management provides coordination and support for the independent public safety agencies and governments that deliver emergency services across Eagle County. When disasters exceed local capacity, the Department of Emergency Management works with public safety partners to activate the county Emergency Operations Center, scale up coordination structures to meet incident needs, mobilize resources, and ensure a unified response.

The Eagle County Department of Emergency Management also oversees community mitigation, 800MHz public safety communications systems, and a wide variety of emergency planning initiatives in collaboration with local, state, and federal partners.



Photo courtesy of Eagle County

The Wildland-Urban Interface - WUI

The wildland-urban interface, or WUI, is generally defined as any area where man-made improvements are built close to, or within, natural terrain and flammable vegetation, and where potential for wildland fire exists.

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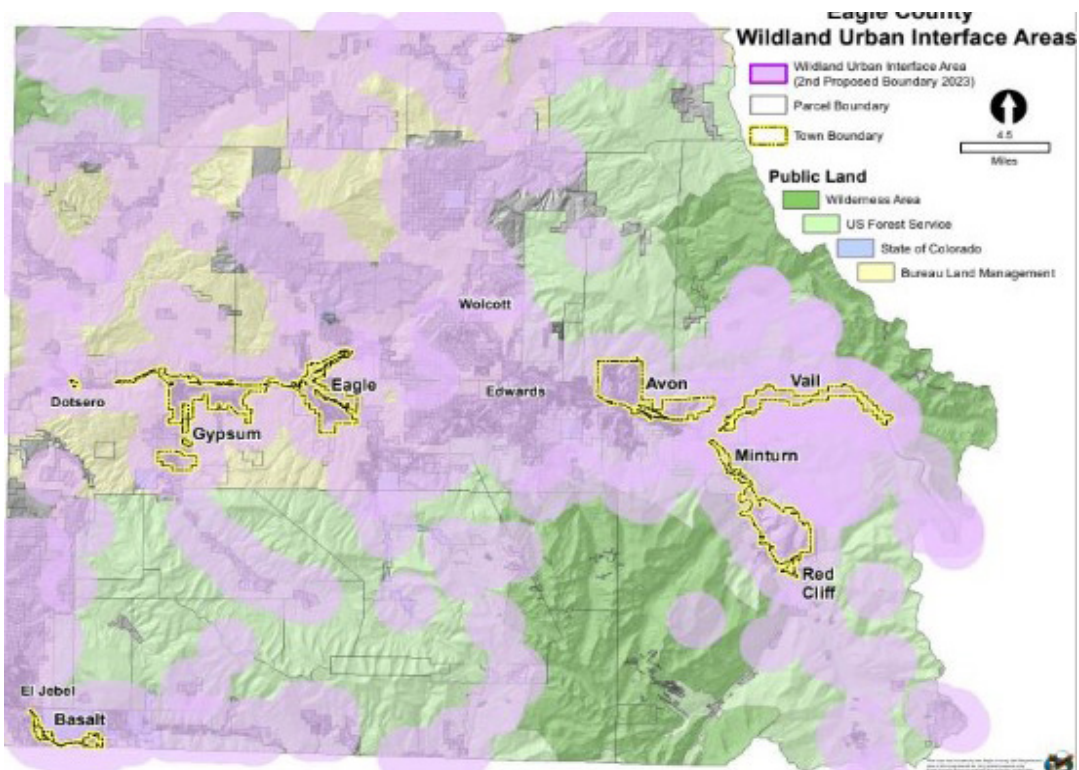
For the purposes of this plan the wildland-urban interface (WUI) is defined as an area that includes all developed private parcels of land in Eagle County and areas of special interest including Vail and Beaver Creek Resorts, the I70 corridor and major utility lines, and extends one and one half (1.5) miles from the edges of these features, including public lands. In rural areas outside of the Hwy 82 and I70 corridor(s), WUI can be defined as areas that extend one and one half (1.5) miles from the edges of structures and other developed features, including public lands.

A visual depiction of the Eagle County WUI area can be seen below. The community values identified within this plan extend beyond the planning boundaries. WUI boundaries were determined through a collaborative planning process with stakeholders using



Photo courtesy of Uncover Colorado

the best available scientific models and subject matter expertise, in order to guide planning and implementation of the goals and strategies set forth in this CWPP. Every area defined as WUI may not be appropriate for mitigation actions and treatment methods identified in the plan.

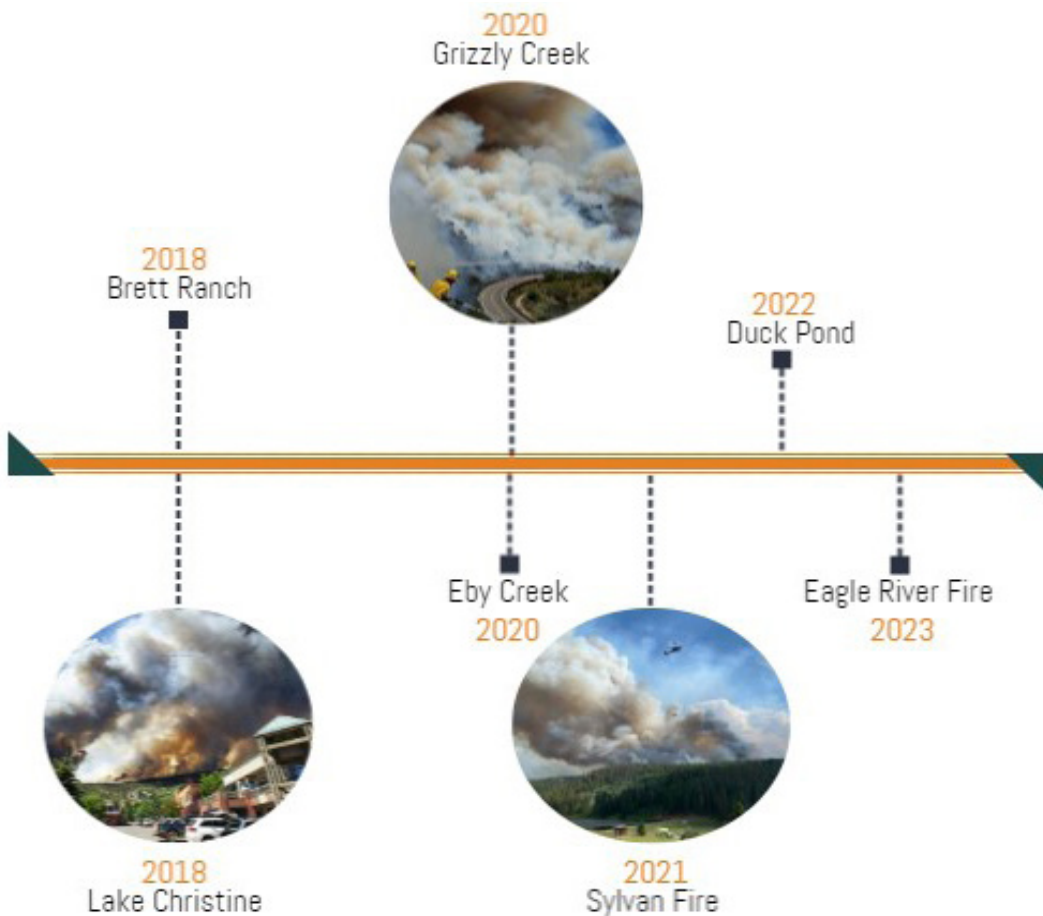


Wildfire Activity

Eagle County continues to see an elevated level of wildfire activity, and the frequency, severity, and complexity of these fires is only expected to increase in the coming years. In 2018, the Lake Christine Fire burned nearly 13,000 acres in Eagle County, destroying three homes, and threatening hundreds more. Earlier that year, the Brett Ranch Fire almost spread to a nearby mobile home park, illustrating the potential risk of urban conflagration in similar neighborhoods. In 2020, the Grizzly Creek Fire burned over 32,000 acres and directly threatened several communities within Eagle County. The 2020 Eby Creek Fire, and 2022 Duck Pond Fire, forced people from their homes and demonstrated the need for more robust planning and communication around evacuations. The Sylvan Fire in 2021 scorched nearly 4,000 acres near popular state park, and corridor closing 2023 Eagle River Fire closed Highway 6 and Interstate 70 snarling traffic for days.



Photo courtesy of Eagle Valley Wildland



Each of these fires experienced torching and crown runs, destroyed infrastructure, and threatened entire communities. The effects of the Grizzly Creek Fire are still being felt as mudslides cause frequent closures of Interstate 70 in the Glenwood Canyon. Most wildfires in Eagle County are started by lightning, or from a variety of human causes (abandoned campfires, truck-chains dragging on highways, outdoor welding/grinding, shooting, etc). The current trendline demonstrates Eagle County's increasing vulnerability to wildfire destruction.

Assessment of Wildfire Risk in Eagle County

Eagle County residents and visitors live, work and recreate in areas which, according to the Colorado State Forest Service, are directly threatened by potential wildfires; while the soaring value of improved property throughout Eagle County causes overall values-at-risk to exceed those of many other Colorado communities.

For the purposes of this CWPP, wildfire risk was evaluated utilizing several different models recognizing risk from wildfire is both from the fire itself, as well as post-fire risks associated with the burned area. To evaluate risk for this plan the Colorado Wildfire Risk Assessment (CO-WRA) and the Risk Management Assistance Analysis were utilized. In addition to the publicly available risk assessments a custom proximity model was utilized to identify structure separation distance (SSD) for each individual structure within Eagle County.

The planning team chose not to aggregate the data into a single quantitative risk rating but instead saw value in identifying risk in 5 separate risk layers. The risk layers are WUI Risk and Risk of Structure Conflagration, Suppression Difficulty Index (SDI), Fire Intensity Scale and Wildfire Risk to Watershed. Maps detailing various risk layers can be found in the sub-area descriptions and viewed in **Appendix B: Assessment of Wildfire Risk In Eagle County**.

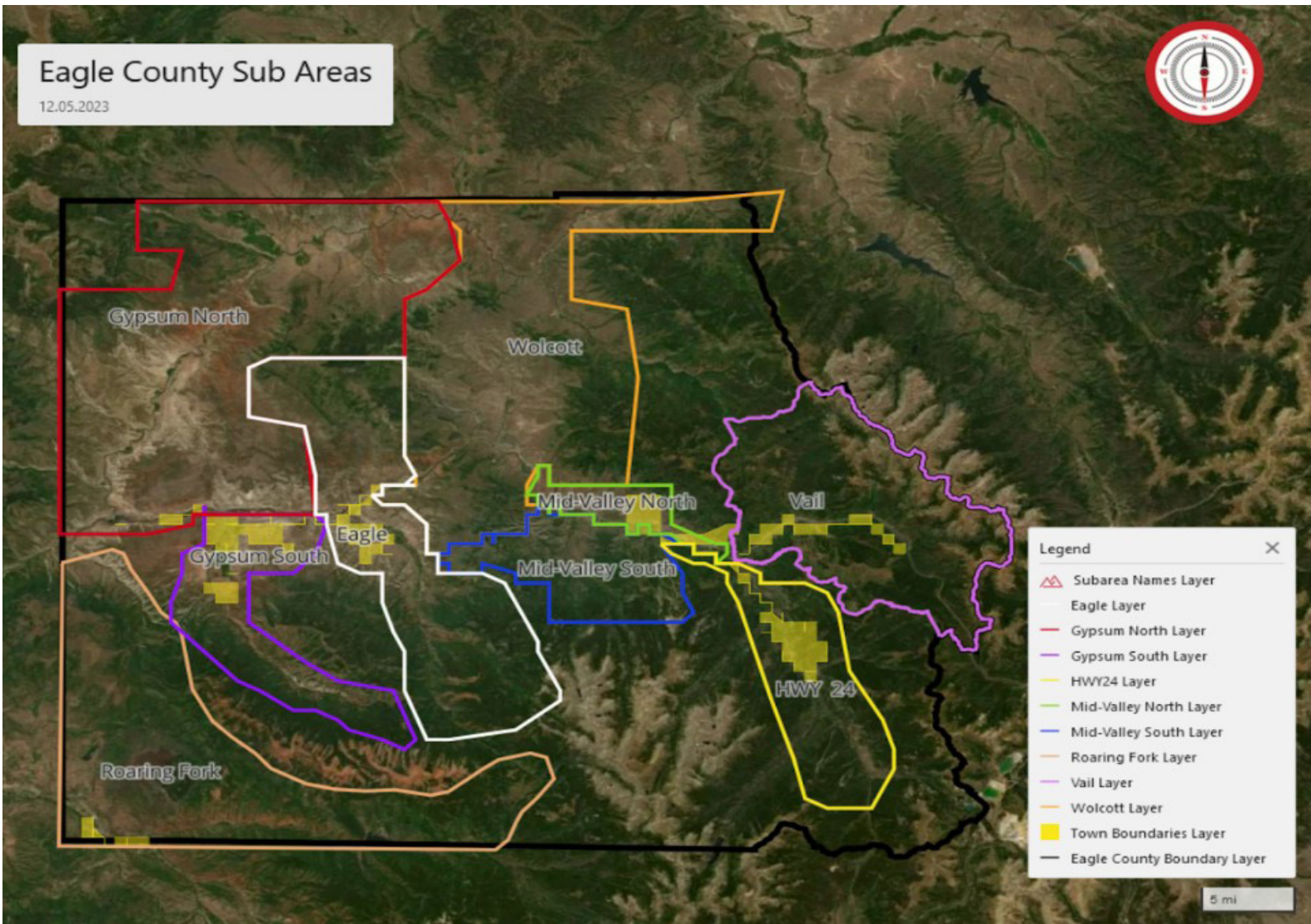
Sub-Area	Risk Rating
Vail	HIGH
Highway 24	EXTREME
Mid-Valley North	HIGH
Mid-Valley South	HIGH
Wolcott	HIGH
Eagle	MODERATE
Gypsum North	MODERATE
Gypsum South	HIGH
Roaring Fork	HIGH

Left: In addition to the spatial data available through the various risk models, Eagle County-based wildland fire coordinators and specialists have evaluated sub-areas of Eagle County and assigned wildfire risk ratings to the focus areas listed to the left.

Each focus area will be described in the following pages. The risk rating criteria were developed by local wildfire experts and reviewed/approved by local fire protection district and fire department chiefs. Each focus area was assessed for vulnerability to its general values at risk:

- **Evacuation Risk:** How easily can an area be safely evacuated based upon numbers and traffic flow potential routes, population, and expected fire behavior impacts to the road system
- **Watershed Risk:** Presence and significance of water sources, erosion potential into those water sources, and the potential for that erosion to cause damage to water infrastructure
- **Infrastructure Risk:** Presence and significance of infrastructure assets, access for firefighters, and potential damage
- **WUI Spread Potential:** Presence or absence of defensible space between homes within the WUI and combustible vegetation, combustibility of home building materials, and likelihood of home-to-home ignition.

The values at risk are individually rated within the focus area, and the focus area is then assigned a summary risk rating.



Above: A depiction of Eagle County broken down into assessed sub-areas.

Recommended Actions

Reduction of structural ignitability and infrastructure protection

Strategy: Implement and enforce Wildland Urban Interface (WUI) policies, zoning laws, building codes and regulations.

Recommended Actions:

- Develop and adopt a unified WUI Code across all jurisdictions in Eagle County.
- Improve land-use planning and zoning laws to incorporate best building and zoning practices to reduce structural ignitability in future development.
- Modify planning and design guidelines for existing developments to account for increasing wildfire risk.
- Build and maintain structures and their surrounding vegetation in a manner that resists ignition from wildfire or when ignited does not rapidly spread the fire.
- Integrate wildfire risk reduction and planning efforts with other Towns, County and federal environmental and sustainability planning goals and activities.



Photo courtesy of Eagle County



Photo courtesy of Wildfire Partners



Photo courtesy of Alice Phinney

Strategy: Incentivise existing structures to retrofit building and home ignition zone utilizing current best practices to reduce structural ignitability.

Recommended Actions:

- Encourage REALFire program participation, and provide free property assessments to educate residents on how their home and landscaping may be susceptible to wildfire and specific ways to reduce wildfire threat.
- Provide private landowners, and collective groups of private landowners, the opportunity to apply for incentive funding in an effort to reduce wildfire risk in their communities.
 - Home Hardening
 - Defensible Space
 - Community Chipping Programs
 - Noxious Weed Abatement
- Develop and implement programs which prioritize and incentivize wildfire mitigation to traditionally underserved populations and in areas of high concentrations of workforce housing.

Recommended Actions

Reduction of structural ignitability and infrastructure protection

Strategy: Identify and safeguard critical drinking water sources from contamination and degradation caused by wildfire and associated activities.

Recommended Actions:

- Consolidate data of vulnerable drinking water sources, assets and infrastructure, may include transport mechanisms Ground Aquifers, surface water bodies, infiltration galleries, (safeguard data collected in accordance with Homeland Security and/or other relevant requirements).
- Implement existing SWPPs recommendations related to wildfire risk reduction to infrastructure and watershed protection.
- Develop SWPPs for water utilities in areas not covered by existing plans and implement recommendations to protect source water from the impacts of wildfire and drought.
- Develop standards for rapid widespread water testing post-fire (including chemicals such as benzene).
- Working with municipalities to implement building code for easily accessible water shutoffs, service building backflow prevention.
- Make Metro District SWPP easily available and accessible to responders and public health ICS.
- Limit use of Phosphates (Phos Chek) near water sources. High levels of coordination need to be established with contractors working for private insurance carriers and utility providers on the application of fire retardant chemicals.



Photo courtesy of Vox

Strategy: Create redundant and resilient utility infrastructure with a focus on energy, water, and telecommunications.

Recommended Actions:

- Adopt policies that require currently above ground utilities to be undergrounded and new utilities to be buried to increase safety, improve reliability, and increase system resilience.
- Improve rural broadband to provide internet access to rural areas for wildfire evacuation, communication, and education/outreach.
- Explore opportunities to install early wildfire detection systems on new and existing infrastructure.
- Improve transmission line safety with larger line clearance, better slash management, and ignition resistant equipment.



Photo courtesy of the Wall Street Journal

Recommended Actions

Reduction of structural ignitability and infrastructure protection



Photo courtesy of Firewise USA

Strategy: Develop programs that reduce structural ignitability risk across entire neighborhoods not just on individual lots (address shared risk).

Recommended Actions:

- Encourage HOA's to participate in the FireWise USA program.
- Encourage motivated individuals to participate in the Neighborhood Ambassador program.
- Ensure all community codes and ordinances are consistent with current best practices for reduction of structural ignitability.
- Improve the public's understanding of our existing community fire protection infrastructure and limitations.
- Utilize FAC Pathways tool to classify community archetypes and identify potential strategies best suited for each community.



Photo courtesy of Colorado Public Radio

Strategy: Identify and review vulnerabilities to roadways and transportation infrastructure.

Recommended Actions:

- Obtain geospatial data on critical infrastructure (bridges, culverts, facilities, signs, etc.) and identify vulnerability to wildfire impacts, including post-fire sediment and debris flows.
- Coordinate with law enforcement and CDOT to mitigate impacts of long-term disruptions and closures to major highways and Interstate-70.
- Implement traffic management plans across multiple jurisdictions in order to maintain interstate commerce during wildfire disruptions.
- Support the development of alternative transportation routes through critical choke points such as Glenwood Canyon and Dowd Junction.

Recommended Actions

Community preparedness for wildfire

Strategy: Ensure the health, safety, and well-being of all community residents, visitors, and workers during and after a wildfire.

Recommended Actions:

- Make sure community and individual assets are insured against catastrophic wildfire.
- Ensure the community has appropriate emergency response and community support resources for wildfire.
- Host neighborhood events specific to emergency response, education, and preparedness.
- Support local governmental organizations in developing and/or updating continuity of operations plans (COOP). Organizations should consider impacts of significant structure loss including facility and infrastructure damage.



Photo courtesy of Eagle Valley Wildland

Strategy: Support the financial stability of individuals and communities during and after wildfires.

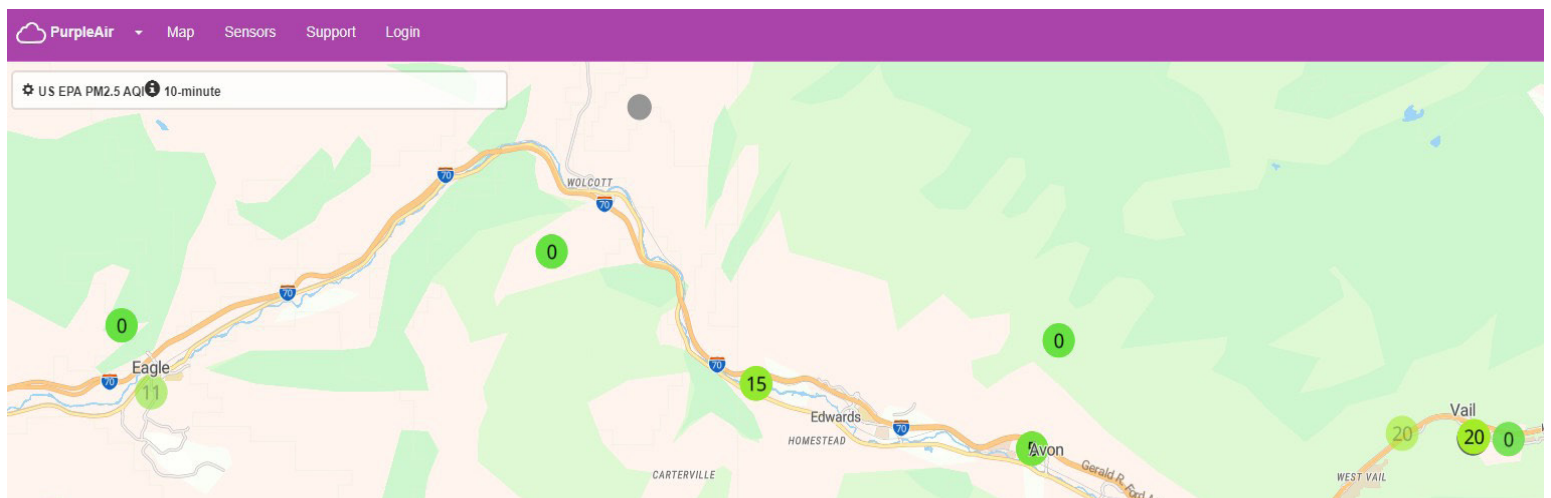
Recommended Actions:

- Develop a County-level emergency fund that displaced populations can utilize in case of emergencies.
- Ensure that displaced renters, not just homeowners, are protected and supported in a post-fire economy.
- Expand access housing and childcare for first responders and response and recovery partners.

Strategy: Increase public awareness of air quality impacts, monitoring, and response related to wildfire smoke.

Recommended Actions:

- Create and deploy an education campaign to help people understand what to do when wildfires reduce local air quality (use neighborhoods as units of change).
- Identify and communicate the location of Community Clean Air Spaces/Smoke Shelters when smoke levels become hazardous.
- Make portable air filters available to vulnerable populations.
- Develop materials that accurately portray Eagle County's air quality during smoke impacts.
- Utilize air quality monitoring and public reporting systems like Air Now and Purple Air.
- Assess the levels of smoke, particulate matter, and other pollutants during and after wildfires.
- Establish protocols for issuing public health advisories and recommendations to minimize exposure to harmful air pollutants.



Recommended Actions

Community preparedness for wildfire

Strategy: Minimize wildfire impacts to the local economy.

Recommended Actions:

- Promote an integrated marketing strategy that highlights what makes Eagle County worth visiting when wildfires are impacting the area (fire restrictions, smoke, travel disruptions, etc).
- Develop a communications and marketing strategy for post-wildfire tourism.
- Ensure that areas in the County not closed due to wildfire activity can sustain additional use and allocate resources accordingly.
- Coordinate with fire managers to minimize disruptions to air traffic at Eagle County Regional Airport.
- Coordinate with transportation partners to minimize disruptions to local traffic routes and commerce during interstate corridor closures.



Photo courtesy of Vail Valley Jet Center

Strategy: Expand community engagement and education focused on behavior changes that enhance wildfire resilience.

Recommended Actions:

- Develop and cultivate partnerships between local towns, resort businesses, and others to support the expansion of economic opportunities.
- Form stakeholder groups to share unified messaging around wildfire closures, and educate people about why the area is closed (safety, resource benefit, etc.).
- Educate residents and tourists on ways to reduce environmental impacts of consumer decisions.
- Make educational materials available in English and Spanish versions.
- Foster social acceptance of prescribed fire, WUI mitigation, smoke, etc. (pre- and post-wildfire restoration actions as well).
- Encourage HOAs to register with local jurisdictions for communication and coordination purposes.



Photo courtesy of Eagle County

Strategy: Promote and provide tools to businesses to implement and improve business continuity best practices.

Recommended Actions:

- Provide financial support for individuals and businesses impacted by wildfire closures.
- Allow for flexible agency permitting for guides and special events.
- Encourage businesses to develop contingency plans for wildfire disruptions.
- Prioritize health and safety over providing recreation opportunities.
- Develop a local funding mechanism and plan ready to implement (with many stakeholders) and fund long-term restoration projects/communication plans/marketing/other needs.



Photo courtesy of Eagle County

Strategy: Foster and enhance coordination between organizations for pre- and post-wildfire response.

Recommended Actions:

- Strengthen relationships with partner agencies, non-governmental organizations, businesses, community and faith-based organizations, and other stakeholders that can support wildfire mitigation, response and recovery through the Eagle County and Roaring Fork Valley Wildfire Collaboratives.
- Ensure proper fire response resources are in place and funded.
- Gather spatial data around critical habitat areas (including wildlife corridors) to proactively protect these areas and/or provide additional review and mitigation for planned project work.

Strategy: Ensure safe, effective, and equitable multi-modal evacuation strategies for the county.

Recommended Actions:

- Model and streamline potential evacuation routes, bottlenecks, and evacuation alternatives (i.e. open gates in private communities).
- Ensure evacuation strategies are updated across all jurisdictional evacuation plans prior to an emergency event.
- Educate all residents on evacuation procedures and emergency preparedness in culturally appropriate ways.
- Further develop a robust emergency notification system. Special attention should be given to communication with special populations such as guests, seasonal residents, access and functional needs, non-english speakers and older populations.
- Consider impacts of other priorities (traffic calming, sustainability, less cars, EVs, etc) and changing populations on evacuation effectiveness. Educate stakeholders on the need to maintain the balance between emergency response and potential competing interests.
- Design fuel treatments to protect primary and secondary evacuation routes.
- Ensure that new development provides for multiple evacuation routes.



Photo courtesy of Eagle County

Recommended Actions

Post-fire planning

Strategy: Assess and address potential hazardous materials risks associated with wildfires, such as the release of toxic substances from burned structures, vehicles, or industrial facilities.

Recommended Actions:

- Develop protocols for proper handling, removal, and disposal of hazardous materials to prevent contamination of soil, air, and water. Protocols should identify who is responsible for oversight of the cleanup.
 - Asbestos
 - Ash Clean-Up
 - Household HAZMAT
- Develop protocols with landfill for disposal of HAZMAT.
- Identify systems that will be used to assess building damage rapidly post fire.
- Develop “how clean is clean” materials based on area and local geological soils and hazardous waste concerns for if hazardous contaminants are a concern and soils testing is needed.



Photo courtesy of the Denver Post



Photo courtesy of CDC

Strategy: Provide guidance related to post-fire impacts and response as it relates to Environmental Health for individuals and communities.

Recommended Actions:

- Provide ‘Food Safety Salvage Waste’ guidance to impacted populations.
- Provide ‘OWTS and Wells After a Fire’ guidance to impacted populations.
- Drinking Water after a Fire.
 - Providing drinking water - bottled water - water trucks availability
 - Providing sanitation - portable chemical toilets to communities without water for flushing. Assess availability and who and where this would be available.



Photo courtesy of Eagle Valley Wildland

Strategy: Prevent loss of access to recreation opportunities during and after a wildfire.

Recommended Actions:

- Identify where infrastructure exists (ski areas, campgrounds, toilets, boat ramps, trails, signs, etc.) and unique vulnerabilities to wildfire.
- Provide robust communication around area wildfire closures and coordinate on redirecting people elsewhere.
- Ensure that areas in the County not closed due to fire activity can sustain additional use and allocate resources accordingly.
- Encourage reimbursement for licenses, campground reservations, etc. due to wildfire impacts.



Photo courtesy of FEMA

Strategy: Facilitate flexible deployment of temporary housing post wildfire disaster.

Recommended Actions:

- Adopt flexible zoning codes to be implemented during emergencies (i.e. allow mobile homes, tiny homes, campers, and allow high occupancy in places).
- Allow for use of facilities for temporary housing (i.e. campgrounds, fairgrounds, etc.)
- Identify ways to expedite reconstruction (permits, fees, inspections).
- Identify temporary housing deployment zones to be utilized during emergencies.
- Consider how to house construction workers to facilitate more rapid reconstruction.
- Consider the impacts of people not rebuilding due to trauma, cost of reconstruction, being underinsured, and high demand for building supplies. Develop policies around large-scale acquisition of land post-wildfire by domestic and transnational companies, outside interests, and individuals.

Recommended Actions

Post-fire planning

Strategy: Support multi-jurisdictional planning for restoring and re-establishing utility infrastructure post wildfire with a focus on energy, water, transportation, and telecommunications.

Recommended Actions:

- Develop post-fire playbook for Eagle County to rapidly deploy resources after wildfire events.
- Develop standards for rapid widespread water testing post-fire (including chemicals such as benzene).
- Prepare to distribute guidance for homeowners on: Wells, Cisterns, Springs, Septic Systems.
- If necessary after a wildfire in the wildland–urban interface, a strict “Do Not Use” water order should be issued to protect public health and be targeted to affected areas.
- Develop complete plumbing safety guidance post-fire for homeowners.
- Reroute or relocate infrastructure, or use temporary structures post-fire to re-establish service.
- Identify who will coordinate long-term multi-jurisdictional post-fire recovery on both public and private property including fundraising/volunteer coordination.
- Support infrastructure planning to mitigate runoff after a wildfire (i.e. pollutants-sediment filtered through retention ponds before reaching waterways).



Photo courtesy of Todd Winslow Pierce.

Recommended Actions

Landscape-scale vegetation management

Strategy: Maintain or restore forests or vegetative cover pre-wildfire.

Recommended Actions:

- Maintain or restore forest and vegetative cover in riparian areas.
 - Maintain or improve the ability of forests to resist insects and pathogens.
 - Prevent invasive plant species and noxious weed establishment by ensuring all materials are “weed-free” and all equipment utilized in projects are clean and free of all plant propagules when entering project areas.
 - Enhance species age classes and structural diversity in forests.
 - Implement wetland and stream restoration projects, including the use of low technology, process based restoration, to retain moisture and increase resilience of the landscape.
 - Formulate a multi-year monitoring plan after fuel mitigation activities to ensure post-treatment invasive plant species and noxious weeds are addressed, erosion is mitigated, and vegetative succession and species composition provides productive forage and cover, including revegetation activities.
 - Hold quarterly meeting(s) with stakeholders through the ECWC Natural Resource working groups to review program and project goals, funding strategies, implementation strategies, after action reviews and environmental monitoring.
-

Strategy: Create wildfire resilient landscapes utilizing current vegetation management best practices on private and public lands.

Recommended Actions:

- Create heterogeneous landscapes that promote diversity of species, ages and condition classes.
- Alter forest structure or composition to reduce risk or severity of wildfires through mitigation actions such as forest thinning, mastication, etc.
- Establish and maintain landscape scale fuel-breaks to increase the likelihood of containing fires within identified Potential Operational Delineations (PODS). Treatments should be designed to be effective under 97th percentile fuel and weather conditions. Create compartmentalization across the planning area where unplanned wildfire can be managed for suppression action and/or multiple resource benefits when appropriate.
- Strengthen identified Potential Operational Delineations (PODS) boundaries to improve likelihood of success containing fires within PODS.
- Promote the use of prescribed fire when appropriate on public and private lands to mimic natural disturbances to fire dependent ecosystems.
- Utilize livestock grazing as a tool for fuel reduction when appropriate.
- Increase social and political acceptance through education and success stories to increase acceptance that wildfire is a natural and integral part of the landscape.
- Reduce regulatory barriers and increase efficiency by conducting interagency planning at landscape levels with local stakeholders.

Recommended Actions

Landscape-scale vegetation management



Photo courtesy of Eagle County

Strategy: Reduce the risk and long-term impacts of wildfires to livestock and agriculture.

Recommended Actions:

- Support efforts to maintain and improve soil health on private and public lands.
- Match management practices to water supply and demand.
- Provide financial support to help manage invasive species and noxious weeds on production agricultural lands pre- and post-wildfire.
- Allow for flexible agency permitting for grazing allotments impacted by wildfire.
- Match infrastructure and equipment to new and expected conditions.



Photo credit to Todd Winslow Pierce.

Strategy: Create resilient wildlife populations by maintaining healthy ecosystems and habitat connectivity.

Recommended Actions:

- Cultivate partnerships with organizations focused on enhancing wildlife and ecosystem health.
- Plan, fund, and implement wildlife habitat restoration projects, especially in riparian zones.
- Gather spatial data around critical habitat areas (including wildlife corridors) to proactively protect these areas and/or provide additional review and mitigation for planned project work.

Recommended Actions

Landscape-scale vegetation management



Photo courtesy of Eagle County

Strategy: Restore vegetative cover post-wildfire.

Recommended Actions:

- Evaluate burned areas promptly and revegetate high severity burn areas after wildfire disturbance to improve soil health and prevent erosion.
- Ensure that post fire Burn Area Emergency Response (BAER) evaluations cover all burned areas, not just federally managed lands.
- Allow for areas of natural regeneration to test for future-adapted species.
- Realign significantly disrupted ecosystems to meet expected future conditions.
- Identify what stakeholders are responsible for monitoring and define metrics for success.



Photo courtesy of Eagle County

Strategy: Create a multi-jurisdictional program to develop and implement best management practices for watershed protection and post-fire recovery.

Recommended Actions:

- Coordinate source water protection planning and implementation efforts across Eagle County.
- Identify and prepare watersheds and infrastructure that are at risk from post fire flooding and debris flow.
- Manage systems to cope with decreased water levels and limited water availability.
- Adjust systems to cope with increased water abundance, and high water levels.
- Respond to or prepare for excessive overland flows (surface runoff).

Recommended Actions

Landscape-scale vegetation management

Strategy: Design and implement wildfire mitigation strategies with minimal impact to wildlife populations.

Recommended Actions:

- Provide training to personnel implementing projects on key wildlife species biology, habitat requirements, and identification of areas utilized locally.
- Consult with CPW staff regarding possible timing and/or spatial restrictions in wildlife habitat. Refer to the CPW Land Use Recommendations Table for spatial and timing restrictions according to applicable terrestrial and aquatic species.
- Utilize CPW Species Activity Mapping or the Eagle County Wildlife Interactive Map to help identify which species and what type of habitat is relevant to the specific project.
- Refer to the local District Wildlife Manager to conduct site visits and discuss individual site specific concerns.
- Prioritize areas identified for mitigation projects that are also in need of habitat enhancement.
- Expand treatments when possible to enhance larger areas of habitat that are not in a productive phase of succession
- Whenever possible, execute treatments, including fuel breaks, in a manner that results in a natural mosaic pattern that retains an appropriate balance of foraging area and cover, as well as maintains a composition of plant species that are favorable for deer and elk forage.



Above photos courtesy of Todd Winslow Pierce.

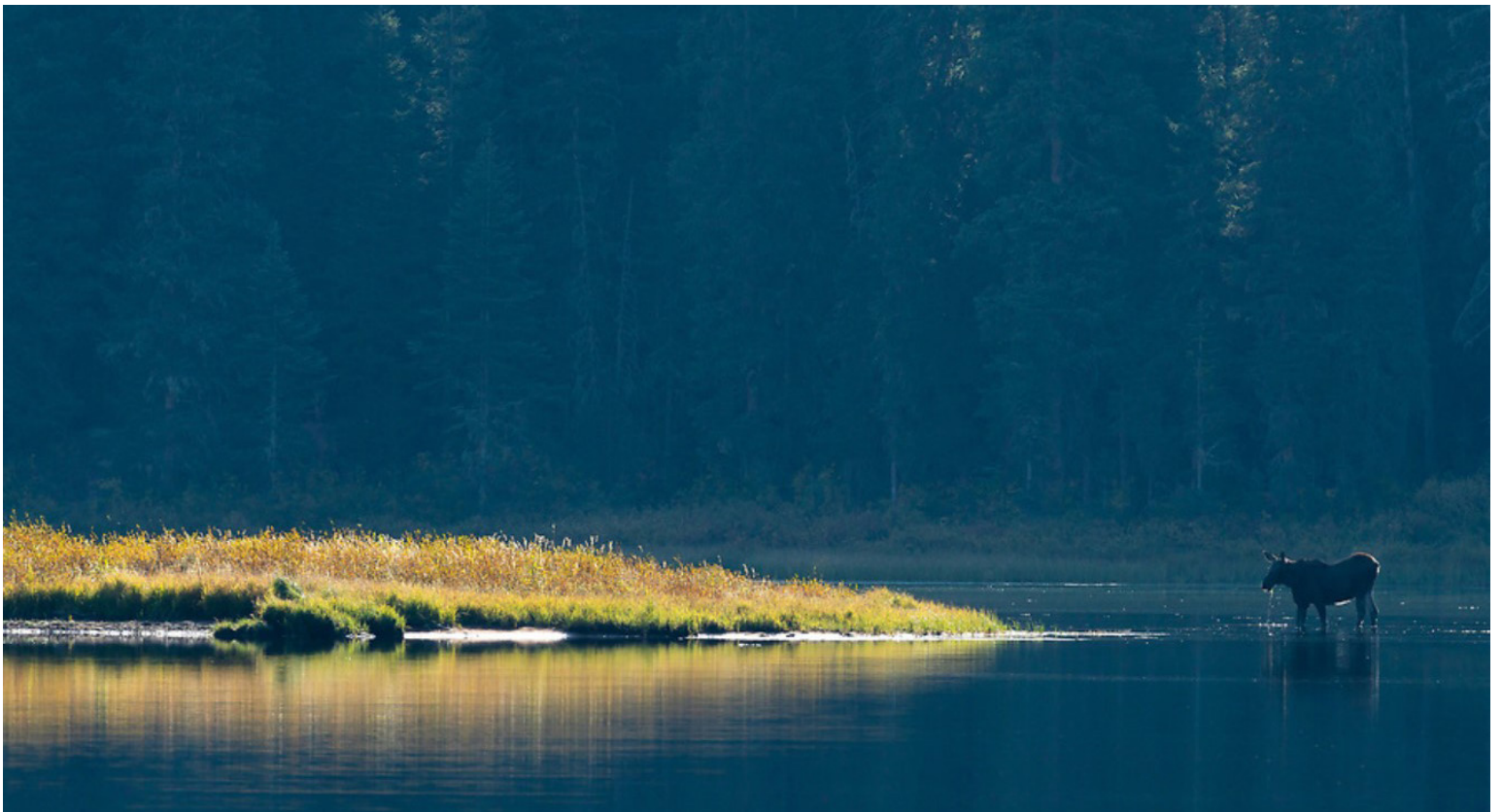


Photo courtesy of Todd Winslow Pierce

Areas of Recommended Landscape Scale Vegetation Management



Photo courtesy of Eagle County

To achieve the goals of this plan much of the landscape across the county needs to be actively managed. All of these recommended treatment areas continue to build upon the over 38,000 acres already completed across the county. To accomplish these recommended treatments, it will take the combined efforts, political will and finances of all organizations in the Eagle County Wildfire Collaborative. Planning is already underway for some of these projects, while others are more aspirational, and will require extensive project development and planning to accomplish. Due to the scale of the proposed treatments, it will be critical that environmental planning, project development and implementation occur at scales that maximize efficiencies and decrease costs. Every available tool should be considered to reduce barriers, and non-traditional partnerships including public-private partnerships, utilization of non-governmental organizations and multi-jurisdictional partnerships should all be considered.



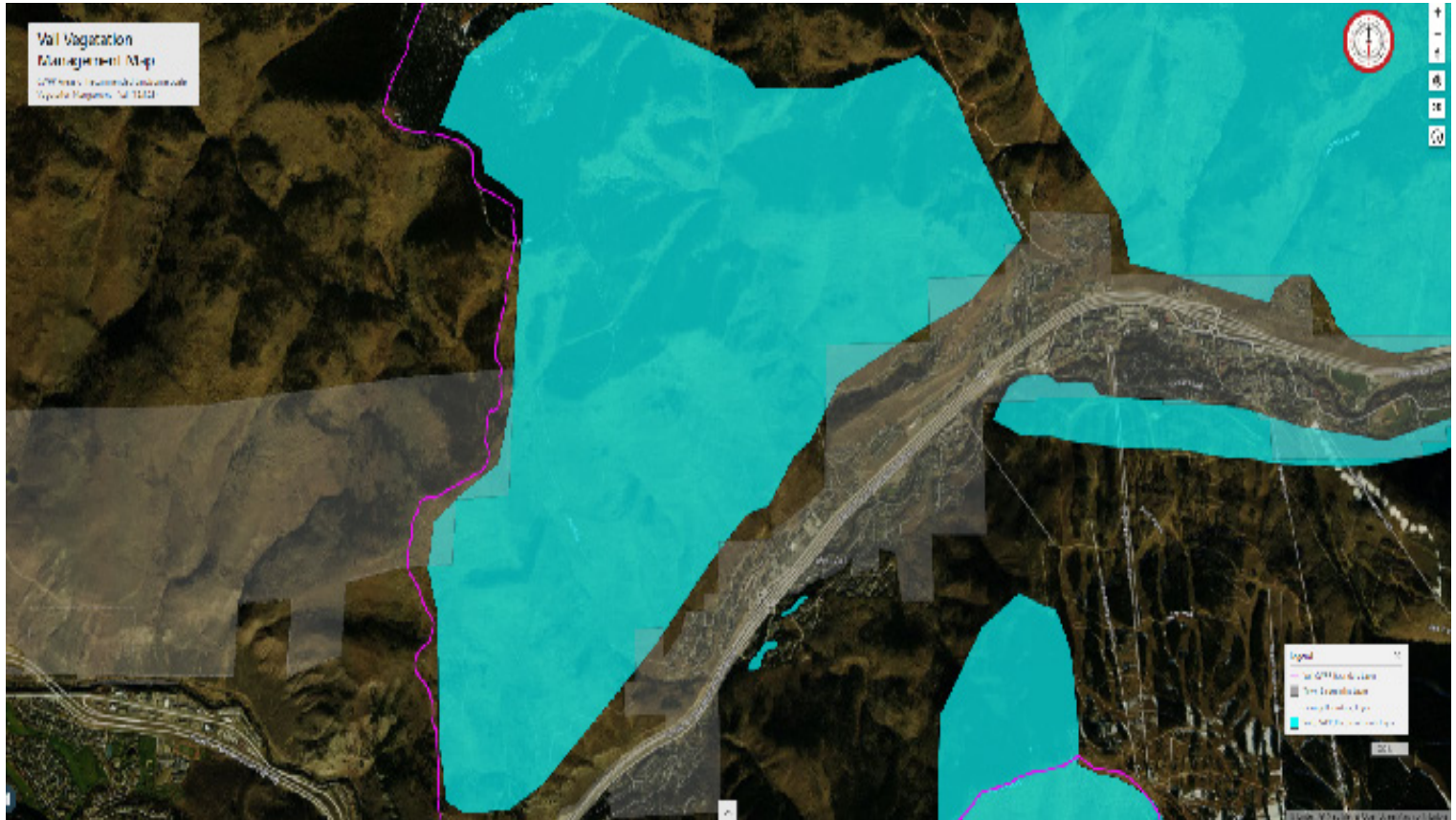
Photo courtesy of Eagle Valley Wildland

Areas of Recommended Landscape Scale Vegetation Management

Lower Gore Creek

Project Area Description

The lower Gore Creek treatment area includes the area from the ridge line north of Dowd Junction east to FS road 700. Interstate 70 and the developed private property from the southeast or downhill boundary and uphill boundary is the lower extent of previous treatments off FS rd. 700 and FS rd. 734. Primary ownership within this treatment area is USFS; however, portions of the treatment area are private and state ownership. The treatment area contains several areas of critical infrastructure including transmission power lines and communications towers.



Treatment Goals

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes

Preferred Treatment Methods

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

1. Use hand treatments to create linked defensible space for all structures along the downhill boundary of the treatment area. These treatments should extend from the structure to an area at least 100 feet wide.
Priority: High
2. Use a combination of hand treatments and mechanical harvest to implement point protection for critical infrastructure. Specific prescriptions for point protection should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet within 100 feet of the infrastructure).
Priority: Moderate
3. Reintroduce fire onto the landscape through the use of prescribed fire. **Priority: Moderate**

Areas of Recommended Landscape Scale Vegetation Management

Middle Gore Creek

Project Area Description

The Middle Gore Creek treatment area includes the area from FS road 700 to the Pitkin Creek Drainage. Interstate 70 and the developed private property form the southern or downhill boundary. The treatment area covers the lower reaches of the Middle Creek, Spraddle Creek, Booth Creek and Pitkin Creek drainages. Primary ownership within this treatment area is USFS however portions of the treatment area are private and municipal ownership. The eastern portion of the treatment area overlaps with the boundary of the Eagles Nest Wilderness Area. The treatment area contains several areas of critical infrastructure including transmission power lines and communications towers.



Treatment Goals

The goals of this treatment area are:

1. Reduce high intensity fire behavior within 100 feet of structures.
2. Protect ecosystems and natural resources from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Decrease potential ignition sources by improving existing power infrastructure.

Preferred Treatment Method

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

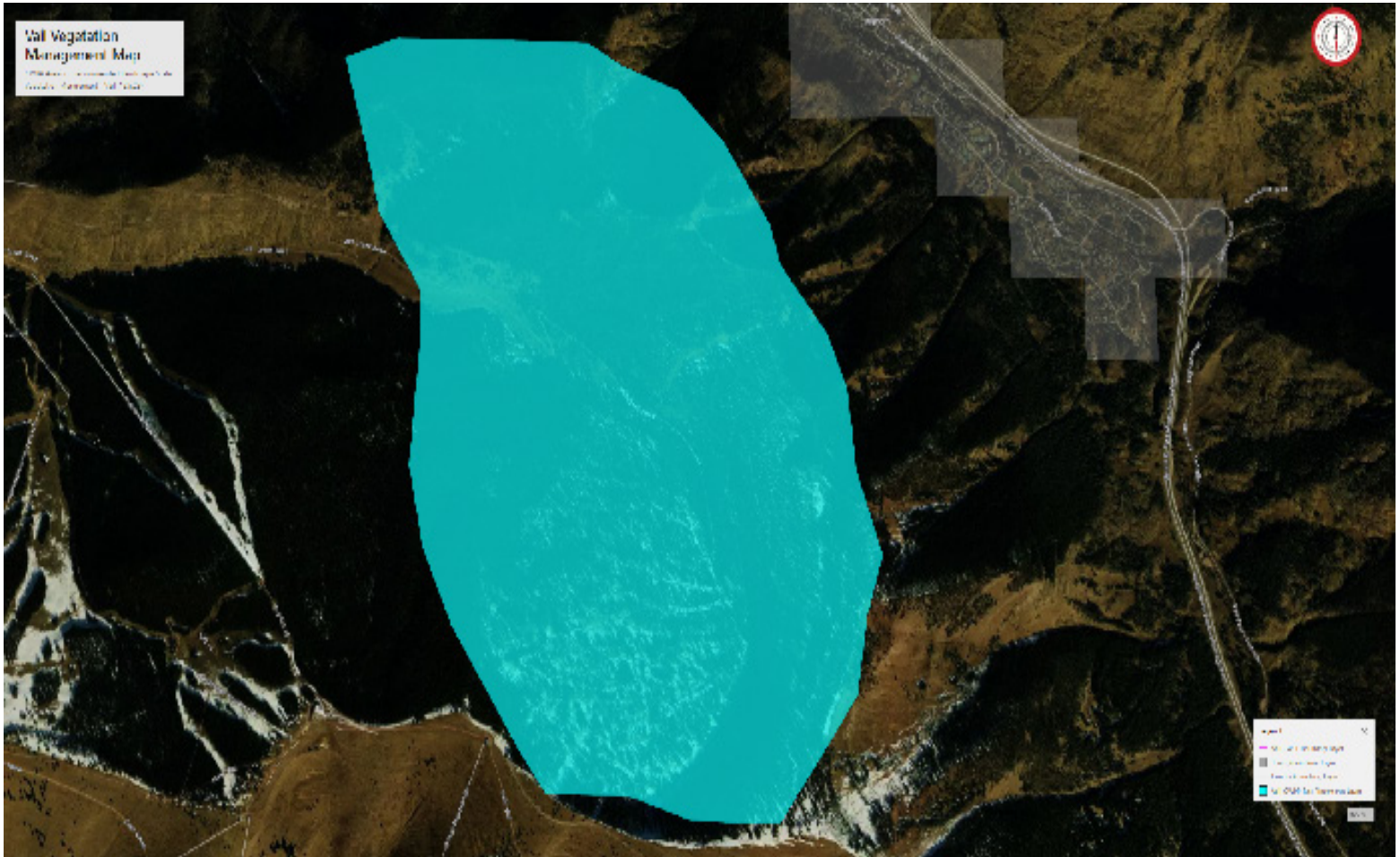
1. Use hand treatments to create linked defensible space for all structures along the downhill boundary of the treatment area. These treatments should extend from the structure to an area at least 100 feet wide.
Priority: High
2. Reintroduce fire onto the landscape through the use of prescribed fire.
Priority: Moderate
3. Prioritize the undergrounding of above ground power distribution lines between the Spraddle Creek subdivision and Bald Mountain Road.
Priority: High

Areas of Recommended Landscape Scale Vegetation Management

Benchmark and Mushroom Bowl

Project Area Description

The Benchmark/ Mushroom Bowl treatment area includes all the area in the upper reaches of the Mill Creek Drainage. The area is commonly referred to as Benchmark or the Mushroom Bowl. The area is accessed via Benchmark Road. Primary ownership within this treatment area is USFS.



Treatment Goals

The goals of this treatment area are:

1. Create operational delineations on the landscape to decrease resistance to control for fires burning within Benchmark or the East Vail Chutes.
2. Reduce high intensity fire behavior along the ridgeline between Benchmark and the East Vail Chutes.
3. Protect critical infrastructure from high intensity wildfires.

Preferred Treatment Method

1. Use a combination of commercial timber harvest and hand treatments and prescribed fire to create and maintain openings along the Northern or Eastern treatment area boundaries. Pockets of dead or diseased trees should be removed throughout the treatment area to decrease fire intensity and create potential operational delineations for fire suppression.

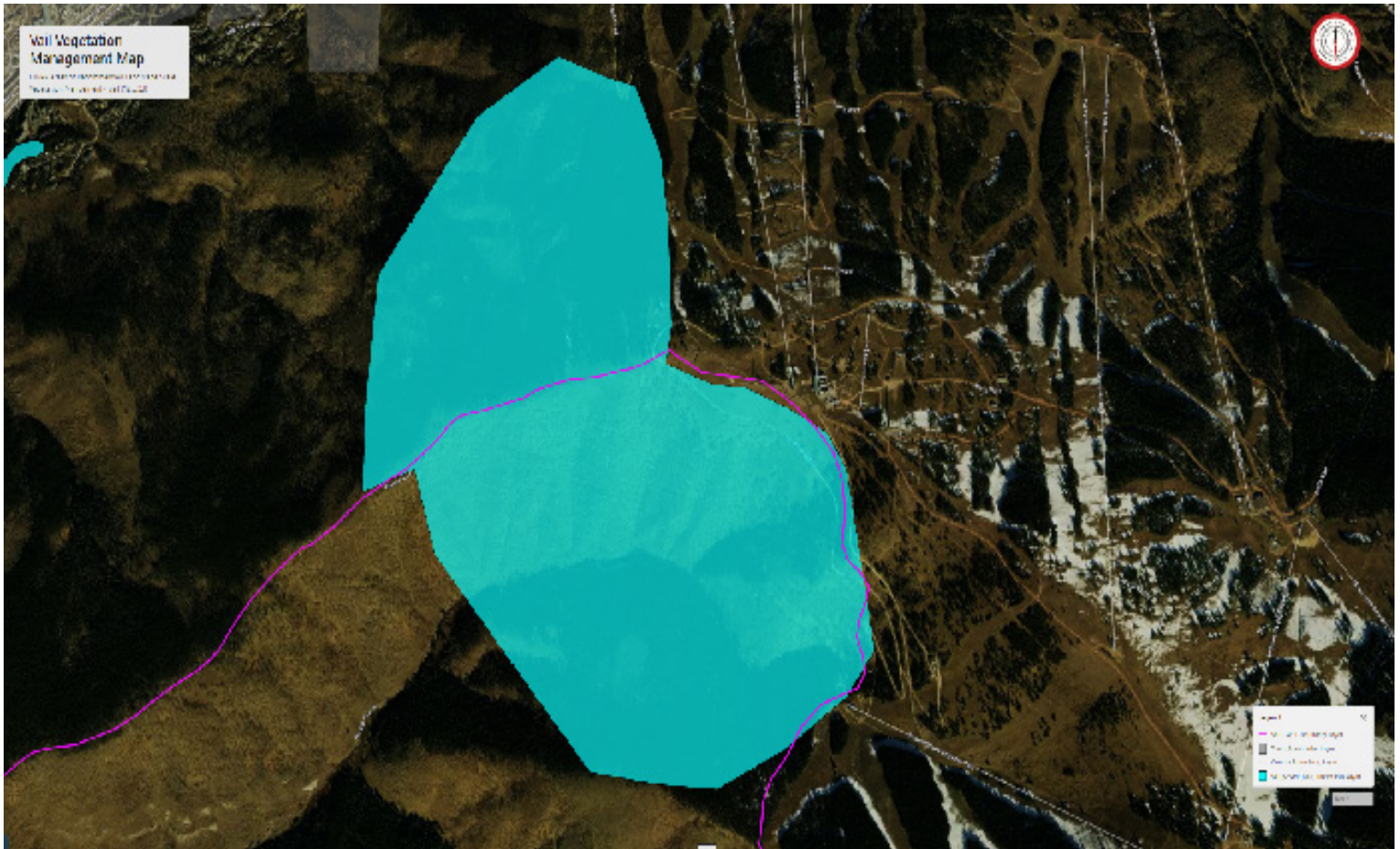
Priority: Moderate

Areas of Recommended Landscape Scale Vegetation Management

Eagles Nest and Lower Game Creek

Project Area Description

The Eagles Nest/ Lower Game Creek treatment area includes the area west of the Vail Ski Area Boundary from the Cascade Lift on the north over the top of the ridge to the drainage below the Game Creek Bowl. Primary ownership within this treatment area is USFS. The treatment area contains several areas of critical infrastructure including recreational ski infrastructure and communications sites. The area immediately east of the treatment area is a highly used developed recreation site for summer recreation activities. The Eagle Bahn Gondola which runs along the eastern edge of the treatment area is the primary evacuation method for moving guests from the mountain to safety in the village.



Treatment Goal

The goals of this treatment area are:

1. Protect critical infrastructure and recreational facilities from high intensity wildfire.
2. Create compartmentalization on landscape.
3. Protect primary evacuation route - reduce risk of wildfire disaster.

Preferred Treatment Method

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

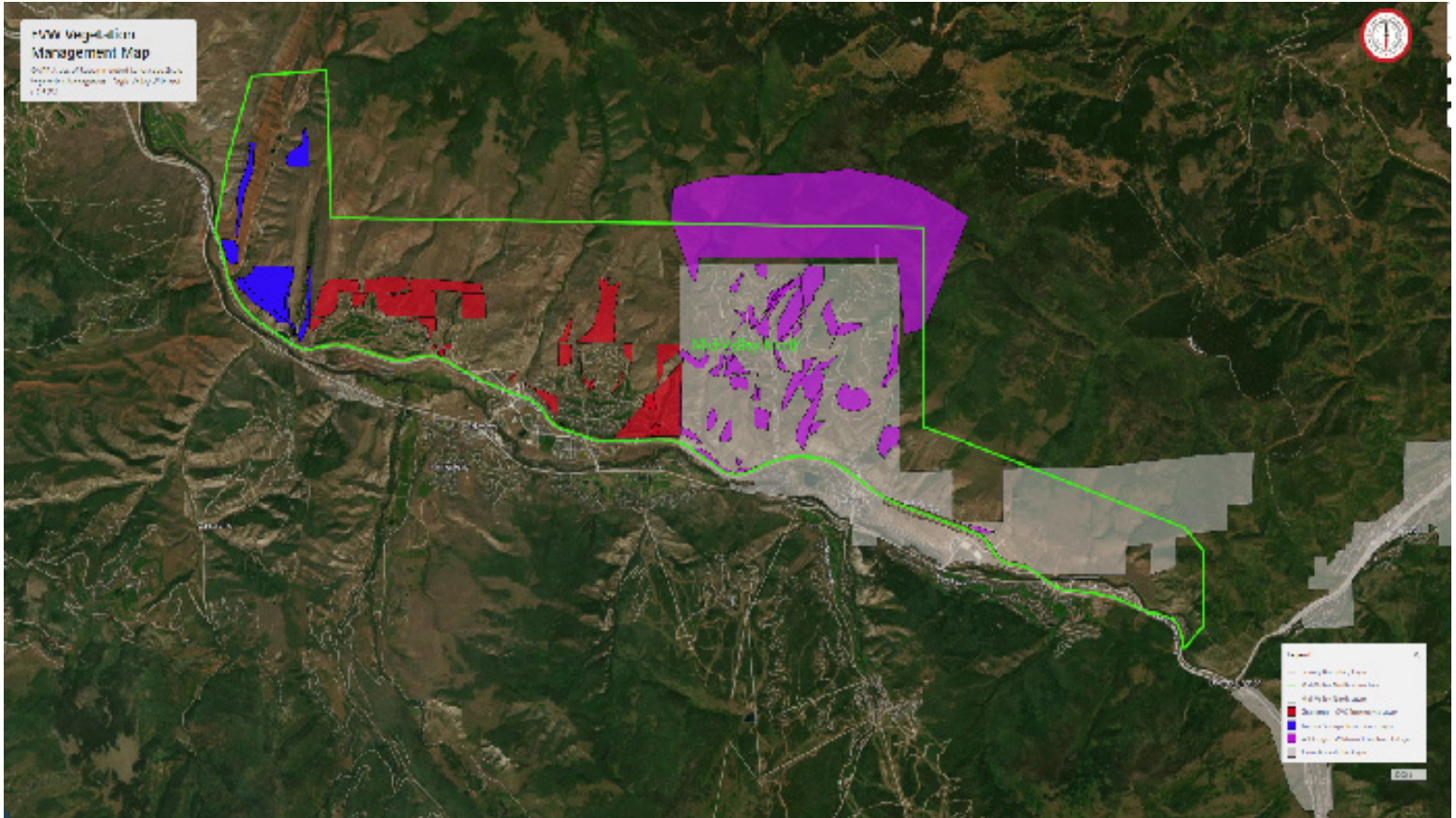
1. Use a combination of commercial timber harvest and hand treatments to create and maintain openings throughout the treatment area boundaries.
Priority: High
2. Use a combination of hand treatments and mechanical harvest to implement point protection for critical infrastructure. Specific prescriptions for point protection should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet within 100 feet of the infrastructure).
Priority: High

Areas of Recommended Landscape Scale Vegetation Management

Mid-Valley North

Project Area Description

Mid-Valley North encompasses areas in Avon and Edwards north of I-70, including the Cordillera Valley Club, Singletree, Wildwood, Wildridge, and Mountain Star sub-divisions. Primary ownership within this treatment area is private or owned by metro districts or HOA's; however, portions of the treatment area are USFS, BLM, and state ownership. The treatment area contains some areas of critical infrastructure including transmission power lines, communications towers, and recreation assets.



Treatment Goal

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Create resilient wildlife populations by maintaining healthy ecosystems and habitat connectivity.
5. Improve the strategic and tactical viability of the USFS/BLM Potential Operational Delineations (PODS) by treating highly flammable fuels along boundaries.
6. Improve the effectiveness of existing and future WUI fuels projects by treating both sides of public/private land boundaries.

Preferred Treatment Method

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

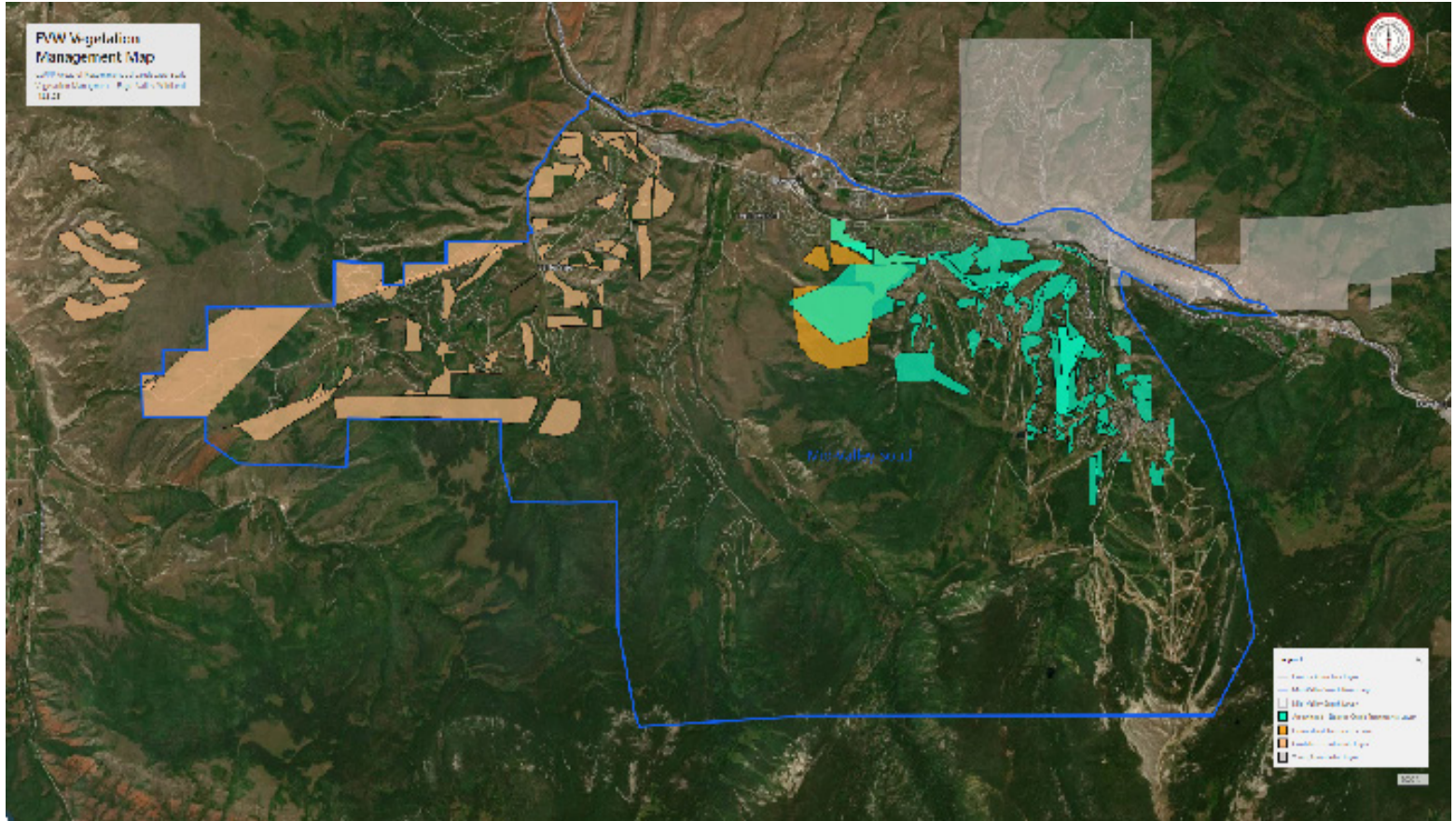
1. Use mastication to create linked fuel breaks and fuels reduction units for all areas of population concentration and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
2. Use hand thinning to selectively thin (reduce fuel loading to appropriate levels given the vegetation type and growth patterns) and create linked fuel breaks and fuels reduction units around areas of population concentrations and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
3. Re-introduce low-intensity fire onto the landscape through the use of prescribed fire to reduce heavy fuel loading and reinstate ecologically appropriate fire return intervals. **Priority: High**

Areas of Recommended Landscape Scale Vegetation Management

Mid-Valley South

Project Area Description

Mid-Valley South encompasses areas in Avon and Edwards south of I-70, including Lake Creek, Creamery Ranch, Homestead, and the Cordillera, Arrowhead, Bachelor Gulch, and Beaver Creek Metro Districts. Primary ownership within this treatment area is USFS; however, portions of the treatment area are private and state ownership. The treatment area contains several areas of critical infrastructure including transmission power lines, communications towers, a major highway, water intake and storage facilities, and ski areas (with their accompanying infrastructure).



Treatment Goals

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Improve the strategic and tactical viability of the USFS/BLM Potential Operational Delineations (PODS) by treating highly flammable fuels along boundaries.
5. Improve the effectiveness of existing and future WUI fuels projects by treating both sides of public/private land boundaries.

Preferred Treatment Method

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

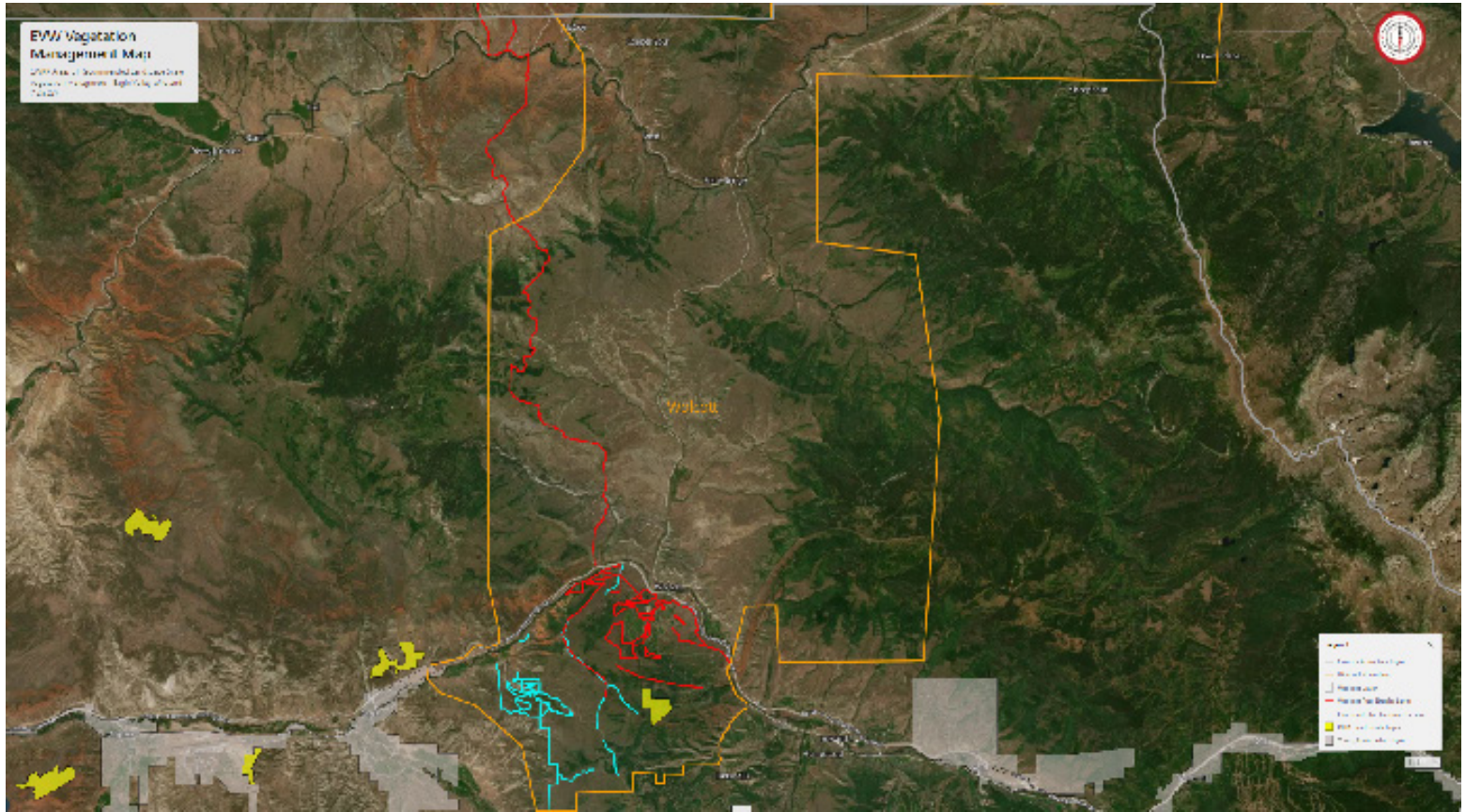
1. Use mastication to create linked fuel breaks and fuels reduction units for all areas of population concentration and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet).
Priority: High
2. Use hand thinning to selectively thin (reduce fuel loading to appropriate levels given the vegetation type and growth patterns) and create linked fuel breaks and fuels reduction units around areas of population concentrations and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet).
Priority: High
3. Re-introduce low-intensity fire onto the landscape through the use of prescribed fire to reduce heavy fuel loading and reinstate ecologically appropriate fire return intervals.
Priority: High

Areas of Recommended Landscape Scale Vegetation Management

Wolcott

Project Area Description

Encompasses the area around Wolcott, including Red Sky Ranch, Diamond Star, Bellyache Ridge, and public and private land along Highway 131 to McCoy (Horse Mountain Ranch, Muddy Pass, Milk Creek, and Alkali Creek Roads). Primary ownership within this treatment area is BLM; however, portions of the treatment area are private and state ownership. The treatment area contains some areas of critical infrastructure including transmission power lines, communications towers, and recreation assets.



Treatment Goals

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Create resilient wildlife populations by maintaining healthy ecosystems and habitat connectivity.
5. Improve the strategic and tactical viability of the USFS/BLM Potential Operational Delineations (PODS) by treating highly flammable fuels along boundaries.
6. Improve the effectiveness of existing and future WUI fuels projects by treating both sides of public/private land boundaries.

Preferred Treatment Method

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

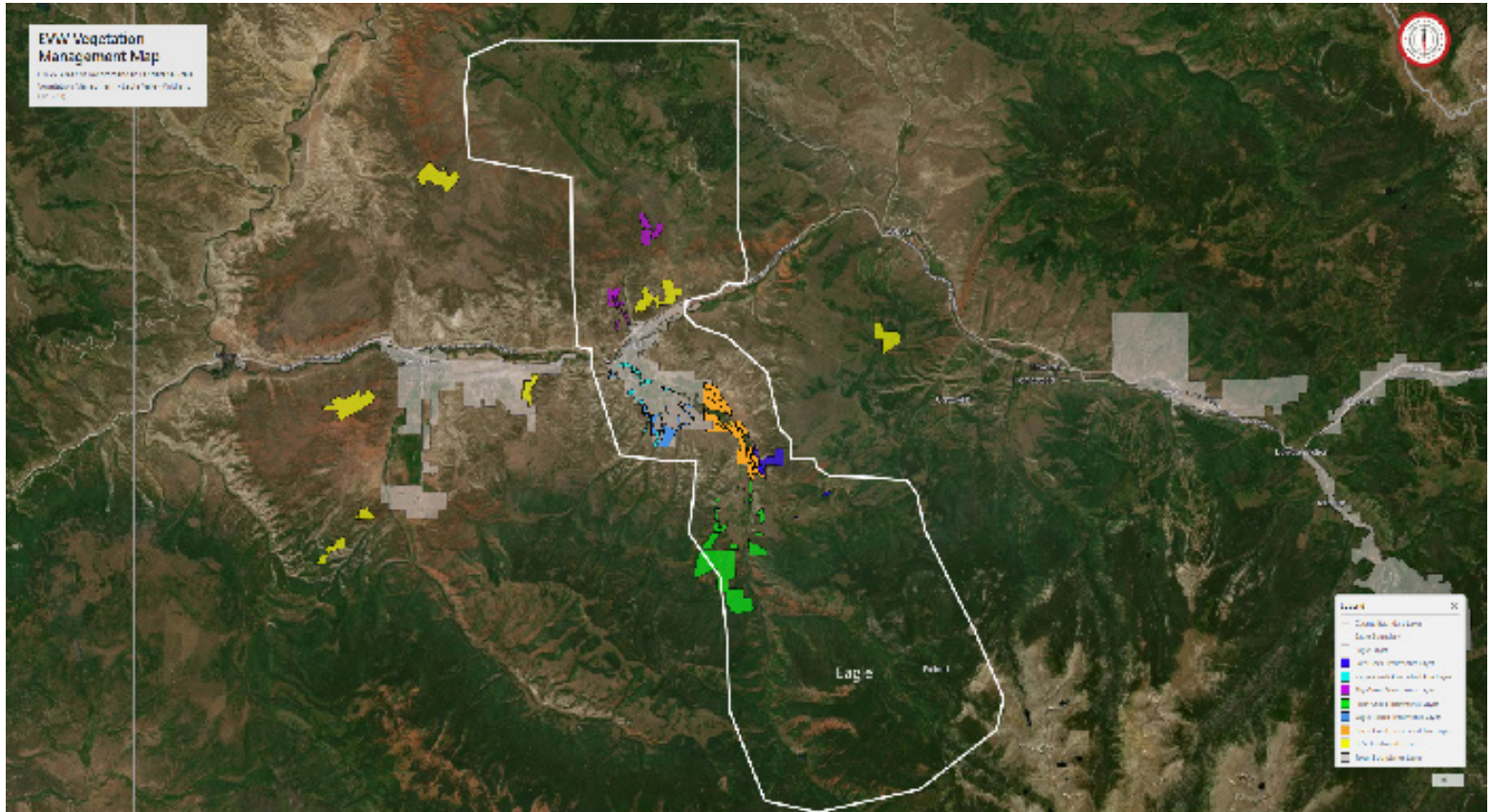
1. Use mastication to create linked fuel breaks and fuels reduction units for all areas of population concentration and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
2. Use hand thinning to selectively thin (reduce fuel loading to appropriate levels given the vegetation type and growth patterns) and create linked fuel breaks and fuels reduction units around areas of population concentrations and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
3. Re-introduce low-intensity fire onto the landscape through the use of prescribed fire to reduce heavy fuel loading and reinstate ecologically appropriate fire return intervals. **Priority: High**

Areas of Recommended Landscape Scale Vegetation Management

Eagle

Project Area Description

This area encompasses Eagle and outlying areas, including the Brush Creek Valley, Eagle Ranch, Eby Creek, Upper Kaibab, Frost Creek, the Salt Creek and Bruce Creek drainages, and Sylvan Lake State Park. Primary ownership within this treatment area is private or HOA; however, portions of the treatment area are Town of Eagle, state, BLM, or USFS ownership. The treatment area contains several areas of critical infrastructure including transmission power lines, communications towers, water storage facilities, and recreation assets.



Treatment Goals

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical water sources and infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Improve the strategic and tactical viability of the USFS/BLM Potential Operational Delineations (PODS) by treating highly flammable fuels along boundaries.
5. Improve the effectiveness of existing and future WUI fuels projects by treating both sides of public/private land boundaries.

Preferred Treatment Methods

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

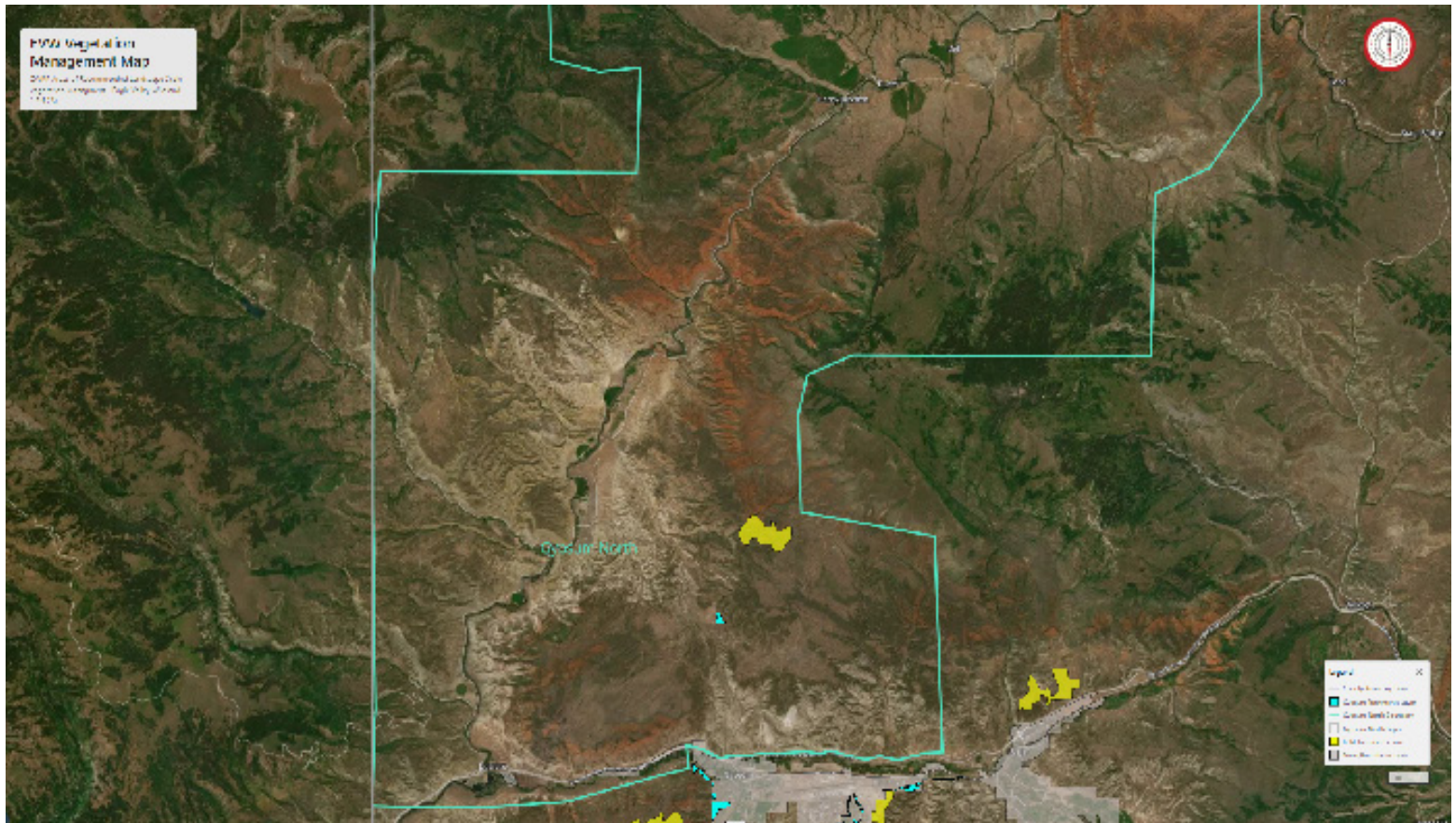
1. Use mastication to create linked fuel breaks and fuels reduction units for all areas of population concentration and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
2. Use hand thinning to selectively thin (reduce fuel loading to appropriate levels given the vegetation type and growth patterns) and create linked fuel breaks and fuels reduction units around areas of population concentrations and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
3. Re-introduce low-intensity fire onto the landscape through the use of prescribed fire to reduce heavy fuel loading and reinstate ecologically appropriate fire return intervals. **Priority: High**

Areas of Recommended Landscape Scale Vegetation Management

Gypsum North

Project Area Description

The Gypsum North area encompasses private and federally managed lands in the areas off the Colorado River Road and Trail Gulch Road, and the Burns, Sweetwater, and Derby Mesa communities. Primary ownership within this treatment area is BLM; however, portions of the treatment area are private and state ownership. The treatment area contains several areas of critical infrastructure including transmission power lines, communications towers, recreation assets, and railroad infrastructure.



Treatment Goals

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Improve the strategic and tactical viability of the USFS/BLM Potential Operational Delineations (PODS) by treating highly flammable fuels along boundaries.
5. Improve the effectiveness of existing and future WUI fuels projects by treating both sides of public/private land boundaries.

Preferred Treatment Method

Multiple treatment methods will be necessary to accomplish the stated objectives. Below are the preferred treatment methods:

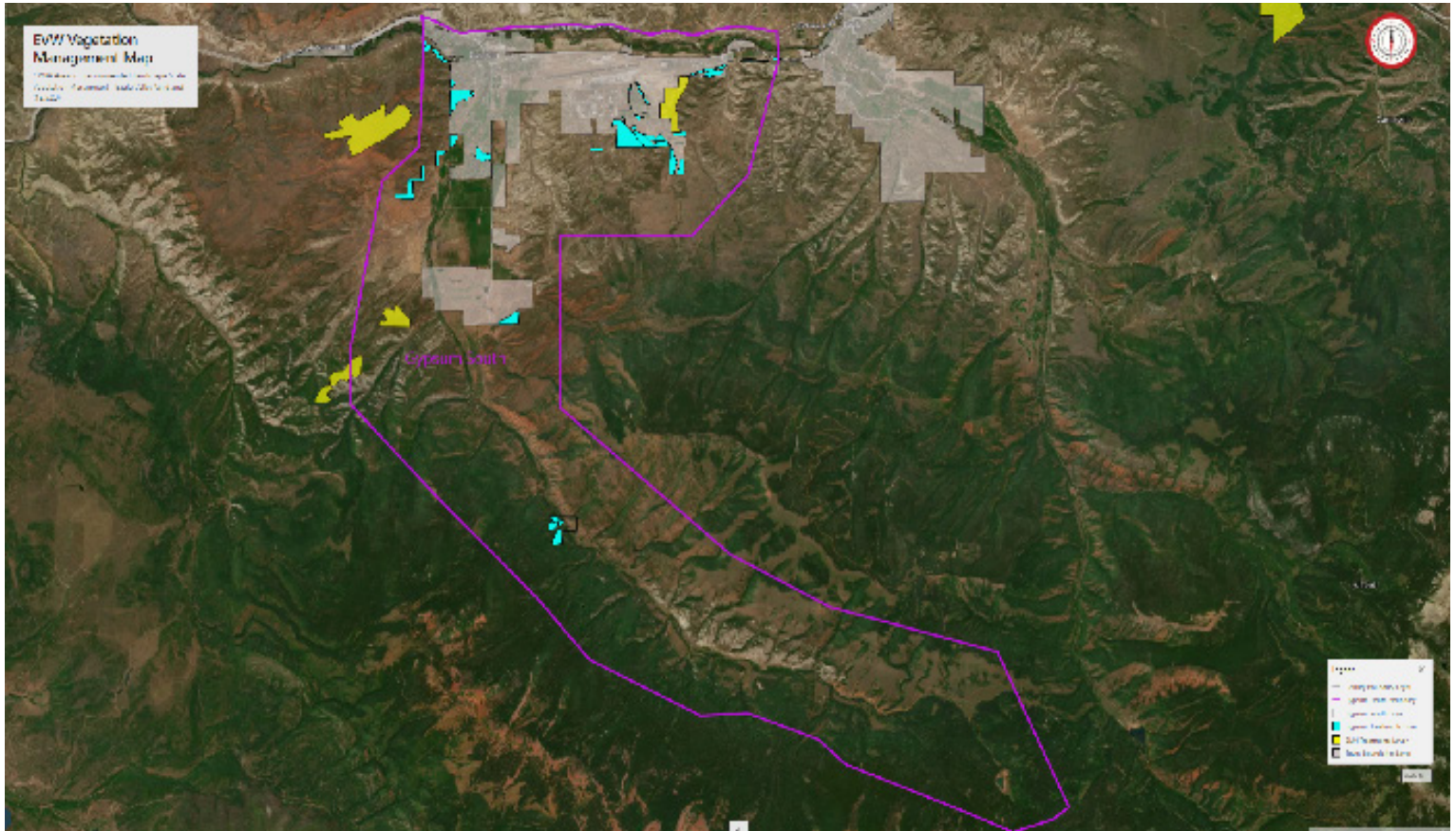
1. Use mastication to create linked fuel breaks and fuels reduction units for all areas of population concentration and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
2. Use hand thinning to selectively thin (reduce fuel loading to appropriate levels given the vegetation type and growth patterns) and create linked fuel breaks and fuels reduction units around areas of population concentrations and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
3. Re-introduce low-intensity fire onto the landscape through the use of prescribed fire to reduce heavy fuel loading and reinstate ecologically appropriate fire return intervals. **Priority: High**

Areas of Recommended Landscape Scale Vegetation Management

Gypsum South

Project Area Description

The Gypsum South area encompasses Gypsum, the Eagle County Airport, Airport Industrial Park, Chatfield Corners, Brightwater, Spring Valley, and public and private lands in the Gypsum Creek drainage. Ownership within this treatment area is a mix of USFS, BLM, state, and private lands. The treatment area contains several areas of critical infrastructure including transmission power lines, communications towers, water sources for the town of Gypsum, water pipelines, water intake and storage facilities, and recreation assets.



Treatment Goals

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical water sources and infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Improve the strategic and tactical viability of the USFS/BLM Potential Operational Delineations (PODS) by treating highly flammable fuels along boundaries.
5. Improve the effectiveness of existing and future WUI fuels projects by treating both sides of public/private land boundaries.

Preferred Treatment Methods

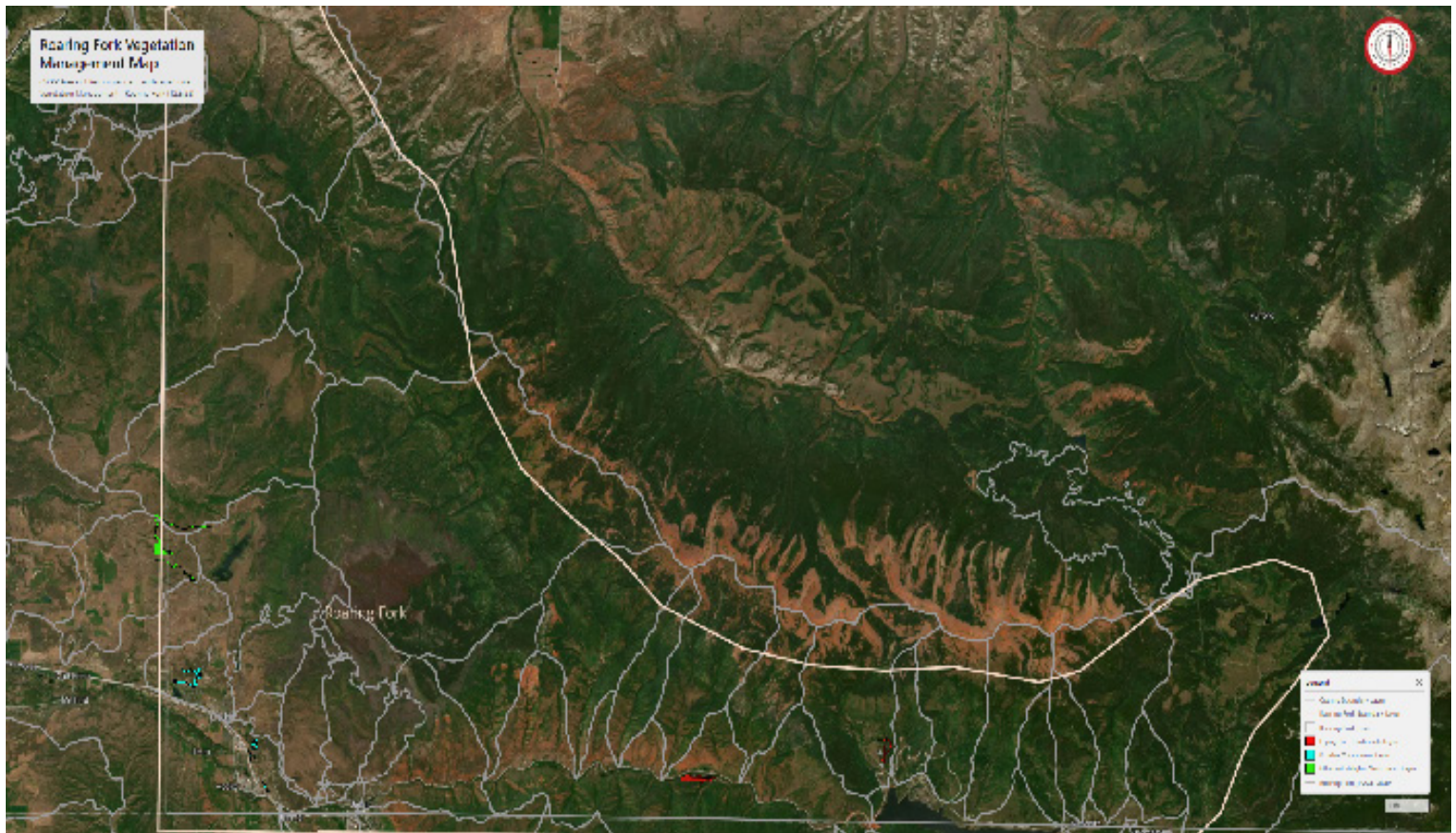
1. Use mastication to create linked fuel breaks and fuels reduction units for all areas of population concentration and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet).. **Priority: High**
2. Use hand thinning to selectively thin (reduce fuel loading to appropriate levels given the vegetation type and growth patterns) and create linked fuel breaks and fuels reduction units around areas of population concentrations and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
3. Re-introduce low-intensity fire onto the landscape through the use of prescribed fire to reduce heavy fuel loading and reinstate ecologically appropriate fire return intervals, particularly in the Gypsum Creek watershed. **Priority: High**

Areas of Recommended Landscape Scale Vegetation Management

Roaring Fork

Project Area Description

Missouri Heights is a large residential area located on the mesa above El Jebel and the Highway 82 corridor. The area can be accessed from Highway 82 via El Jebel Road which becomes Upper Cattle Creek Road as it travels through Missouri Heights, or from Garfield County via County Road 102 which becomes Fender Lane. The Town of Basalt is located along State Highway 82, and at the confluence of the Frying Pan and Roaring Fork rivers. The Ruedi Reservoir is a reservoir on the Frying Pan River. It sits about 15 miles upstream of the town of Basalt, Colorado. The reservoir is located within the White River National Forest, and straddles the county line between Pitkin County and Eagle County. The treatment area contains several areas of critical infrastructure including transmission power lines, communications towers, recreation assets, Gold-Medal trout habitat, the Town of Basalt, and the Spring Park Reservoir and Ruedi Reservoir.



Treatment Goals

The goals of this treatment area are:

1. Protect ecosystems and natural resources from high intensity wildfires.
2. Protect critical water sources and infrastructure from high intensity wildfires.
3. Create wildfire resilient landscapes.
4. Reduce high intensity fire behavior within 100 feet of structures.
5. Improve the strategic and tactical viability of the USFS/BLM Potential Operational Delineations (PODS) by treating highly flammable fuels along boundaries.
6. Improve the effectiveness of existing and future WUI fuels projects by treating both sides of public/private land boundaries.

Preferred Treatment Methods

1. Use mastication to create linked fuel breaks and fuels reduction units for all areas of population concentration and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
2. Use hand thinning to selectively thin (reduce fuel loading to appropriate levels given the vegetation type and growth patterns) and create linked fuel breaks and fuels reduction units around areas of population concentrations and infrastructure assets. Specific prescriptions for fuels reduction projects should decrease potential fire behavior below thresholds that would damage infrastructure (i.e. flame length less than 3 feet). **Priority: High**
3. Reintroduce fire onto the landscape through the use of prescribed fire, and managing natural wildfire ignitions for resource benefit. **Priority: Moderate**
4. Expand community engagement and education focused on behavior changes that enhance wildfire resilience. **Priority: High**

WUI - Wildland Urban Interface

CWPP - Community Wildfire Protection Plan

CPW - Colorado Parks and Wildlife

BLM - Bureau of Land Management

USFS - United States Forest Service

CSFS - Colorado State Forest Service

CDOT - Colorado Department of Transportation

OWTS - Onsite Wastewater Treatment System

BIL - Bipartisan Infrastructure Law

HFRA - Healthy Forests Restoration Act

CPD - Census-Designated Place

MAMA - Mountain Area Mutual Aid

CO-WRA - Colorado Wildfire Risk Assessment

HWY - Highway

IFTDSS - Interagency Fuels Treatment Decision Support System

ICS - Incident Command System

PODS - Potential Operational Delineations

SWPP - Source Water Protection Plan

HMP - Hazard Mitigation Plan

ICS - Incident Command System

FAC - Fire Adapted Communities

BAER - Burned Area Emergency Response

EV - Electric Vehicle

HOA - HomeOwners Association

MPB - Mountain Pine Beetle

SAD - Sudden Aspen Decline

FRCC - Fire Regime Condition Class

NIST - The National Institute of Standards and Technology

SSD - structure separation distance

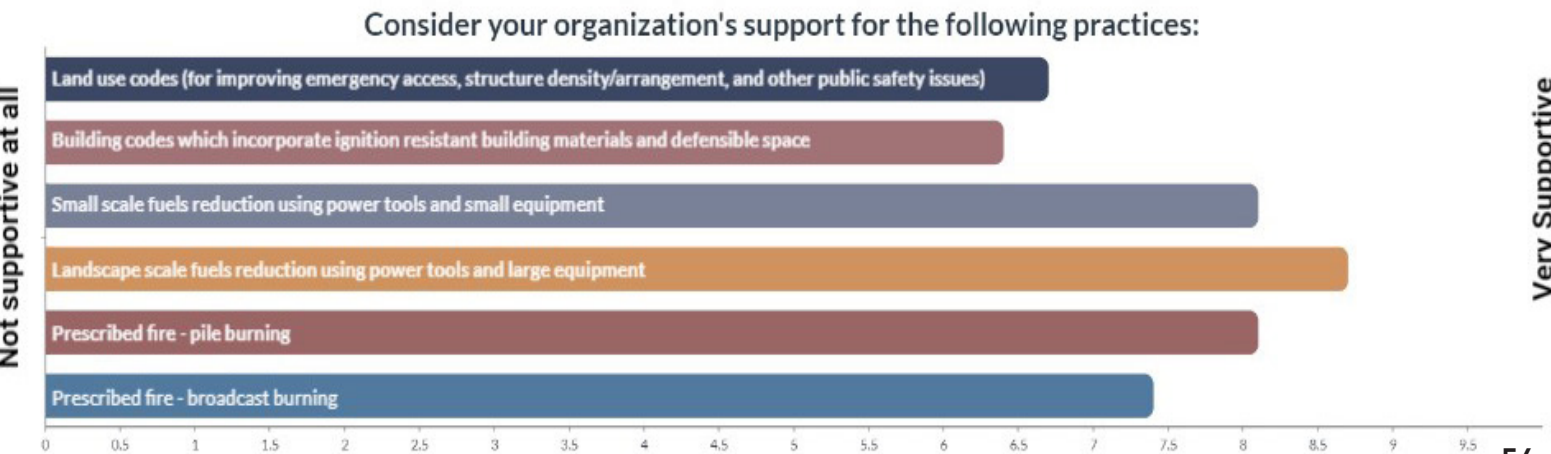
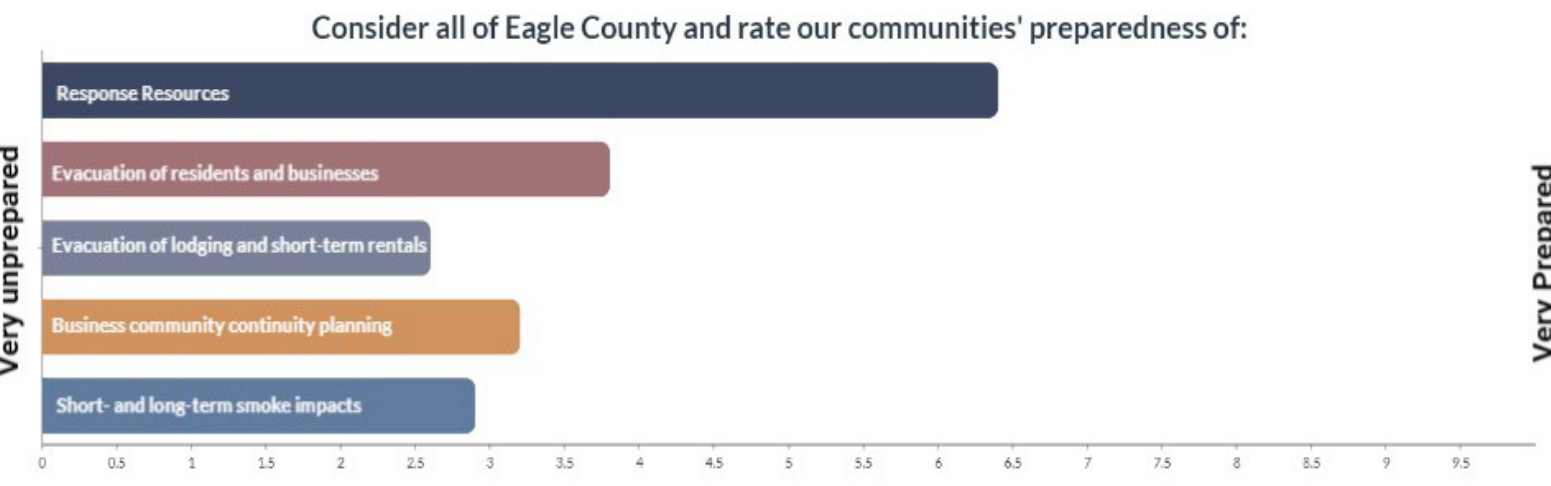
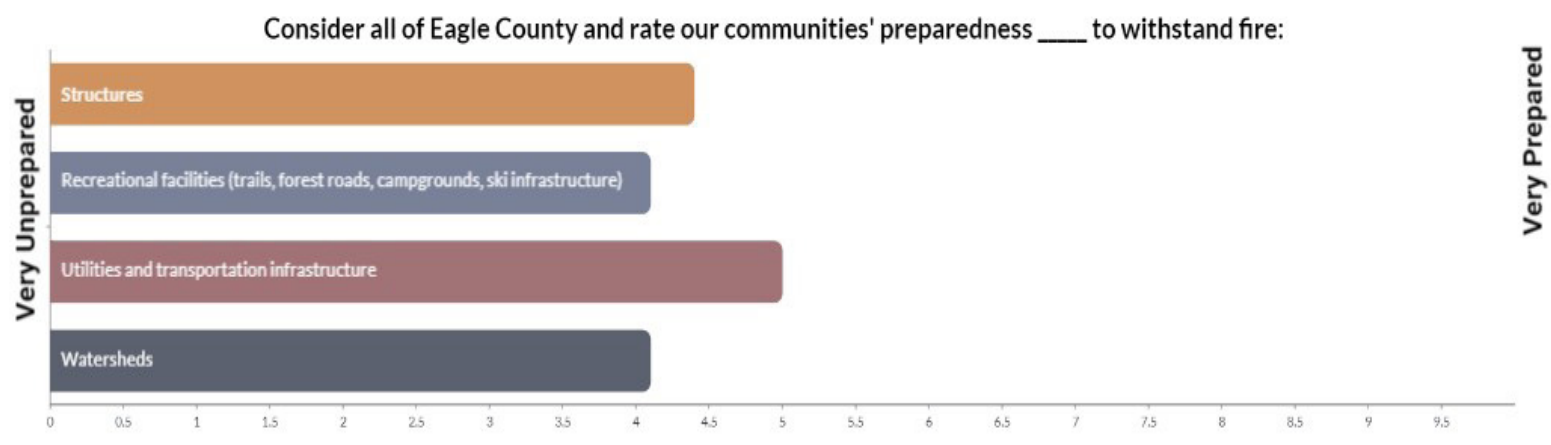
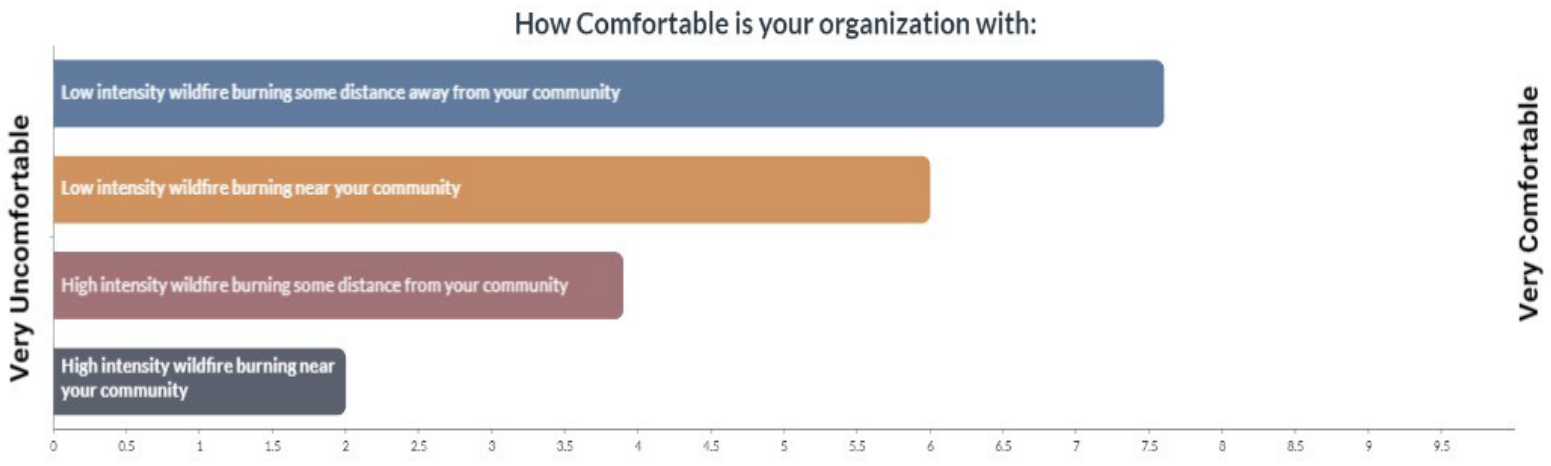
CDC - Center for Disease Control

SDI - Suppression Difficulty Index

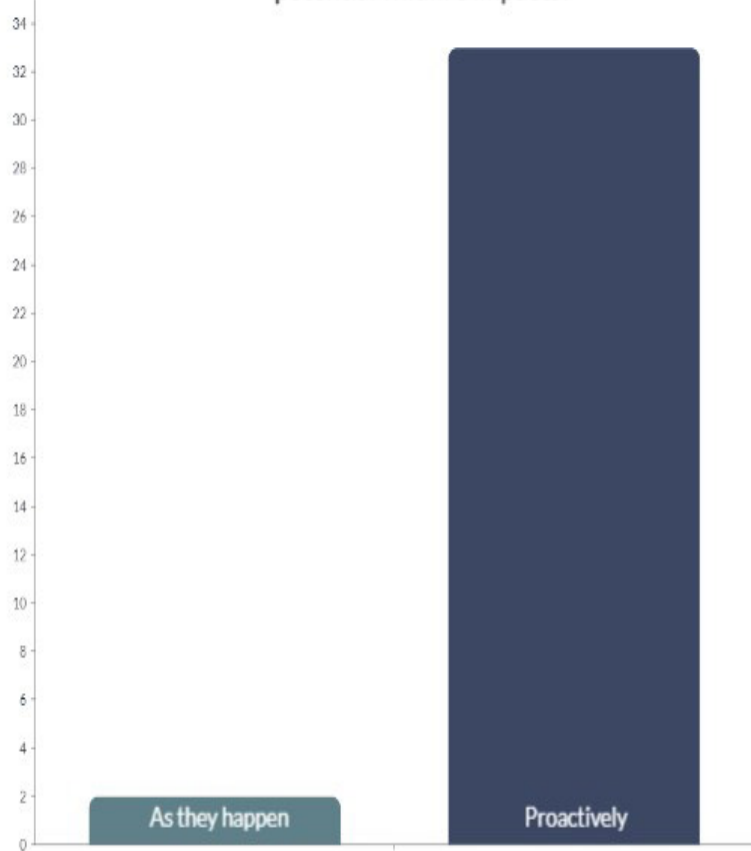
COOP - Continuity of Operations Plans

References

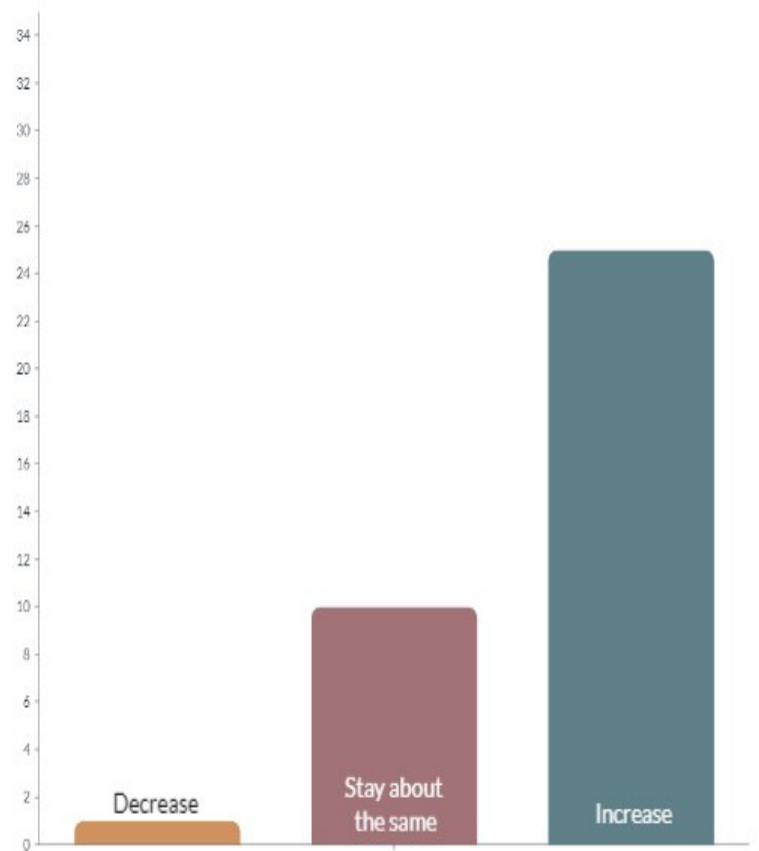
- **Vail CWPP** - <https://www.vail.gov/home/showpublisheddocument/116/637431457568430000>
- **Eagle River Fire Protection District CWPP** - https://csfs.colostate.edu/wp-content/uploads/2019/11/ERFPD_CWPP_2020.pdf
- **Arrowhead CWPP** - <https://static.colostate.edu/client-files/csfs/documents/ArrowheadCWPP.pdf>
- **Bachelor Gulch CWPP** - <https://static.colostate.edu/client-files/csfs/documents/BachelorGulchCWPP.pdf>
- **Beaver Creek CWPP** - <https://static.colostate.edu/client-files/csfs/documents/BeaverCreekCWPP.pdf>
- **Cordillera CWPP** - <https://static.colostate.edu/client-files/csfs/documents/CordilleraCWPP.pdf>
- **Town of Eagle SWPP** - https://www.townofeagle.org/DocumentCenter/View/16142/TownofEagle_SWPP_Final_Public_062320
- **Eagle River Water and Sanitation Gore Creek SWPP** - https://www.erwsd.org/sites/default/files/documents/Vail_SWPP.pdf
- **Eagle County Hazard Mitigation Plan** - <https://drive.google.com/file/d/1Du5EOBcKLaY2P7S XcbfCF2KxgKvjPSg7/view>
- **Eagle County Community Resilience Plan** - <https://www.resilienteaglecounty.com/>
- **Eagle County Wildfire Regulations** - <https://drive.google.com/file/d/1d835mFpJA3uPOcspgv fDJGyZBqyK7TWn/view>
- **REALFire Program** - <https://realfire.net/>
- **Colorado Wildfire Risk Assessment (CO-WRA)** - <https://co-pub.coloradoforestatlas.org>
- **Landfire national dataset** - <https://www.landfire.gov/frcc/frcchome.php>.
- **The National Institute of Standards and Technology (NIST)** released Technical Note 2205 WUI Structure/ Parcel/
- **Community Fire Hazard Mitigation Methodology** - <https://nvlpubs.nist.gov/nistpubs/TechnicalNotes/NIST.TN.2205.pdf>.
- **CDC Social Vulnerability Index (SVI)** - <https://www.earthdata.nasa.gov/learn/articles/sedac-social-vulnerability-dataset>.
- **CHFA Colorado 2023 rent and income limits** - <https://www.chfainfo.com/getattachment/76fc6334-528d-4efd-b90d-1d49b412a2f4/2023-Rent-and-income-limits.pdf>



When do you believe our community should address potential wildfire impacts?



Looking to the future, do you believe wildfire risk will...



Appendix A - Stakeholder input and involvement

The following stakeholders contributed to the creation of this plan:

Municipalities	
Town of Vail	Russ Forrest
Town of Avon	Jena Skinner
Town of Minturn	Michelle Meeter
Town of Red Cliff	Melissa Matthews
Town of Eagle	Larry Pardee
Town of Eagle	Melissa Darna
Town of Gypsum	Taylor Slauch
Town of Basalt	Ryan Mahoney

Conservation Districts / Non-Governmental Organizations	
Eagle River Watershed Council	James Dilzell
Eagle River Watershed Council	Anna Nakae
Eagle Valley Land Trust	Torrey Davis
Eagle Valley Land Trust	Jessica Foulis
Eagle Valley Land Trust	Keri Inoyue
Vail Valley Mountain Trails Alliance	Ernst Seager
Eagle County Conservation District	Laura Bohannon

Fire Districts / Departments / Organizations	
Eagle Valley Wildland	Hugh Fairfield-Smith
Eagle Valley Wildland	Ross Wilmore
Eagle Valley Wildland	Katie Scott
Eagle County Wildfire Collaborative	Stacey Todd
Rock Creek VFD	Brita Horn
Vail Fire and Emergency Services	Mark Novak
Vail Fire and Emergency Services	Paul Cada
Greater Eagle Fire Protection District	Doug Cupp
Eagle River Fire Protection District	Karl Bauer
Gypsum Fire District	Justin Kirkland
Roaring Fork Fire and Rescue	Scott Thompson

Eagle County	
Eagle County Emergency Management	Birch Barron
Eagle County Emergency Management	Fernando Almanza
Eagle County Wildfire Mitigation	Eric Lovgren
Eagle County Wildfire Mitigation	Katie Jenkins
Eagle County Manager	Jeff Shroll
Eagle County Sheriff	James VanBeek
Eagle County Natural Resources	Marcia Gilles
Eagle County Natural Resources	Maureen Mulcahy
Eagle County Natural Resources	Emily Seddon
Eagle County Vegetation Stewardship	Kallie Rand
Eagle County Environmental Health	Claire Lewandowski
Eagle County Environmental Health	Kirk Weems
Eagle County Housing and Development Authority	Kim Bell Williams

Utilities	
Eagle River Water and Sanitation	Michael Rae
Eagle River Water and Sanitation	Dan Siebert
Eagle River Water and Sanitation	Kira Koppel
Xcel	Laurin Lee
Holy Cross Electric	Bryan Hannegan
Holy Cross Electric	David Bleakley
Holy Cross Electric	Bo Jones
Colorado Springs Utilities	Jeremy Taylor
Black Hills Natural Gas	Eric Neblett
Black Hills Natural Gas	Kacee Rogers

Appendix A - Stakeholder input and involvement

Federal and State Agencies		Metro Districts	
BLM - CO River Field Office	Larry Sandoval	Bachelor Gulch Metropolitan District	Dave Berg
BLM - CO River Field Office	Chad Sewell	Arrowhead Metropolitan District	Jerry Hensel
USFS - White River National Forest	Leanne Veldhuis	Edwards Metropolitan District	Kris Miller
USFS - White River National Forest	John Markalunas	Berry Creek Metropolitan District	Nina Timm
USFS - White River National Forest	Larry Pardee	Buckhorn Valley Metropolitan District	Sarah Shepherd
Colorado State Forest Service	Melissa Daurna	Eagle-Vail Metropolitan District	Steven Barber
Colorado State Forest Service	Carolina Manriquez	Two Rivers Metropolitan District	Craig Plizga
Colorado State Forest Service	Chazz Lakin	Eagle Ranch Metropolitan District	Dave Crawford
CDOT	Kane Schneider	Beaver Creek Metropolitan District	Bill Simmons
CDOT	Joe Bajza	CDOT	Trevor Broersma
Colorado Parks and Wildlife	Devin Duval	Other Critical Stakeholders	
Colorado Parks and Wildlife	Layton Stutsman	Vail Board of Realtors	Cynthia Thrall
Colorado Parks and Wildlife	Heather Halbritter	Vail Resorts - Vail Mountain	Jeff Babb
CPW - Sylvan Lake State Park	Matt Westerberg	Vail Valley Partnership	Chris Romer
CPW - Sylvan Lake State Park	Chris Tennent	Eagle County School District	Phil Qualman
Colorado Division of Fire Prevention and Control	Ryan McCulley		
Colorado Division of Fire Prevention and Control	Jesse Moreng		
Colorado State Land Board	Jerod Smith		

Vail

Vail is a 4.6 square mile high density development of 5000 full time residents, 5000 additional part time residents and millions of annual visitors. The community is situated along a 10 mile stretch of interstate 70 and extends approximately ¼ mile north and south of the Interstate. The community is completely surrounded by the White River National Forest and is home to Vail Mountain, one of the largest economic centers of the county. Due to the space constraints of the valley nearly all structures within the community are built within 30 feet of the nearest structure. The valley is surrounded by steep slopes and dense vegetation leading to high likelihood of high severity fire. Lower and Middle Gore Creek have known areas of geologic instability and risk for post fire flooding and debris flow is high. If a large-scale evacuation was necessary I-70 is the only route out of the community and will likely have significant congestion on the routes leading to the interstate.

Risk

The overall risk rating to the Vail area is **HIGH**. Topographic features pose a challenge for fire suppression and the density of structures lead to a high likelihood of structure to structure ignitions if fire enters into the community. Concerns surround evacuation routes capacity as well as large guest populations during high fire potential times. While burn probability is lower in the area, fire intensity is very high which increases the risks of significant post fire impacts to communities and critical infrastructure.

Highway 24

The Highway 24 area encompasses the communities of Eagle-Vail, Minturn, Red Cliff, and scattered development on Tennessee Pass. Eagle-Vail has approximately 4,000 residents with about 850 structures, and Minturn is home for 1,140 people with over 500 commercial and residential structures. Along the Highway 24 corridor are the historic towns of Minturn and Redcliff, as well as scattered development on Tennessee Pass with residential and commercial structures. The Eagle River flows parallel to Highway 24 through Minturn. Whiskey Creek flows into the Eagle River near the intersection of Highway 6 and Highway 24. The water treatment plant in Minturn has its intake on Cross Creek.

Vegetation at lower elevations in Whiskey Creek and Minturn is made up of juniper in the overstory with grasses, sagebrush, and serviceberry in the understory. At higher elevations, lodgepole pine and aspen become the predominant overstory species, with thick serviceberry in the understory. Much of the lodgepole has been killed by the Mountain Pine Beetle, with some areas experiencing 80% tree mortality. Due to suppression of the natural fire regime, the juniper is growing extremely dense, and is drought stressed. Sagebrush in the area has grown to be 2-3 feet tall and decadent.

Risk

The overall risk rating to the HWY 24 area is **EXTREME**. Topographic features pose a significant threat to life and property. Concerns surround evacuation routes and structure to structure fire movement in the communities of EagleVail, Minturn, and Red Cliff. There are also concerns about the outlying communities that surround the HWY 24 Corridor. Special attention should be given to strengthening evacuation routes and areas where movement of traffic will slow (e.g. Battle Mountain Pass).

Note: High risk areas also surround the Eagle Mine, Gilman and Camp Hail for hazardous materials and confirmed unexploded ordnance.

Mid-Valley North

Mid-Valley North encompasses areas in Avon and Edwards north of I-70, including the Cordillera Valley Club, Singletree, Wildwood, Wildridge, and Mountain Star sub-divisions, totaling 1,730 structures. There are approximately over 9,000 people in Edwards and 6,500 people in Avon. Vegetation in this area is primarily made up of pinon pine and juniper in the overstory, with grasses and sagebrush in the understory. Douglas fir and aspen are present in drainages with sagebrush and grass in the understory. June Creek and Berry Creek flow through the Singletree and Cordillera Valley Club areas, and eventually into the Eagle River. Suppression of the natural fire regime has led to extremely dense juniper and sagebrush near values at-risk. Vegetation throughout the area is drought stressed. Due to an Ips beetle outbreak, approximately 50% of the pinon pine has been killed.

Wildridge, Mountain Star, Cordillera Valley, and Singletree have power lines and other energy infrastructure running through them. Should these areas get directly impacted by wildfire, the ramifications could be felt by the residents in Avon, as well as the entire county for months to years after the event. Due to the steep terrain and dense, flashy fuels, fast and intense fire growth is possible that could overwhelm initial response.

Risk

The overall risk to life and property in Mid-Valley North is **HIGH**. The primary factors leading to the high risk rating are the fragile evacuation routes of Mountain Star, Wildridge, Singletree, Cordillera Valley Club, and Red Canyon Estates. A fire ignition of Interstate 70 could quickly compromise evacuation routes in the area. Suppression difficulty is complex due to the steep terrain in most areas. Special attention should be given to projects that support the protection of the communities.

Mid-Valley South

Mid-Valley South encompasses areas in Avon and Edwards south of I-70, including Lake Creak, Creamery Ranch, Homestead, and the Cordillera, Arrowhead, Bachelor Gulch, and Beaver Creek Metro Districts. There are over 4321 structures, with approximately over 9,000 people in Edwards and 6,500 people in Avon. Vegetation in this area is primarily made up of lodgepole pine, Douglas fir, and aspen in the overstory with grasses, sagebrush, and dense serviceberry in the understory. Due to suppression of the natural fire regime, the serviceberry and aspen are growing extremely densely. A mountain pine beetle outbreak has resulted in approximately 50% of the lodgepole pine in the area being killed.

The majority of homes and businesses are located within three subdivisions on the south side of Avon: Arrowhead, Bachelor Gulch, and Beaver Creek. These areas contain some of the highest value real estate in Eagle County, as well as a ski resort and commercial areas that provide thousands of jobs to residents throughout the county. Should these areas get directly impacted by wildfire, the ramifications will be felt by the residents in Avon, and could be felt by businesses and workers throughout the entire county (and those that commute from outside the county to work in the resorts and commercial areas).

Risk

The overall risk to Mid-Valley South is **HIGH**. The primary risk factor is one way in and one-way-out communities. Each drainage has no options of evacuation to the south other than one area on the most western boundary of Cordillera. Although the risk of a fast moving fire is lower than Mid-Valley South the burn severity is much higher. With the fuel types in these communities a well established fire will be difficult to suppress. The Bellyache ridge is the breaking point of fire severity and burn probability, meaning with the high probability of fire moving from the west and the Brush Creek Drainage into the heavy fuel types to the East of Bellyache Ridge a severe long lasting fire carries a HIGH risk of suppression difficulty and long term impact.

Wolcott

Encompasses the area around Wolcott, including Red Sky Ranch, Diamond Star, Bellyache Ridge, and public and private land along Highway 131 to McCoy (Horse Mountain Ranch, Muddy Pass, Milk Creek, and Alkali Creek Roads). Vegetation in the area is primarily made up of pinon pine and juniper in the overstory, with grasses and sagebrush in the understory. Red Sky Ranch and Bellyache Ridge have very sparse timber, with the vast majority being decadent sagebrush. Diamond Star has serviceberry, and rabbitbrush mixed in with the sagebrush in the understory, and stands of Douglas Fir at higher elevations.

Sagebrush in Red Sky Ranch and Bellyache Ridge is growing two to four feet tall, decadent, and extremely dense and continuous over steep terrain. Due to suppression of the natural fire regime, the juniper in Diamond Star Ranch is extremely dense, and drought stressed. An Ips beetle outbreak has resulted in approximately 50% of the pinon pine being killed.

Bellyache Ridge, Red Sky Ranch and Diamond Star Ranch are located in steep terrain with flashy fuels, immediately adjacent to BLM land with further dense, flashy fuels. Should a significant wildfire get established in these areas, the ensuing erosion and pollution of the Eagle River downstream could affect the Town of Eagle and Eagle County for years to come. Additionally, due to the difficult terrain and fuels, fires in these areas could overwhelm initial response. While housing density is low in the immediate vicinity, fire could rapidly reach more populated areas in Eagle or Edwards before firefighters are able to get a foothold.

Risk

Risk to the Wolcott area is **HIGH**. The communities of Diamond Star, Red Sky Ranch, Bellyache Ridge, and Horse Mountain Ranch carry the highest risk to life and property due to suppression difficulty along with fuel types along the southern boundaries. The Bellyache ridge is the breaking point of fire severity and burn probability, meaning with the high probability of fire moving from the west and the Brush Creek Drainage into the heavy fuel types to the East of Bellyache Ridge a severe long lasting fire carries a HIGH risk of suppression difficulty and long term impact. A High Risk is also being assigned to the communities of Bond, McCoy, Rancho Del Rio and the sub communities along HWY 131. Response time is the primary factor of concern in these communities.

Note: The Wolcott area has more fires per year than any other unit in the Eagle Valley Wildland response area.

Eagle

This area encompasses Eagle and outlying areas, including the Brush Creek Valley, Eagle Ranch, Eby Creek, Upper Kaibab, Frost Creek, the Salt Creek and Bruce Creek drainages, and Sylvan Lake State Park. More than 7,500 people live in Eagle. There are roughly 2,100 homes throughout the area, as well as power lines, and I-70 running through the town.

Vegetation in the area is primarily made up of pinon pine and juniper in the overstory, with grasses and sagebrush in the understory. The Bruce Creek drainage consists of a pinon-juniper overstory with sagebrush, grasses, serviceberry, and rabbitbrush in the understory, with Douglas Fir and quaking aspen at higher elevations. In Bruce Creek, Gambel oak is prolific in the understory, growing over 10 feet tall and nearly impenetrable in areas. Due to suppression of the natural fire regime, juniper is growing extremely densely and is drought stressed. An Ips beetle outbreak has resulted in approximately 50% of the pinon pine being killed.

Should a significant wildfire become established in these areas, the ensuing erosion and pollution of the Eagle River downstream could affect the Town of Eagle and Eagle County for years to come. The Eagle area is heavily used for recreation and is immediately adjacent to I-70, making it an extremely fire prone area. The Eagle Ranch neighborhood is immediately adjacent to BLM lands with dense, flashy fuels.

Risk

The overall risk to the Eagle Area is **MODERATE**. Since most of the Eagle area carries significantly less topographic concerns than many of the other locations in Eagle County the Suppression Difficulty is much less than other adjacent areas. Note that Moderate concern is elevated due to light flashy fuels in most areas and the high likelihood of wildfire in the area.

Gypsum North

The Gypsum North area encompasses private and federally managed lands in the areas off the Colorado River Road and Trail Gulch Road, and the Burns, Sweetwater, and Derby Mesa communities. It is sparsely populated, with approximately 500 known structures. Most of the land ownership is managed by the Upper Colorado River District Bureau of Land Management, with some private ranches scattered throughout. Most roads are unpaved and subject to being washed out by flash flooding throughout the summer. Cell phone coverage is minimal and there are areas without radio coverage.

Vegetation consists primarily of sagebrush, pinon pine, juniper, and native grasses, with some areas of aspen and mixed conifer forests at higher elevations. In most areas, suppression of the natural fire regime has caused sagebrush to become decadent, and juniper encroachment has increased the fuel loading to far beyond historical norms. The Colorado River sees significant recreation activity from fishing and rafting, 4 wheeling, hunting, and recreational shooting. All of these activities bring the hazard of human-caused wildfires, exacerbating the hazard caused by frequent lightning ignitions in the area.

Risk

The Overall risk to Gypsum North is **MODERATE**. Gypsum North carries a high likelihood of wildfire. However the location of most homes in the area are near moderate Suppression Difficulty and potential control feature (e.g. Colorado River or irrigated fields). The topographic feature of the Colorado River Road poses some concern but not enough to drive a high rating.

Gypsum South

The Gypsum South area encompasses Gypsum, the Eagle County Airport, Airport Industrial Park, Chatfield Corners, Brightwater, Spring Valley, and public and private lands in the Gypsum Creek drainage. Gypsum is home for 8,040 people. About 400 homes are in the Spring Valley Neighborhood.

Vegetation consists primarily of pinon pine and juniper in the overstory, with grasses and sagebrush in the understory. Due to suppression of the natural fire regime, the juniper is growing extremely densely and is drought stressed. An Ips beetle outbreak has killed about 50% of the pinon pine in the area. The area around Mosher Spring is in an ecological transition zone, where pinon pine and juniper are mixed with decadent aspen stands and lodgepole pine. Engelmann spruce and subalpine fir with heavy dead-and-down in the higher elevation areas of the units. Grasses and sagebrush mix with serviceberry, rabbit brush, and other woody shrubs in the understory.

Mosher Spring is a historic homestead that supplies the town of Gypsum with drinking water after it passes through the Mosher Water Treatment plant. Should these areas get directly impacted, the ramifications could be felt by Gypsum and the entire county for decades. Both the drinking water resources and the Spring Valley neighborhood border Bureau of Land Management land that consists of flashy fuels (grass and decadent sagebrush) that can support fast and intense fire growth that could overwhelm initial response.

Risk

The overall Risk to Gypsum South is **HIGH** due to the likelihood of fire moving into the communities of Red Hill and Sky Legend, both of which carry limited egress options. The Gypsum Creek Drainage also carries a high risk of long term effects as Gypsum Creek is the sole drinking water for Gypsum. The Gypsum South unit is also home to the Eagle County Regional Airport that is well within the spotting distance.

Roaring Fork Valley

Missouri Heights is a large residential area located on the mesa above El Jebel and the Highway 82 corridor. The area can be accessed from Highway 82 via El Jebel Road which becomes Upper Cattle Creek Road as it travels through Missouri Heights, or from Garfield County via County Road 102 which becomes Fender Lane.

The primary vegetation in Missouri Heights is gambel-oak with a short grass and sagebrush understory, varying in coverage from uniformly dispersed sage to continuous stands of dense oak. Small sections of riparian vegetation are present near water sources and drainages, and a large tall grass meadow runs through the center of the community. Native and non-native ornamental grass, trees, and shrubs of various types can be found near home-sites as elements of residential landscaping.

The Town of Basalt sits at the confluence of the Frying Pan River and Roaring Fork River, and is accessed from Highway 82 via Two Rivers Road. This historic railroad town is characterized by high structure density, and mature vegetation lining narrow streets. Many homes in Basalt have been there for generations. The WUI neighborhoods of Cedar Drive, Seven Castles, Big Hat, Peachblow and Ruedi Shores are found along the Frying Pan Road towards Ruedi Reservoir heading east.

A wide variety of vegetation types are found in the planning area, including grass, sage, juniper, gambel-oak, serviceberry, aspen, lodgepole pine, and mixed conifer forests. North facing aspects in the Frying Pan River Valley have considerably higher fuel densities. Large transmission lines run below the community on its southern borders. Many homes in the area have wood siding, and most houses have conventional wood decks. Emergency responders will have to cross rated, and non-rated bridges over the Frying Pan River in order to access many homes in the community.

Risk

The overall risk to the Roaring Fork planning area is **HIGH**. The Lake Christine Fire in 2018 burned through the Roaring Fork Valley, heavily impacting parts of Basalt and El Jebel. This large wildfire, which spread to almost 13,000 acres over 28 days, destroyed three residences and several outbuildings. The rolling hills and drainages, along with light, flashy fuels such as grass, sage and oak, will act to spread fire quickly throughout the area. Under extreme weather and fuel moisture conditions, fire intensity could become a serious issue making containment and control difficult to establish and maintain. Many homes in the community lack adequate defensible space, and ignition resistant construction.

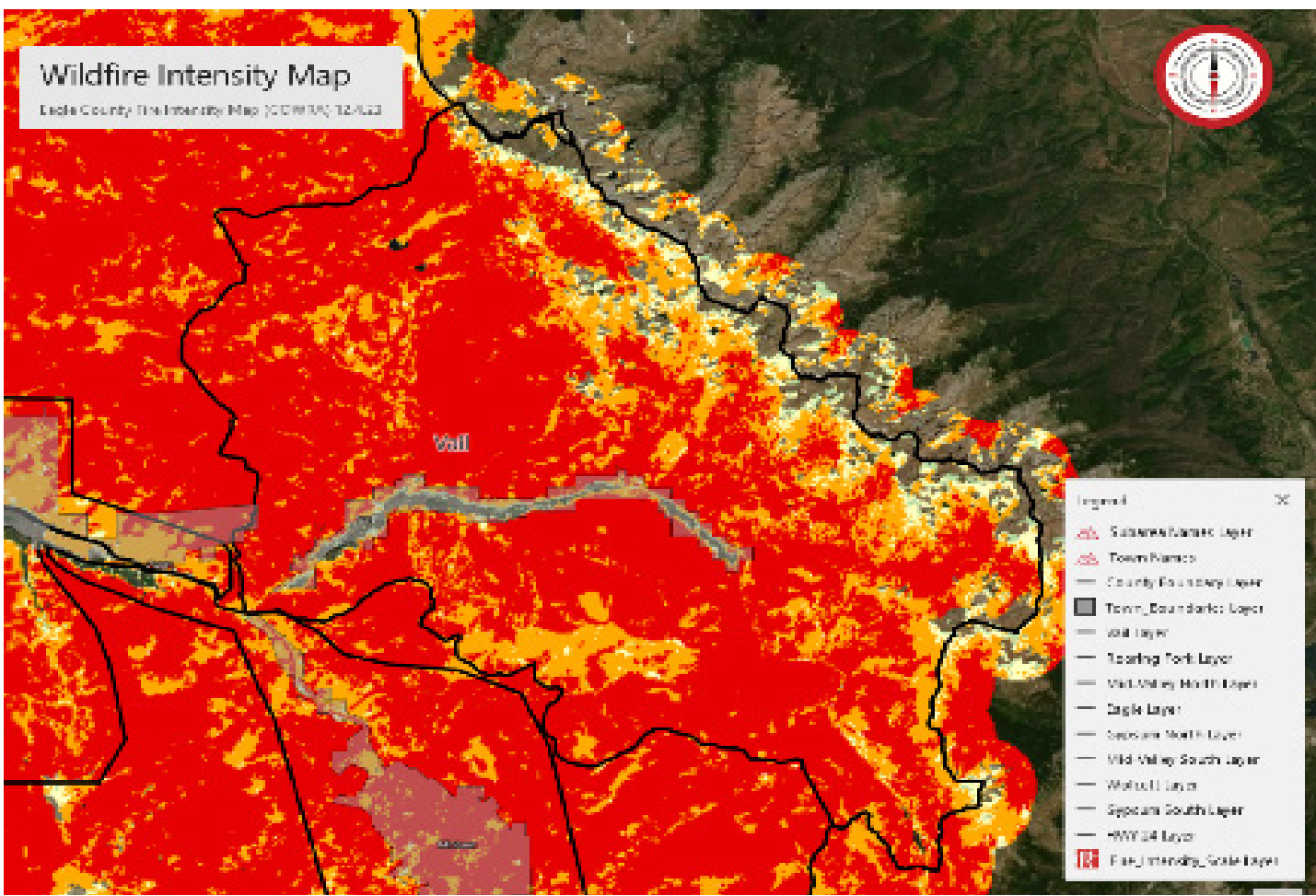
Appendix B - Sub-Area Risk Assessment Maps

Use this appendix as supplemental information regarding the maps in the following pages. Each letter references a sub-area and each number references a map type.

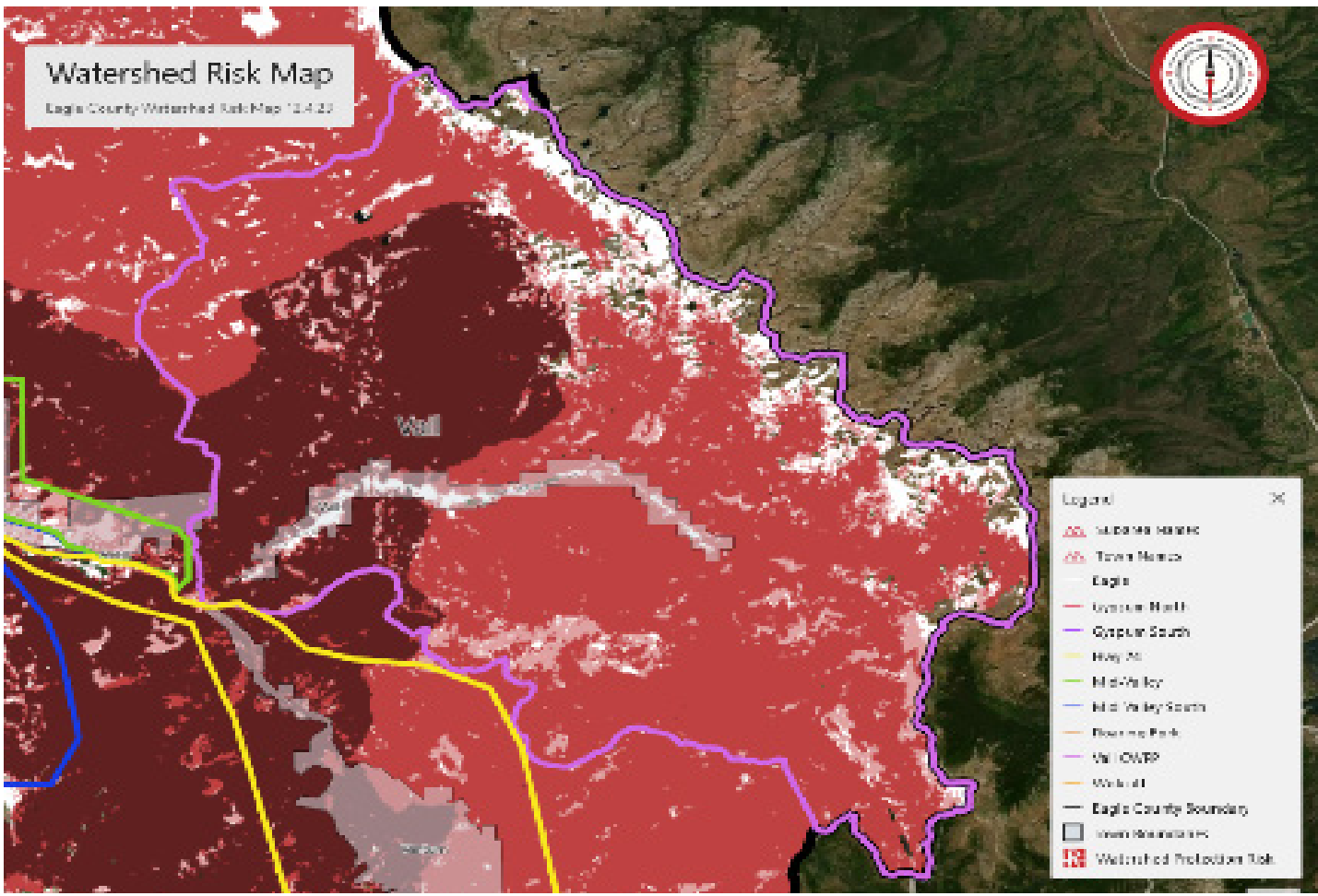
Letter Notation	Map Location
A.1-A.4	Vail
B.1-B.4	Highway 24
C.1-C.4	Mid-Valley North
D.1-D.4	Mid-Valley South
E.1-E.4	Wolcott
F.1-F.4	Eagle
G.1-G.4	Gypsum North
H.1-H.4	Gypsum South
I.1-I.4	Roaring Fork

Number	Map Type	Map Description
A - I .1	Wildfire Intensity Map	The fire intensity map shows the potential fire behavior across the planning area. The data is derived from the Colorado Wildfire Risk Assessment (CO-WRA)
A - I .2	Watershed Risk Map	A measure of the risk to Watershed Protection Areas based on the potential negative impacts from wildfire. The data is derived from the Colorado Wildfire Risk Assessment (CO-WRA)
A - I .3	Wildland Urban Interface Risk Map (WUI)	The Wildland-Urban Interface (WUI) Risk Index layer is a rating of the potential impact of wildfire on people and their homes. The data is derived from the Colorado Wildfire Risk Assessment (CO-WRA)
A - I .4	Suppression Difficulty Index Map (SDI)	Reflects the difficulty to suppress a fire given the terrain and vegetation conditions that may impact ground resource access and capabilities. The data is derived from the Colorado Wildfire Risk Assessment (CO-WRA).

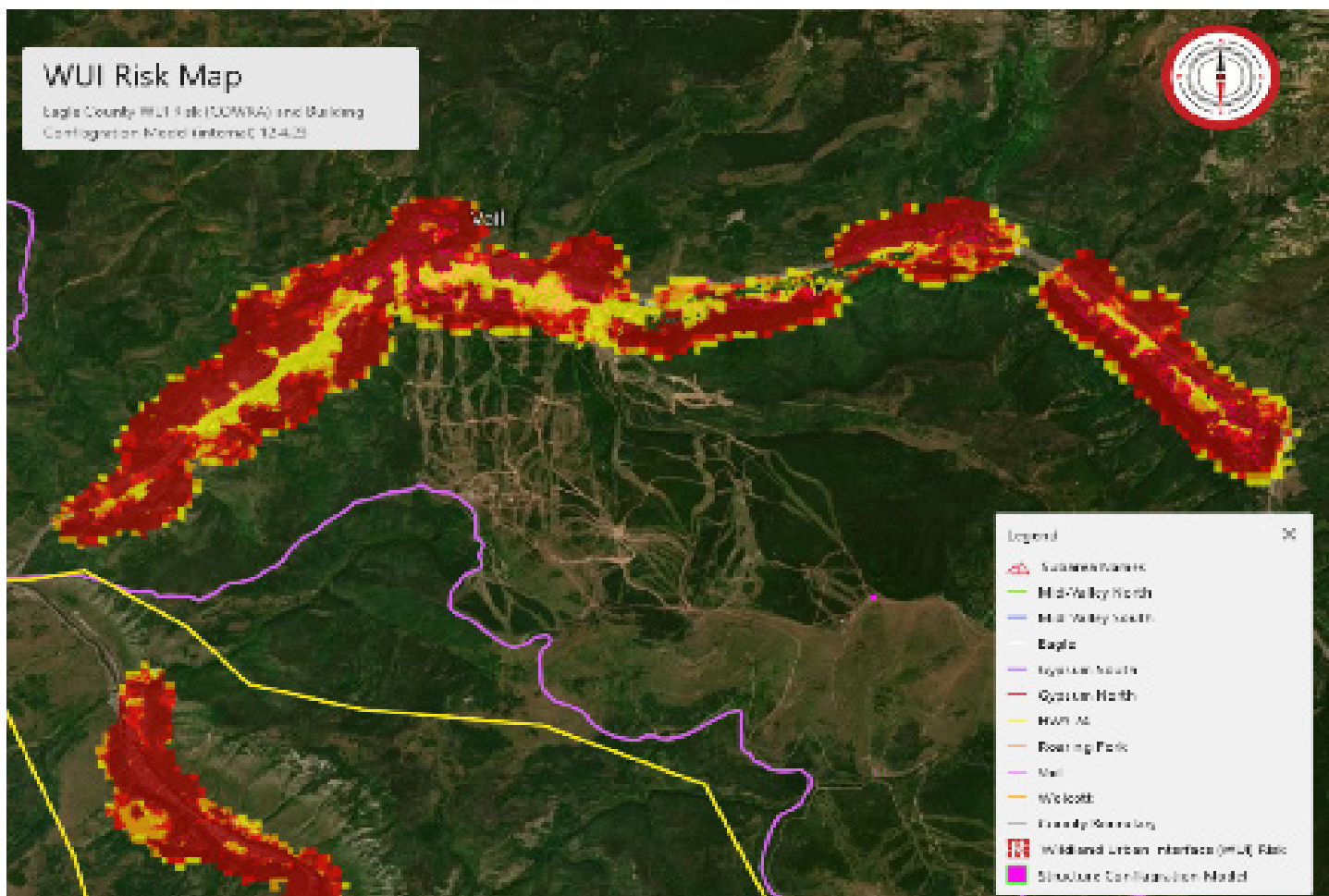
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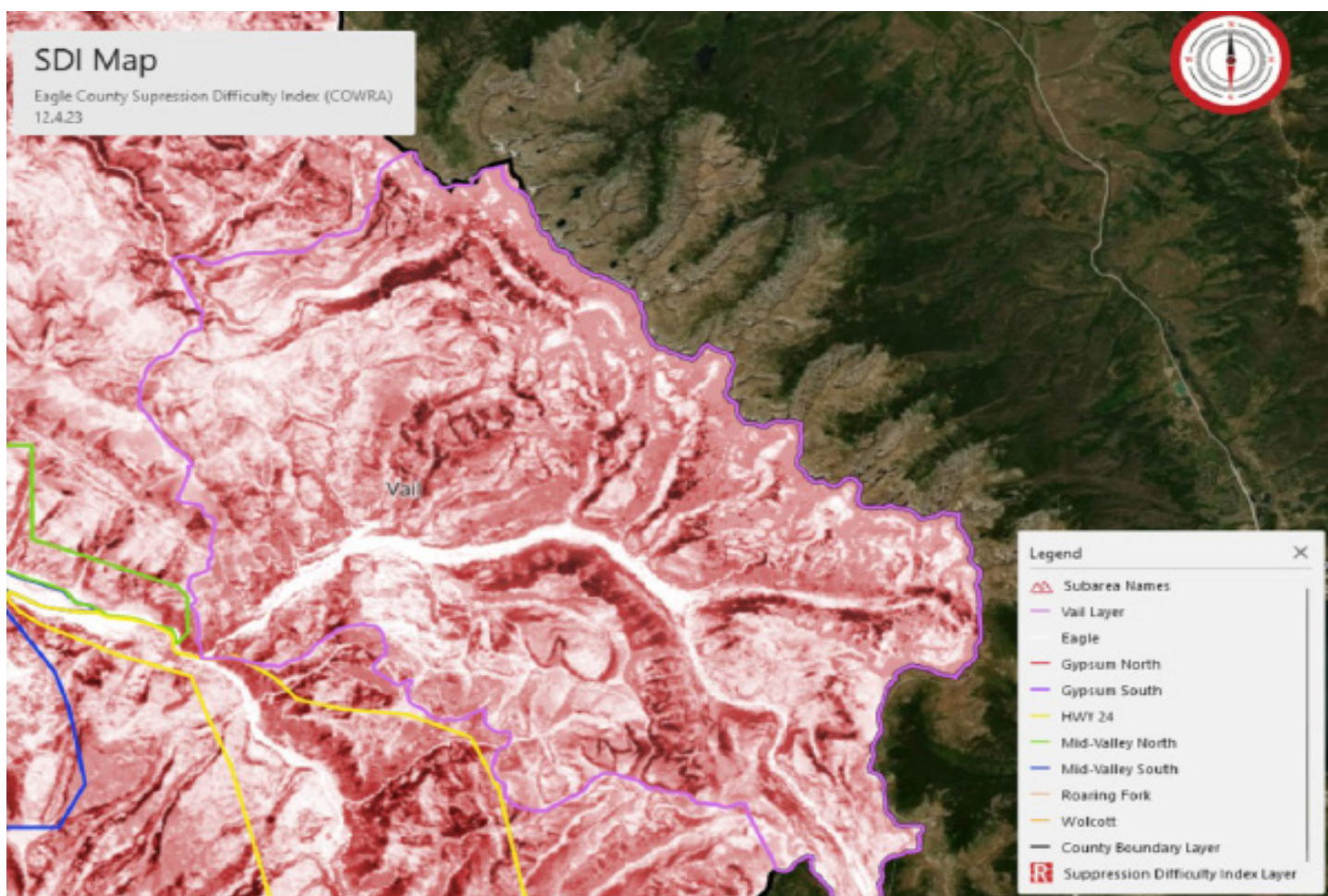
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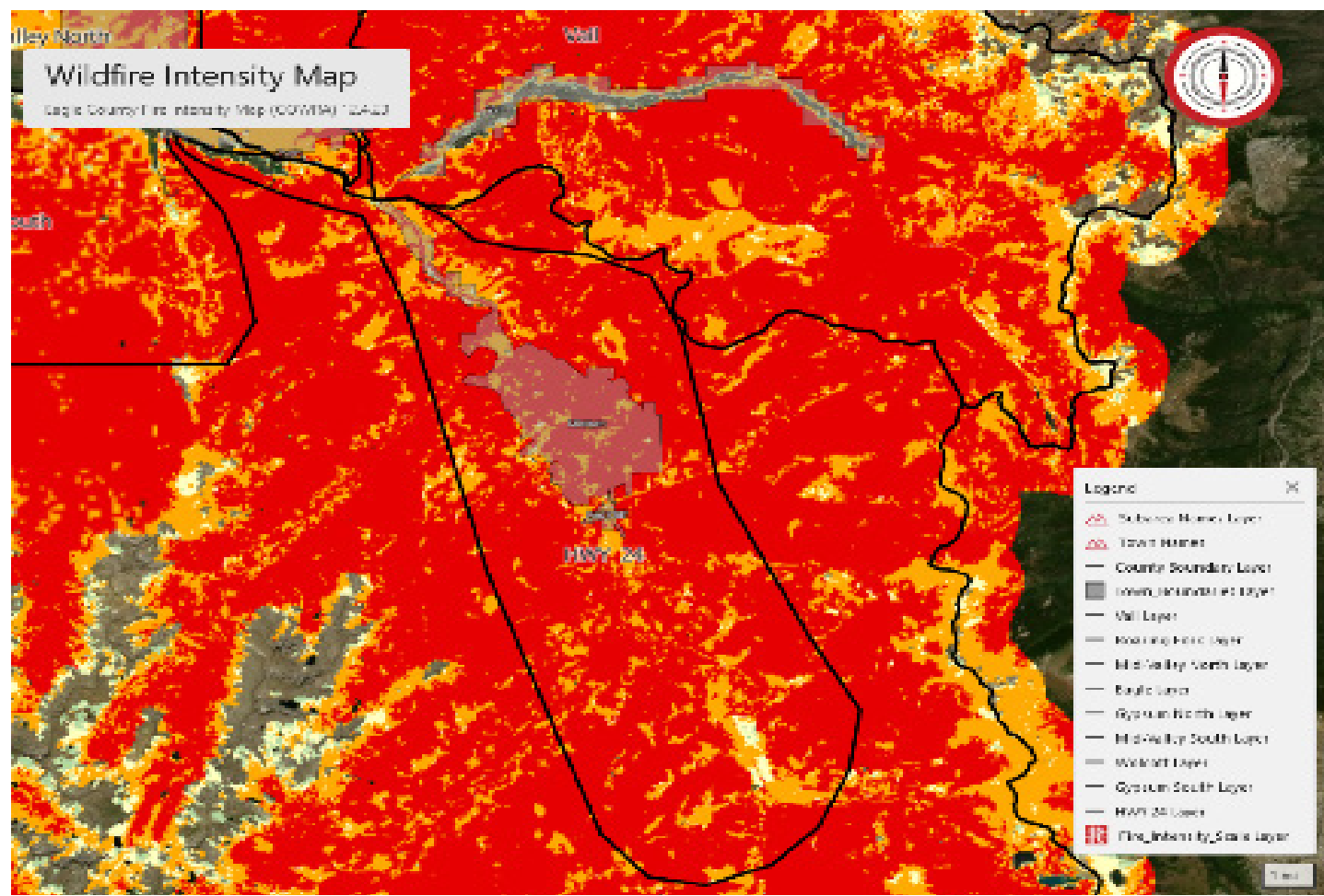
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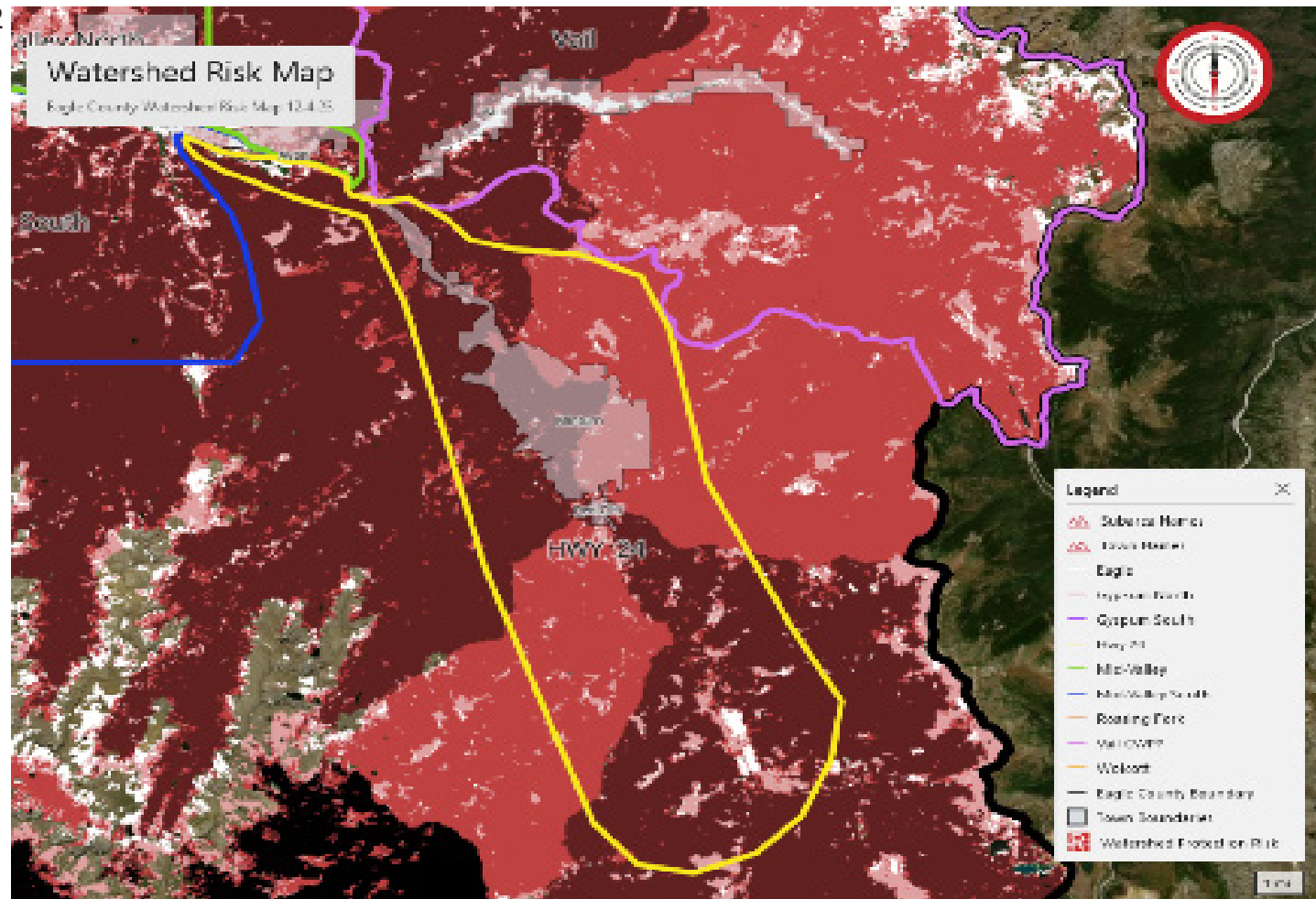
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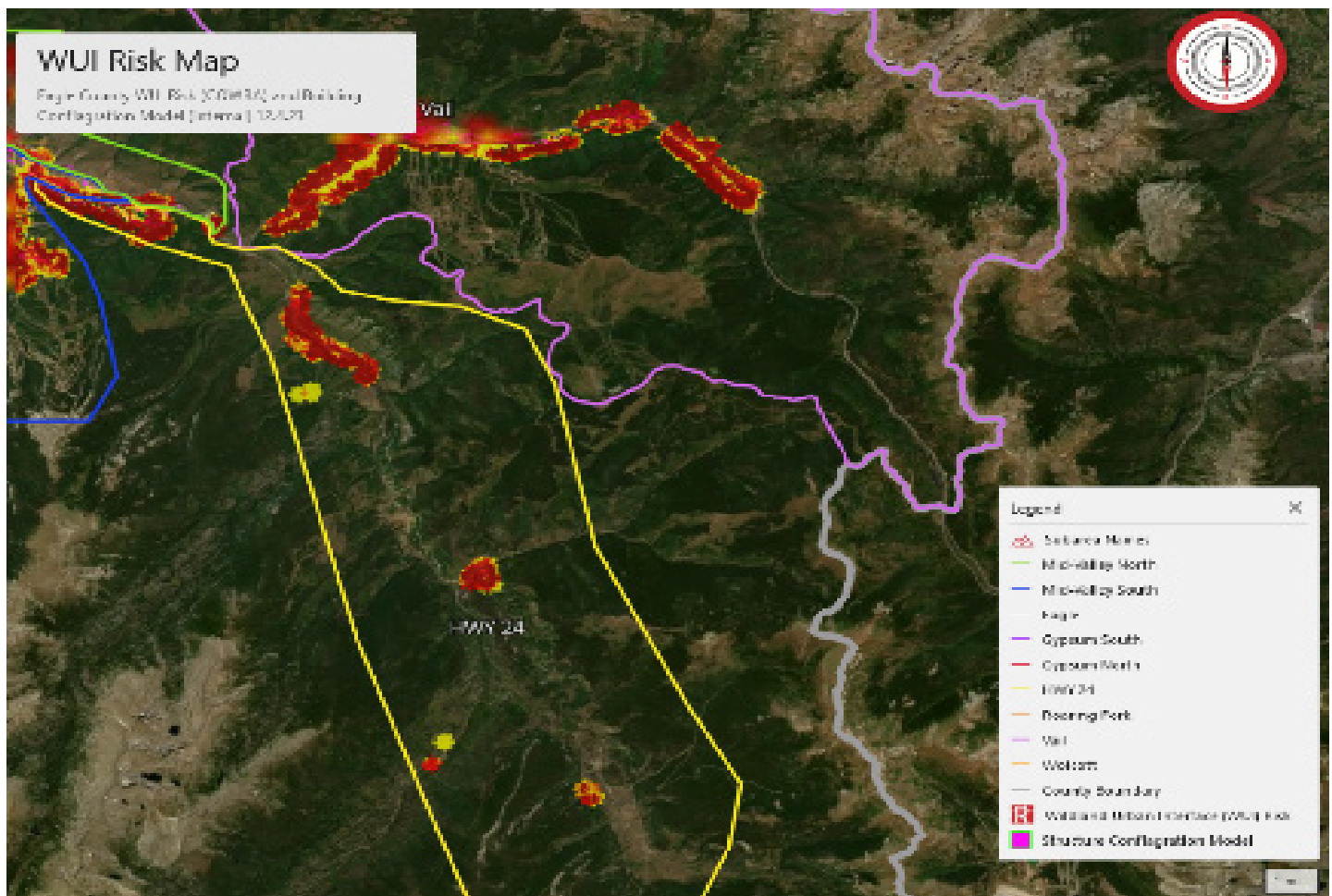
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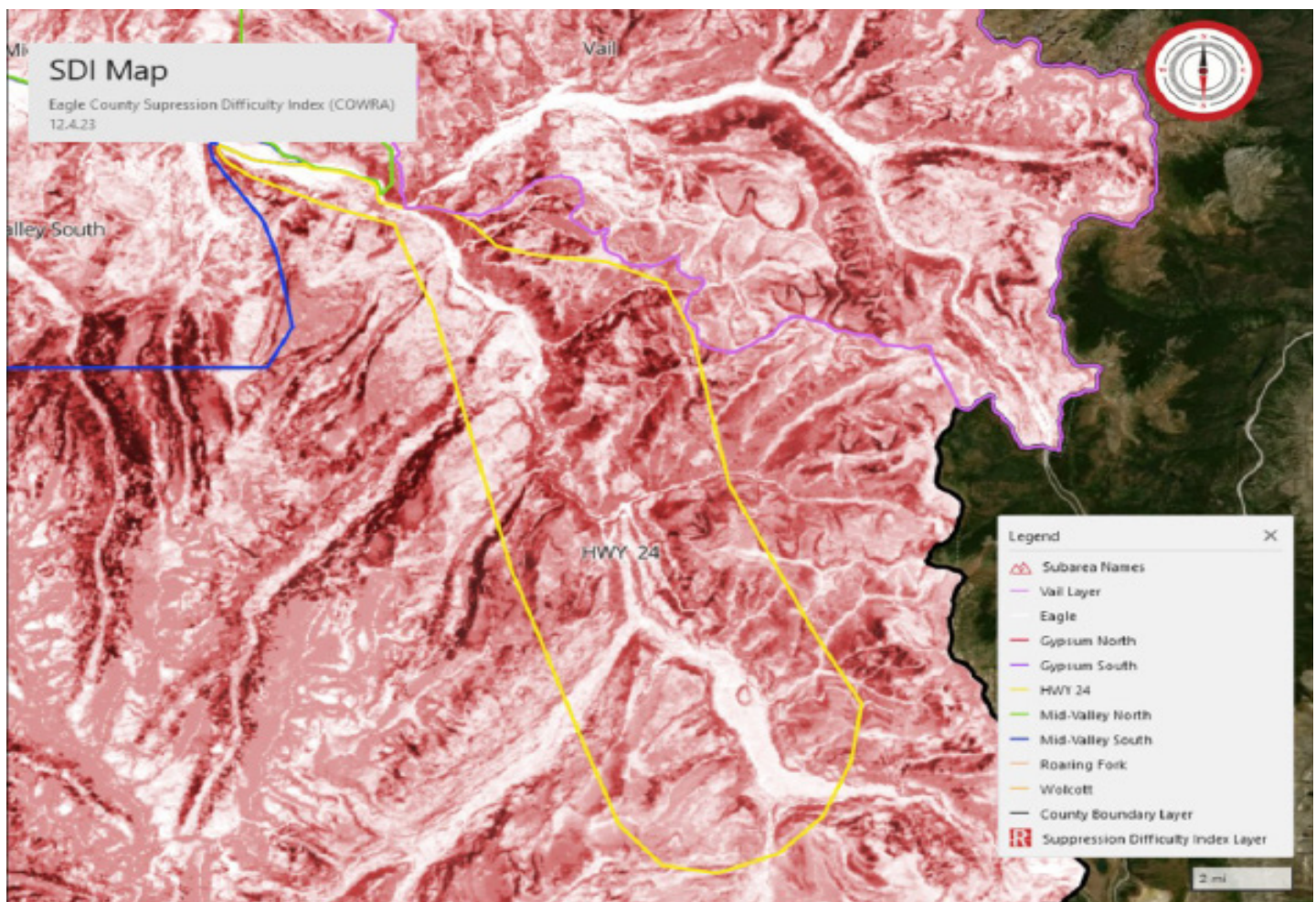
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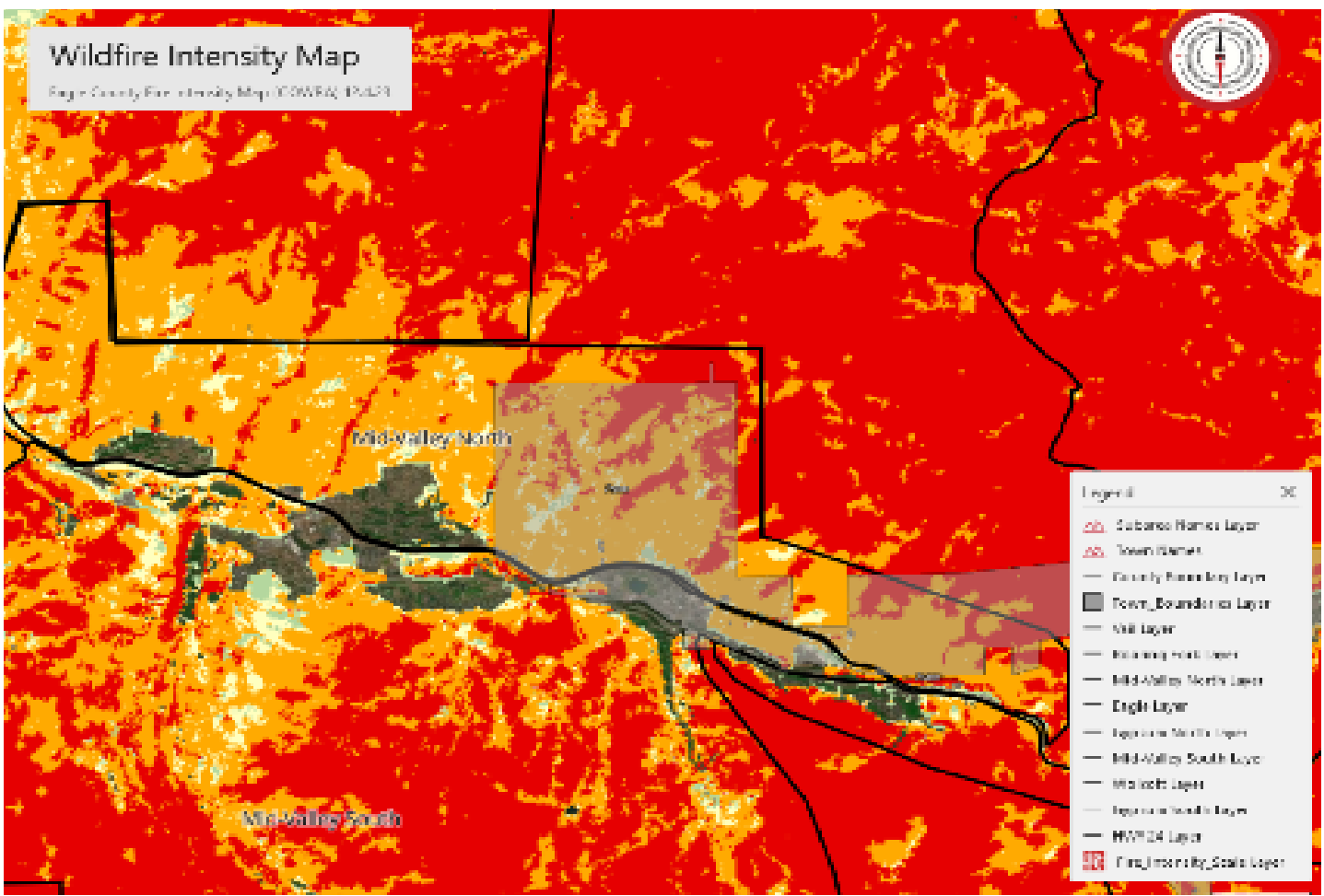
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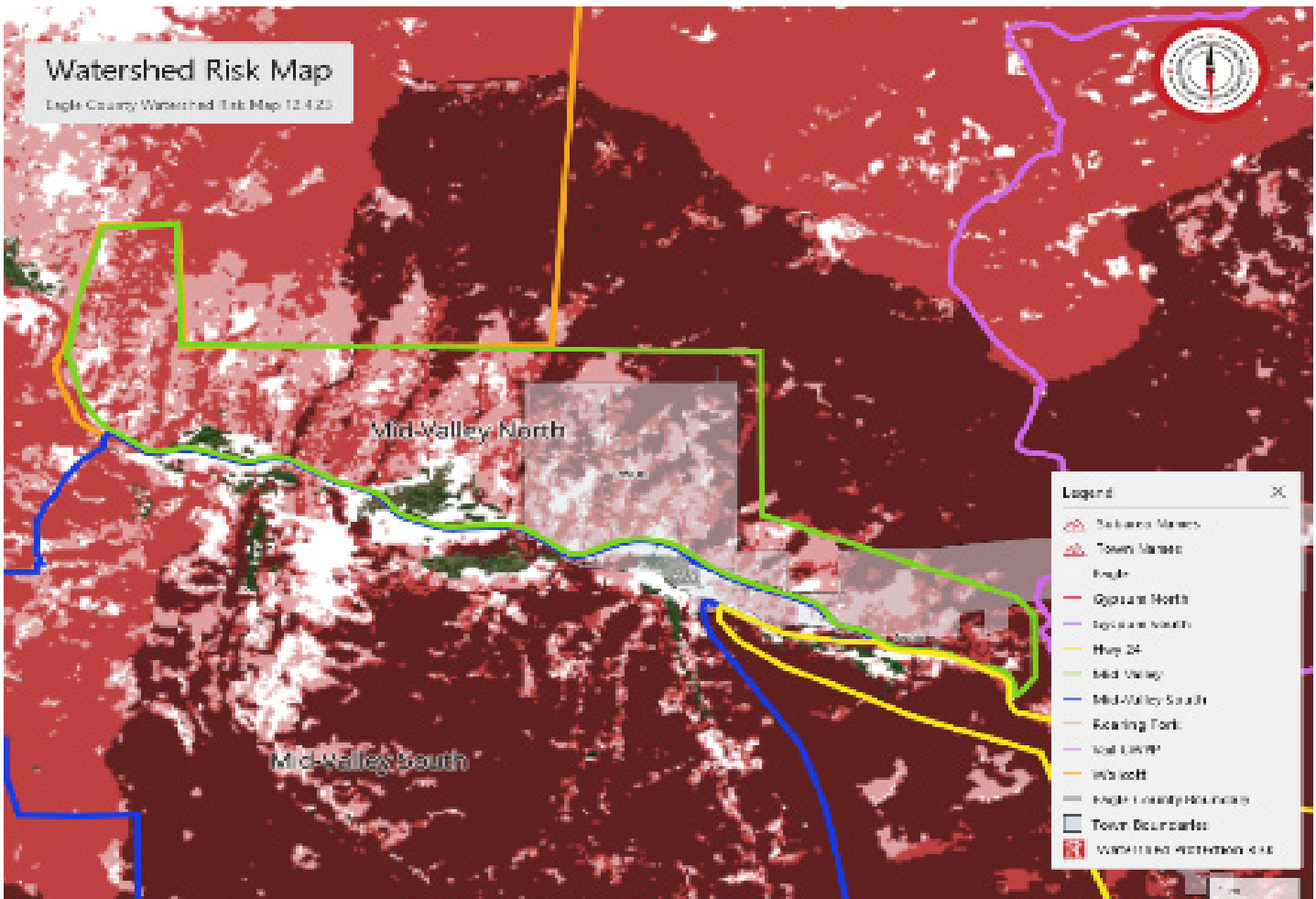
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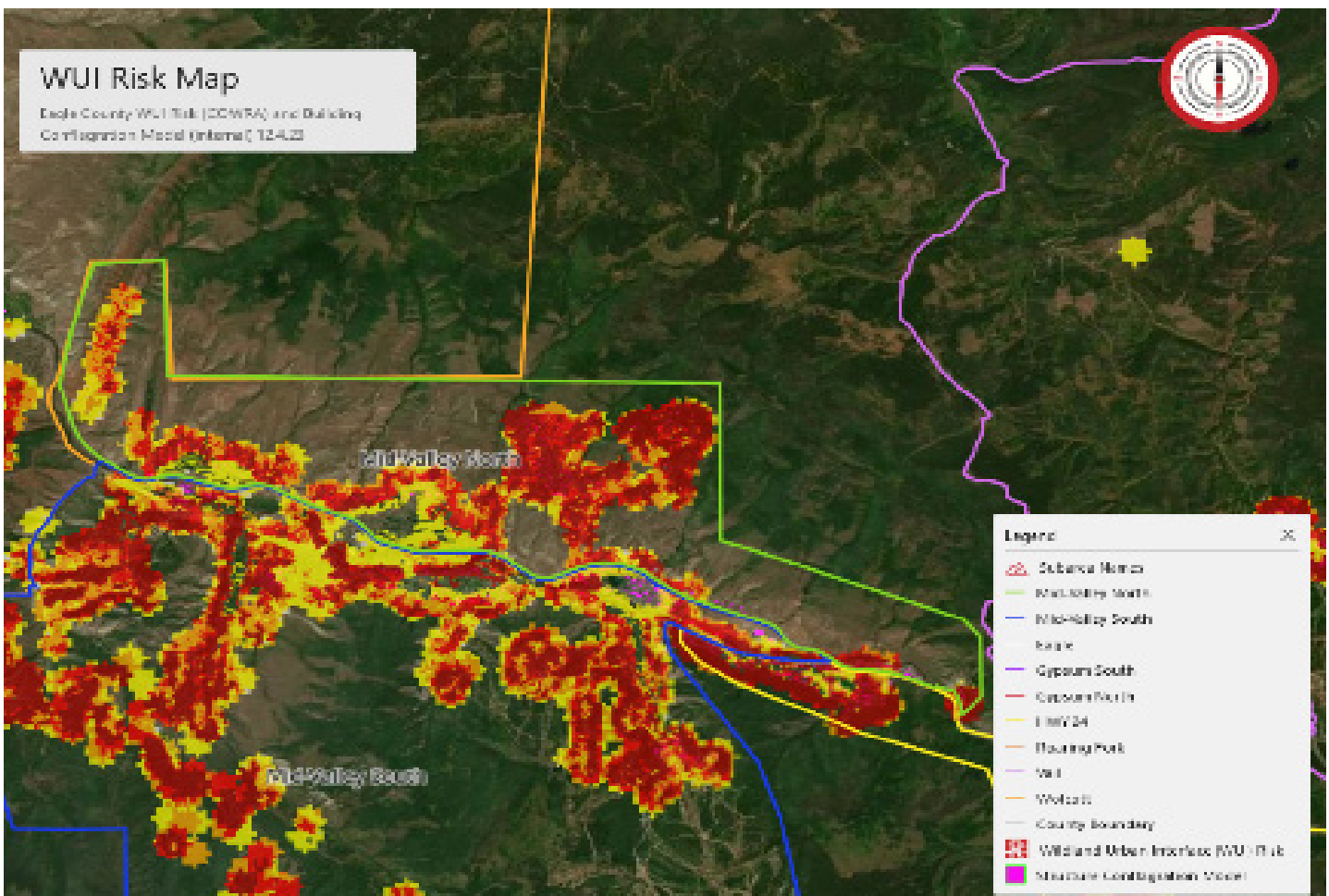
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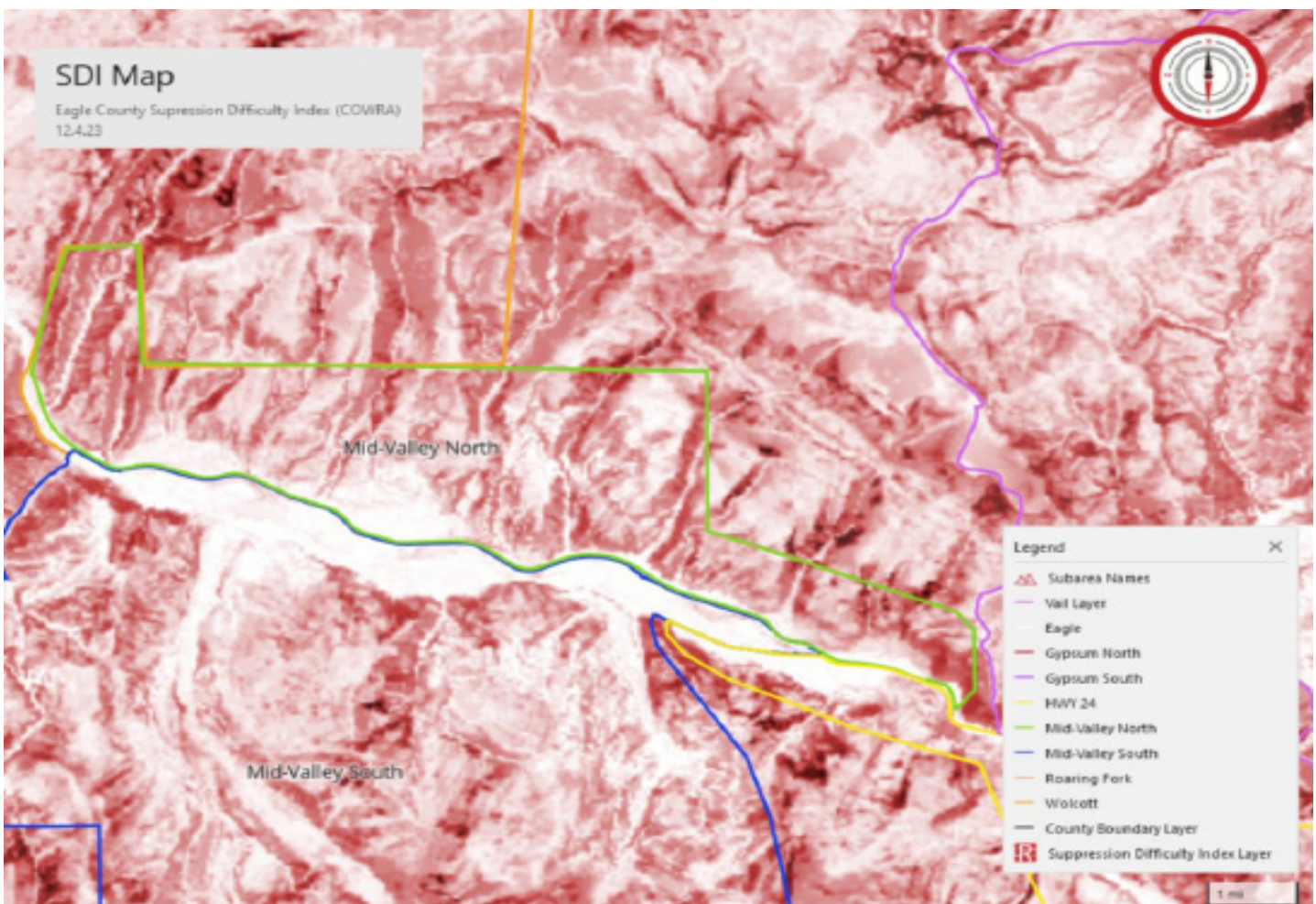
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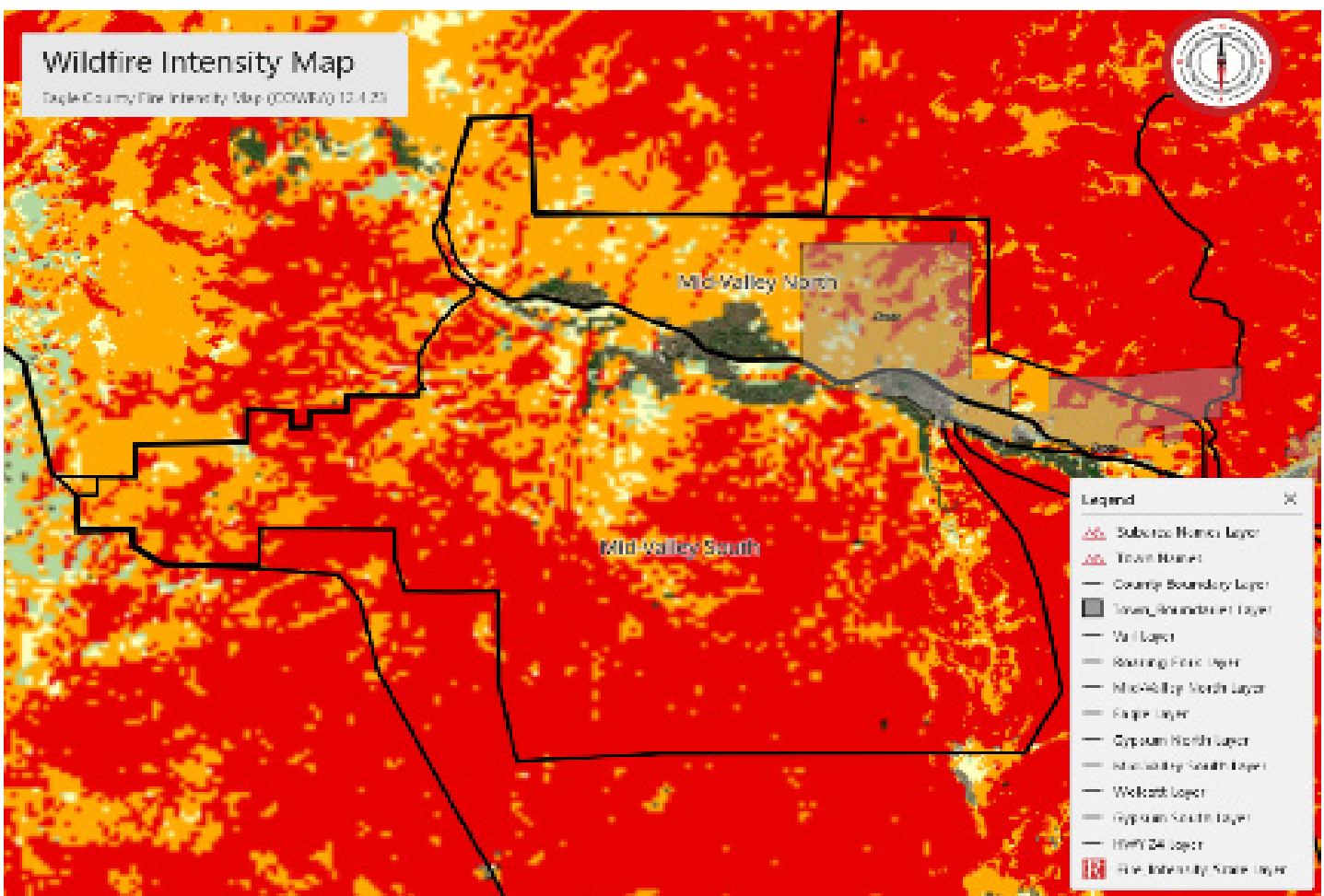
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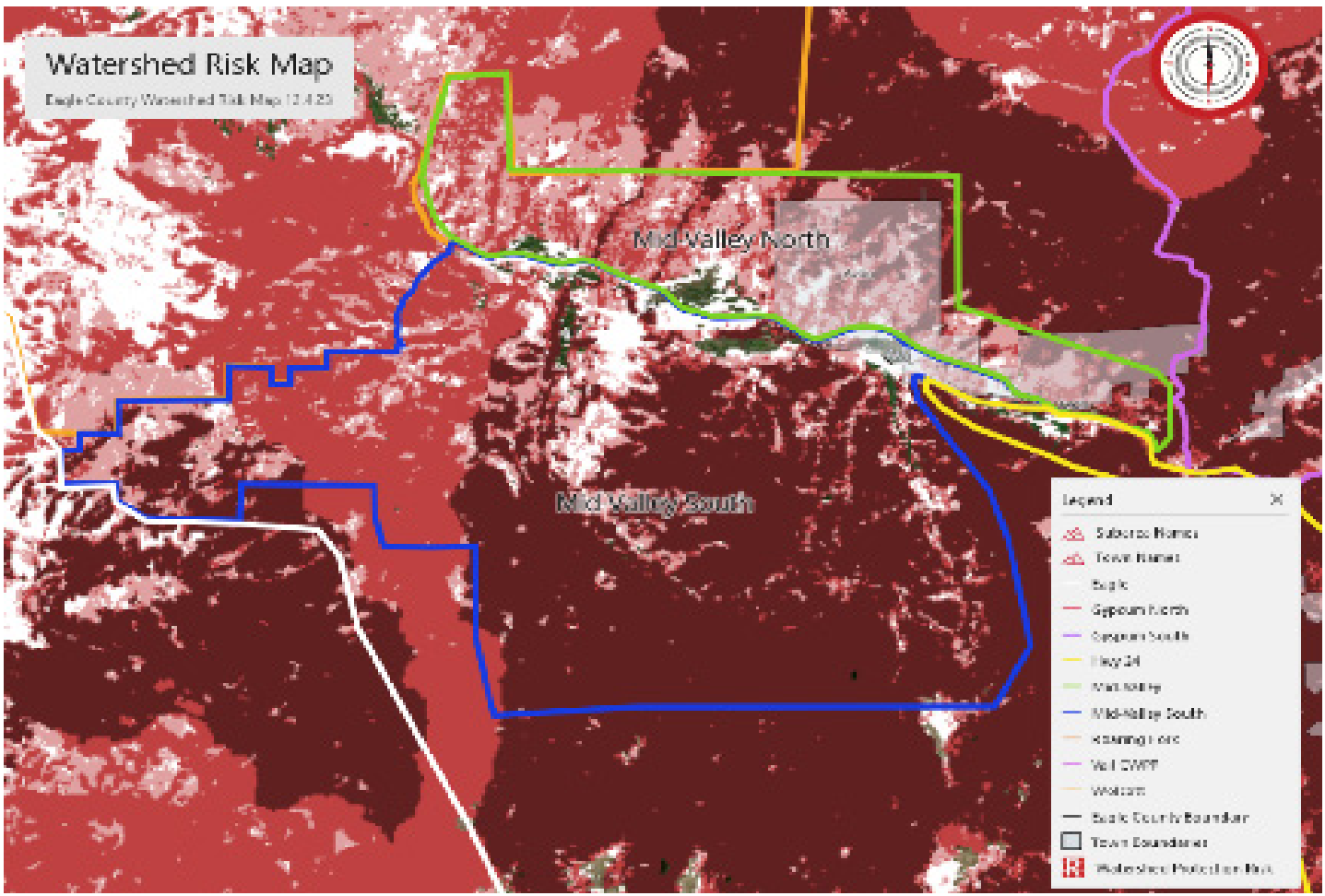
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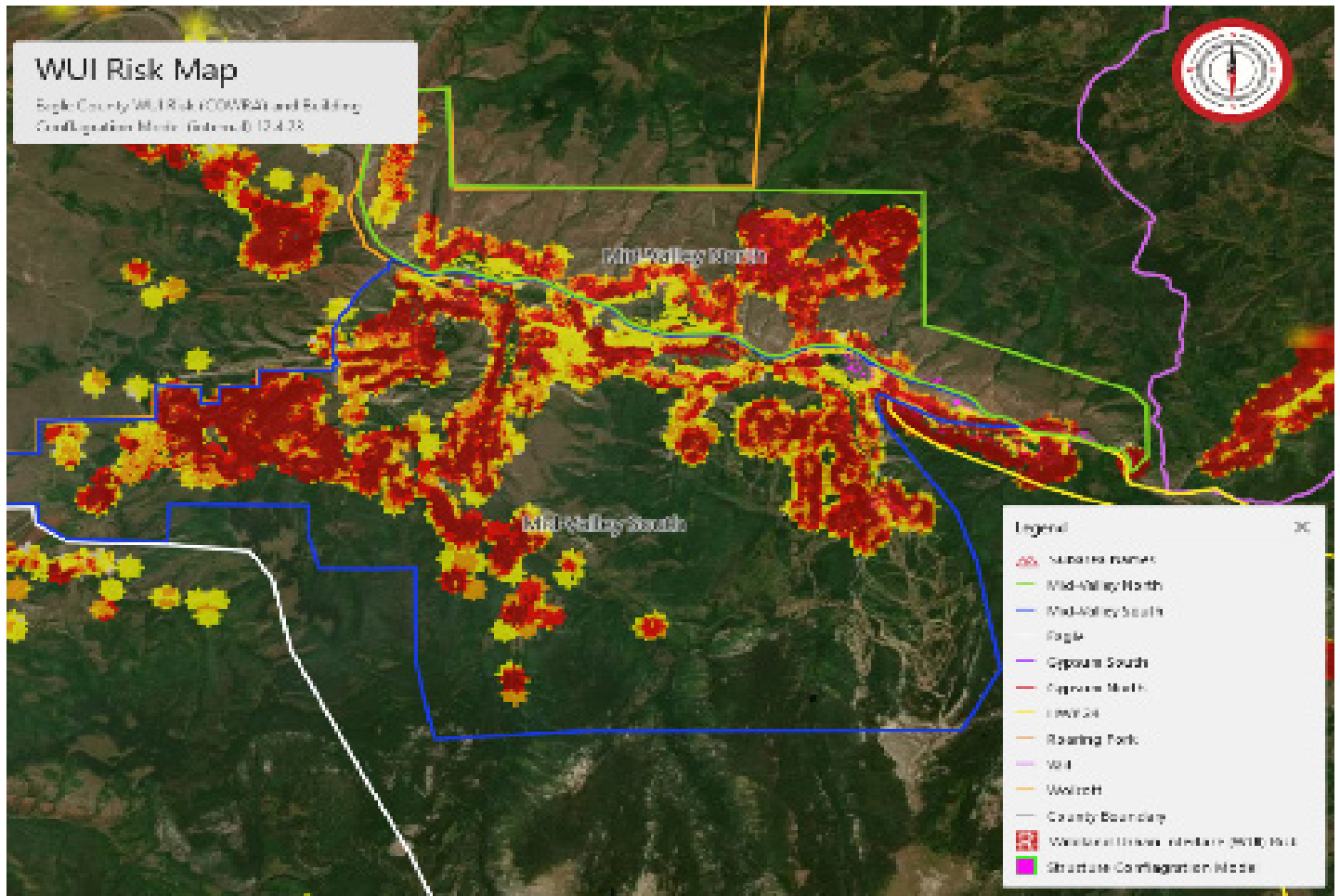
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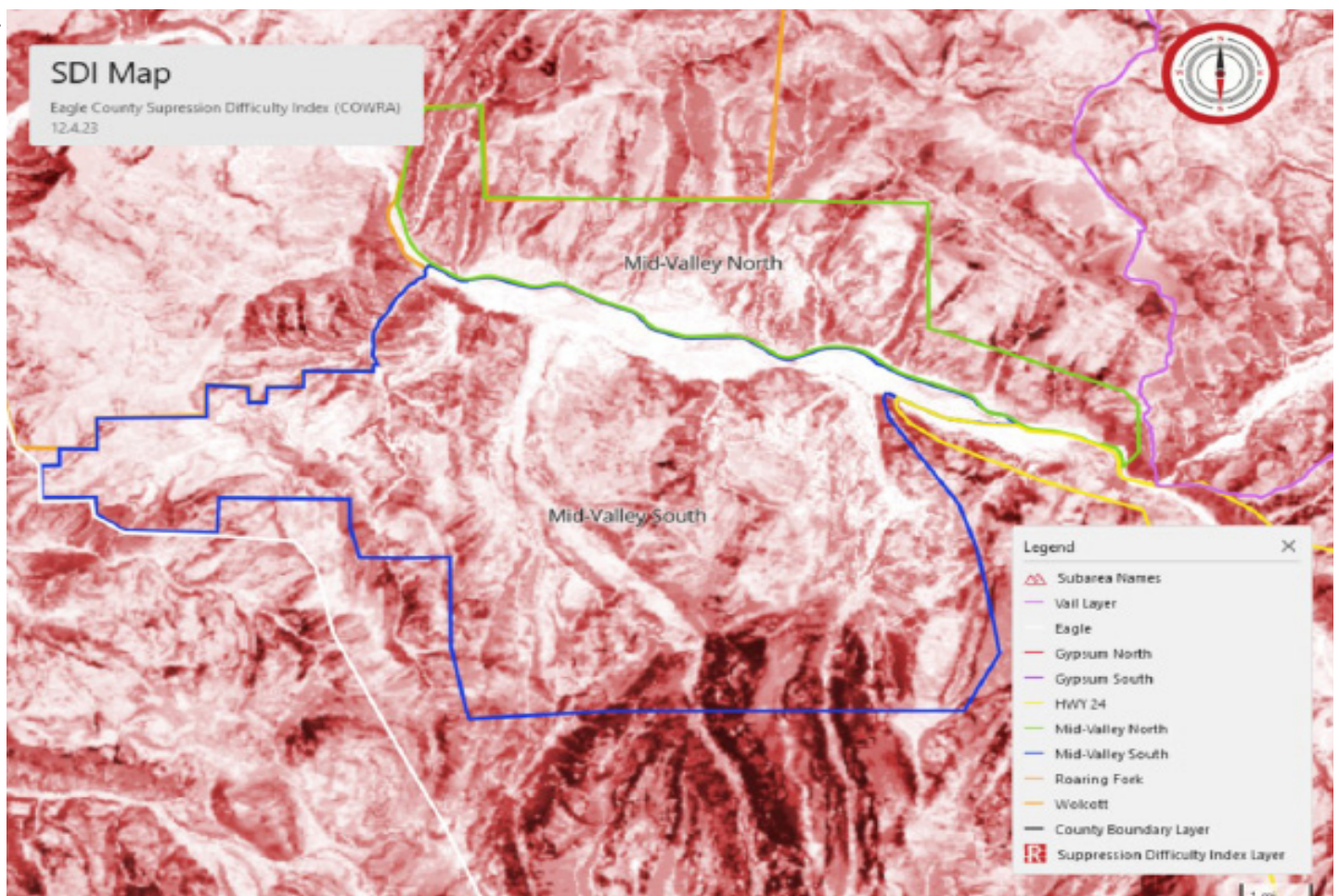
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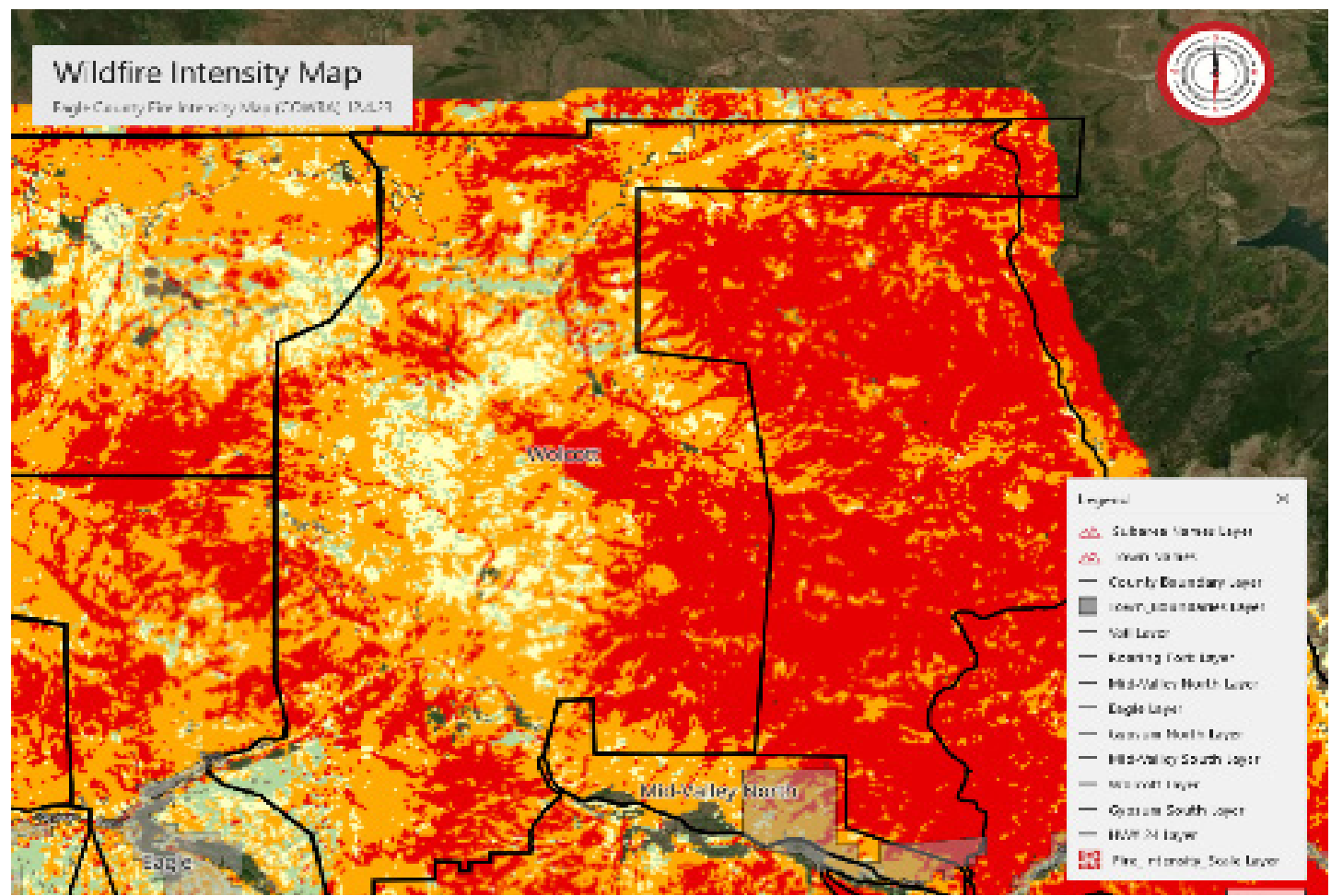
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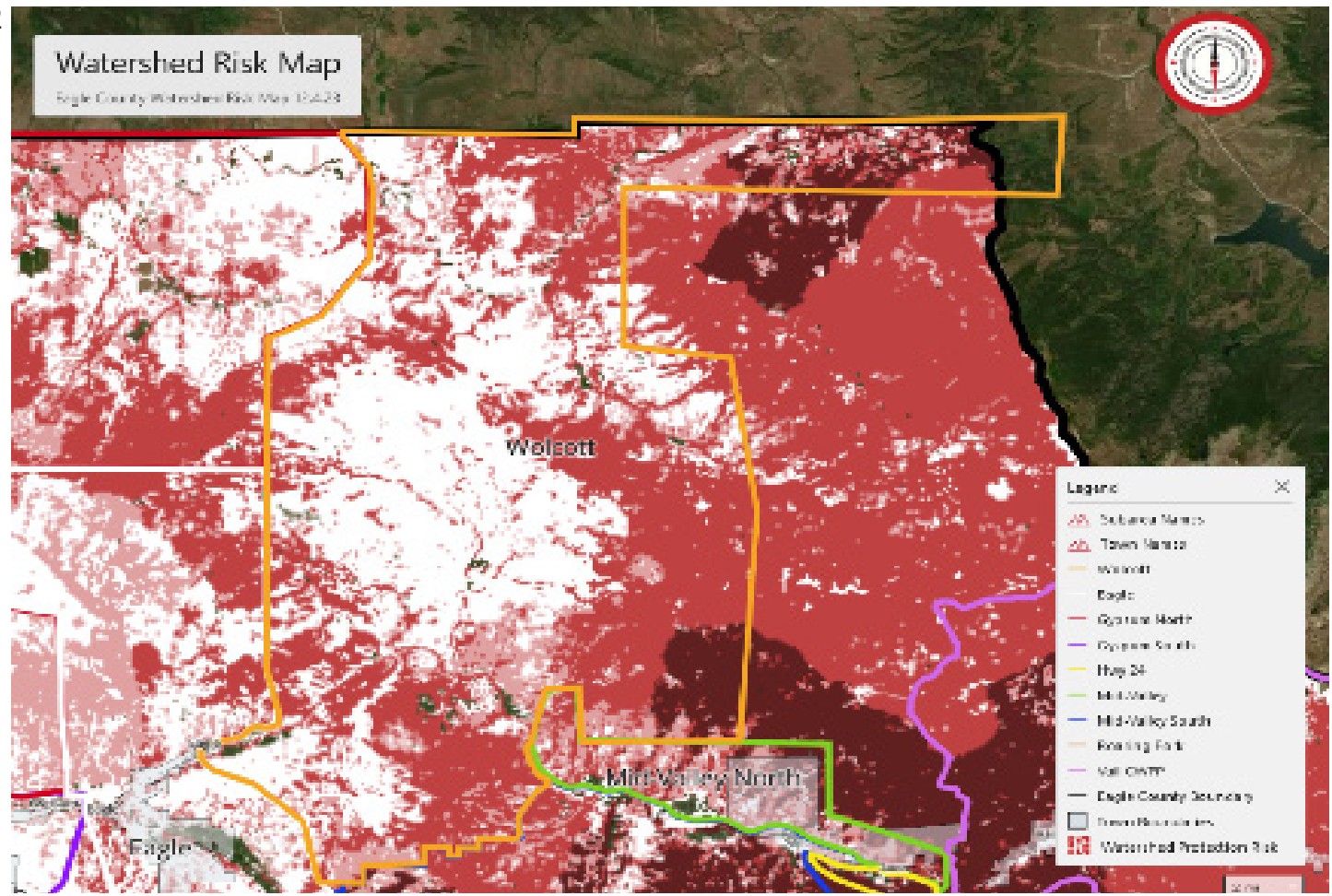
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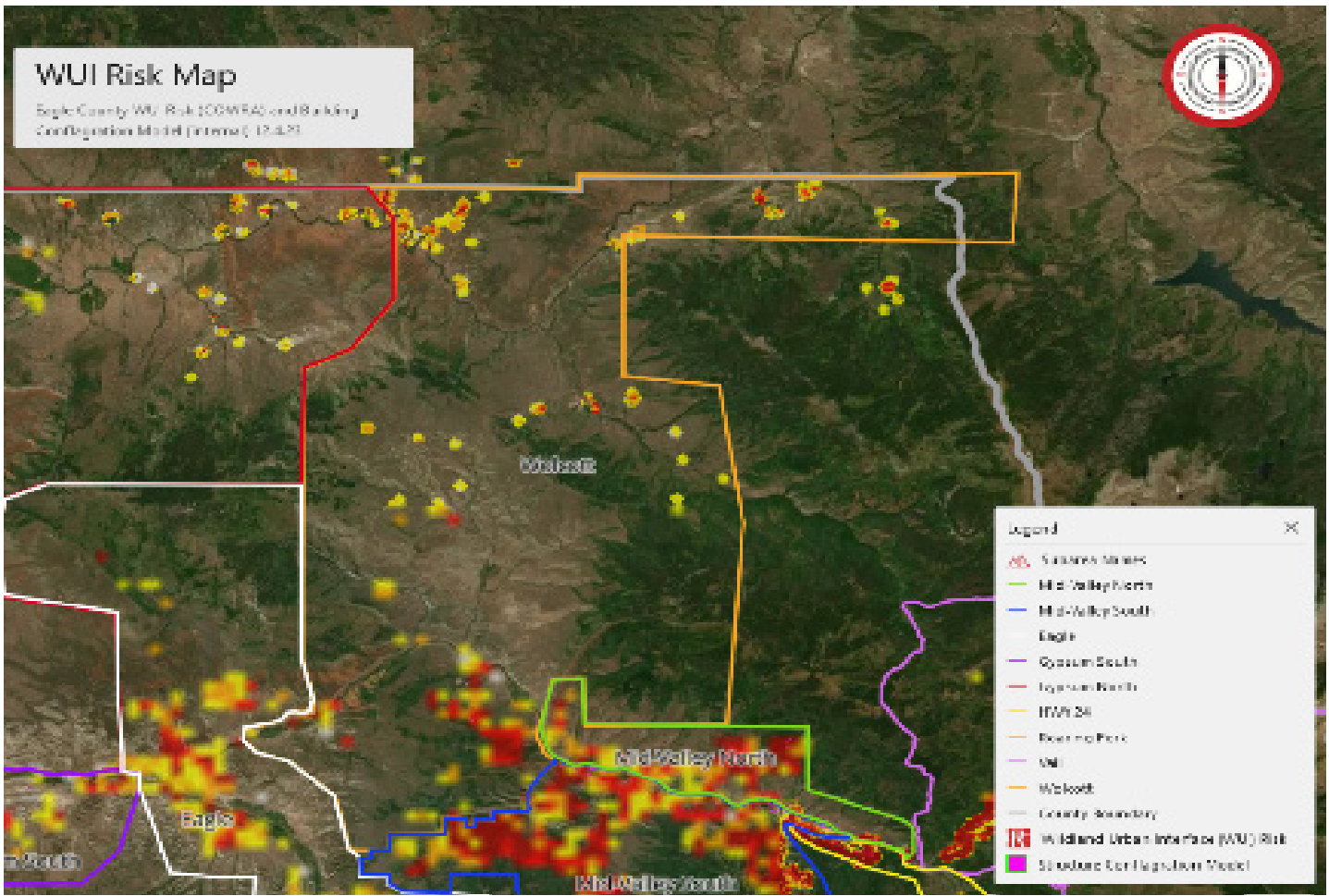
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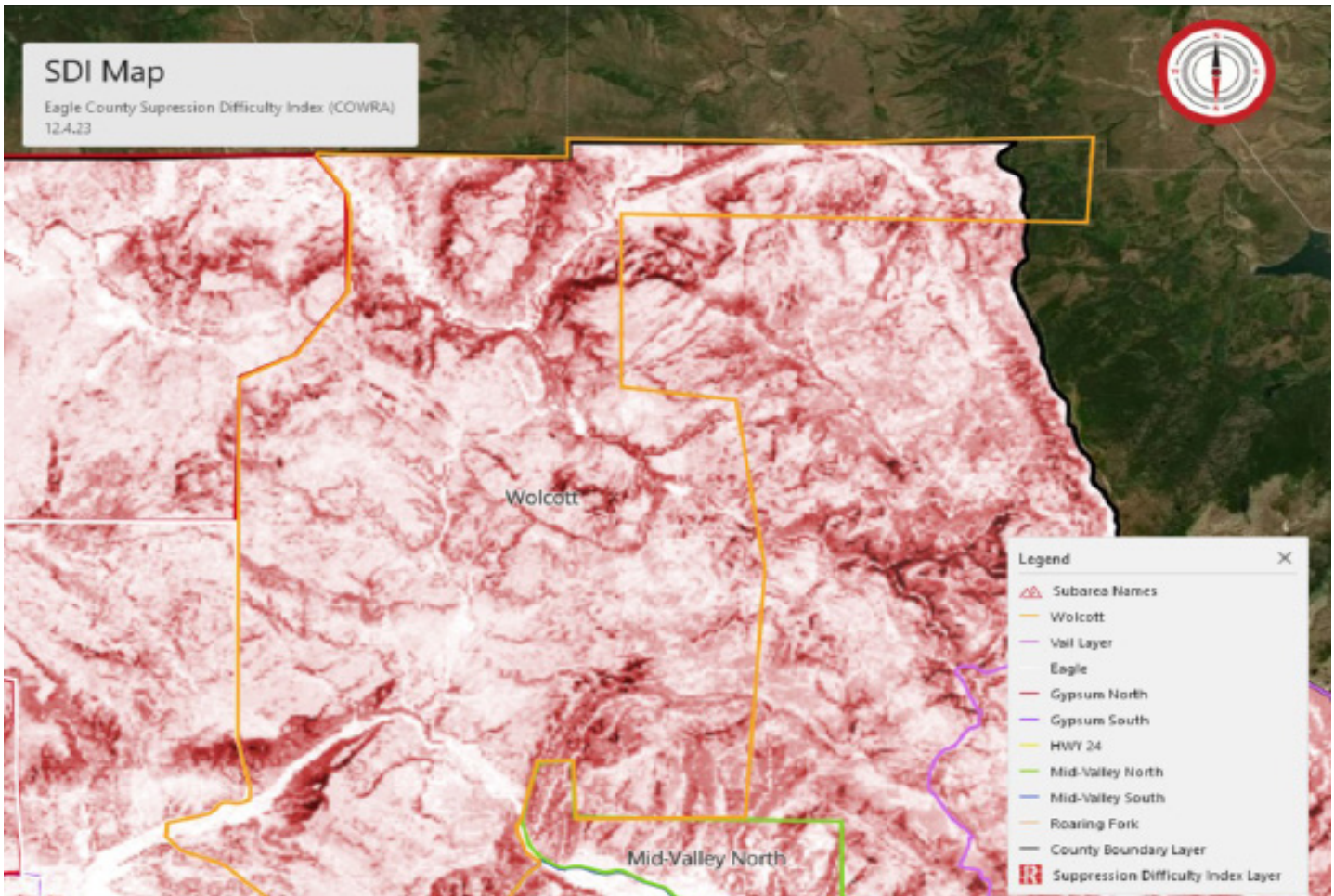
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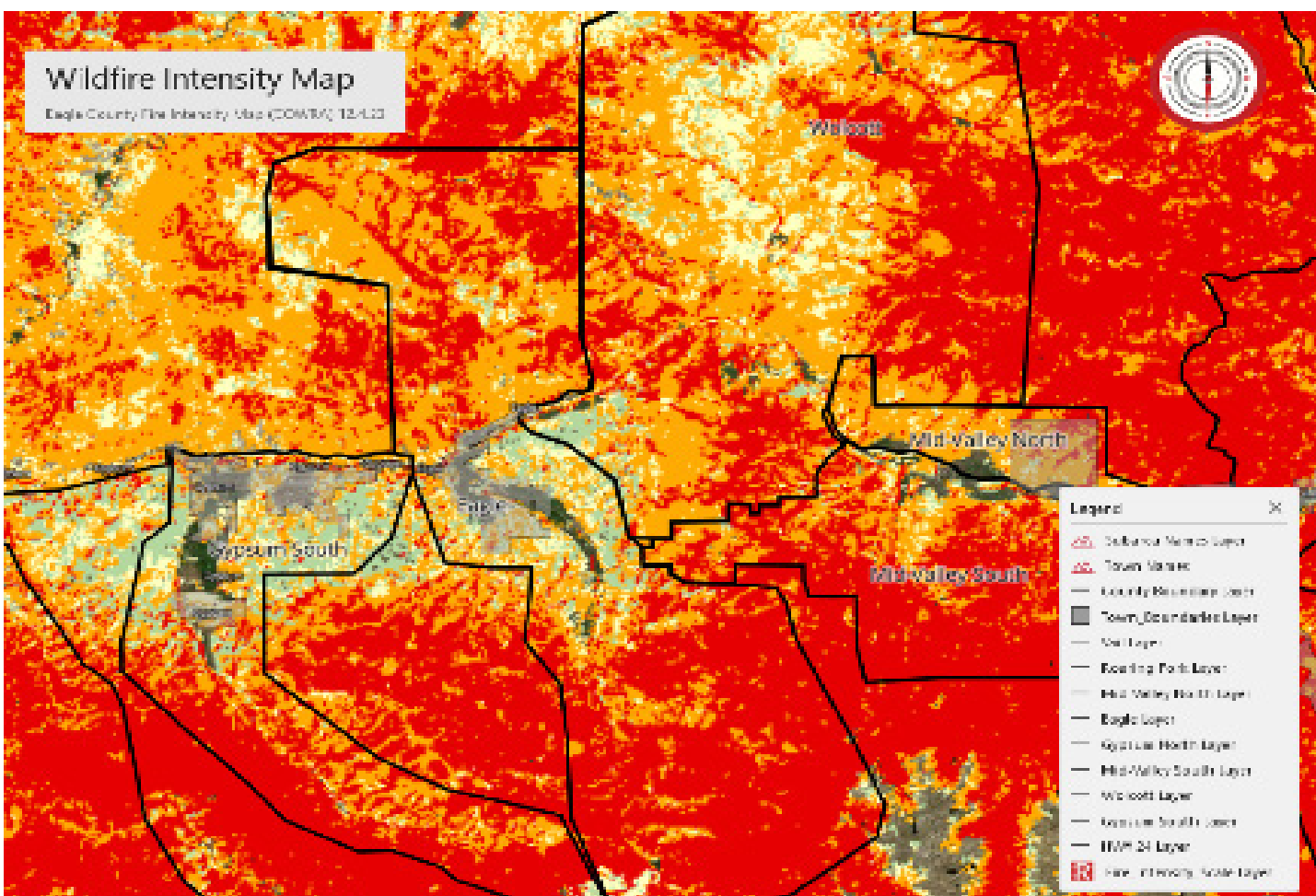
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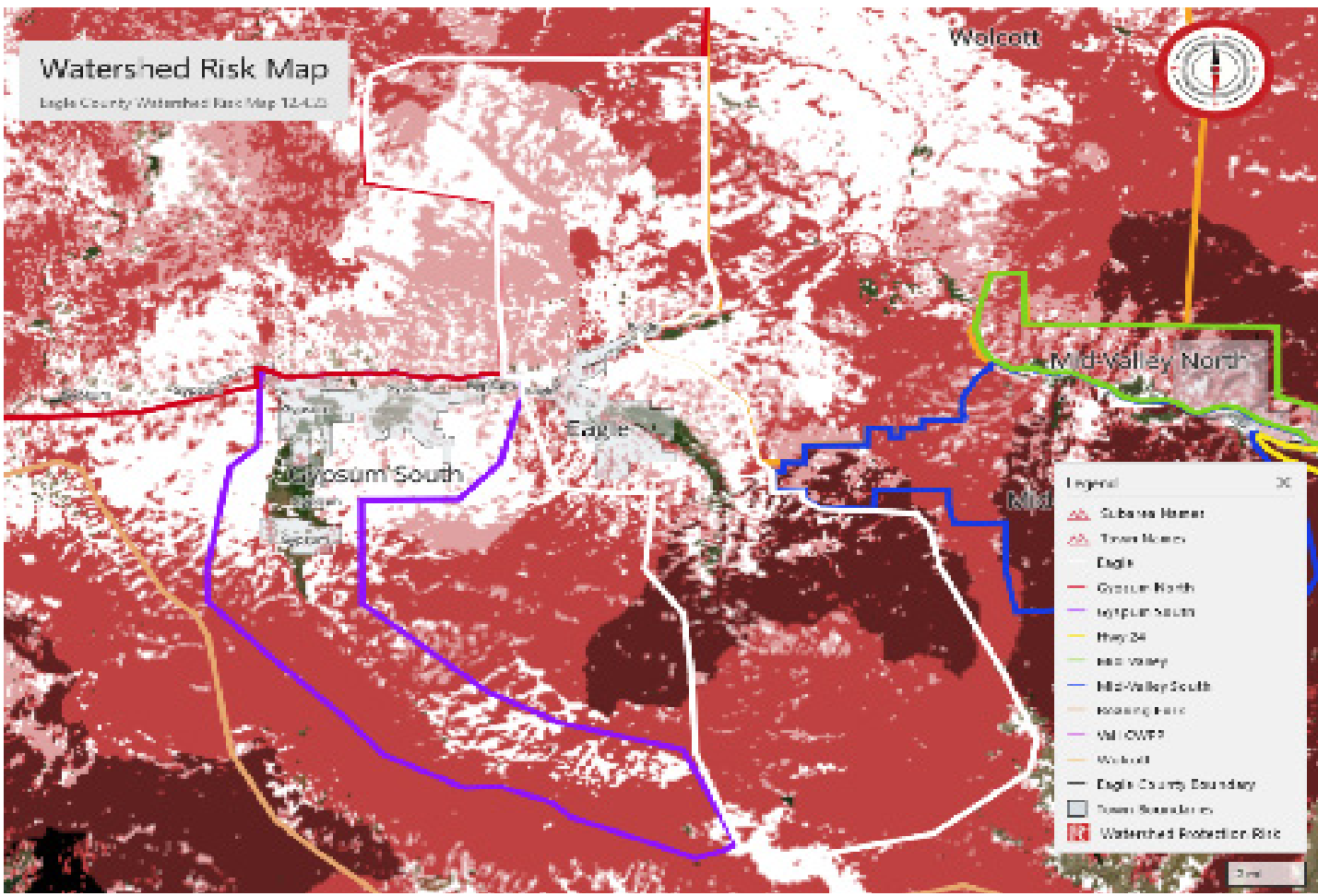
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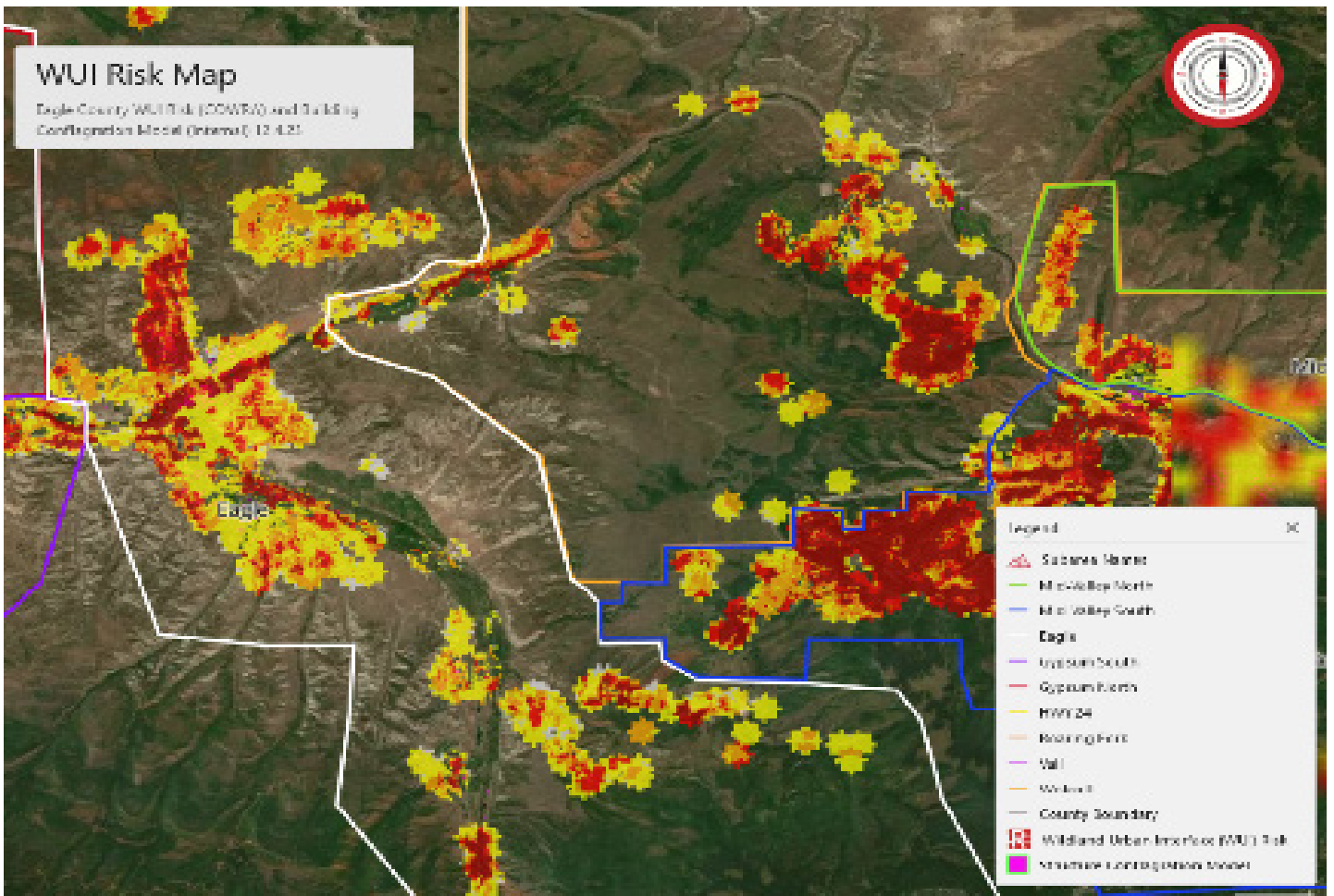
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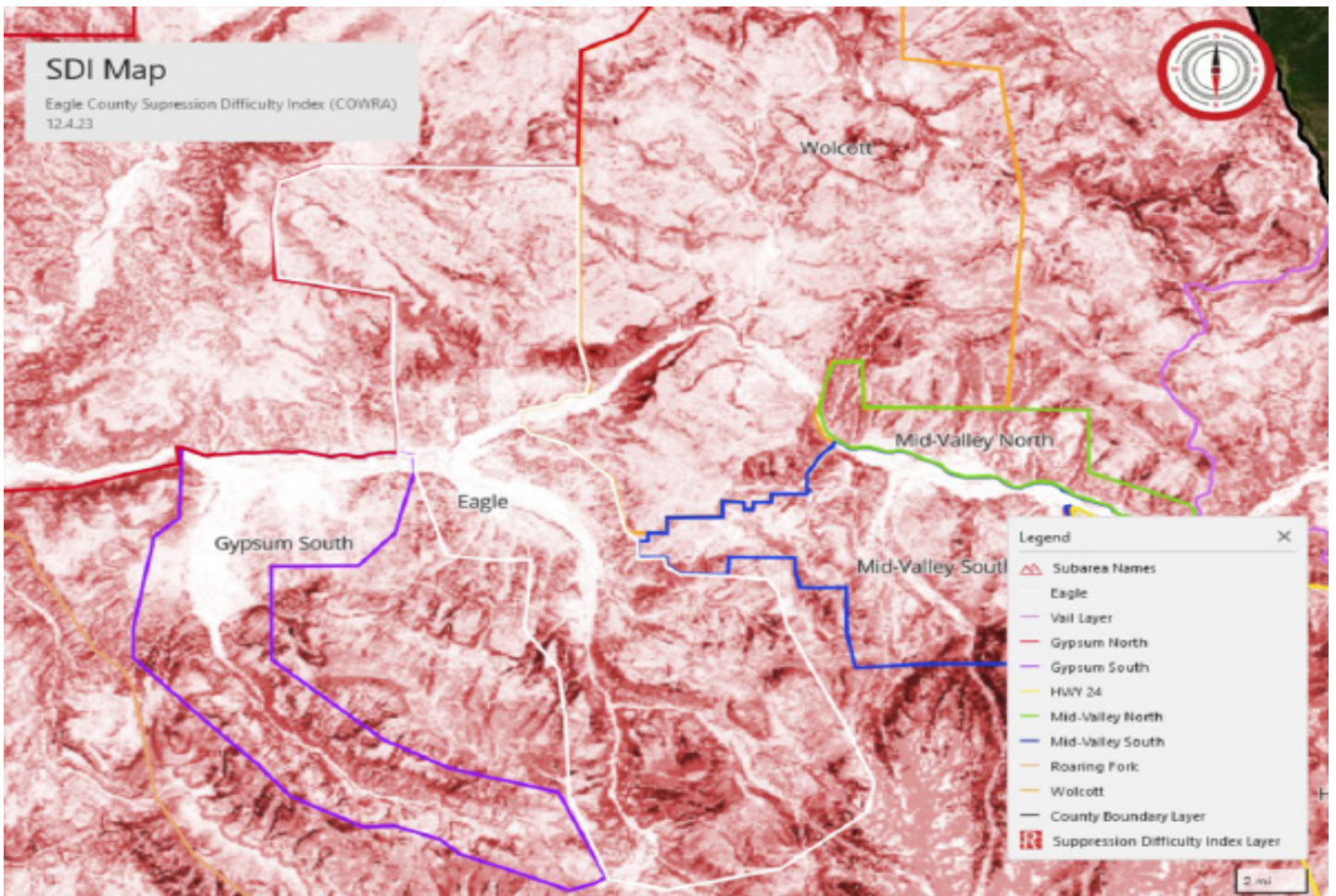
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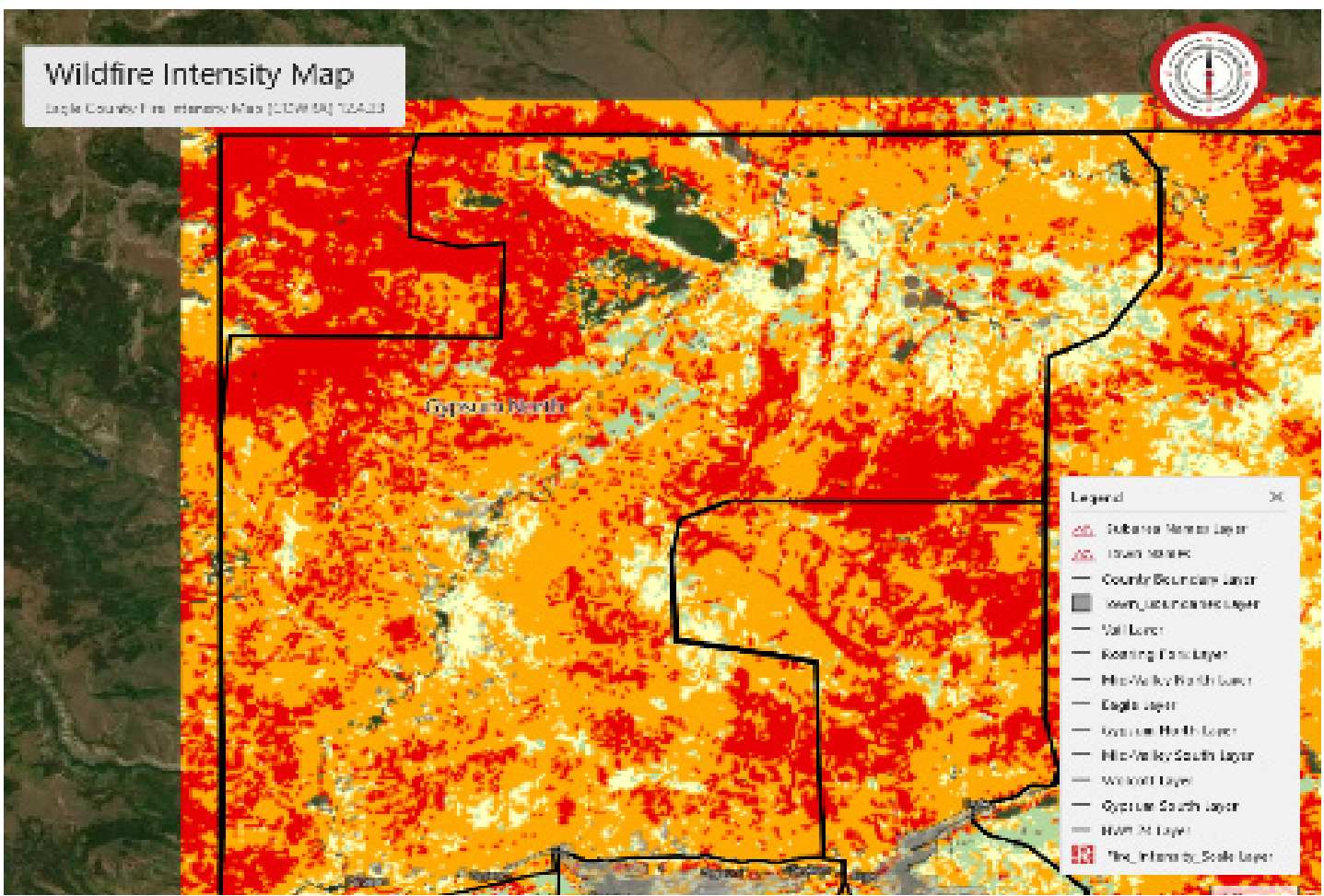
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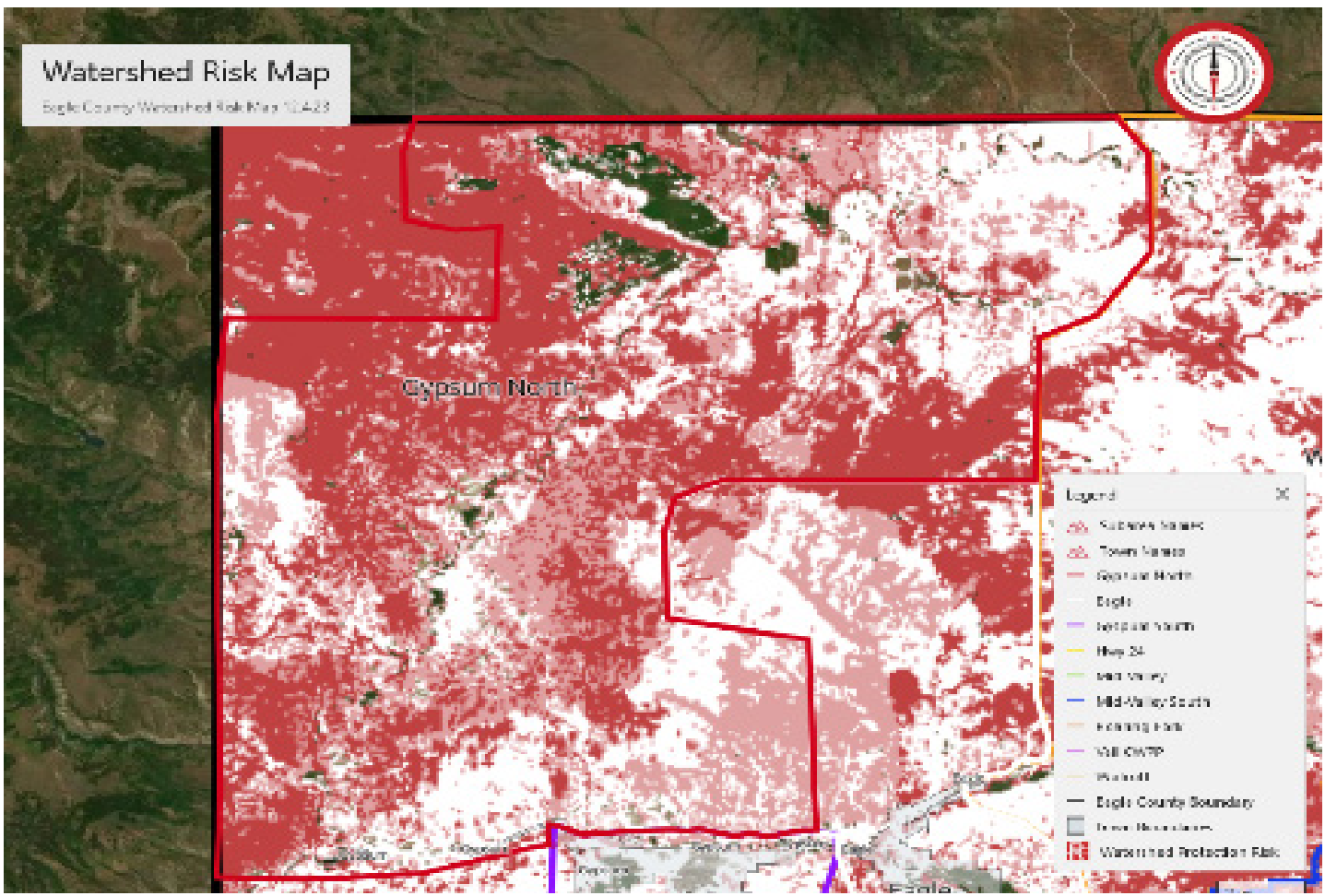
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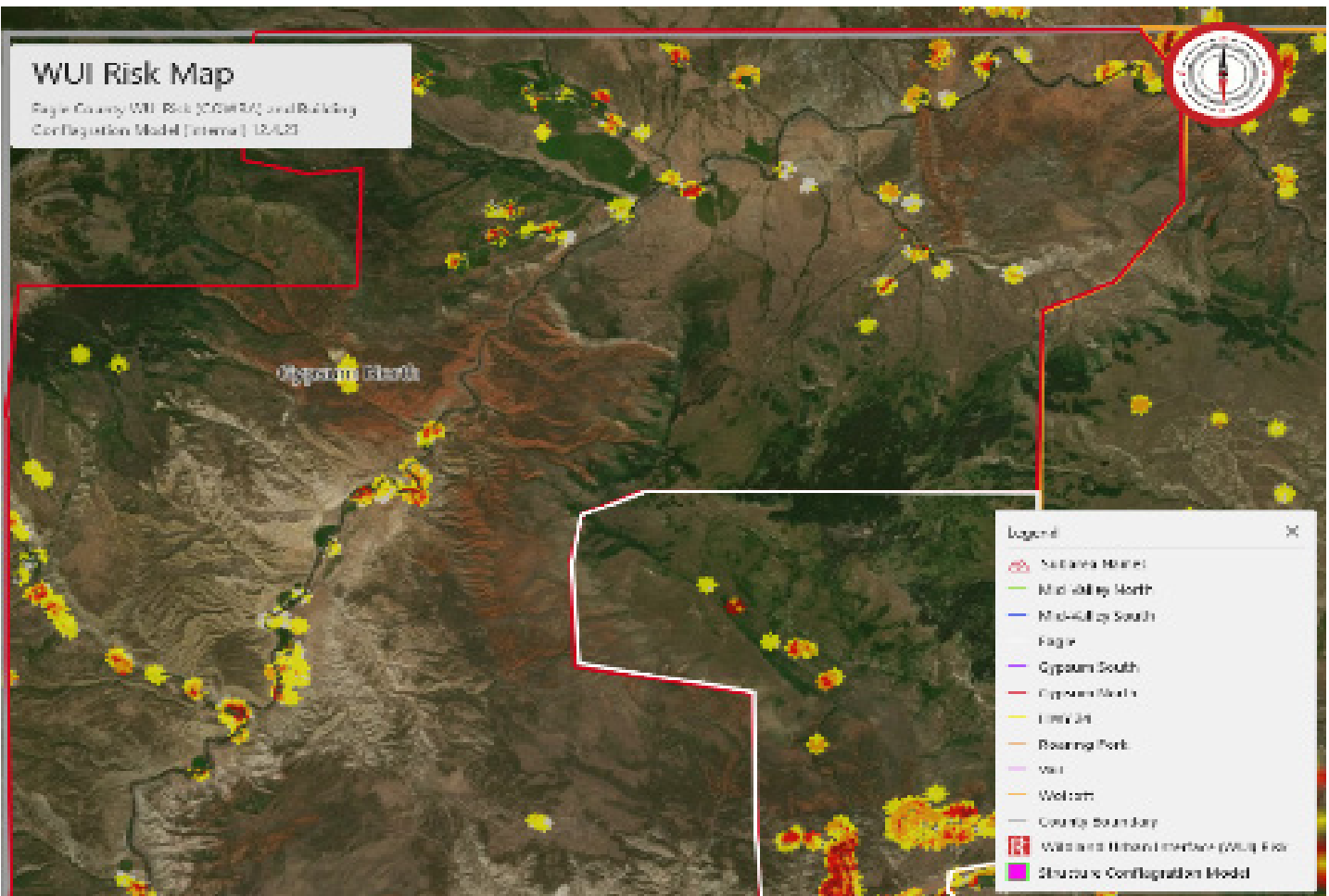
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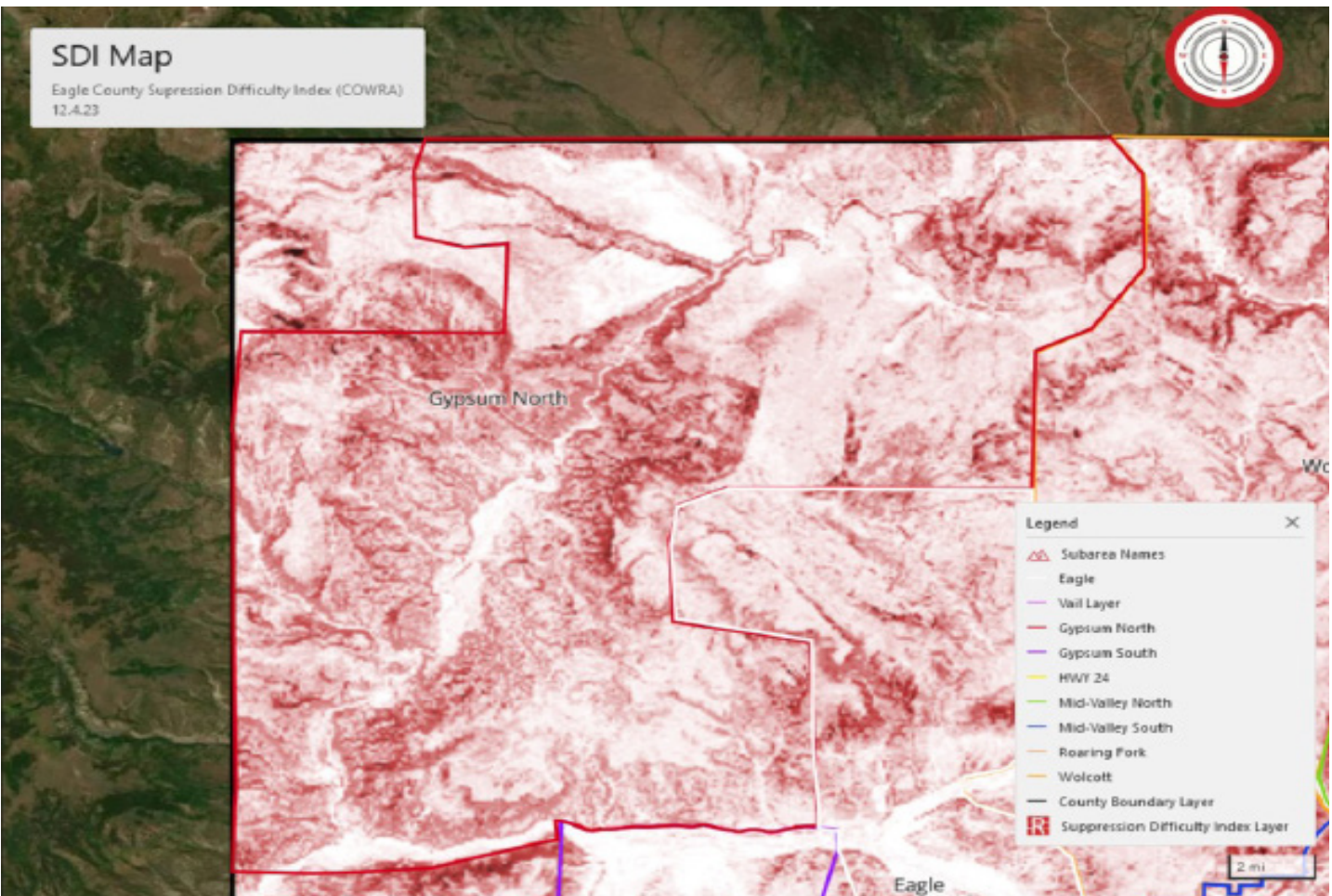
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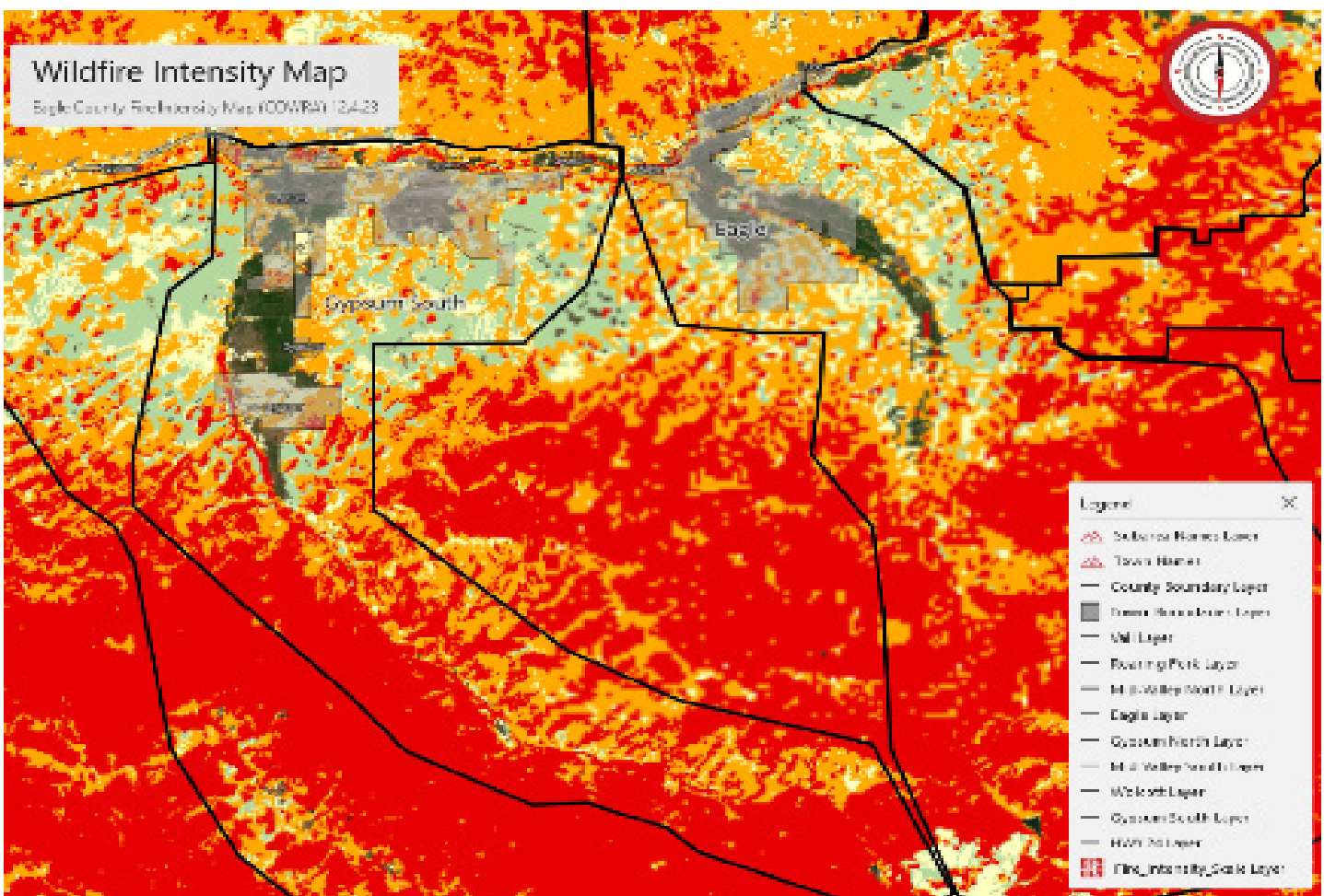
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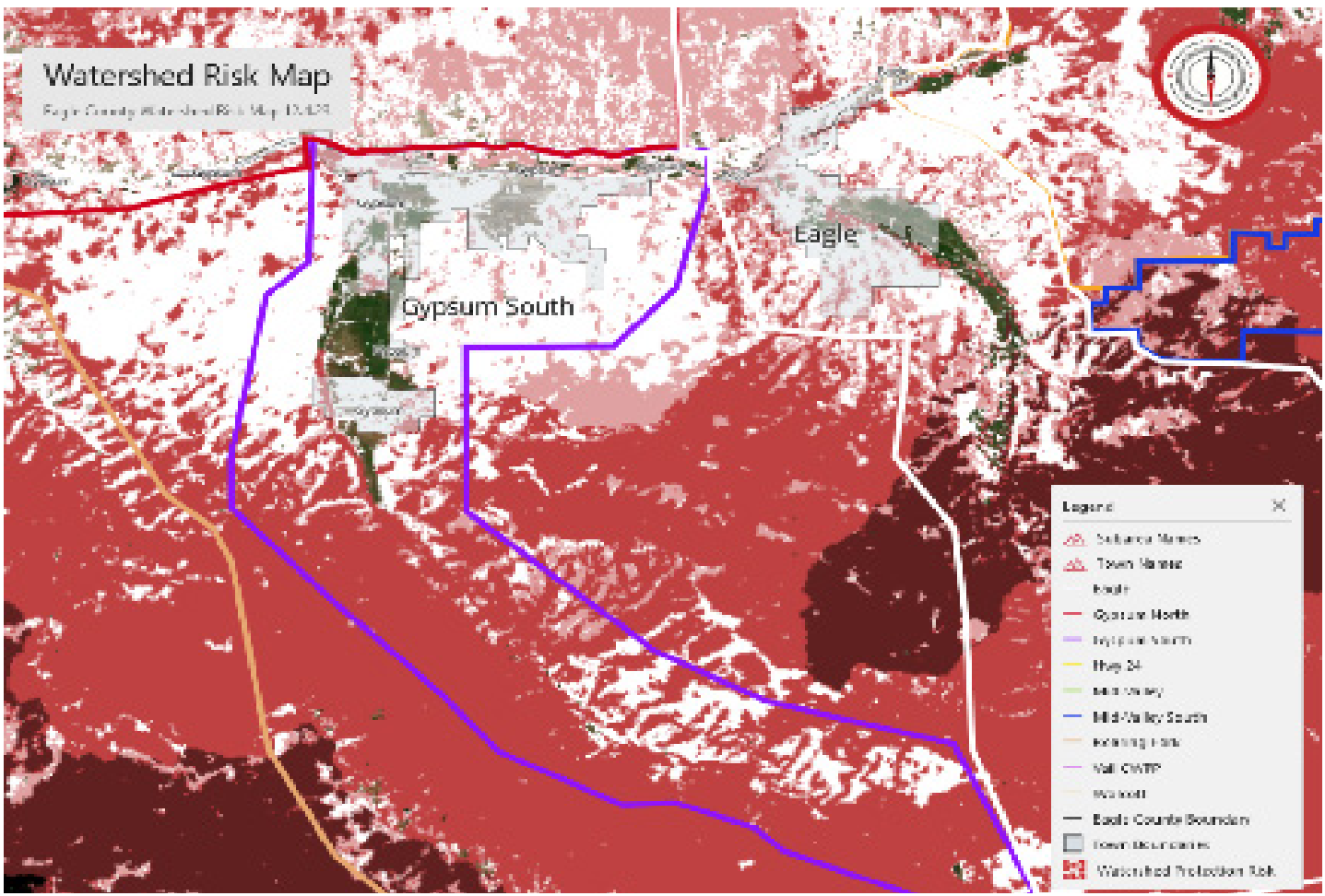
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H.1

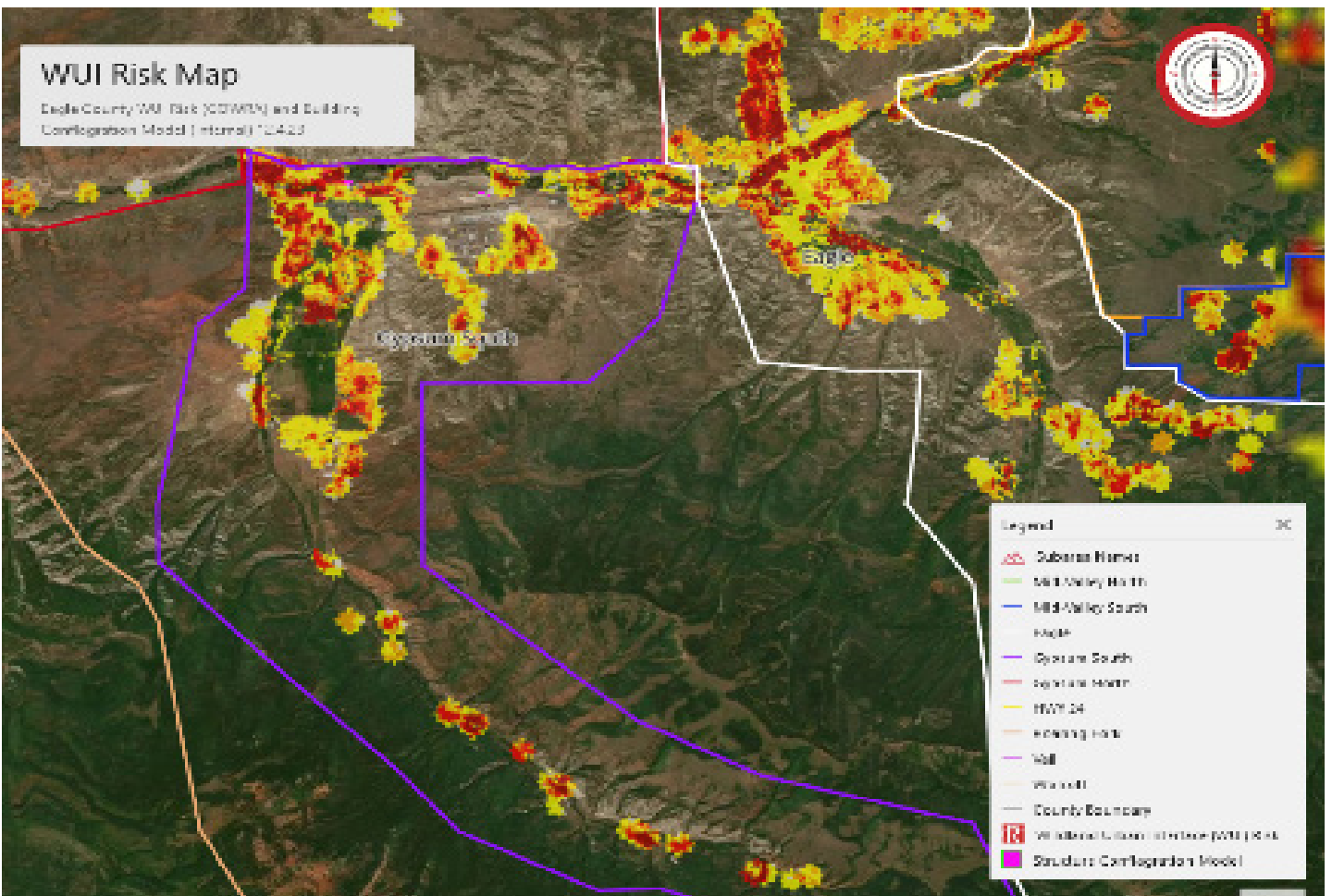


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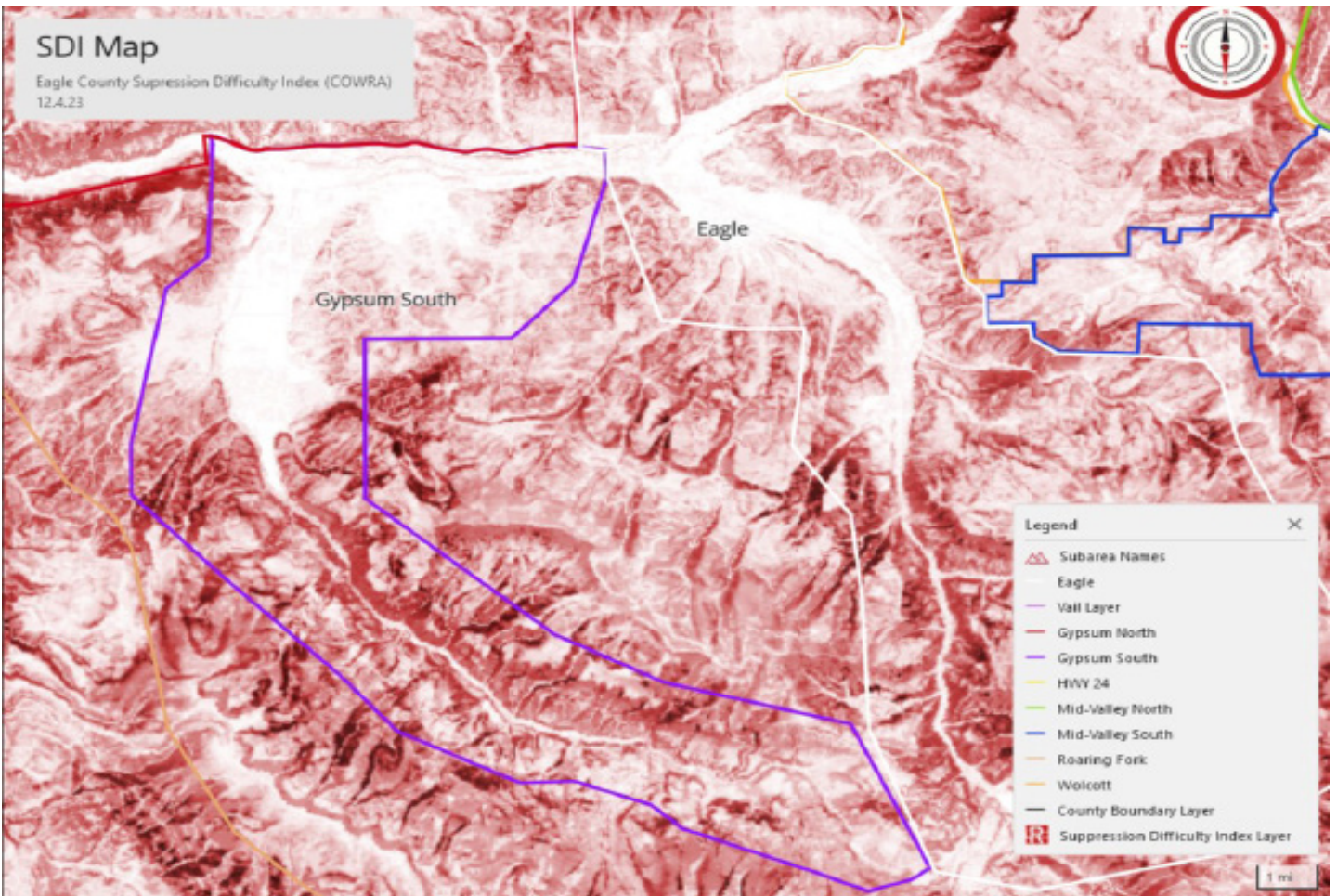


Appendix B - Sub-Area Risk Assessment Maps

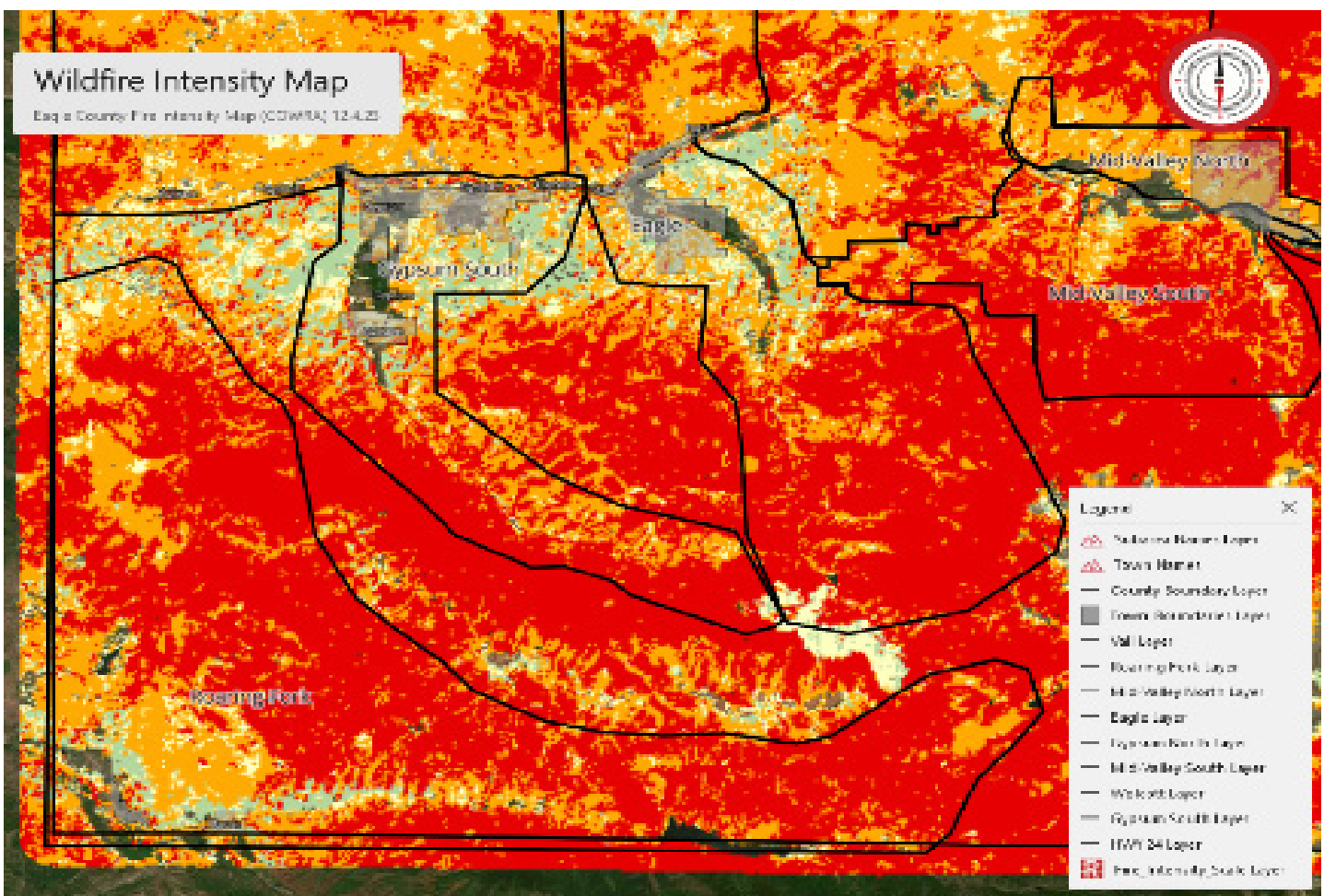
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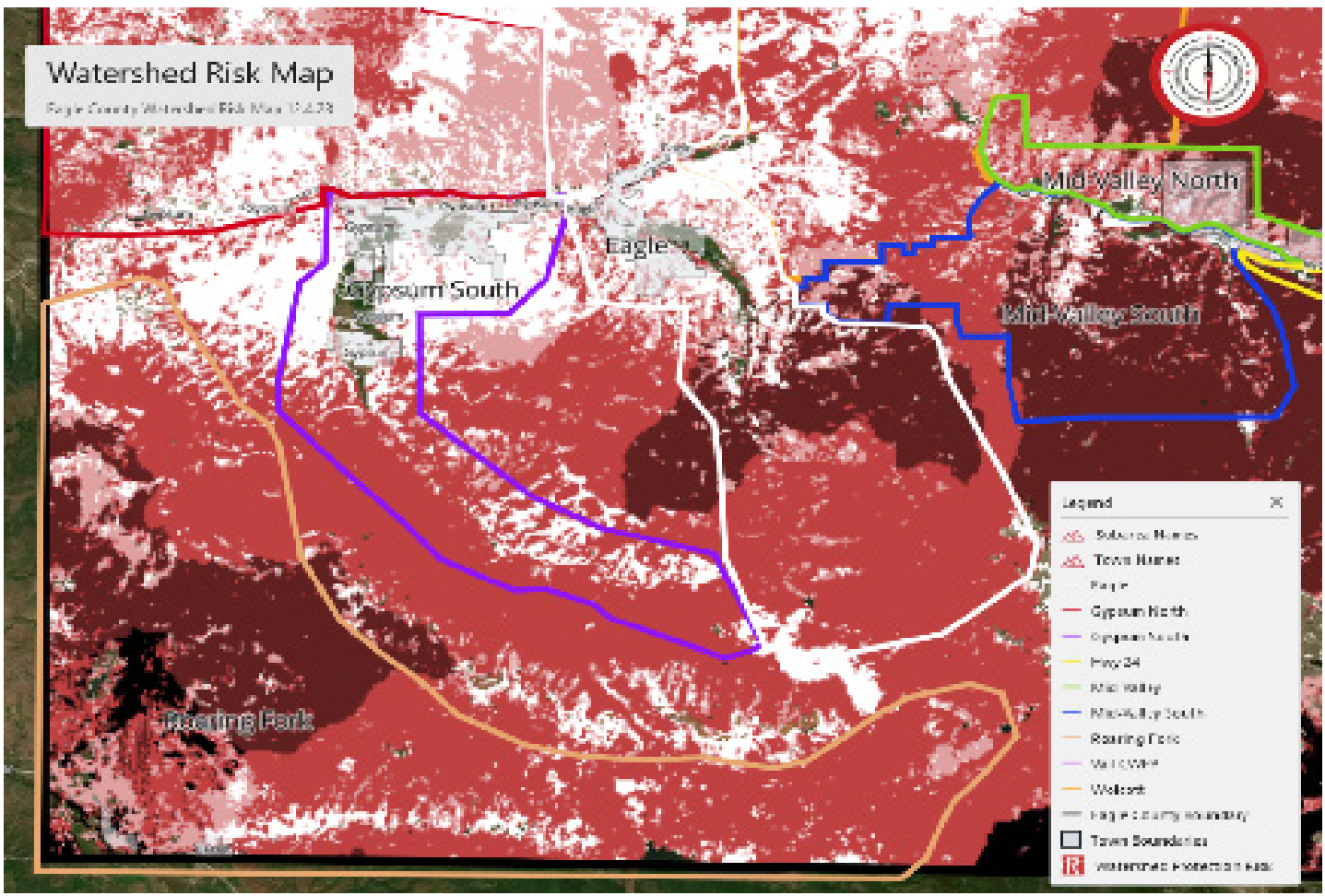
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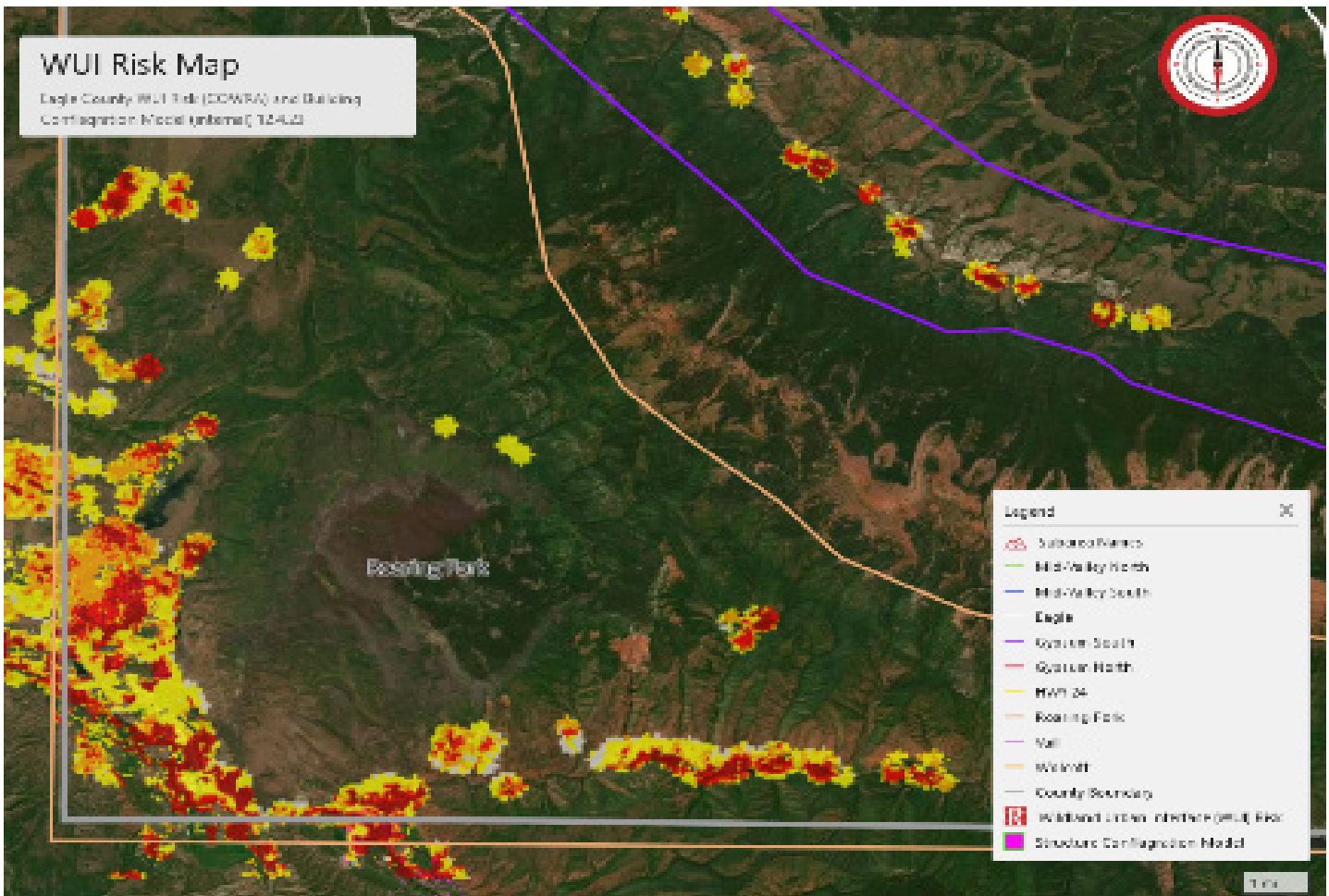
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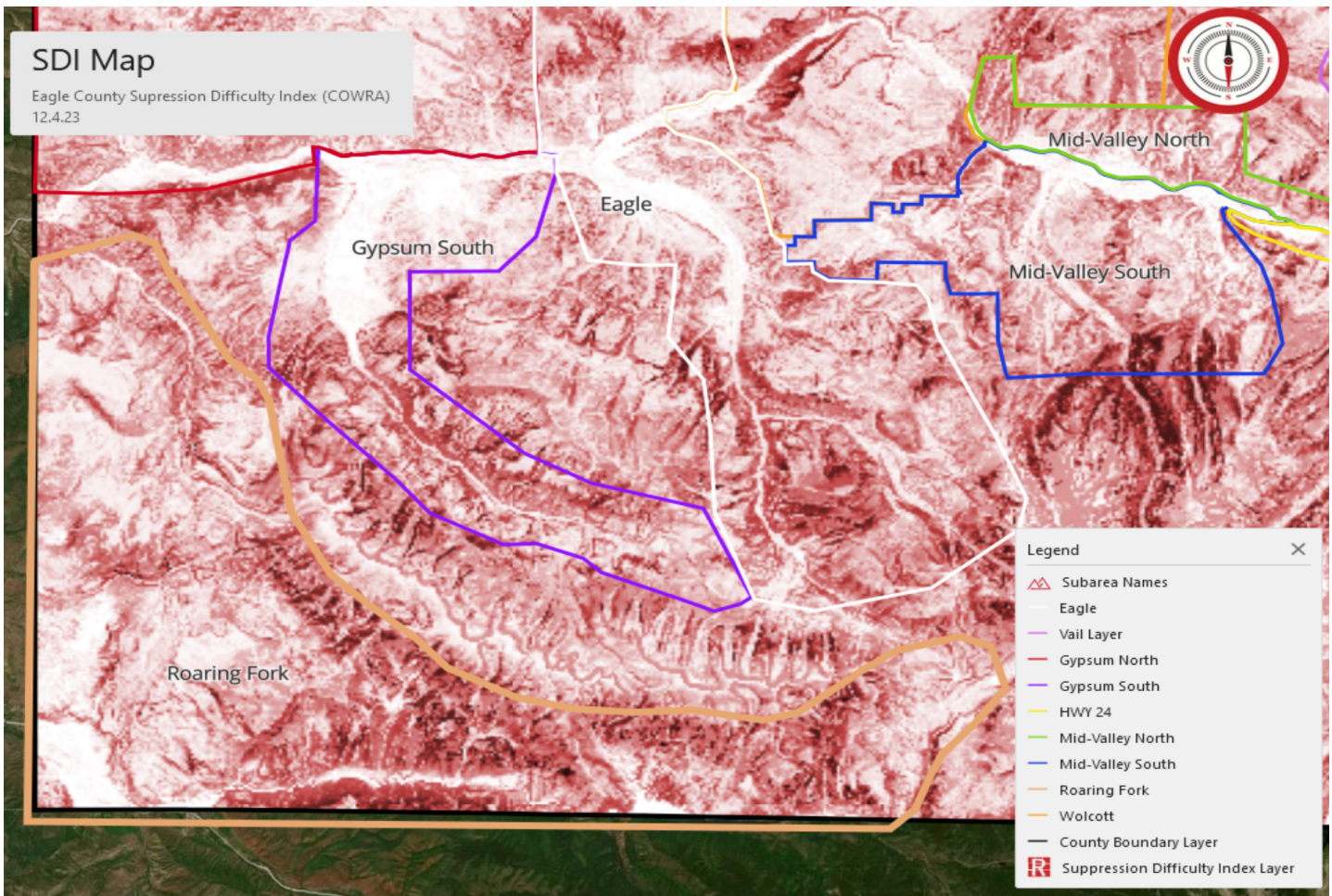
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I.3



I.4



Mitigation Service	Key Services
Eagle County Wildfire Collaborative	<ul style="list-style-type: none"> • Community mitigation planning • Grant writing • Stakeholder engagement • Wildfire recovery • Program/project guidance • Education and outreach • Policy direction
Roaring Fork Valley Wildfire Collaborative	<ul style="list-style-type: none"> • Community mitigation planning • Grant writing • Stakeholder engagement • Wildfire recovery • Program/project guidance • Education and outreach • Policy direction
Vail Fire - Fire Adapted Vail	<ul style="list-style-type: none"> • Community risk assessments • Curbside chipping • Highly impactfull cross-boundary fuels reduction projects ranging from individual defensible space to landscape scale fuels reduction coordinated with the White River National Forest and Colorado Parks and Wildlife • "Fire Adapted Vail": a strategic framework to guide preparedness, mitigation, response and recovery • Active engagement at the state and national level with Fire Adapted Colorado, Fire Adapted Communities Learning Network, and the IAFC Wildfire Policy Committee
Eagle Valley Wildland	<ul style="list-style-type: none"> • Fuels reduction • Prescribed fire • Community education • Community risk assessments • Fire suppression
Eagle County Wildfire Mitigation	<ul style="list-style-type: none"> • Coordination with public and private agencies to implement forest health and fuels reduction projects • Leveraging grant funding from state and federal sources to implement education and outreach programs • Eagle County Wildfire Protection Plan and Wildfire Hazard Map • Facilitate learning exchanges, workshops, and training events • Open burn program • Cost-share assistance program • REALFire: a program through which local residents can request a property assessment to mitigate home risk, in addition to annual training and sharing of best practices for Realtors sponsored by the Vail Board of REALTORS

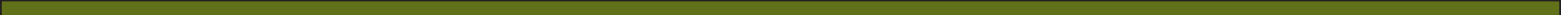
Eagle County Wildfire Collaborative

The Eagle County Wildfire Council was originally formed in 2009. In 2021, this group reorganized as the Eagle County Wildfire Collaborative (ECWC). The Eagle County Wildfire Collaborative (ECWC) is a group of stakeholders within Eagle County working together to help mitigate wildfire threats through collaboration and partnerships. Stakeholders within the ECWC include all Fire Agencies within Eagle County, Federal and State partners, Eagle County, watershed and sustainability, community leaders, wildlife experts, smoke and health experts, and leaders from various groups in ecosystem sustainability. The mission of the ECWC is to reduce wildfire risk through appropriately funded planning and program implementation focused on community engagement, education, communication, policy advocacy, and mitigation action aimed at creating fire adapted communities and resilient landscapes.



**Eagle County
Wildfire Collaborative**

- Key Services**
- Community mitigation planning
 - Grant writing
 - Stakeholder engagement
 - Wildfire recovery
 - Program/project guidance
 - Education and outreach
 - Policy direction



- Key Services**
- Community mitigation planning
 - Grant writing
 - Stakeholder engagement
 - Wildfire recovery
 - Program/project guidance
 - Education and outreach
 - Policy direction

Roaring Fork Valley Wildfire Collaborative

The Roaring Fork Valley Wildfire Collaborative works to reduce wildfire risk by identifying, prioritizing, and implementing strategic cross-boundary plans and projects aimed at creating fire resilient landscapes and fire-adapted communities while focusing on community engagement, education, and inclusion. Stakeholders within the RFVWC include all Fire Agencies within Eagle/Pitkin/Garfield County, Federal and State partners, Eagle County, Pitkin County, Garfield County, watershed and sustainability, community leaders, wildlife experts, smoke and health experts, and leaders from various groups in ecosystem sustainability.



**ROARING FORK VALLEY
WILDFIRE
COLLABORATIVE**

Vail Fire - Fire Adapted Vail

Vail Fire and Emergency Services is a department of the Town of Vail. The Department is an all risk fire department providing prevention, mitigation and emergency services to the town and surrounding area. Vail Fire has been highly engaged in wildfire risk reduction in our community since 2007. Over the past 13 years the department has completed numerous highly impactful cross- boundary fuels reduction projects.



Key Services

- Community risk assessments
- Curbside chipping
- Highly impactful cross-boundary fuels reduction projects ranging from individual defensible space to landscape scale fuels reduction coordinated with the White River National Forest and Colorado Parks and Wildlife
- "Fire Adapted Vail": a strategic framework to guide preparedness, mitigation, response and recovery
- Active engagement at the state and national level with Fire Adapted Colorado, Fire Adapted Communities Learning Network, and the IAFC Wildfire Policy Committee



Photo courtesy of Eagle County

Eagle Valley Wildland

Eagle Valley Wildland (EVW) is a collaborative partnership between multiple agencies dedicated to reducing the risk of wildfires through mitigation, suppression and community education. Includes Eagle River Fire Protection District, Greater Eagle Fire District, Gypsum Fire Protection District, and Eagle County. Eagle Valley Wildland (EVW) is responsible for fuels and fire management activities across 831 square miles of WUI, rural communities, forest, and rangeland. It oversees implementation of fuels reduction projects on county, town, and private lands. EVW has partnered with many districts, HOA's, and various associations to provide oversight and coordination on wildfire mitigation projects.

Key Services

- Fuels reduction
- Prescribed fire
- Community education
- Community risk assessments
- Fire suppression

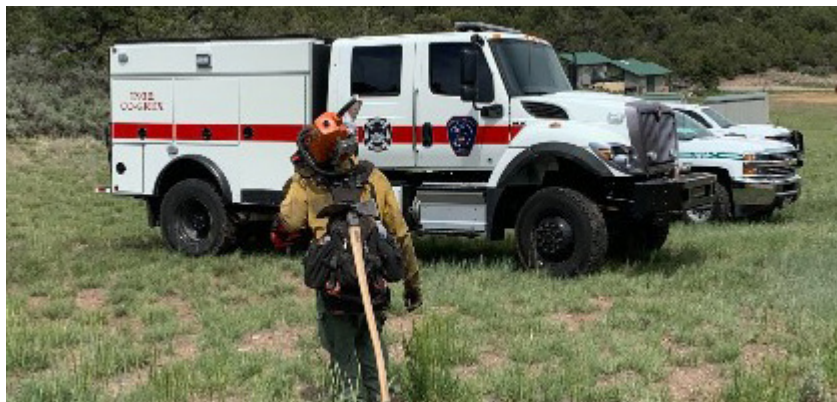


Photo courtesy of Eagle Valley Wildland

Eagle County Wildfire Mitigation

Eagle County Wildfire Mitigation is focused on resiliency planning and creating fire adapted communities by reducing wildfire risk in the Wildland Urban Interface / Intermix within Eagle County. They negotiate with homeowners, developers, builders, local fire authorities, and others in order to achieve workable solutions while maintaining the integrity of Eagle County's Wildfire Regulations.

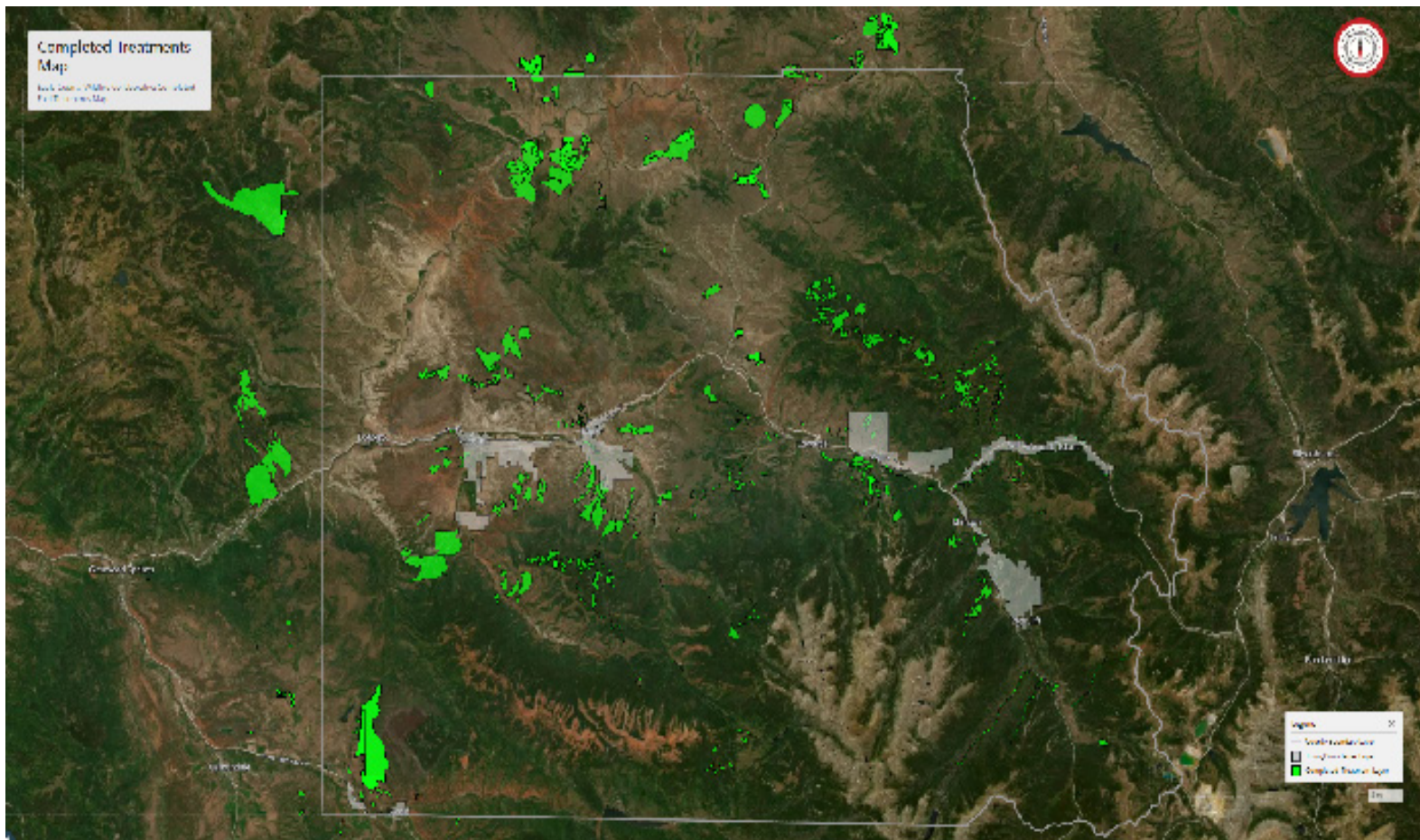


Photo courtesy of Eagle County

Key Services

- Coordination with public and private agencies to implement forest health and fuel reduction projects
- Leveraging grant funding from state and federal sources to implement education and outreach programs
- Eagle County Community Wildfire Protection Plan and Wildfire Hazard Map
- Facilitate learning exchanges, workshops, and training events
- Open burning program
- Cost-share assistance program





Eagle County

Recognizing the need for wildfire education, awareness, and action, the Vail Board of REALTORS® (VBR) worked with Eagle County to create the REALFire® program in 2016. Through the program, homeowners can assess their property's vulnerability to wildfires at no cost. REALFire® provides owners with an understanding of wildfire hazards and how to fortify the area around their homes by creating defensible space. An experienced fire professional visits the property to perform an in-depth assessment for wildfire fuels. The professional looks at potential wildland fuels surrounding the home, like fallen trees or overgrown landscaping, as well as "built fuels" on the property like fences, sheds and the home itself. After the assessment, clients receive a detailed report with voluntary actions to measurably reduce wildfire danger. Since the REALFire® program was created, 970 property assessments have been completed in Eagle County, including many large HOAs and condominium buildings in Beaver Creek, Bachelor Gulch, and Arrowhead.

The Eagle County Wildfire Assistance program was implemented after the 2018 Lake Christine Fire. This cost-share assistance program offers private landowners, and collective groups of private landowners, the opportunity to apply for incentive funding in an effort to reduce wildfire risk in Eagle County communities. Over the past 5 years, more than \$330,000 has been leveraged by community members to implement 300+ Home Ignition Zone hazard reduction projects, 100+ acres of defensible space, and develop more than a dozen community chipping programs.

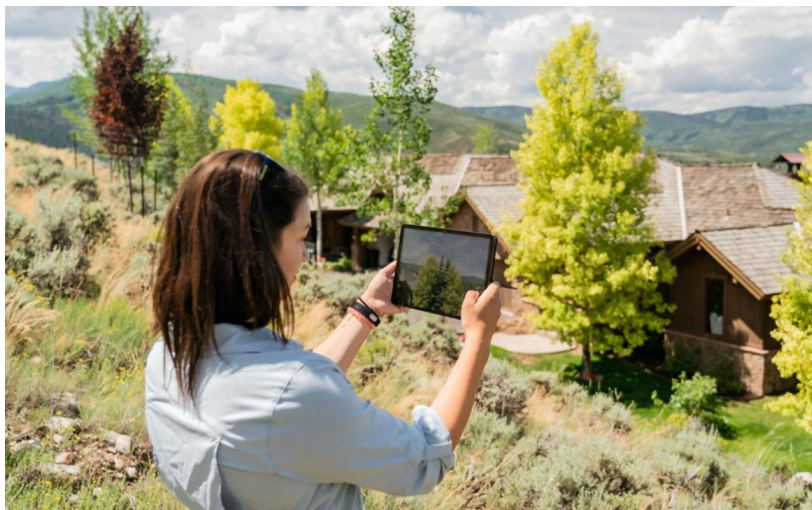


Photo courtesy of Dylan Brown

Vail Fire - Fire Adapted Vail

Since the early 2000's the Town of Vail and Vail Fire and Emergency Services have made a strong commitment to addressing wildfire risk. Beginning in 2007 the town funded a Wildfire Division within the Fire Department to complete fuels reduction and community resiliency programs and supplement wildfire response in the Town and countywide. The Wildland Division was instrumental in initially addressing increased fuel loading due to Mountain Pine Beetle mortality and since have expanded programs and services to more holistically address wildfire risk within the Vail Fire response area.

Initial work of the Wildland Division was focused on fuels reduction in the boundary areas between the Town and surrounding White River National Forest. Between 2007 and 2023 the Town and USFS have jointly implemented numerous small and large scale projects including the Vail WUI and Vail Intermountain projects. In 2023 the USFS signed a record of decision authorizing the next large scale project in Vail, Booth Creek Fuels. In addition to the productive relationships with the USFS the Wildland Division has also partnered with Colorado Parks and Wildlife to treat units on the Deer Underpass State Wildlife Area and Vail Resorts to treat land on Vail Mountain. The Wildland Division is also heavily involved in managing open space owned by the Town of Vail. A keystone project implemented in 2021 was the Booth Creek Prescribed burn. This small but significant broadcast prescribed fire was successfully implemented in a high visibility and high priority area within the community showing the tangible benefits and safe use of broadcast prescribed fire.



Photo courtesy of Vail Fire and Emergency Services

Much of the division's annual workload focuses around providing resources for community members to address wildfire risk at their residences. Since 2017 the division has been implementing a forward leaning wildfire hazard assessment program. Each year 1/5 of the Town is assessed using a rapid wildfire assessment method. The parcel specific results are shared with every property owner in an effort to provide specific risk information to each resident of the community. These assessments have led to noticeable action in the community and many follow-up visits by trained wildfire experts. A specific issue that was identified through the wildfire assessment program was a lack of defensible space in the most critical first five feet surrounding a structure. Through the support of the Vail Town Council the Fire Free Five Community Assistance Program was born as a way to incentivize property owners to create a five foot wide non-combustible landscape zone around their entire property. In the first 2 years of the program over \$250,000 of funds have been distributed to more than 140 properties including single family, multi family and commercial properties. Since nearly the inception of the Wildfire Division the town has run a curbside chipping program to assist community members with disposal of slash created implementing defensible space. Since 2016 the curbside chipping program has disposed of over 1200 tons of slash from the Town of Vail.



Photo courtesy of Vail Fire and Emergency Services

To address legacy design standards Vail has successively adopted building and development standards that incorporate best practices for reducing structural ignitability. In 2007 the Town adopted regulations requiring the use of class A roofing materials on all structures and incorporated an abatement order requiring the removal of dead trees. In 2015 the abatement order was updated to include all wildfire fuels and remains a tool useful in requiring private property owners to address high hazard vegetation. In 2018 the Town amended building and planning codes to more holistically address structural ignitability. This code package included a designation of the entire Town of Vail within the Wildland Urban Interface as well as requirements for all new construction and additions over 500 feet² to incorporate ignition resistant building materials and fire resistant landscaping into their design. In 2020 these codes were once again modified to be inclusive of any project which makes exterior modifications

Eagle Valley Wildland

Eagle Valley Wildland was created in 2019 in response to the growing wildfire threat in Eagle County. In 2021, EVW successfully implemented 35 acres of mechanical treatment, 3.5 miles of fuel breaks, and 72 acres of prescribed fire. In 2022, EVW began partnering with various stakeholders throughout the community to treat just over 1,700 acres and create 17 miles of tactical fuel breaks along the edge of homes. Building on this momentum, EVW partnered with 26 stakeholders in 2023 to leverage grant money to treat 2600 acres of land, implement 23 miles of fuel breaks, and burn over 2,000 piles.



Photo courtesy of Eagle County

Bureau of Land Management

Since the early 2000's the BLM has made a concerted effort to reduce the risk of catastrophic wildland fires while improving wildlife habitat and meeting other resource objectives. This work has primarily been focused on the Interstate 70 corridor and the Colorado River Road. Treatment types have included mastication, cut/pile/burn, lop & scatter, broadcast prescribed fire, timber sales, chemical treatments to control invasive species and seeding when needed. If commercially feasible biomass is made available from these projects for electricity generation, lumber and firewood.

From 2020 to present the BLM has treated on average 2,250 acres per year in Eagle County with the above described methods and continues to build additional capacity with the addition of new personnel and equipment. Additionally the BLM has provided Community Assistance Grants of over \$100,000 yearly to various organizations in Eagle County to conduct mitigation work on non-Federal lands.

Colorado State Forest Service

The Colorado State Forest Service provides technical and financial assistance for fuel reduction projects in Eagle County. Over the past decade, grant funding from the CSFS has been used to supplement thousands of acres of project work. In recent years, the CSFS has partnered with the BLM to design and implement Good Neighbor Authority (GNA) projects on public lands. In 2022, a 22 acre fuel reduction project was completed in mixed conifer forest near the Bellyache Ridge neighborhood in Wolcott. This project marks the first use of this valuable tool for completing fuel reduction projects across jurisdictional boundaries in Eagle County.

USDA Forest Service

Over the past several years, The White River National Forest has implemented numerous fuel reduction projects in Eagle County. These projects include timber sales, stewardship contracts, planning efforts, and prescribed fire. Several landscape scale projects have been completed in the Eagle area on Hardscrabble Mountain. The Wolverton, Seven Hermits, Firebox and Third Gulch timber sales (completed in 2022) resulted in nearly 950 acres of fuel reduction in aspen and lodgepole pine within the Brush Creek watershed. In addition to timber sales and stewardship agreements, USFS fire managers have successfully implemented several thousand acres of prescribed fire on the White River National Forest. Notable prescribed fire projects include: Piney Rx, Seven Hermits Rx, Intermountain Rx, Cattle Creek Rx and Basalt Mountain Rx. Prescribed fires conducted on Basalt Mountain between 2007 and 2017 had a significant impact on the Lake Christine Fire (2018), keeping the wildfire from burning into the community of Missouri Heights.



Photo courtesy of Todd Winslow Pierce