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Wildfire Hazard Assessment & Mitigation Plan



Prepared by: Ryan Elwyn, NFPA Certified Wildfire Mitigation Specialist 1165934-CWMS
Call: (870) 485-4129 Email: elwynwildfire@gmail.com
Website: www.elwynwildfire.com

PHYSICAL ADDRESS	LEGAL DESCRIPTION	JEFFERSON COUNTY PARCEL ID
[REDACTED]	[REDACTED]	[REDACTED]

Elwyn Wildfire is owned and operated by a former USFS Hotshot firefighter who has a mission to provide minimal disturbance and ecologically compatible wildfire mitigation services. The intent of these services is to support landowners and land managers in wildfire hazard reduction planning and project implementation to develop wildfire adaptive communities and landscapes.

Factors determining the extent of wildfire hazards existing to the property include, but are not limited to, the following conditions; property access, structure materials and construction, topographic location, steepness of slopes, vegetation type, vegetation arrangement and density, average climate conditions, and availability for potential fire ignitions.

Ryan Elwyn, the owner and operator of Elwyn Wildfire LLC, is available to address any concerns. Feel free to contact him via phone call, text or email.

Thank you for giving us the opportunity to prepare a wildfire hazard assessment of your property!

LEGAL DISCLAIMER

LEGAL DISCLAIMER:

While the purpose of the wildfire hazard assessment and correlating hazard reduction treatments is to reduce the risk of fire damage to your structures or property, following the recommendations in this assessment report does not guarantee prevention of such damage.

The optimal goal of the wildfire hazard assessment and correlating hazard reduction work is to provide your home, structures, and landscapes with the ability to survive a wildland fire without the intervention of fire fighting resources. Maintaining a property to have minimal fire ignition and spread potential can substantially increase safety to you, fire fighting personnel, and your community.

However, wildfire is unpredictable and can be impossible to stop or control, regardless of what mitigation efforts you have taken. In no event shall Elwyn Wildfire LLC or its supervisors, employees, or volunteers be liable for any personal injury (including death), property damage, or any other damage whatsoever which may be incurred or suffered as a direct or indirect result of participation in the wildfire assessment report or correlating hazard reduction work. This disclaimer of liability applies whether such damages are special, indirect, consequential, or compensatory, and whether they are based on warranty, contract, tort, or any other legal theory. Elwyn Wildfire LLC to the fullest extent permitted by law, disclaims all warranties, express or implied, statutory or otherwise.

Elwyn Wildfire LLC makes no warranties, guarantees or representations of any kind with respect to the effectiveness of any mitigation efforts you undertake in connection with your participation in the Elwyn Wildfire LLC mitigation program.



STANDARDS COMPLIANCE STATEMENT



I, Ryan Elwyn,
Elwyn Wildfire LLC - NFPA® Certified Wildfire Mitigation Specialist
NFPA #1165934-CWMS

Date : 08/01/2025

In regards to;

Jefferson County Planning & Zoning Section 20 - Wildland Urban Interface Overlay

District, with this combined Wildfire Hazard Assessment and Mitigation Plan, find the property and property owner located at [REDACTED], Gothen CO 80403, (Jefferson County Parcel ID [REDACTED]) to be compliant with Jefferson County Zoning Resolution Section 39 - Wildland Urban Interface Overlay District. This is to be considered initial inspection letter.

If the stated fire hazard mitigation plan is implemented the property will remain compliant with the **Colorado State University's Cooperative Extension Fact Sheet 6.302** guidelines and the **NFPA's Firewise USA®** program.

CWMS Practicum Phase Verification Form



NFPA Certified Wildfire Mitigation Specialist® Program

Applicant Name: Ryan Elwyn, Owner Elwyn Wildfire LLC - NFP # 16534 CWMS

Date of Assessment: 08/01/2022 Property Address: 1000 14th Street, Golden CO 80403

The National Fire Protection Association administers the NFPA Certified Wildland Mitigation Specialist program. As part of this program, applicants are required to complete practical exercises. The above named applicant must provide verification that four home assessments were conducted as part of the certification program requirements.

You are not asked to verify the accuracy, quality, or completeness of the report or the underlying home assessment, nor will this be taken as any verification that you have read the report, as this is only an exercise for a certification program. By signing below, you are only providing the required verification that the above named applicant conducted a home assessment for the identified property.

Name (print): _____

Relationship to applicant (i.e. property owner/manager, real estate department): _____

Agency (i.e. property owner/manager or fire department): _____

Address:

City: _____ State/Prov: _____ Zip/Country Code: _____

Phone: _____ Email: _____

Signature: _____ Date: _____

Table of Contents

Legal Disclaimer	2
Standards Compliance Statement	3
CWMS Practicum Phase Verification Form	4
Referenced Assessment Standards & Guidelines	6
National Fire Protection Association (NFPA®)	6
Colorado State Forest Service (CSFS)	6
Insurance Institute for Business & Home Safety (IBHS)	6
Purpose and Goals	7
Protect and Improve Property Value	7
Jefferson County Wildfire Zoning Resolution Compliance	7
Property Insurance Compliance	8
Locational Assessment	9
1. Topographic Assessment	9
2. Fire Climate Assessment	11
3. Property Vegetation Types and Fire Behavior Descriptions	13
4. Local Fire History	14
5. Ignition Source Exposure Assessment	15
6. Local Fire Suppression Resource Capabilities Assessment	17
7. Local Area Wildfire Fuels Reductions	18
8. Property Access Assessment	19
Primary Structure Assessment	21
1. Roof to Eaves	21
2. Vertical Walls	22
3. Projections and Attachments	23
Home Ignition Zone 1	24
Home Ignition Zone 2	25
Home Ignition Zone 3	27
Proposed Detached Garage	29
Horse Barn & Stalls	31
Summary of Existing NFPA Compliant Conditions	33
Summary of recommended Wildfire risk remediations	34
Potential Do It Yourself Low Cost Hazard Remediations	36
Additional Hazard Mitigation Methods To Consider	36
Services Offered By Elwyn Wildfire LLC	37
NFPA - Certified Wildfire Mitigation Specialist 1165934-CWMS	37
Additional Wildfire Risk Reduction Resources	38

Referenced Assessment Standards & Guidelines

National Fire Protection Association (NFPA®)

The National Fire Protection Association (NFPA) is a U.S.-based international nonprofit organization devoted to eliminating death, injury, property, and economic loss due to fire, electrical, and related hazards. The NFPA Wildfire Division provides resources to residents and safety professionals to help ensure everyone living in communities at risk has the information, knowledge, and tools to prepare and protect their homes from the threat of wildfire.

[Reference Link → NFPA Wildfire Division](#)

NFPA 1140 - Standard for Wildland Fire Protection

NFPA 1140, Standard for Wildland Fire Protection, is a consolidation of four previous NFPA standards: NFPA 1051, Standard for Wildland Firefighting Personnel Professional Qualifications; NFPA 1141, Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas; NFPA 1143, Standard for Wildland Fire Management; and NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire.

[Reference Link → NFPA 1140 Standards for Wildland Fire Protection](#)

NFPA Firewise USA®

The national Firewise USA® recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level.

[Reference Link → Preparing Homes for Wildfire](#)

Colorado State Forest Service (CSFS)

The Colorado State Forest Service (CSFS) develops educational materials and supports programs that help residents and communities take action to reduce their wildfire risk.

2021 CSFS Home Ignition Zone Guide

This guide focuses on actions that are effective in reducing wildfire hazards on your property. It is important to recognize that these efforts should always begin with the home or structure itself and progress outward.

[Reference Link → 2021 CSFS HIZ Guide](#)

CSFS Home Ignition Zone Checklist

Practical steps to increase the likelihood your home survives a wildfire by addressing the home ignition zone, which is the home itself and the area around it. This will minimize the ability of your home to ignite during a wildfire, in part by reducing or eliminating nearby fuels.

[Reference Link → CSFS HIZ Checklist](#)

Colorado State University's Cooperative Extension Fact Sheet 6.302

This fact sheet states the standards and criteria governing the design of defensible space and associated fuel break thinnings to comply with Jefferson County Wildfire Zoning Resolution, Section 39.

[Reference Link → CSFS Extension Fact Sheet 6.302](#)

Insurance Institute for Business & Home Safety (IBHS)

Wildfire Prepared Home Assessment & Checklist

[Reference Link → IBHS Wildfire Prepared Checklist](#)

Purpose and Goals

Protect and Improve Property Value

Forest and the homes within the forest represent much more than monetary value. These homes contain irreplaceable items and memories or their retirement dream and family vacation sanctuaries. We live in the forest to be in the forest. The forest provides an abundance of outdoor recreational activities and a quite solitude from the hustle and bustle of the cities.

How do we protect and improve a forest property value?

The goal with wildfire mitigation is to **“harden the structures”** **“Keep fire on the ground and reduce the production of embers”**. Structure hardening is the process of using construction materials and techniques that **“reduce the likelihood of embers igniting the structure”**. Vegetation modifications and continuous maintenance reduces fire spread, fire intensity and production of embers.

The result is a much higher likelihood the structures and vegetation will survive a wildfire. **The process of modifying the vegetation increases the landscape appeal, property appeal, and improves scenic viewing by decreasing “eye sore” vegetation.**

“Firefighters are heroes, but home owners that perform mitigation are heroes, too.”



Jefferson County Wildfire Zoning Resolution Compliance

[**Jefferson County Wildfire Zoning Resolution, Section 39**](#) **<-- Clickable link**, is Jefferson County's attempt to become a fire adaptive community. A fire adaptive community has implemented construction and vegetation modifications that bolster a community's resistance to catastrophic damages incurred by wildfire events.

Jefferson County requires a Defensible Space Permit (i.e. wildfire mitigation work) on properties within the Wildland Urban Interface Overlay District (above 6,400 feet in elevation) in the following instances:

- New structures or replacements of structures
- Additions to existing structures
- New development projects, such as new subdivision plats
- When required by a note on a subdivision plat

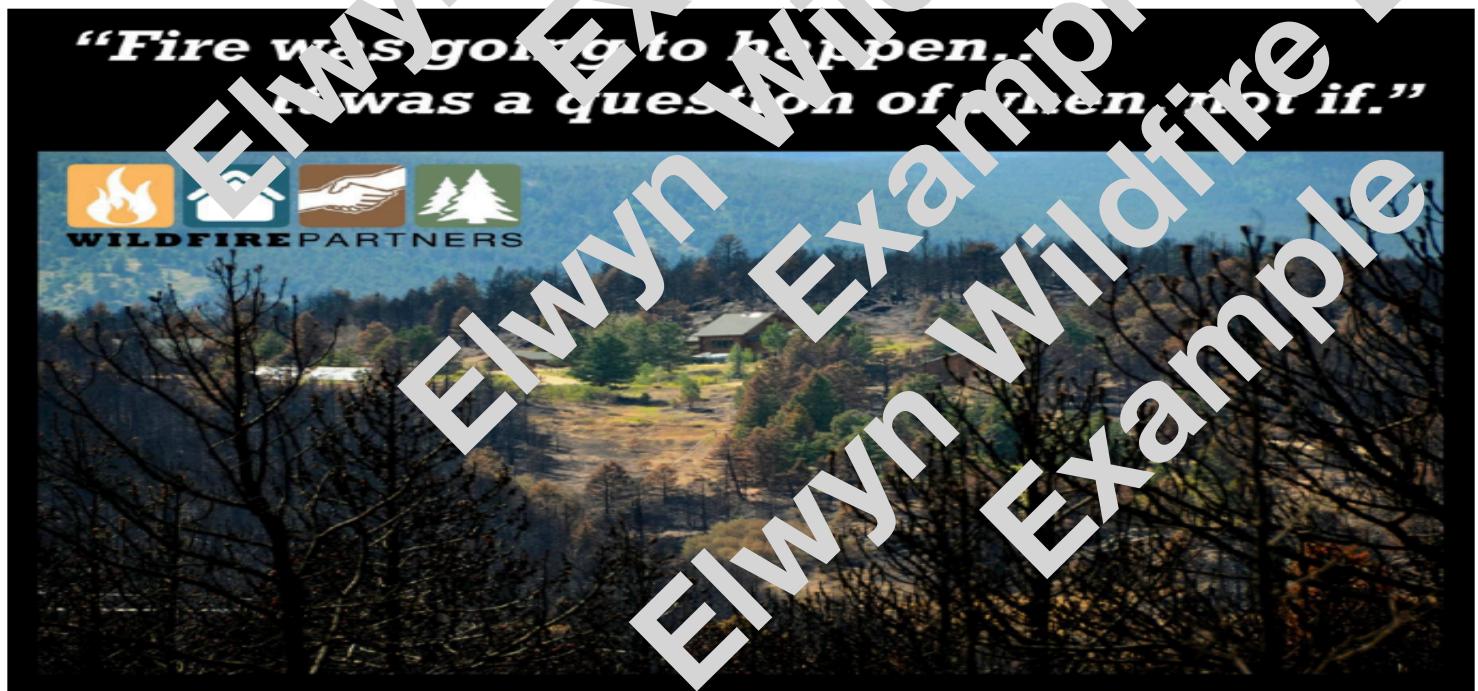
Property Insurance Compliance

Colorado lawmakers have reached a consensus with insurance industry representatives over a bill that will regulate how carriers determine a homeowner's wildfire risk and the premiums they pay. [House Bill 1182](#) was signed into law [May 28th 2025](#) with an implementation date scheduled to be July 2026.

[House Bill 1182](#) is an effort to give homeowners more credit for steps they take to protect their homes and reduce their risk. Insurance carriers are required to consider mitigation efforts when assessing a homeowner's wildfire risk. This new law requires insurance companies to share information on their risk models with the state's insurance division, explain to homeowners how their risk is calculated and what they can do to lower it, and allow homeowners to appeal their risk score.

The insurance providers can now ensure homeowners' mitigation efforts are accountable to an industry-recognized standard, such as the [Insurance Institute for Business and Home Safety's Wildfire Prepared Home Program](#). The program certifies homes that meet a set of criteria as being "wildfire-adaptive" and is currently recognized by insurance carriers in California and Utah as a way to lower premiums.

The Insurance Institute for Business and Home Safety, [IBHS](#), and the National Fire Protection Association, [NFPA](#), have a collaborative agreement to ensure the [Wildfire Prepared Home Program](#) property assessments and fire adaptive recommendations are developed from the latest professional experience and wildfire science data. Brian Elwyn, Owner of Elwyn Wildfire LLC, is a [NFPA Certified Wildfire Mitigation Specialist](#). The NFPA CWMS certification is in alignment with [Insurance Institute for Business and Home Safety Wildfire Prepared Home Program](#) and [House Bill 1182](#).



Don't forget! The heirlooms and memories the home and property have are priceless!

Many property owners don't realize they aren't insured or under-insured. Don't forget insurance companies are not in the business to give away money. **They will fight to not pay out claims making a horrible situation even worse!**

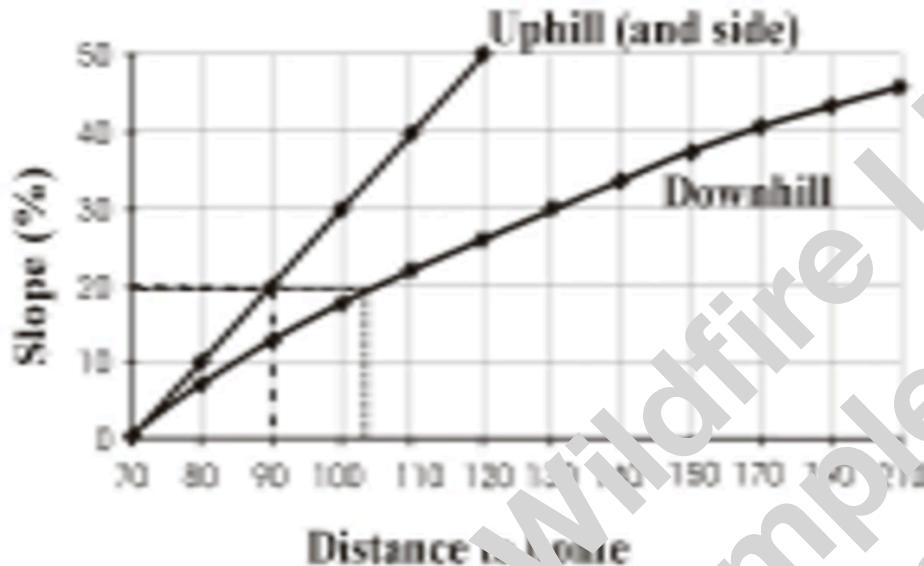
Wildfire mitigation is an investment well worth making!

Locational Assessment

1.

Topographic Assessment

Slope Calculation & Recommended HIZ Zone 2 Minimum Treatment Area Size



This chart indicates the minimum recommended dimensions for defensible space from the home to the outer edge of Zone 2.

For example, if your home is situated on a 20 percent slope, the minimum defensible space dimensions would be 90 feet uphill and sidehill of the home and 130 feet downhill from the home.

Reference Link → [CSFE Extension Doc Sheet 6.302](#)



Downslope = 30 feet elevation rise / 100 feet run = ~ 30%

According to the above measurements and calculations, **Zone 2 vegetation/wildfire fuel reduction modifications is recommended to minimally extend approximately 130 feet downhill and 100 feet uphill and to the side of the structures residing on the property.**

Topographic Fire Behavior



PRE-EXISTING NFPA FIRE ADAPTIVE CONDITIONS:

- Multiple paved and dirt roads intersect the surrounding area providing multiple non-flammable fuel breaks.

WILDFIRE HAZARDS:

- Multiple ignition source potentials exist downslope and downwind of the predominate wind patterns of the local area.
- The property resides on/above ~20%-30% slopes
- Property's highly valued structures located at the top of a cone shaped hill amongst overall rolling hill terrain.

WILDFIRE HAZARD REMEDIATIONS:

- Follow structure hardening guidelines stated below to reduce ember intrusion.
- Maintain the vegetation density, to standards mentioned below, within ~130' downslope and 100' uphill/sidehill of any valued structure(s) residing on the property.
- Work with the GGFPD community, Jefferson County, the CSFS, and USFS to reduce wildfire fuels in boarding and nearby properties.

Fire Climate Assessment

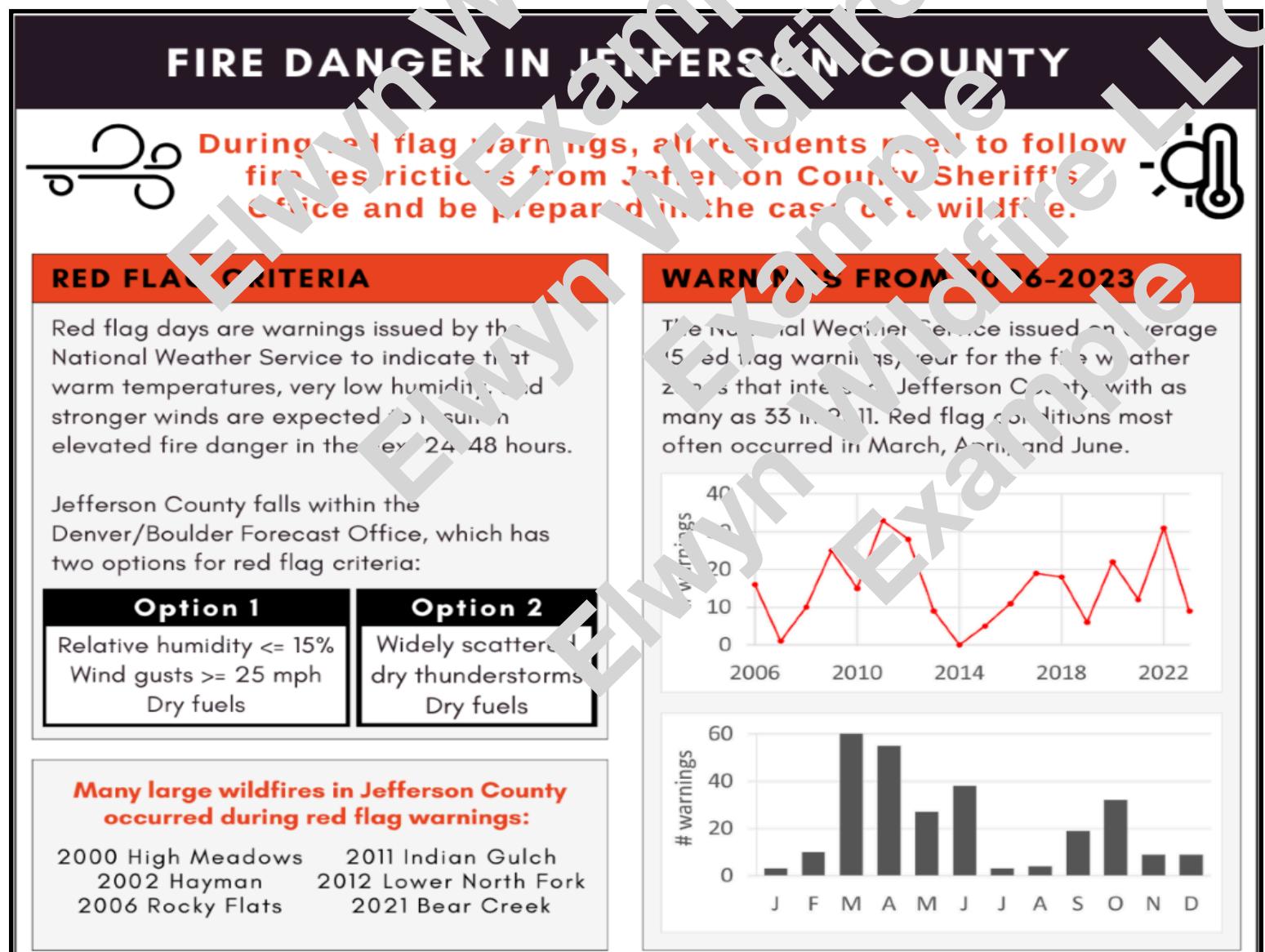
The 2024 Jefferson County Community Wildfire Protection Plan states:

[Reference link → Jefferson County CWPP](#)

“Jefferson County has some of the highest wildfire risk in the state of Colorado, and extreme fire behavior could threaten critical infrastructures, homes, and the lives of residents, visitors, and firefighters. There is an immediate need for many communities in Jefferson County to undertake proactive measures and mitigate wildfire risk to protect lives and property.

According to the 2024 Wildfire Risk to Communities, an analysis by the U.S. Forest Service, Jefferson County has the second highest wildfire risk of all counties in Colorado and greater risk to wildfire than 98% of counties in the United States (Scott et al., 2024). The Colorado Front Range—which includes Jefferson County—was identified as one of 21 high-priority landscapes for the U.S. Forest Service’s Wildfire Crisis Strategy due to high fire risk and the abundance of highly valued resources & assets (HVPAs) along the Colorado Front Range.

The highest relative burn probabilities in Jefferson County occur in the northern part of the county in Coal Creek Canyon and Golden Gate Fire Protection Districts where there is the potential for rapid rates of fire spread across steep, complex terrain covered in grasslands, shrublands, and forests with low to moderate tree densities and abundant understory vegetation.



FUEL**THE HUMAN ENVIRONMENT****TOPOGRAPHY****WEATHER****FUEL**

Fuel is required for any fire to burn. In regard to wildland fire, fuels consist of live and dead vegetation, such as trees, shrubs, grasses and their debris. Structures also become a potential source of fuel when they are in the vicinity of a wildfire. The amount of fuel, its moisture content, arrangement and other characteristics influence fire behavior.

**WEATHER**

Dry, hot and windy weather increases the likelihood of a major wildfire to occur. These conditions make ignition easier, allow fuels to burn more rapidly, and increase fire intensity. High wind speeds, in particular, can transform a small, easily controllable fire into a catastrophic event in a matter of minutes.

**TOPOGRAPHY**

Since heat rises, elevated slopes greatly influences fire behavior and rate of fire spread. Slopes with south and southwest aspects tend to be drier and more prone to ignition. Steep, narrow drainages and canyons, like chimney, when wildfires occur.

**HUMAN**

When people choose to build or buy homes in high-hazard fire areas, their homes are potential fuel. Untreated wood shake and shingle roofs, narrow roads, limited access, lack of firewise landscaping, inadequate water supplies and inadequately planned subdivisions increase the risk of wildfire to people and their property.

WILDFIRE HAZARDS:

- The climate of the area is relatively dry.
- Thunderstorms can occur frequently and produce hundreds of lightning strikes in a single storm.
- Seasonal weather patterns over the region and topographic effects from the continental divide can generate high winds year-round.
- It is not uncommon for this area to experience winds in excess of 50 miles per hour.
- It is possible for wildfires to occur 12 months a year.

WILDFIRE HAZARD REMEDIATIONS:

- Complete the mitigation recommendations stated below to reduce fire hazard potentials.
- Thin the vegetation density reducing continuous connectivity.
- Remove ladder fuels to provide vertical disconnection between ground vegetation and aerial vegetation.
- Maintain grass to less than 4" height within 30 feet of the structures.
- Maintain a wildfire emergency plan and have [evacuation to-go items](#) prepared.
- Be registered and familiar with local emergency notification methods - [Jefferson County Lookout Alert](#)
- Know and annually practice [evacuation route](#) travels.
- Stay updated with potential road construction detours/delays, [C-DOT website](#).

3. Property Vegetation Types and Fire Behavior Descriptions

Ponderosa pine mixed conifer

Species: Ponderosa pine, Douglas-fir, aspen, juniper, white fir, gamble oak

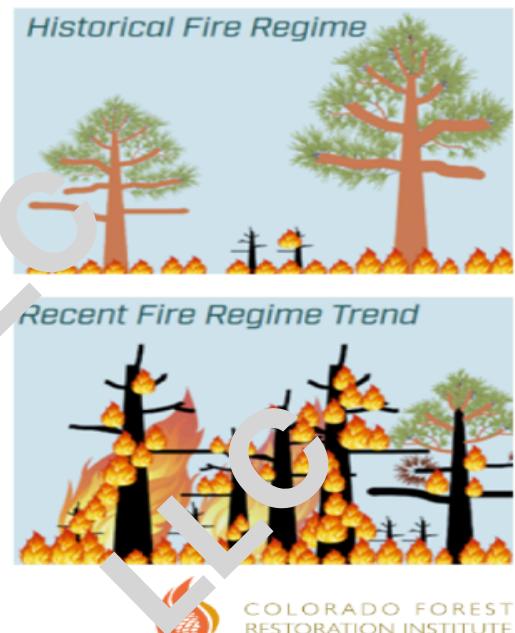
Typical elevation: 6,300-9,500 ft

Fire return interval: 7-50 years (frequent)

Fire severity: Low- to moderate-severity, with some smaller patches of stand-replacing fire where most or all trees die

Ponderosa pine mixed conifer forests are fire dependent. Historically, fire burned across the forest floor, controlling tree regeneration, removing lower limbs on mature trees, and creating large, open spaces between trees.

Human management activities (grazing, logging, fire suppression) have resulted in unnaturally dense forests. During extreme weather, high winds can easily spread fire between tree crowns, resulting in very large high-severity wildfires where most trees are killed. This is not always the case but is a trend that has occurred more frequently in this forest type in the last few decades.



The south, west and north slopes of the property has a vegetation canopy, existing primarily of Ponderosa and mixed conifer trees with an understory/ladder fuel vegetation of grasses, mountain mahogany and wax current to this species

Sprouting species - Aspen and Gambel oak

Species: Aspen occur in pure stands of aspen or in forests with ponderosa pine, lodgepole pine, blue spruce, and other conifers

Gamble oak occur in pure stands of oak or a component of mixed conifer forests and montane shrublands

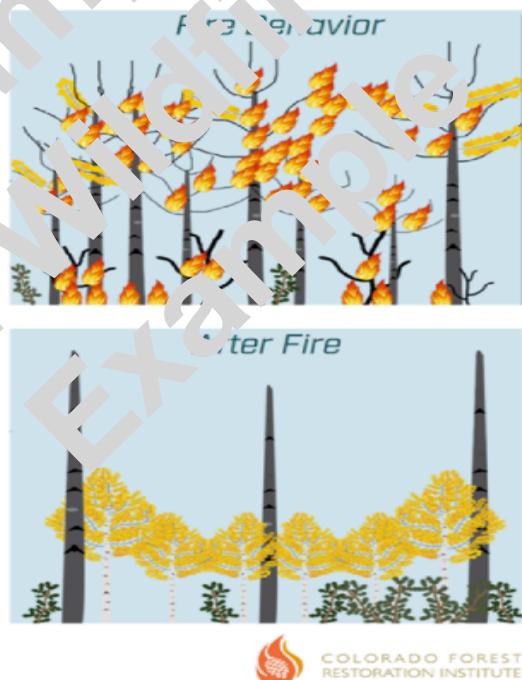
Typical elevation: Highly variable

Fire return interval: Highly variable

Fire severity: Slow and creeping fire, during drought, stand-replacing fire where most or all trees die

Aspen trees are fairly fire resistant and fire resilient. These deciduous trees have high fuel moisture, no low branches, and smooth bark, making them less likely to ignite than conifer trees. Aspens are readily killed by fire but recover quickly via sprouting. This sun-loving species experiences reduced competition from conifers after fire, further creating opportunities for aspen stands to expand.

Gambel oak have low resistance and high resilience to fire. They can be a heavy and continuous fuel source that contributes to fast-moving and intense wildfires. They are readily killed by fire but recover quickly via sprouting. Their acorns provide an important food source for wildlife.



Eastern slopes of the property mostly consist of a healthy Aspen forest intermixed with some conifer/pine trees with a mix of grasses and service berry understory/ladder fuels.

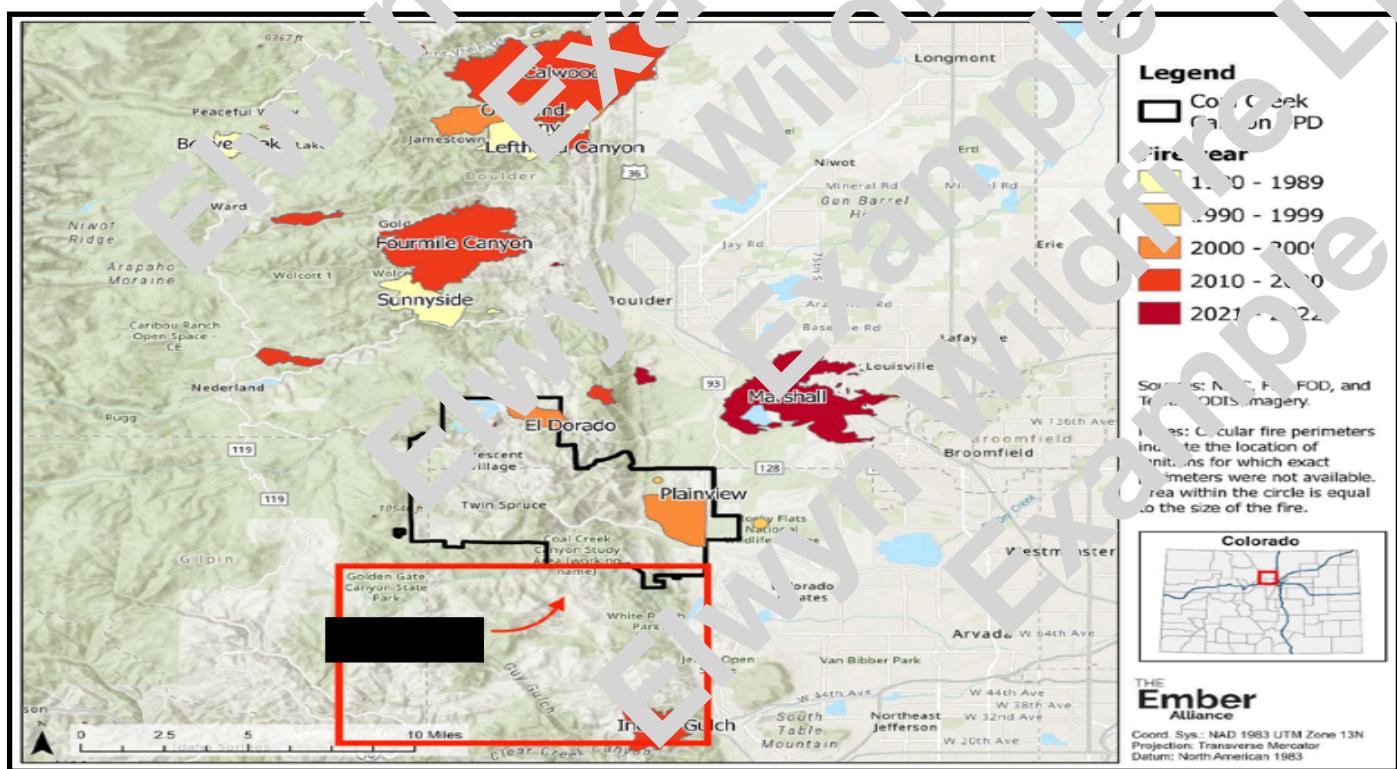
Local Fire History

The Front Range ecosystems are historically adapted for frequent occurrence of fire. Government-mandated fire suppression interrupted the naturally occurring fire cycle resulting in the area and surrounding areas have an extremely high density of wildfire fuel available to aid the fire behavior intensity and spread of any fire ignited. Combined with the numerous potential ignitions sources available in the area and surrounding areas, the probability for catastrophic damages to occur from wildfire today is very likely.

The neighboring fire district recently updated community wildfire protection plan was used for referencing local fire history. The 2024 Coal Creek Canyon Fire Protection District Community Wildfire Protection Plan was referred to [Reference link → CCCFPD CWPP](#)

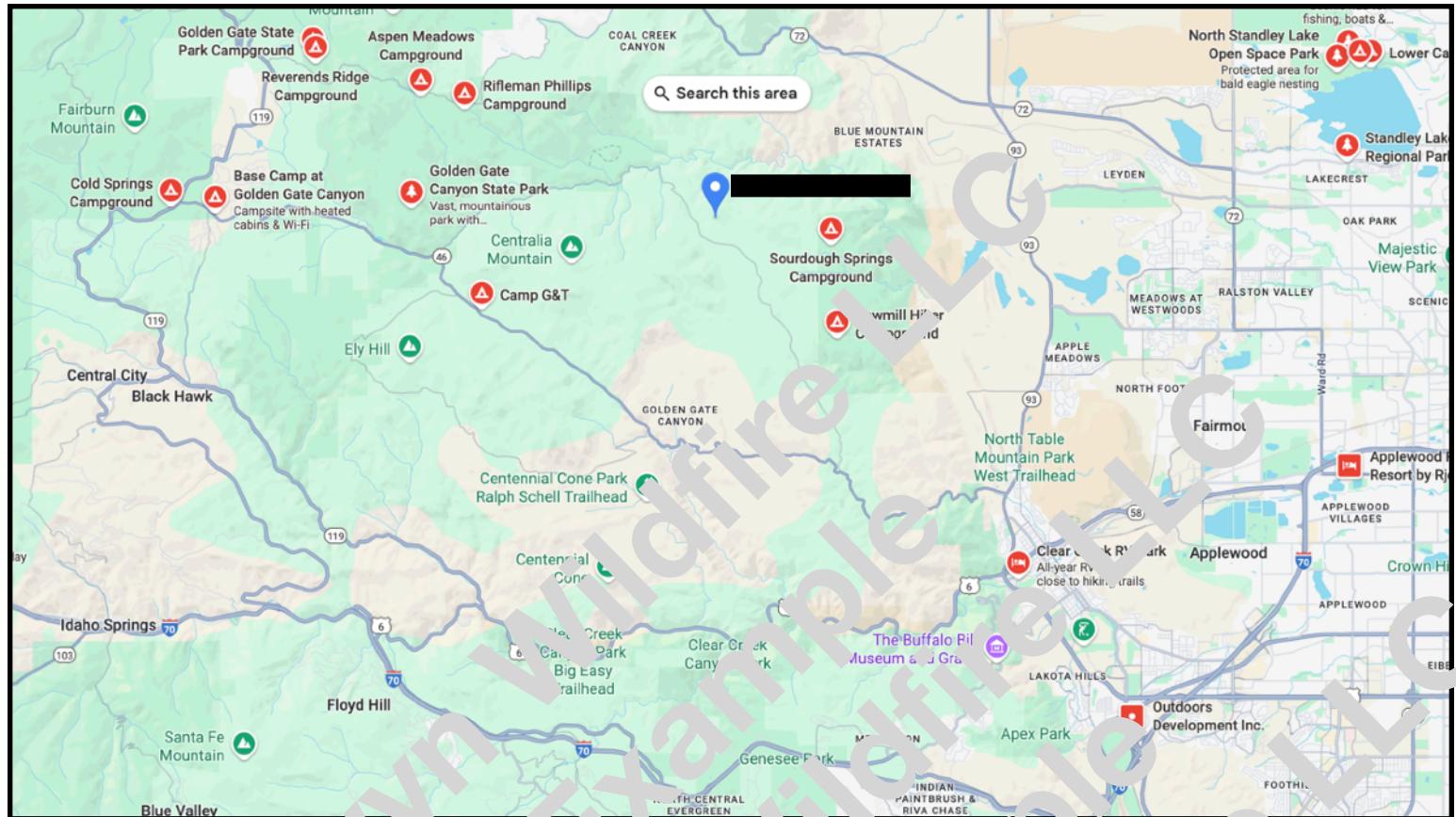
The 2024 Coal Creek Canyon Fire Protection District Community Wildfire Protection Plan states:

“CCCFPD and adjacent districts have significant wildland fire potential due to high hazard conditions such as dense forests, steep terrain, and limited road access. The 2006 Plainview Fire spread across 2,700 acres in CCCFPD, fueled by over 70 mph winds. The Plainview Fire forced about 100 families to evacuate from the Plainview and Blue Mountain Estates communities. The 2010 El Dorado Fire burned 1,000 acres in the northern portion of CCCFPD and triggered voluntary evacuations for 250 homes. Other fires that burned near but not within CCCFPD include the 2010 Fourmile Canyon Fire (6,175 acres), 2016 Cold Springs Fire (525 acres), 2021 Mars Hill Fire (6,080 acres).”



Wildland firefighters suppress a vast majority of ignitions in the district before they exceed 0.25 acres in size, but fires can escape the initial capacity of firefighters under high, dry, and windy conditions. Human-caused ignitions predominate in the district, with the most human- and lightning-caused ignitions occurring in June and July.

Ignition Source Exposure Assessment



The 2024 Jefferson County Community Wildfire Protection Plan states:

Reference Link — [Jefferson County CWPP](#)

“Jefferson County has some of the highest wildfire risk in the state of Colorado, and extreme fire behavior could threaten critical infrastructure, homes, and the lives of residents, visitors, and firefighters. There is an immediate need for many communities in Jefferson County to undertake proactive measures and mitigate wildfire risk to protect lives and property.”

According to the 2024 Wildfire Risk to Communities, an analysis by the U.S. Forest Service, Jefferson County has the second highest wildfire risk of all counties in Colorado and greater risk to wildfire than 98% of counties in the United States (Scott et al., 2024). The Colorado Front Range—which includes Jefferson County—was identified as one of 21 high-priority landscapes in the U.S. Forest Service’s Wildfire Crisis Strategy due to high fire risk and the abundance of highly valued resource assets (HVRAs) along the Colorado Front Range.

The highest relative burn probabilities in Jefferson County occur in the northern part of the county in Coal Creek Canyon and Golden Gate Fire Protection Districts where there is the potential for rapid rates of fire spread across steep, complex terrain covered in grasslands, shrublands, and forests with low to moderate tree densities and abundant understory vegetation.”

WILDFIRE IGNITION SOURCE HAZARDS:

- Heavy density vegetation in alignment with topography and prevailing wind directions.
- High tourist visitations.
- High volume highways exist downhill of the property.
- Campgrounds, picnic areas, outdoor recreation located downhill and west / southwest of the property.
- Substantial hunting activities in the area and surrounding areas during typically dry fall season.
- Power lines and railroad transect the terrain.
- Large metropolis areas located down slope and in alignment with common wind patterns.
- Thunderstorms can occur frequently and produce hundred's of lightning strikes in a single storm.



WILDFIRE HAZARD REMEDIATION:

- Follow structure hardening guidelines stated below to reduce ember intrusion.
- Maintain the vegetation density within ~130' downslope and 100' side/slope of the intended structure(s) to standards mentioned below.
- Be connected to local community emergency alert systems - [Jefferson County Lookout Alert](#).
- Participate and support community wildfire risk reduction and awareness programs.
- Prepare and annually review [evacuation checklist](#).
- Prepare and annually review [escape route plan](#).
- Stay updated with potential road construction detours/delays, [C-DOT website](#).

6. Local Fire Suppression Resource Capabilities Assessment

The 2011 Golden Gate Fire Protection District website was referenced to collect the following data:

[Reference link → Golden Gate Fire Protection District Website](#)

“The Golden Gate Fire Protection District serves approximately 1200 residents and covers a 50 square mile area. We also serve various recreation areas including Golden Gate Canyon State Park, Centennial Cone Open Space Park, White Ranch Open Space Park, Mount Galbraith Open Space Park, and Colorado Department of Wildlife lands. Our department is all-volunteer with the exception of the paid Fire Chief and administration employee. **Our ISO (Insurance Services Organization) rating is a class 6 for all residents that live within 5-miles of a fire station.**”

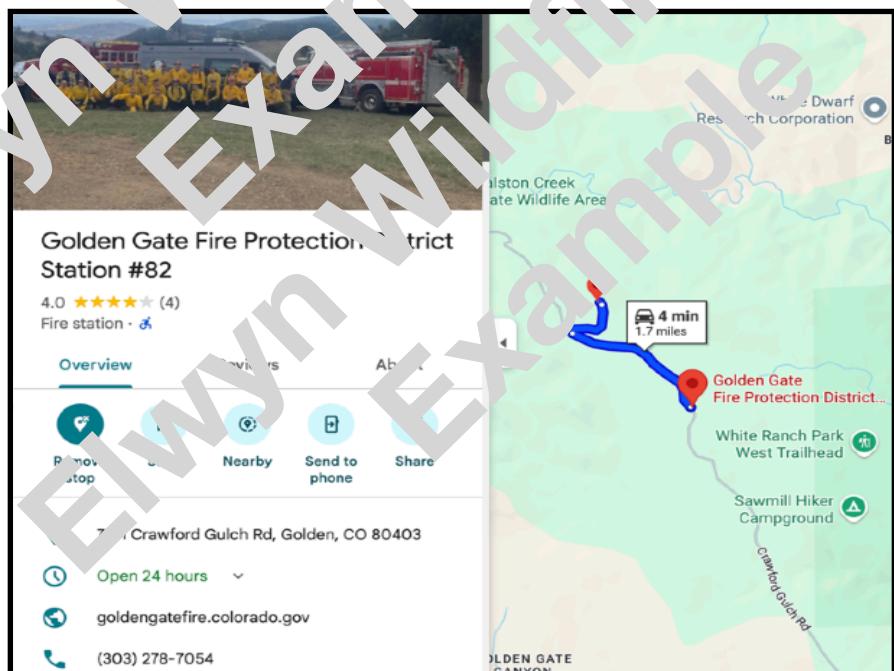
The Golden Gate Fire Protection District Community Wildfire Protection Plan was referred to collect the fire suppression capabilities data.

[Reference link → GGFPD - CWPP](#)

The Golden Gate Fire Protection District Wildfire Protection Plan states the following:

“Golden Gate Volunteer Fire Department maintains two equipped stations throughout the district. The department consists of one chief, one assistant chief, two station captains, one medical officer, 11 volunteer firefighters, and 3 support staff. Most residents in GGFPD are located less than five miles from a fire station, and there are currently sufficient VFD personnel to respond to the numerous emergency calls they receive each year. In wildland areas outside of the WUI zones in the district, response time could be long due to rugged terrain and lack of road access. However, there is currently adequate staff and equipment to effectively handle the majority of fire and medical emergencies. Jefferson County maintains a certified Type 3 Incident Management Team for overhead support in the event of a multiple-day fire event. Should a complex fire event extend past 24 hours, a Type 2 or Type 1 IMT would need to be brought to the district.”

Apparatus	Type	Station
Brush 862	Type 6 Engine	4
Tender 872	Type 2 Tactical Tender	1
EUV	6x6 Rescue ATV	1
Engine 831	Type 3 Engine	2
Brush 856	Type 6 Engine	1
Tender 870	Type 1 Tender	2
Engine 832	Type 3 Engine	1



Golden Gate Fire Station #1 is 1.7 miles from the property

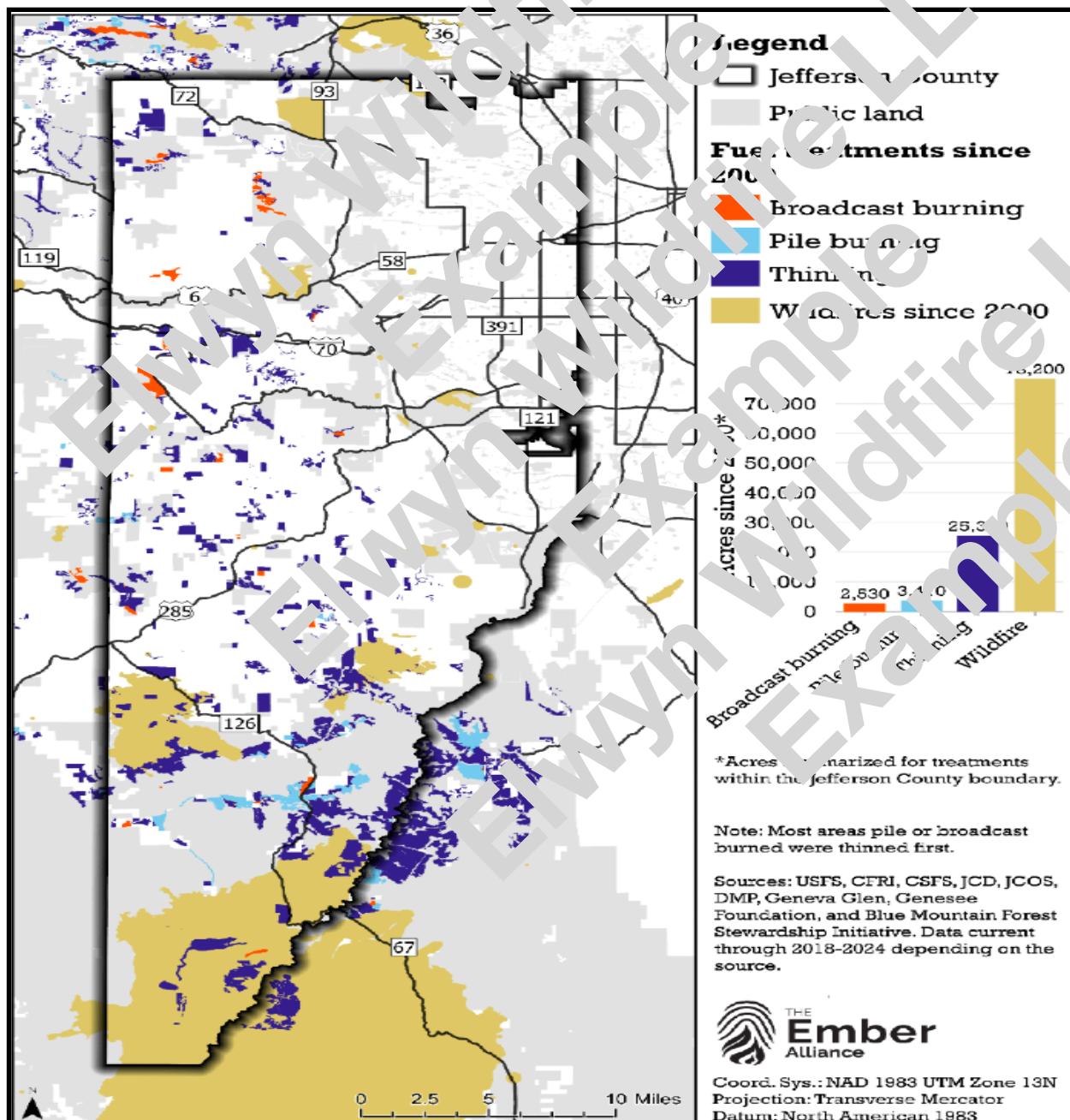
GGFPD has the **Insurance Services Office (ISO) classification of class 6** for this property address.

Local Area Wildfire Fuels Reductions

The 2024 Jefferson County Community Wildfire Protection Plan was referenced to collect the following data: [Reference link → Jefferson County - 2024 CWPP](#)

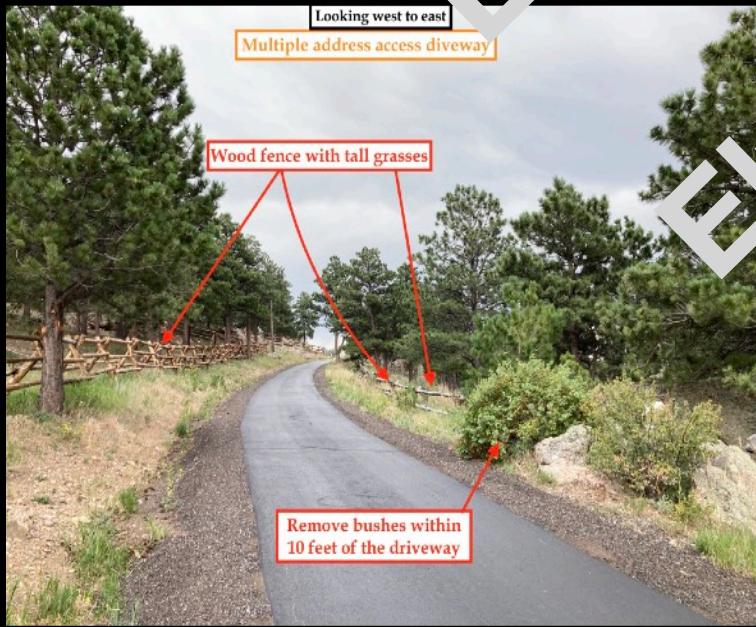
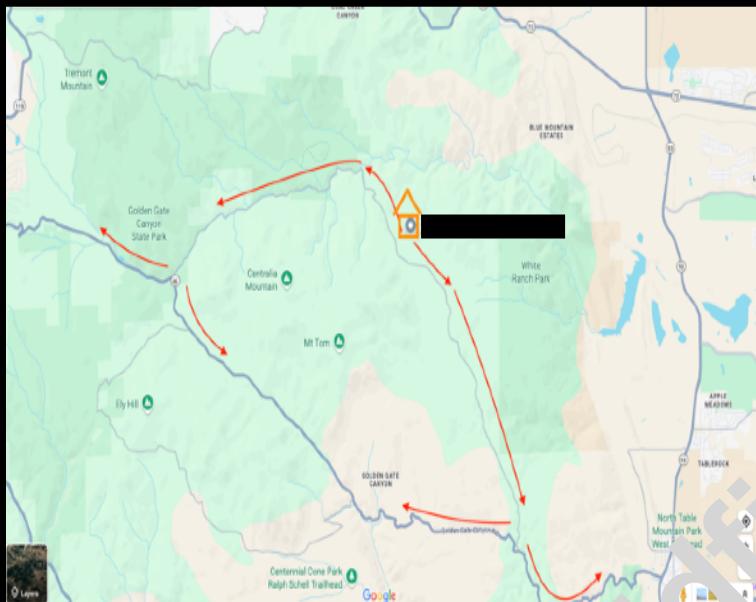
“Public land managers and private residents in and around Jefferson County have conducted strategic fuel treatments on about 31,350 acres between 2000-2023 to reduce wildfire risk and/or restore ecosystem health. Thinning without burning was the primary mode of fuel treatment, accounting for 80% of treated acres. The U.S. Forest Service treated 45% of treated acres between 2000-2023 and the Colorado State Forest Service treated 35%.”

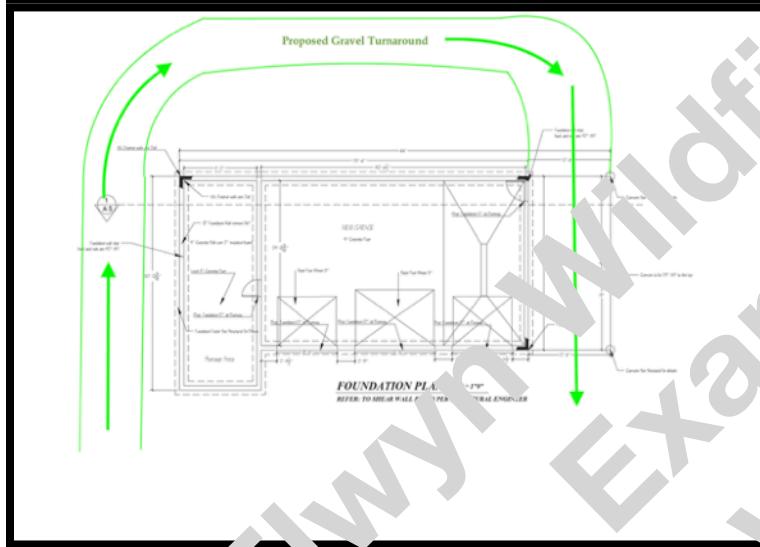
The pace and scale of fuel treatments was outpaced by the size of wildfires in Jefferson County between 2000-2023; wildfires burned 2.5 times more area than fuel treatments mitigated. Burned areas can serve as an effective fuel treatment modifying wildfire behavior for years to come, as evidenced by reduced fire severity in the areas burned by the 1996 Buffalo Creek and 2002 Hayman Fires.”



[Reference link → Jefferson County - 2024 CWPP](#)

Property Access Assessment





PRE-EXISTING WILDFIRE ADAPTIVE CONDITIONS:

- Safe turn around proposed to be built will provide safe turnaround option for a Type-6 wildland fire fighting engine located within 100 feet of the high value structures of the property.
- Golden Gate Fire Protection District Station is 1.7 miles from the address. ICD rating 6.

WILDFIRE HAZARDS:

- Do all the gates have a manual operation available for access to the neighborhood and the individual properties during power outages?
- Higher densities of 10' private driveway escape route fuels, on the lower branches creating connectivity between ground fuels and crown fuel, ie. "ladder fuel" = obstacles to tree-top connectivity.
- Tree crown density on the east side of the house obscuring some visibility of the house from the road.
- Noncombustible reflective address indicator is not present.

WILDFIRE HAZARD REMEDIATIONS:

- Provide a noncombustible reflective address indicator visible to Spirit Ranch Rd →
- If the east side "carport" space of the garage is to be commonly occupied by a vehicle or trailer, ensure keys are made readily available for fire department use during an emergency.
- Remove conifer/pine species from the Aspen stand located east of the house extending to the driveway.
- Remove lower branches on trees located within 10 feet of private driveway.
- Prepare and annually review escape route plan.
- Compliance with [Jefferson County Wildfire Zoning Resolution, Section 39](#) ← Clickable link



Primary Structure Assessment

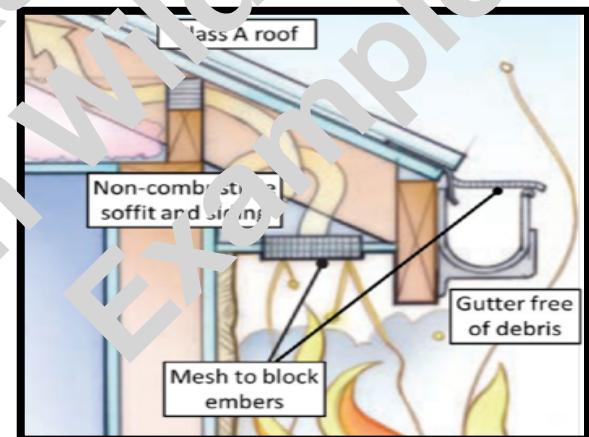
1.

Roof to Eaves



EXISTING NFPA COMPLIANT CONDITIONS:

- Noncombustible Class A roof
- Few vents protruding the roof with maintained and flush seals.
- Roofline edge caps.
- Roof is completely clean. No vegetative debris collecting.
- Gutters are clean.
- Enclosed soffits. 1/8th inch or less screened vents.
- Fireplace chimney has 1/4" inch screen.

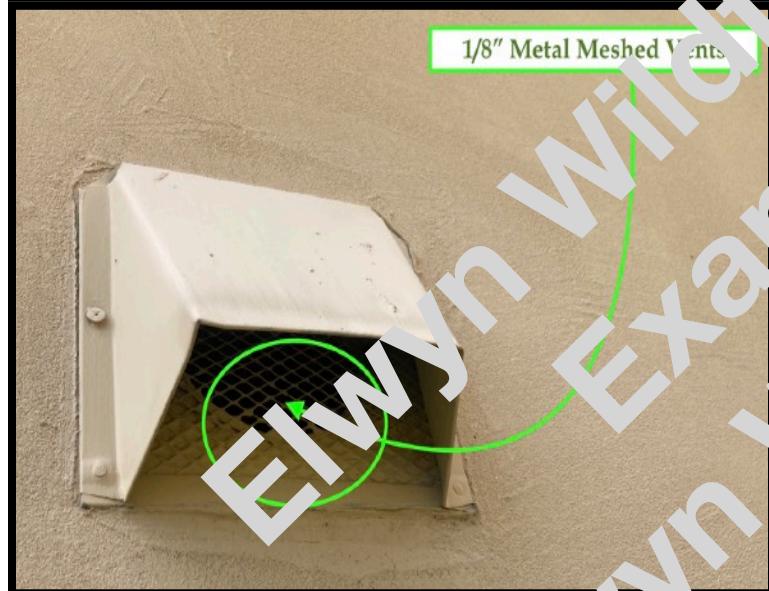


WILDFIRE HAZARDS:

- Some smaller trees and brush have branches within 10 feet of roof-line/eves of the structure.

WILDFIRE HAZARD REMEDIATIONS:

- Maintain roof clean of vegetative debris seasonally.
- Maintain clean gutters.
- Trim tree branches to beyond 10 feet of structure eves.
- Provide prepositioned ladder to allow fire fighters access to the roof during a wildfire emergency.
- **Watch these videos – > [Ember Attack](#) & [IBHS Ember Test](#) & [NFPA Home Survival](#)**



EXISTING NFPA COMPLIANT CONDITIONS:

- Double paned glass windows
- Lowest 6 inches of the structure walls are noncombustible materials.
- Door seals are tight and maintained with no gaps visible.
- Maintained exterior door weather stripping.
- Siding vents are 1/8th inch metal screened or louvered

WILDFIRE HAZARDS:

- Combustible vegetation or vegetation debris collecting at base of the walls or within 0-5 foot side of the house.

WILDFIRE HAZARD REMEDIATIONS:

- Maintain exterior wall paint with caulking any visible gaps.
- Maintain conjunction of walls and ground or deck surface free of any vegetation debris.

Projections and Attachments



EXISTING NFPA COMPLIANT CONDITIONS:

- Noncombustible decking/structural materials

WILDFIRE HAZARDS:

- Combustible lawn furniture pads.
- Combustible rugs catch embers.

WILDFIRE HAZARD REMEDIATIONS:

- Maintain clean decks and porches free from vegetative debris.
- Store combustible patio/deck furniture pads in a noncombustible container or area.
- Move the grill propane container into the garage or to beyond 30 feet from the house during a wildfire emergency.
- Maintain a 5 foot non combustible area surrounding the outer edge of any structure.

Home Ignition Zone 1

(0 - 5 feet from outer edge of the structure)



EXISTING NFPA COMPLIANT CONDITIONS:

- West side of the house has an irrigated garden area, stream, pond and large concrete areas within the 0-5' noncombustible zone 1.
- Much of the south and south eastern corner of the house is irrigated grass, garden areas and concrete patio/pool area.

WILDFIRE HAZARDS:

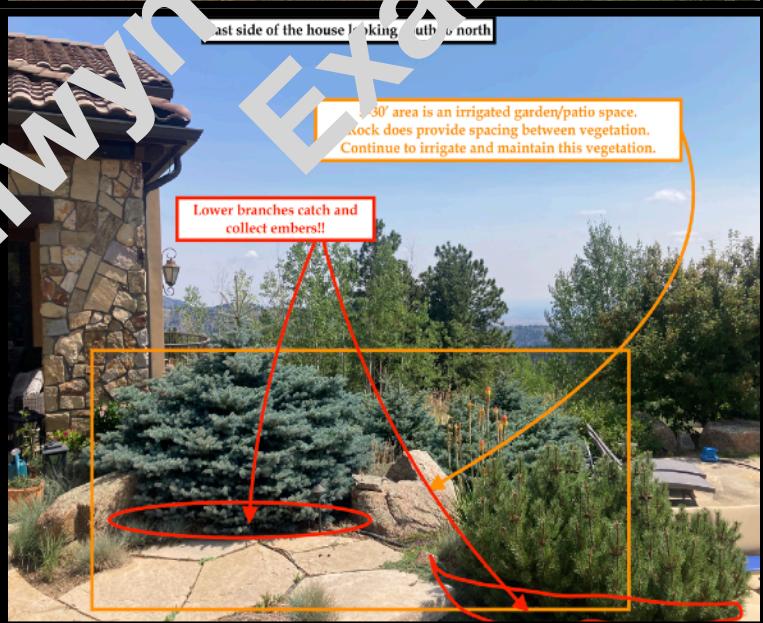
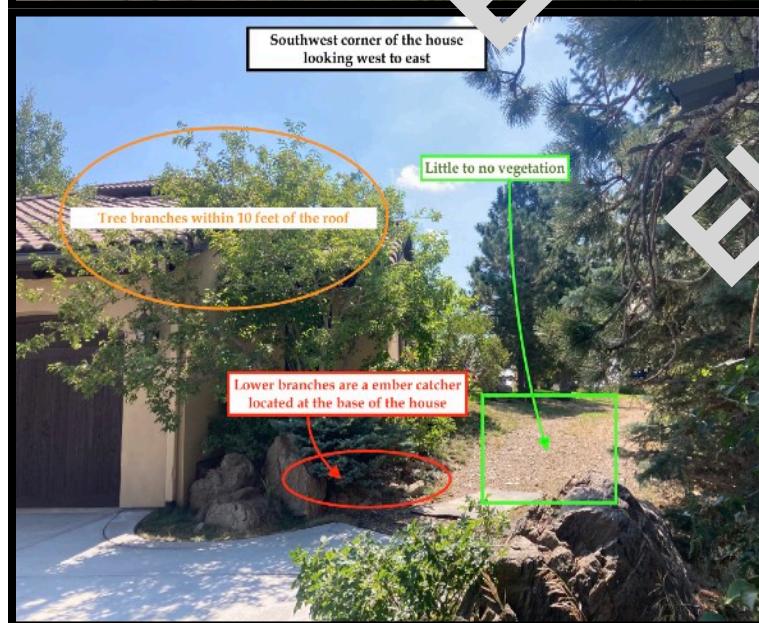
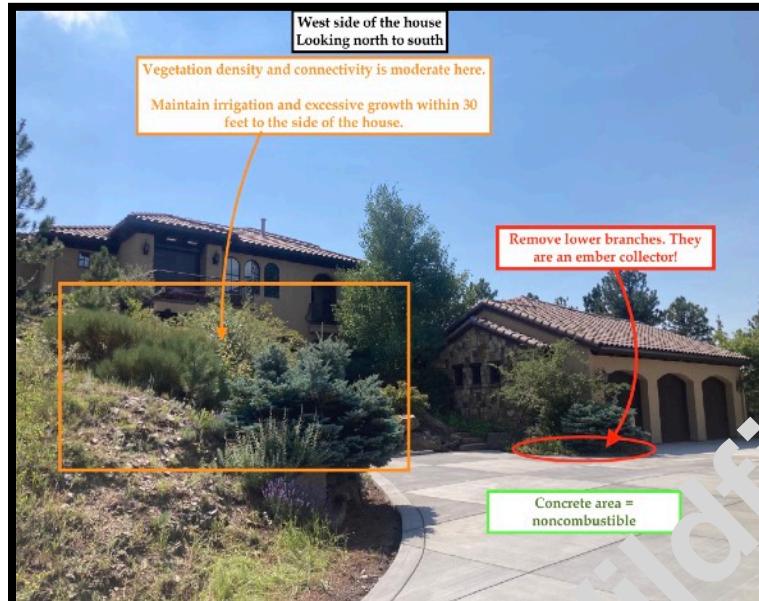
- Grasses and pine needles within critical 5 foot noncombustible zone and touching the structure on east and north sides.
- Patio furniture pads are combustible.

WILDFIRE HAZARD REMEDIATIONS:

- Maintain a 5 foot noncombustible area surrounding the outer edge of any structure.
- Use dirt, gravel, pavers or other noncombustible materials to replace pine needles and grasses within the 0-5' zone.
- Any vegetation within 0-5 foot zone needs to be irrigated and [FireWise approved vegetation](#) <-- click link
- Regularly clean vegetative debris from the surface of the deck and patio's.
- Store combustible patio/deck furniture pads in a noncombustible container or area.

Home Ignition Zone 2

(5 - 30 feet from outer edge of the structure)



EXISTING NFPA COMPLIANT CONDITIONS:

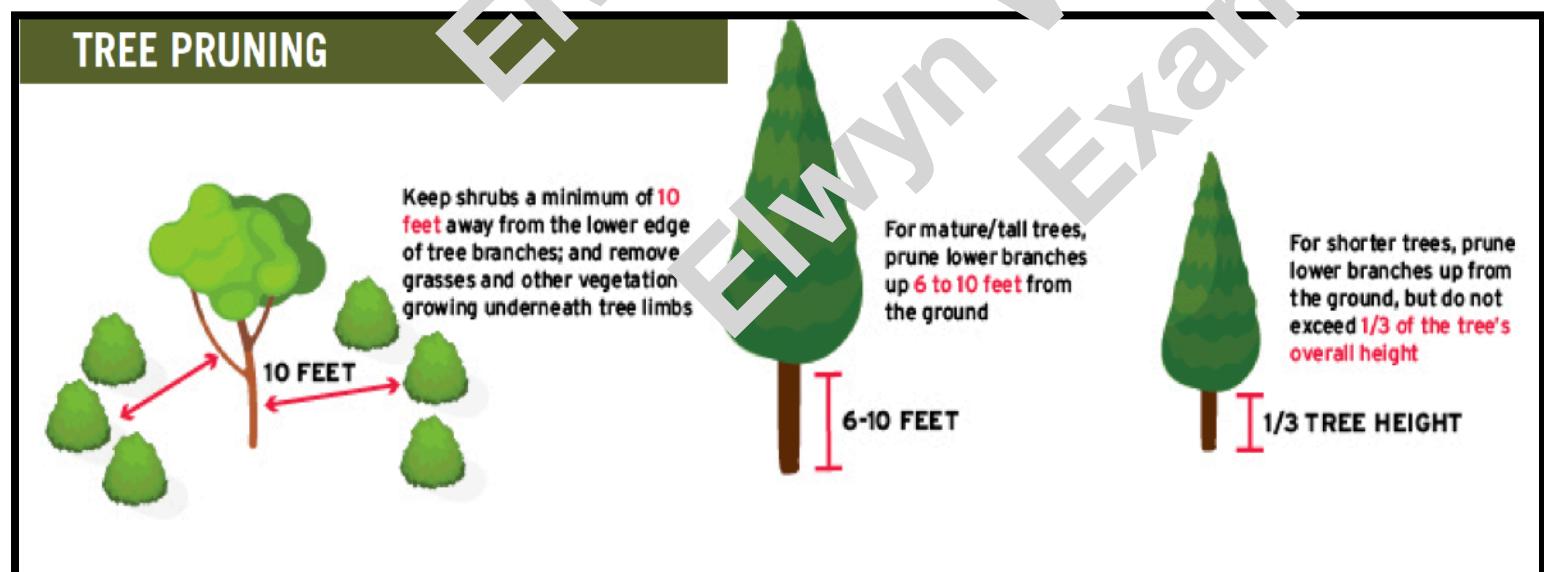
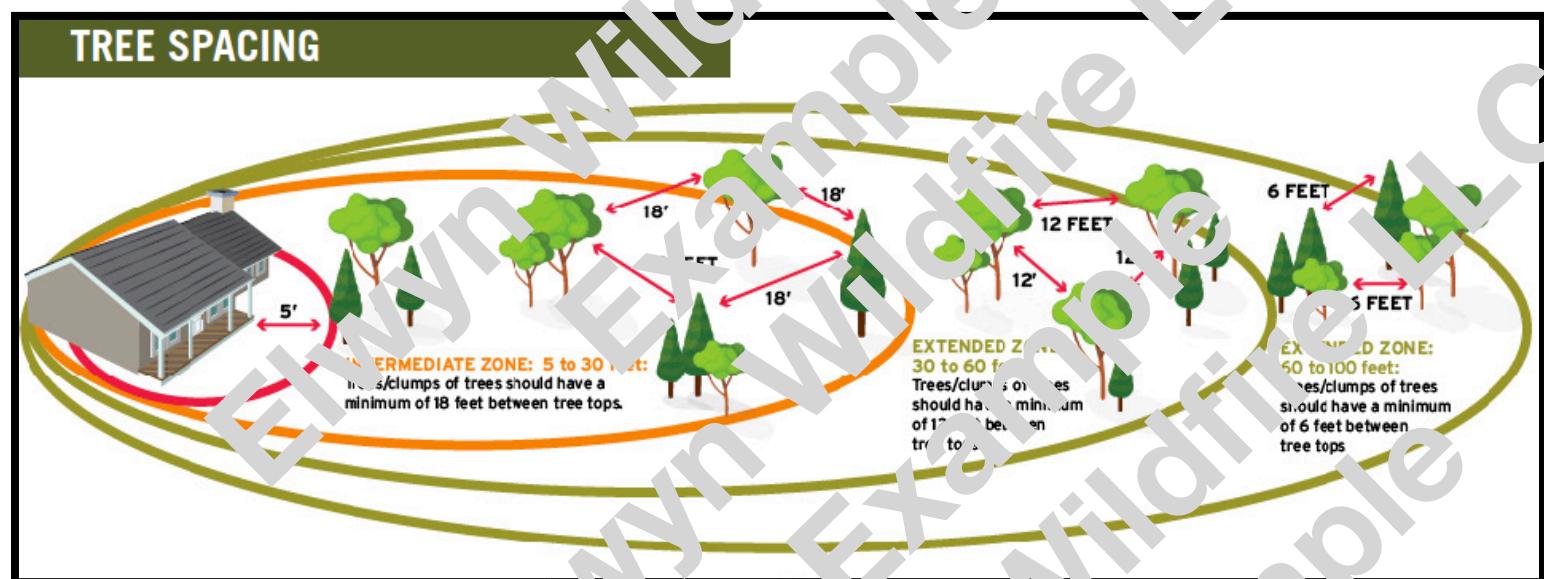
- Limited trees and brush in this zone (5-30').
- Irrigated garden areas increase humidity near the house.

WILDFIRE HAZARDS:

- Grasses taller than 4 inches within 30 feet of the structure.
- Some ground to canopy vegetation continuity/connectivity could support tree-top fire spread and extreme ember production.
- Lower branches on bushes will collect embers during a wildfire event.

WILDFIRE HAZARD REMEDIATIONS:

- Remove lower branches of bushes and trees in the 0-30' zone to create spacing between ground vegetation and the crowns of the vegetation.
- Maintain grasses and ground vegetation to less than 4 inches in height within 30 feet of the structure.
- Keep vegetation in this zone well irrigated.
- Remove pine and conifer trees within the eastern slope Aspen forest stand between the house and driveway.



Home Ignition Zone 3

(30 - 130 feet from outer edge of the structure)



EXISTING NFPA COMPLIANT CONDITIONS:

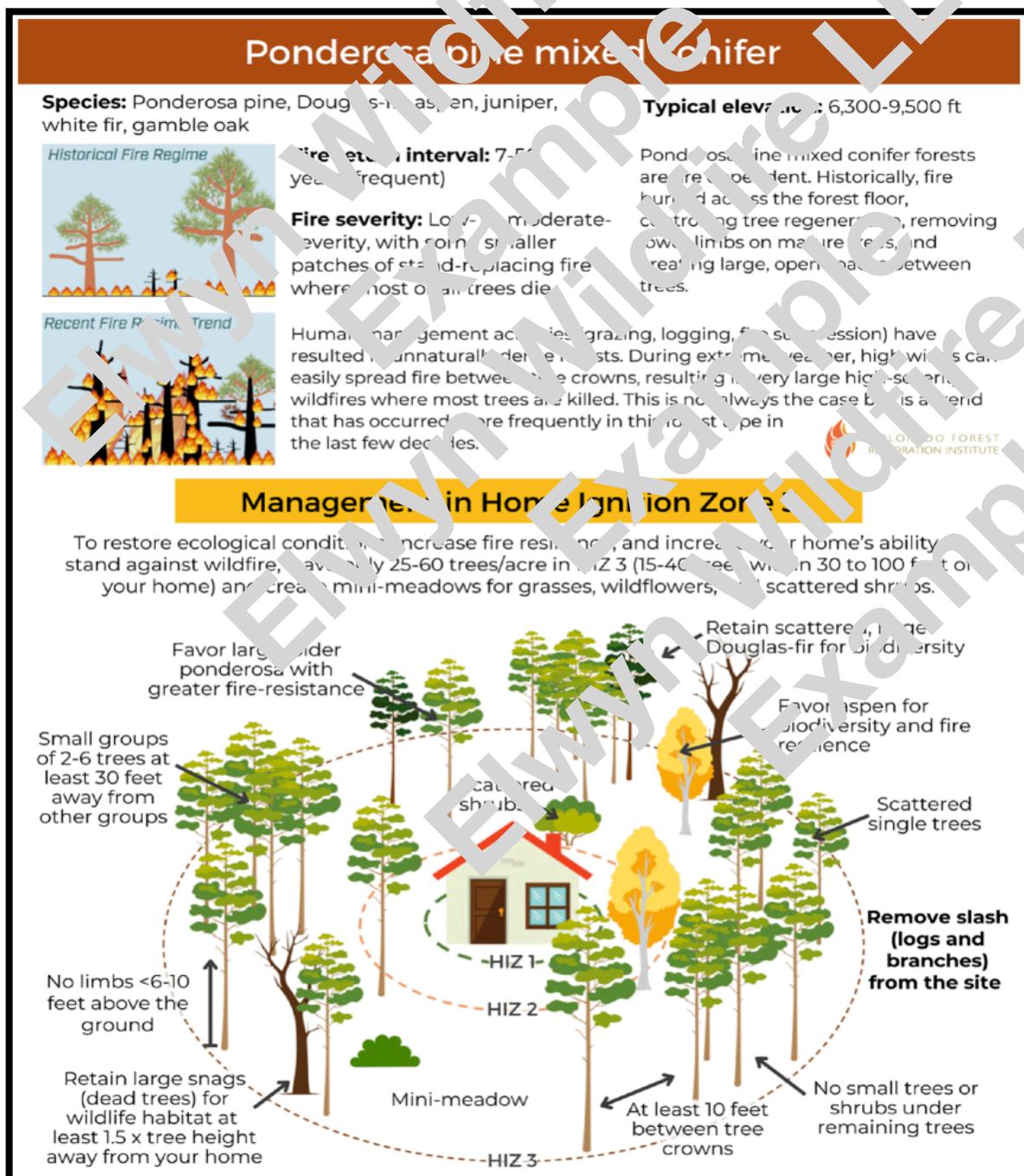
- The north side of the house has excellent zone 2 and zone 3 tree density spacing.
- Ground fuels are easy to maintain, with limited ladder fuel connectivity to the top of the trees.
- Minimal vegetation modifications needed to space tree crown spacing in limited areas.
- The Aspen forest located on the east and north sides of the house can provide increased humidity levels during a wildfire event.

WILDFIRE HAZARDS:

- Some tree crown densities located on the south and west slopes of the property are denser than recommended standards.

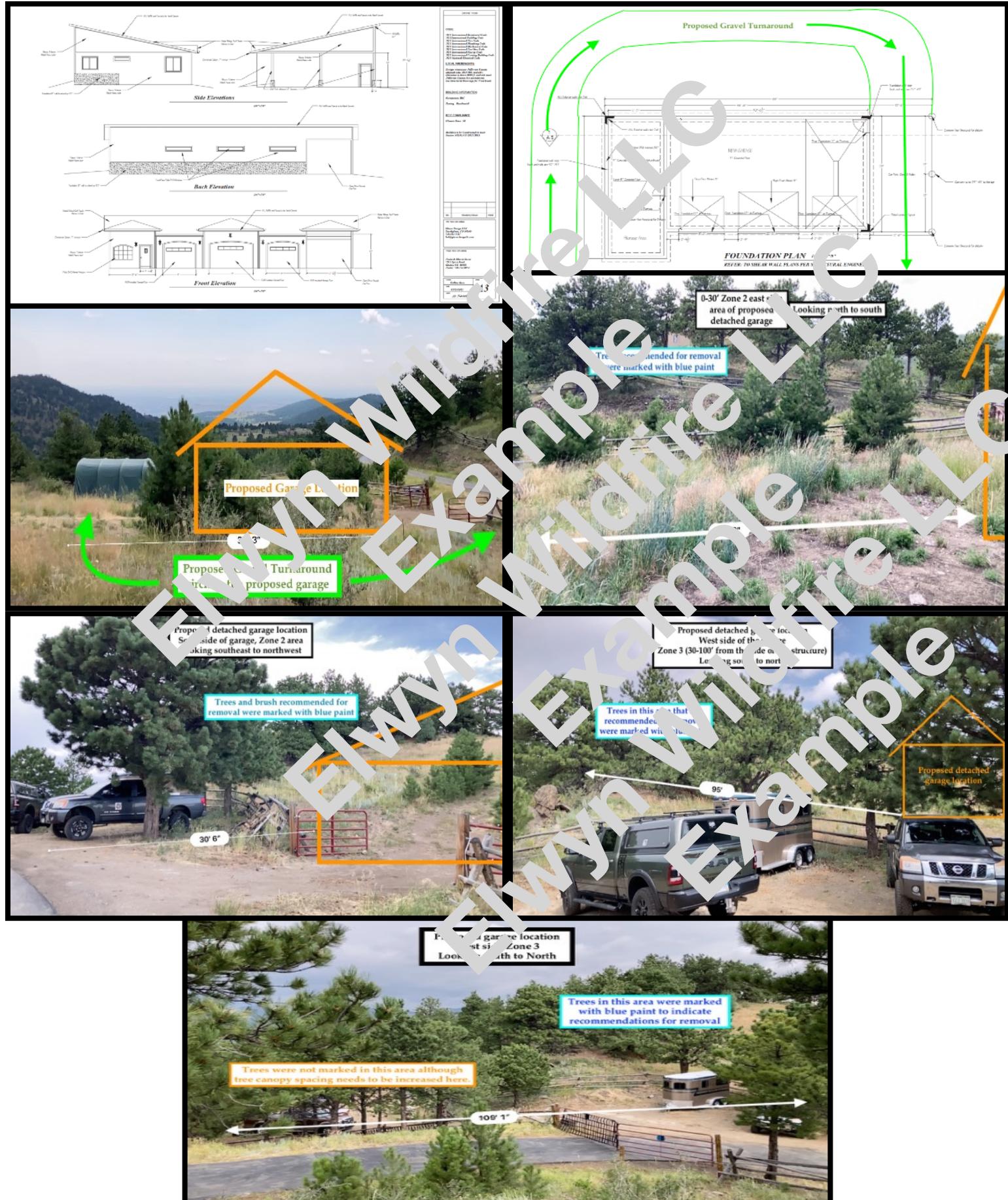
WILDFIRE HAZARD REMEDIATIONS:

- Remove some lower hanging branches.
- Remove some larger trees to increase tree canopy spacing to recommended standards below.
- Remove pine and conifer trees from the Aspen forest located on the east side of the house between the house and the private driveway.



Proposed Detached Garage

Jefferson County Parcel ID [REDACTED]



EXISTING NFPA COMPLIANT CONDITIONS:

- Noncombustible roof and exterior wall materials ensuring lowest 6 inches of the structure walls are noncombustible materials.
- Roof and exterior wall vents are 1/8th inch metal screened or louvered.
- Double paned glass windows.
- Door seals are tight and maintained with no gaps visible. Maintained exterior door weather stripping.
- 0-5' foot noncombustible area measured from side of the structure.
- Gravel vehicle turnaround surrounding the building located within the 0-15' area surrounding the planned garage.
- Power outage emergency accessible manually operated gate.

WILDFIRE HAZARDS:

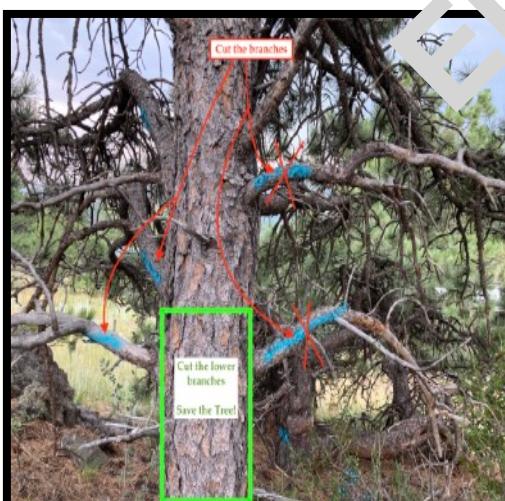
- Combustible vegetation or vegetation debris collecting at base of the walls or within 0-5 foot side of the house.
- High levels of overall vegetation density residing within Zone 3 (30'-130') of the detached garage will produce abundant embers during a wildfire event.

WILDFIRE HAZARD RECOMMENDATIONS:

- Maintain siding paint and caulking any visible gaps.
- Maintain a 5 foot noncombustible area surrounding the outer edge of any structure.
- Maintain grasses and ground vegetation to less than 4 inches in height within 30' feet of the structure.
- If the east side "carport" space of the garage is to be converted to a vehicle or trailer, ensure keys are made readily available for fire department use during an emergency.
- Maintain the vegetation density within ~10' downslope and 100' side/uphill of the valued structure to recommended spacing guidelines.
- Zone 2 & 3 recommended vegetation to be removed has been marked with **blue paint**.

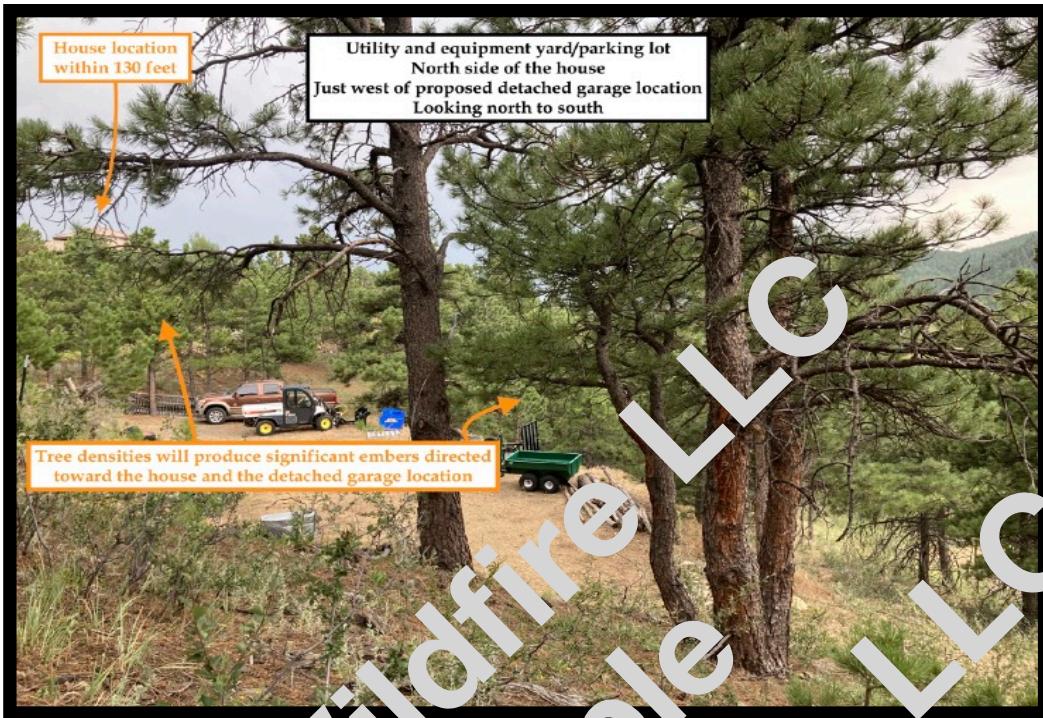
See above/ below photo for reference

- Juniper's are preferred to be removed for any situation within the ~130' downslope and 100' side/uphill area. **Blue paint** on Juniper's references recommendation for total removal.
- Branches of conifer and pine trees that are **painted blue** indicate branches to be removed, generally referencing low-hanging branches of trees or brush.
- Trunks of conifer and pine trees that are **painted blue** indicate whole trees recommended for removal.
- Brush species, i.e. mountain mahogany or wax current, **painted blue** indicates recommendation for removal.
- **Following these recommendations will significantly reduce the quantity of ember's produced during a wildfire event.**



Horse Barn & Stalls





EXISTING NFPA COMPLIANT CONDITIONS:

- Noncombustible roof and exterior wall materials enclosing lowest 2 inches of the structure walls are noncombustible materials.
- The horse barn/stall south slope alignment and vegetation density to the house provides some degree of fire suppression for the house being within the 130' Zone 3 of the house.
- Ground fuels are very coarse within the horse barn/stall areas.
- Lower branches of the trees have been removed.
- The west slope outdoor rink provides some degree of fuel break characteristics to the vegetation located west of the house and the proposed detached garage.

WILDFIRE HAZARDS:

- Combustible vegetation or vegetation debris collecting at base of the walls or within 0-5 foot side of the barn/stall structure.
- High levels of overall vegetation density residing within Zone 3 (30'-130') of the horse barn/stalls will produce abundant embers during a wildfire event.
- Post and pole wood rail fence will produce large numbers of embers within 130' feet to the house and barn/stalls
- Alignment of firewood stack and combustible storage area located on the western side of the barn/stalls will collect embers and ignite the barn/stalls thus resulting in extreme exposure to long duration radiant heat and ember production down slope of the house.

WILDFIRE HAZARD REMEDIATIONS:

- Maintain exterior walls of barn/stalls to limit ember intrusion, paint and caulking any visible gaps.
- Maintain a 5 foot noncombustible area surrounding the outer edge of any structure.
 - Remove pine needles in these areas adjacent to the barn/stalls.
- Maintain grasses and ground vegetation to less than 4 inches in height within 30 feet of the structure.
- Consider applying Zone 2 and Zone 3 tree and brush spacing recommendations to forest areas located south, west, and north of the horse stalls to reduce risk of wildfire damage to the horse barn/stalls.
- Remove firewood stack and combustible storage area located on the western side of the barn/stalls.
- Remove post and pole rail fence where possible.

Summary of EXISTING NFPA COMPLIANT CONDITIONS

- 2wd accessible roadway and maintained driveway.
- Power outage emergency accessible manually operated gate located within 200 feet of the house and at proposed detached garage location.
- Neighborhood paved and gravel roads/driveways provide some degree of larger scope fuel break protection.
- The driveway currently provides safe turn around for Type-6 wildland fire fighting engine within 100 feet of the valued structures.
- Fire Protection District Station is 1.7 miles from the address.
- Noncombustible roof in excellent condition.
- Minimal vents protruding the roof with maintained flue condition seals.
- Enclosed soffits with 1/8 inch or smaller vents
- Noncombustible exterior walls maintained in good condition.
- The lowest 6 inches of the structure(s) walls is noncombustible.
- Double-paned glass windows.
- Door seals are maintained with no visible gaps.
- Noncombustible used for the construction of the decks/patios
- Patio is clean of vegetative debris.
- West side of the house has an irrigated garden area, stream, pond and large concrete areas within the 0-5' noncombustible Zone 1, increase localized humidity is produced!!
- Zone 2 (5-30') has increased localized humidity produced by the south side and southeastern corner of the house having irrigated grass, garden areas and concrete patio/pool area.
- Limited trees and brush within 5-30 foot zone with concrete patios and garage turnaround/parking areas.
- The horse barn/stall south slope alignment and vegetation density to the house, provides some degree of fire suppression for the house being within the 130' Zone 3 of the house.
- Horse barn/stall area ground fuel and lower branches have be removed.
- Minor vegetation modifications within the ~130' downslope and 100' side/uphill areas of the structures (Zone 2 and 3) will significantly reduce the wildfire hazards on the property.
- The north side of the house has excellent zone 2 and zone 3 tree density spacing.
- The Aspen forest located on the east and north sides of the house can provide increased humidity levels during a wildfire event.
- A gravel vehicle turnaround surrounding the proposed garage located within the 0-15' area surrounding the planned garage.
- The property owners have requested for this professionally, NFPA certified, and customized wildfire risk assessment and mitigation plan to be produced helping them to understand their unique wildfire adaptive situation.

Summary of recommended WILDFIRE RISK REMEDIATIONS

1. Be connected to local community emergency alert systems - [Jefferson County Lookout Alert](#).
2. Ensure main neighborhood gate can be operated for emergencies during an ongoing power outage.
3. Participate and support community wildfire risk reduction and awareness programs.
4. Prepare and annually review [evacuation checklist](#).
5. Prepare and annually review and practice [escape route plan](#).
6. Stay updated with potential road construction detours/delays, [DOT website](#).
7. Provide a noncombustible reflective address indicator visible to  Rd ---->
8. Inform local fire department of completed wildfire mitigation and wildfire adaptations for fire department database.
9. If the east side "carport" space of the garage is to be commonly occupied by a vehicle or trailer, ensure keys are made readily available for fire department use during an emergency.
10. Provide prepositioned ladder to allow fire fighters access to the roof during a wildfire emergency.
11. Keep the roof and gutters clear of vegetation after seasonal snowmelt.
12. Trim tree branches to beyond 10 feet of structure even to drip line.
13. Create a noncombustible 0-5' foot zone from the side of the structures. Use dirt, gravel, pavers or other noncombustible materials to create a noncombustible 0-5' area directly abutting the exterior wall of the structure.
14. Regularly clean vegetative debris from the surface of the patio and deck or within the 0-5' zone.
15. Store firewood in noncombustible storage structure or move to a location beyond 30 feet of the side of the house.
16. Store combustible patio furniture cushions and propane grill propane bottle in a noncombustible location when not in use.
17. Consider [FireWise approved vegetation](#) (click link for landscaping options) within 30 feet of the house.
18. Maintain grass to less than 4" height within the 5-30' foot Zone 2 from the side of the structures.
19. Continue to maintain and irrigate small garden areas within the 5-30' foot Zone 2.
20. Remove firewood stack and noncombustible storage area located on the western side of the barn/stalls.
 - Consider building noncombustible storage area
21. Remove post and pole rail fence where possible.
22. Zone 3 (~130' downslope and 100' side/uphill surrounding a structure) Create approximate vegetation crown spacing of ~10 feet between drip-line of the vegetation.
23. Remove pine and conifer trees within the east side slope Aspen forest stand between the house and driveway.
24. Remove some larger trees to increase tree canopy spacing to recommended standards located on the west and northwest slopes within ~130' downslope and 100' side/uphill areas adjacent to the structures.

Summary of recommended WILDFIRE RISK REMEDIATIONS CONTINUED

25. Zone 2 & 3 recommended vegetation to be removed adjacent to the proposed garage has been marked with **blue paint**.

- See above/ below photos for reference.
- Juniper's are preferred 1st to be removed for any situation within the ~130' downslope and 100' side/uphill area. **Blue paint** on Juniper's references recommendation for total removal.
- Branches of conifer and pine trees that are **painted blue** indicate branches to be removed, generally referencing low hanging branches of trees or brush.
- Trunks of conifer and pine trees that are **painted blue** indicate whole trees recommended for removal.
- Brush species, i.e. mountain mahogany or wax current, **painted blue** indicates recommendation for removal.

26. Consider applying Zone 2 and Zone 3 vegetation spacing recommendations to forest areas located south, west, and north of the horse stalls to reduce risk of wildfire damage to the horse barn/stalls.

27. Work with neighbors to create linked defensible spaces. Projects that span multiple properties are more effective at reducing wildfire risk and hazards.

28. Work with the local community, Jefferson County, CSFS and USFS to reduce wildfire risk vegetation in boarding properties.

29. Watch these videos — > [Ember Attack](#) & [FIS Ember Test](#) & [NFPA Home Survival](#)

Potential Do It Yourself Low Cost Hazard Remediations

1. Maintain a wildfire [emergency plan](#) and have [evacuation to-go items](#) prepared.
2. Be connected to local community emergency alert systems - [Jefferson County Lookout Alert](#).
3. Inform local fire department of completed wildfire mitigation and wildfire adaptations for fire department database.
4. Provide prepositioned ladder to allow fire fighters access to the roof during a wildfire emergency.
5. Keep any propane grill at a location 30 feet or further from the structure or have a plan to move the propane tank to a noncombustible location during a wildfire emergency.
6. Continue to clean the roof and deck of vegetative litter seasonal.
7. Ensure trash and recycle bins are stored in noncombustible area.
8. Park vehicles in ready to go position facing towards exit with windows rolled up.
9. Maintain paint and caulking on the inclosed eaves to prevent ember intrusion.
10. Maintain a noncombustible 0-5 foot zone from the side of the structures.
11. Maintain grass to less than 4" height within 30 feet of the structures.
12. Maintain 5-30 zone vegetative debris build up and vegetative crown density spacing to approximate ~18 foot spacing
13. Maintain 30-100' zone vegetative debris build up and vegetative crown density spacing to approximate ~10 foot spacing
14. Work with neighbors to create linked defensible space. Projects that span multiple properties are more effective at reducing wildfire risk.
15. Work with the local community, Jefferson County, BLM and USFS to reduce wildfire risk. Vegetation in boarding properties.
16. Watch these videos—> [Ember Attack](#) & [IBHS Ember Test](#) & [NFPA Home Survival](#)

Additional Hazard Mitigation Methods to Consider

- Consider applying Zone 2 and Zone 3 vegetation spacing recommendations to forest areas located south, west, and north of the horse stalls to reduce risk of wildfire damage to the horse barn/stalls.
- Have portable hose and sprinkler system ready to set up around the shed and decks to prevent ember ignitions by increasing humidity surrounding those areas.
- Invest in fire foam system.
- Connect rain gutters to a rain water collection system and water pump for emergency situations.
 - Consider potential power cut offs during wildfire events.
 - Have a generator ready to power a emergency fire sprinkler system.
- Collaborate with community and other potential stakeholders in broader landscape wildfire mitigation projects.
- Work with county, state and federal wildfire mitigation projects and initiatives.



Services Offered By Elwyn *Wildfire LLC*

NFPA - Certified Wildfire Mitigation Specialist 1165934-CWMS



Wildfire Hazard Fuel/Vegetation Modifications

- Home / Structure Ignition Zone Preparedness
- Shaded Fuel Break Treatment
- Clear Cut Fuel Break Treatment
- Lop and Scatter
- Cut and Pile
- Chipping
- Wood Utilization Market Sourcing & Coordination

Wildfire Hazard Reduction Project Management

- Colorado State Forestry Guidance Compliance
- County Wildland Urban Interface Zoning & Code Compliance
- Colorado Division of Fire Prevention & Control Certified Burning Compliance

Colorado Certified Burn Program Slash Pile Burning

- Colorado Division of Fire Prevention & Control Certified Burner Burn Plan Development
- Colorado Division of Fire Prevention & Control Approved Slash Pile Burn Implementation

Community Wildfire Preparedness Plan Consulting

- Healthy Forest Restoration Act 02-3 Compliance
- Colorado State Forest Service - Colorado Senate Bill 09-001, CWPPP Compliance
- National Fire Prevention Association Home / Structure Wildfire Hazard Assessment
- National Fire Prevention Association Firewise USA® Community Wildfire Hazard Assessment
- Watershed Wildfire Hazard Assessment
- Project Implementation Assessment
- Mitigation Event Coordination
- Volunteer Time Tracking Assistance / Coordination

Wildfire Hazard Reduction Implementation Grant Funding Acquisition

- Grant Sourcing
- Stakeholder Collaboration
- Community Outreach
- Application Proposal Preparation

Additional Wildfire Risk Reduction Resources

LEGAL DISCLAIMER:

Elwyn Wildfire LLC does not endorse the use of any of the following resources listed. The following list was created to facilitate ideas to reduce wildfire hazards Elwyn Wildfire LLC does not provide mitigation services for.

Elwyn Wildfire LLC makes no warranties, guarantees or representations of any kind with respect to the effectiveness of any mitigation efforts you undertake in connection with your participation in the Elwyn Wildfire LLC hazard assessment program.

Metal Gutter Covers

Gutter Helmet - Colorado

Phone - 800-824-3772

Website (clickable link) - [Gutter Helmet Colorado](#)

Home Depot

Website (clickable link) - [Home Depot Metal Gutter Guard Search](#)

Lowes

Website (clickable link) - [Lowes Metal Gutter Guard Search](#)

Amazon

Website (clickable link) - [Amazon Metal Gutter Guard Search](#)

Ember Resistant Vents and Screening (1/8 inch or smaller)

Vulcan Vents

Website (clickable link) - [vulcanvents.com](#)

Home Depot

Website (clickable link) - [Home Depot ember resistant vent search](#)

Lowes

Website (clickable link) - [Lowes ember resistant vent search](#)

Amazon

Website (clickable link) - [Amazon ember resistant vent search](#)

Noncombustible Fencing

Eagle Eye Fencing Specialist LLC - Golden, Colorado

Phone - 720-968-9687

Website (clickable link) - [Eagle Eye Fencing Specialist LLC](#)

A Straight Up Fence Company - Denver, Colorado

Phone - 720-404-4730

Website (clickable link) - [A Straight Up Fence Company](#)

Intumescent Paints/Coatings

National Fireproofing Supply CO

Website (clickable link) - [National Fireproofing Intumescent Paint For Wood](#)

Home Depot

Website (clickable link) - [Home Depot Intumescent Paint For Wood search](#)

Lowes

Website (clickable link) - [Lowes Intumescent Paint For Wood search](#)

Amazon

Website (clickable link) - [Amazon Intumescent Paint For Wood search](#)

Exterior Emergency Window Coverings

Enviro Screens & Shutters - Golden CO

Website (clickable link) - [Enviro Screens and Shutters](#)

Consumer Fire Products, Inc

Website (clickable link) - [Consumer Fire Products - Fire Shading and Covers](#)

Tempered Window Glass

Home Depot

Website (clickable link) - [Home Depot Tempered Window Glass search](#)

Lowes

Website (clickable link) - [Lowes Tempered Window Glass search](#)

Wildfire Sprinkler Systems

Colorado Firebreak

Phone - (720) 922-1746

Website (clickable link) - [ColoradoFireBreak.com](#)

Wildfire Protection Systems

Website (clickable link) - [Wildfiresprinkler.com](#)

Amazon

Website (clickable link) - [Amazon wildfire sprinkler system search](#)

Wildfire Foam Systems

Colorado Firebreak

Phone - (720) 922-1746

Website (clickable link) - [ColoradoFireBreak.com](#)

C & S Supply, Inc

Website (clickable link) - [C & S Supply, Inc Fire Foam](#)