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2022



**GLACIER VIEW
FIRE PROTECTION DISTRICT**

LARIMER COUNTY, COLORADO

Community Wildfire Protection Plan

EXECUTIVE SUMMARY AND IMPLEMENTATION PLAN

Glacier View Fire Protection District 2022 Community Wildfire Protection Plan

Executive Summary and Implementation Plan

Prepared for Glacier View Fire Protection District
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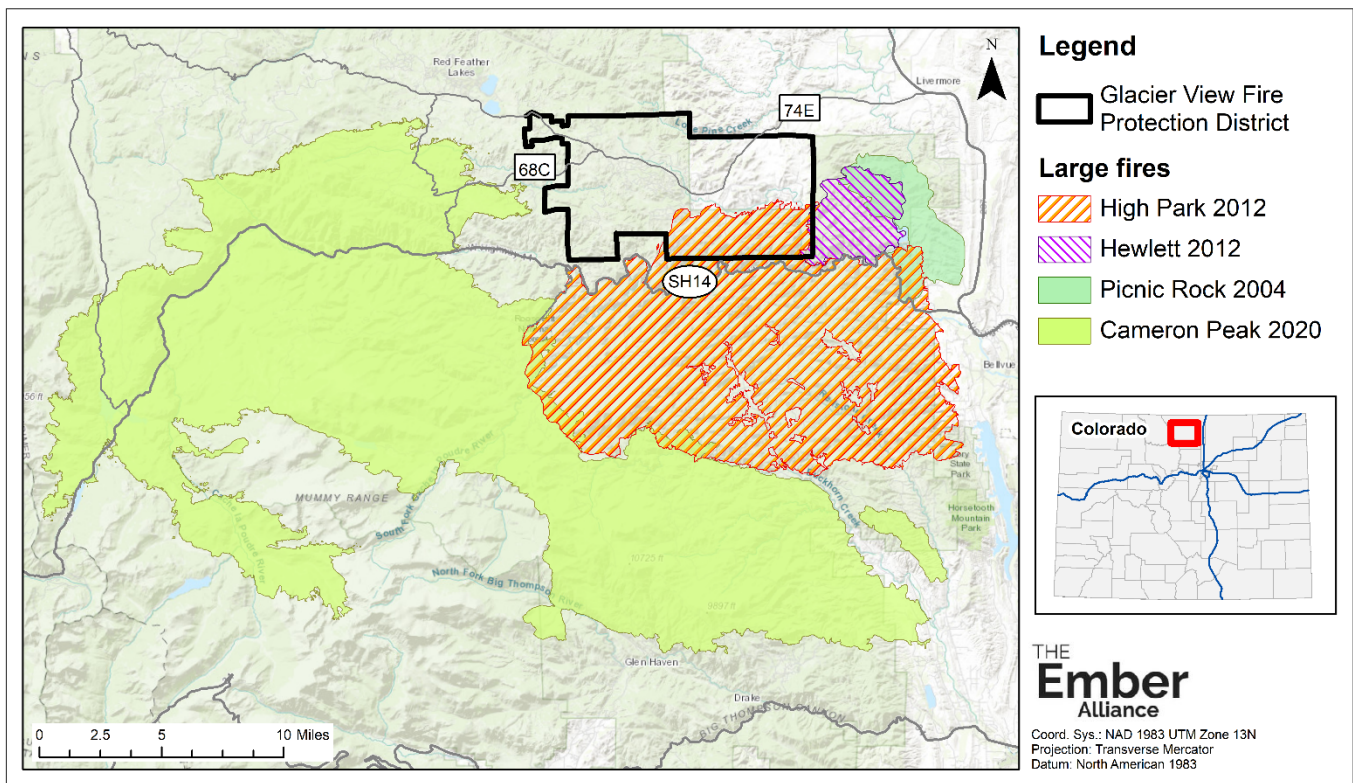
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The 2022 Glacier View Fire Protection District Community Wildfire Protection Plan is a call-to-action that identifies strategic actions to mitigate risk and promote emergency preparedness.

Overview of the Glacier View Fire Protection District (GVFPD)

The Glacier View Fire Protection District (GVFPD) is a community of 1,500 year-round residents in the area of County Road 74E (Red Feather Lakes Road), north of Colorado State Highway 14 and seven miles west of U.S. Highway 287 in Larimer County, Colorado. Subdivisions within the GVFPD include Whispering Pines, Red Feather Highlands, North Rim, Green Mountain Meadows, Glacier View Meadows, Deer Meadows, Hewlett Gulch, Sundance Trail Guest Ranch, and Drake Ranch. Landowners in the GVFPD include the U.S. Forest Service, Colorado State Land Board, Colorado Parks & Wildlife, Larimer County, and private landowners including Boy Scouts of America, University of Denver Mountain Campus, and private residences

High risk of extreme fire behavior exists across the GVFPD due to topography, winds, and fuel conditions. Portions of the GVFPD are densely forested on steep north-facing slopes or canyons and could experience active crown fires that would be difficult if not impossible for firefighters to contain. Grassy areas could experience fast-moving surface fires. The portion of the GVFPD burned by the High Park Fire in 2012 has lighter fuel loads. Some areas have widely spaced trees with few ladder fuels; these areas would most likely experience surface fires with occasional passive crown fires. It is paramount to address wildfire risk across the GVFPD now; the likelihood of fire seasons overwhelming firefighting resources continues to increase as climate change drives hotter and drier conditions and development expands in the wildland-urban interface.



Four significant wildfires burned in and around the GVFPD from 2004-2020. The 2012 High Park Fire burned through the southern part of the district and destroyed more than 50 homes there. Reduced fuel loads in the area burned by the High Park Fire arrested the spread of the 2020 Cameron Peak Fire.

The 2022 GVFPD Community Wildfire Protection Plan (CWPP)

The 2022 GVFPD Community Wildfire Protection Plan (CWPP) serves as a strategic planning tool that empowers residents, homeowner's associations (HOAs), community groups, the fire department, and land managers to make this community safer and more resilient to wildfire. The CWPP is based on well-established scientific analysis of fire risk within and adjacent to the GVFPD. Recommendations for action are supported by the lessons learned from recent large fires in northern Colorado, nationally, and even internationally and best practices developed by fire adapted communities across the country. The full CWPP for GVFPD is available [online](#), and interactive maps from the CWPP are available [online](#).

Community engagement is a vital aspect of CWPP development and implementation. The GVFPD and The Ember Alliance (TEA) engaged residents through public meetings and a survey of the GVFPD Board of Directors. They reviewed fire behavior and evacuation predictions with local fire and fuel experts and emergency planners, and they worked with local land managers to develop an implementation plan for strategic fuel treatments.

This document outlines key findings from the 2022 CWPP and an implementation plan to transform the CWPP into a future-oriented actionable strategy. The overarching strategy recommended by the CWPP is to develop and maintain a **Fire Adapted Community** across the GVFPD, defined as a human community consisting of informed and prepared citizens collaboratively planning and taking action to safely coexist with wildland fire.

Recommendations include resident action to reduce the flammability of their homes, create and maintain defensible space, and increase their preparedness and ability to safely evacuate when a wildfire occurs. Recommendations to large landowners, public land managers, the GVFPD, HOAs, and other partners include linking defensible space together across neighborhoods, reducing fuels in strategic locations across the landscape, mitigating key roadways that could be threatened by wildfire, and increasing community capacity to conduct safe evacuations.

The CWPP will only affect real change if stakeholders come together to address shared risk and implement strategic projects on the ground.

Stakeholders include GVFPD, residents, Homeowners Associations (HOAs), community groups, public land managers, county, state, and federal agencies, and non-profit conservation groups. Cooperative action promises the best possibility of protecting the lives and safety of residents and firefighters, protecting property values and the quality of life for current and future resident, and increasing the resilience of fire-adapted ecosystems.



GVFPD is committed to reducing your community's wildfire fire risk and increasing emergency preparedness, but they cannot face these challenges without your involvement!

Key Messages from the 2022 CWPP for the GVFPD

1. **Collective action** is crucial to reduce the potential for catastrophic wildfires and protect the lives and safety of residents and wildfires, property values, and the quality of life for current and future resident and to increase the resilience of fire-adapted ecosystems. *See Section 3 of the 2022 CWPP.*
2. **High risk of extreme fire behavior** exists across the GVFPD due to topography, winds, and fuel conditions. The likelihood of fire seasons overwhelming firefighting resources continues to increase as climate change drives hotter and drier conditions and development expands in the wildland-urban interface. *See Section 2 and Appendix A of the 2022 CWPP.*
3. There is **high potential for structure loss** across the GVFPD and dangerous conditions for firefighters defending structures during wildfires. **Residents need to create defensible space** by removing vegetation and other sources of fuel on their properties and **harden their homes** to reduce the structure's flammability and potential for ember penetration. **Resources are available to support these actions**, and collective efforts by multiple neighbors can significantly increase the likelihood of homes surviving wildfires. *See Section 3 of the 2022 CWPP.*
4. Portions of the GVFPD have limited egress routes and a potential for extreme congestion, slow evacuation times, and dangerous conditions along roadways. **All residents and the GVFPD need to undertake proactive steps to prepare for potential evacuations.** *See Section 3 and Appendix A of the 2022 CWPP.*
5. **Ecological restoration and fuel treatments** across the GVFPD and the broader landscape can reduce the likelihood of high-severity wildfires, create fire-resilient forests, and address roadway survivability concerns. Fuel treatments create important opportunities for wildland firefighters by reducing the potential for extreme fire behavior in strategic locations, as evidenced by fuel treatments around the Shambhala Mountain Center that helped firefighters protect structures during the 2020 Cameron Peak Fire. *See Section 4 the 2022 CWPP.*



Ecological fuel treatments in a ponderosa pine forest at the Ben Delatour Scour Ranch using thinning and prescribed burning. Fuel treatments create important operational opportunities for wildland firefighters to protect communities during wildfires. Photo credits: [Colorado Forest Restoration Institute](#).

Residents can increase the chance of their homes surviving wildfires and increase the safety of firefighters by creating defensible space and hardening their homes.

Homes can ignite during wildfires when the tremendous amount of heat emitted by burning vegetation or adjacent homes cause structure to ignite, flames directly contact structures, or embers land on or penetrate structures. Fires can travel between structures along fuel pathways such as a fence or row of shrubs connecting a shed and a home.

During many wildland fires, 50% to 90% of homes ignite due to embers rather than radiant heat or direct flame. Embers can ignite structures when they land on roofs, enter homes through exposed eaves, or get under wooden decks.

Almost 95% of the homes in GVFPD are at risk of long-range ember cast from nearby burning vegetation under severe fire-weather conditions, and about 25% of homes are at risk of short-range ember cast and 40% to radiant heat as well. Almost 60% of homes within GVFPD could be exposed to short-range ember cast from at least one other home (Figure 9.a.10). Homes within about 330 feet of each other have a greater risk of home-to-home ignition from radiant heat and short-range embers.

You can increase the likelihood that your home will survive a wildfire and help protect the safety of firefighters by creating defensible space, replacing, or altering building materials to make your home less susceptible to ignition, and taking steps to increase firefighter access along your driveway. Residents should target mitigation measures in the **home ignition zone (HIZ)** and along driveways (see section 3a of the 2022 CWPP).



Homes built mid-slope and at the top of steep slopes and within ravines and draws are at greater risk of damage from wildfires. Dense vegetation near the structure exacerbates this risk. Photo credit: TEA.

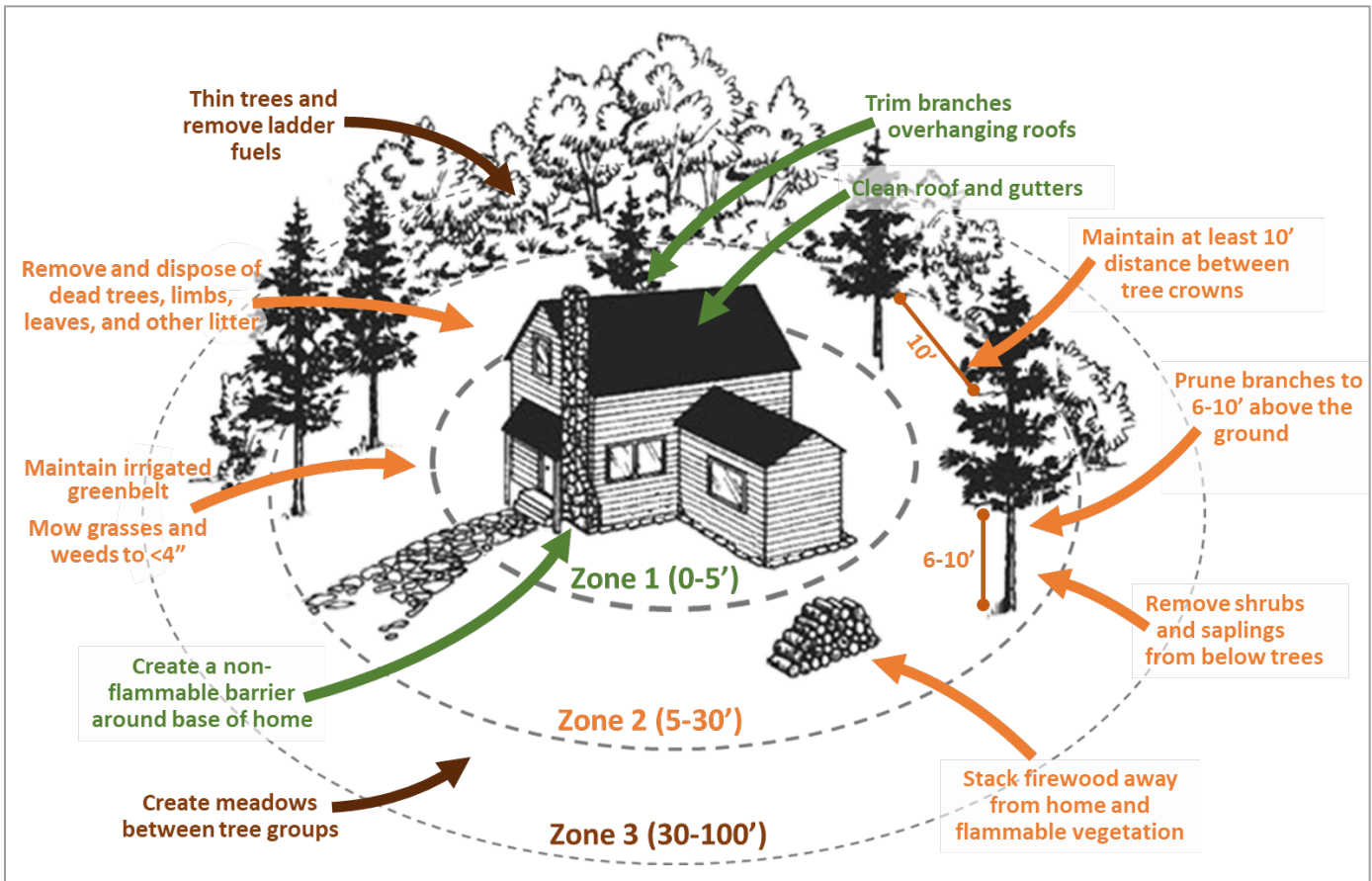


Some homes in the GVFPD have exemplary defensible space: mowed grass near structures, trees limbed and not overhanging roofs, and non-flammable barriers out to 5 feet from the home. Photo credit: TEA.

Home ignition zone: your home and other structures (e.g., sheds and garages) and the area within 100 feet of each structure.

Defensible space: the area around a building where vegetation, debris, and other types of combustible fuels have been treated, cleared, or reduced to slow the spread of fire and reduce exposure to radiant heat and direct flame contact.

Home hardening: the practice of making a home less likely to ignite from the heat or direct contact with flames or embers.



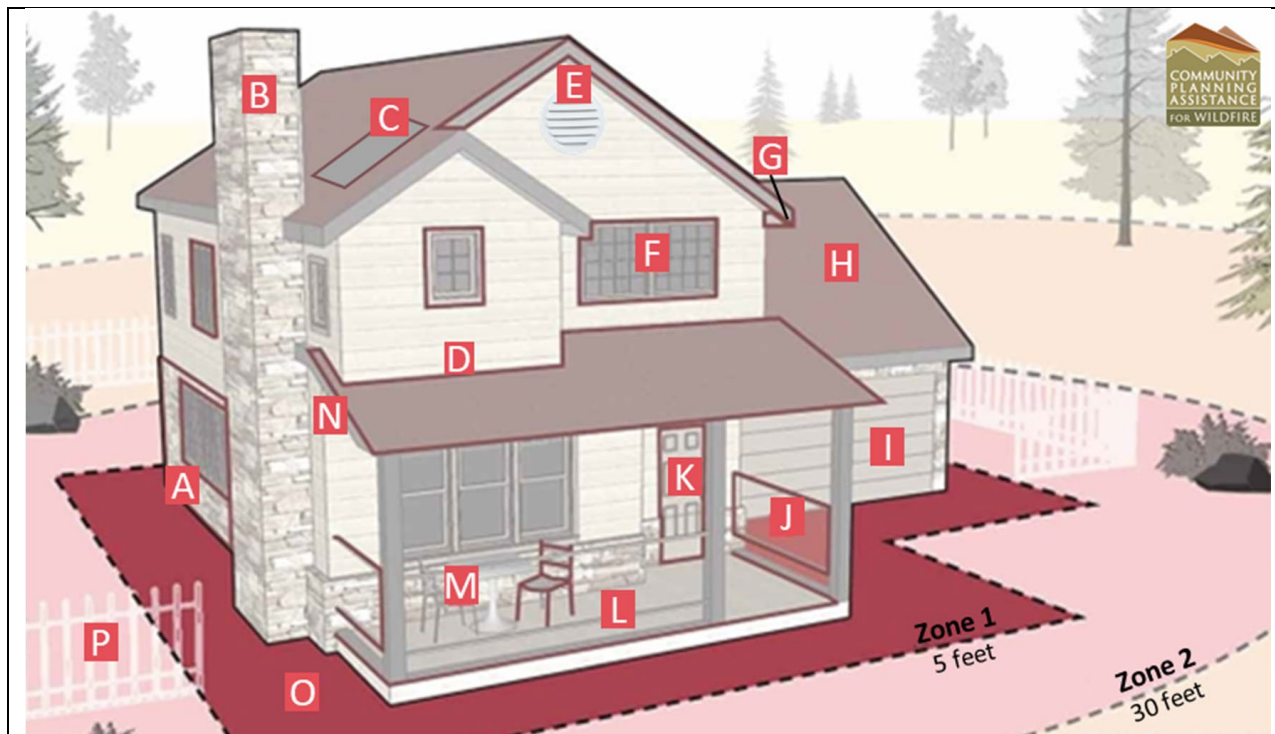
Defensible space zones and mitigation measures recommended by the Colorado State Forest Service (CSFS). See the Glacier View CWPP and the CSFS publication [The Home Ignition Zone](#) for recommendations to create defensible space around your home. Image from CSFS with modification by M.S. Matonis.

Linked Defensible Space

Some residents in the GVFPD are rightfully concerned about high hazards on their neighbors' properties and surrounding public land. Your home ignition zone might overlap with your neighbor's property. Given the high fire risk in the area, it is important that residents across the GVFPD create defensible space and harden their homes. **Collective action by residents will magnify the impact of individual defensible space projects**, create tactical opportunities for wildland firefighters, and reduce the likelihood that homes will ignite due to embers produced from adjacent, combusting homes. Linked defensible space has greater strategic value, and projects that span ownership boundaries are better candidates for grant funding (see section 3b and 3f of the 2022 CWPP).

Accessibility and Navigability for Firefighters

It is important to ensure emergency responders can locate and access your home. Narrow driveways without turnarounds, tree limbs hanging over the road, and lots of dead and down trees by the road may make firefighters choose to not defend your home during a wildfire event. According to the National Fire Protection Association, driveways should have a minimum of 20 feet of clearance horizontally and 13.5 feet of clearance vertically to allow engines to safely access the roads. Widening shared driveways and private roads can be time-consuming or expensive. Neighbors and HOAs working together to share costs and apply for grants are an effective way to make safer homes for all residents in an area (see sections 3a, 3b, and 3f of the 2022 CWPP).



Low-cost actions:

- B.** Cover chimneys and stovepipe outlets with 3/8th to 1/2 inch corrosion-resistant metal mesh.
- C.** Minimize debris accumulation under and next to solar panels.
- E.** Cover vent openings with 1/16th to 1/8th inch corrosion-resistant metal mesh. Install dryer vents with metal flappers and keep closed unless in use.
- G.** Clear debris from roof and gutters regularly.
- I.** Install metal flashing around and under garage doors that goes up at least 6 inches inside and outside the door.
- J.** Use noncombustible lattice, trellis, or other decorative features.
- K.** Install weather stripping around and under doors.
- L.** Remove combustible materials from underneath, on top of, or within 5 feet of deck.
- M.** Use noncombustible patio furniture.
- N.** Cover all eaves with screened vents.
- O.** Establish and maintain a 5-foot noncombustible buffer around the home.

Actions to plan and save for:

- A.** Use noncombustible or ignition resistant siding and trim (e.g., stucco, fiber cement, fire-retardant treated wood) at least 2 feet up around the base of your home.
- C.** Use multipaned glass for skylights, not materials that can melt (e.g., plexiglass), and use metal flashing.
- D.** Install a 6-inch vertical noncombustible surface on all gables above roofs.
- F.** Install multi-pane windows with at least one tempered-glass pane and metal mesh screens. Use noncombustible materials for window frames.
- G.** Install noncombustible gutters, gutter covers, and downspouts.
- H.** Install ignition-resistant or noncombustible roofs (composition, metal, or tile).
- I.** Install 1-hour fire rated garage doors.
- K.** Install a 1-hour fire rated doors.
- L.** Use ignition-resistant or noncombustible decking. Enclose crawl spaces.
- N.** Use noncombustible eaves.
- P.** Replace wooden fences with noncombustible materials and keep at least 8 feet away from the home. Keep double combustible fences at least 20 feet away from the home.

A home can never be made fireproof, but home hardening practices decrease the chance that flames, radiant heat, and embers will ignite your home. Infographic by [Community Planning Assistance for Wildfire](#) with modifications to include information from CALFIRE 2019 and Maranghides et al. 2022. See section 3a of the 2022 CWPP for additional information on home hardening measures.

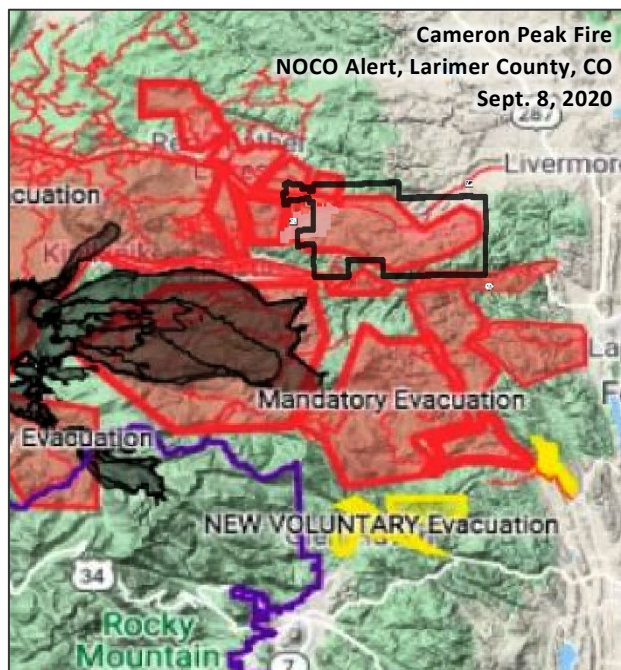
All residents need to undertake proactive steps to prepare for potential evacuations, and the GVFPD is committed to strategic actions to mitigate evacuation concerns for the entire community.

Residents in the GVFPD are not strangers to wildfire evacuations. Residents were evacuated for a total of 2 weeks during the 2012 High Park Fire, and numerous mandatory and voluntary evacuations were triggered by the 2020 Cameron Peak Fire. Due to the elevated wildfire risk in the GVFPD, future evacuations are likely, underscoring the importance of emergency preparedness by all residents.

There is a high likelihood of evacuation congestion and long evacuation times during a wildfire. Evacuation times for individual residents could exceed 3 hours in some parts of the GVFPD due to the limited number of egress routes from many neighborhoods.

Tall vegetation growing along roadways could impact the safety of residents during evacuations. Non-survivable conditions could occur if an active wildfire reaches the roadway and the combustion of thick forest vegetation results in flame lengths greater than 8 feet. Drivers stopped or trapped on these roadways would have a low chance of surviving fires of this intensity.

Under extreme fire weather conditions, almost 30% of roads and driveways in the GVFPD could potentially experience non-survivable conditions. Some of the roadway segments with potentially non-survivable conditions are part of key evacuation routes and a high priority for mitigation to reduce fuels and potential flame lengths. These areas were identified as high priorities for fuel treatments to mitigate risks to residents and first responders (see Section 4 and Appendix A of the 2022 CWPP).



Residents in the GVFPD experienced mandatory evacuations during the 2020 Cameron Peak Fire. Evacuation preparedness is critical to keep residents and first responders safe.

Follow evacuation etiquette to increase the chance of everyone exiting the GVFPD in a safe and timely manner during a wildfire incident:

- Register for [Larimer County Emergency Alerts](#) to receive evacuation notifications.
- Leave as quickly as possible after receiving an evacuation notice.
- Have a go-bag packed and ready during the wildfire season, especially on days with red flag warnings.
- Leave with as few vehicles as necessary to reduce congestion and evacuation times across the community.
- Drive safely and with headlights on. Maintain a safe and steady pace. Do not stop to take pictures.
- Yield to emergency vehicles.
- Follow directions of law enforcement officers and emergency responders.



Ecological restoration and fuel treatments can reduce the likelihood of high-severity wildfires, create fire-resilient forests, and address roadway survivability concerns.

Objectives and Benefits of Fuel Treatments

Fuel treatments are a land management tool for reducing wildfire hazard by decreasing the amount and altering the distribution of wildland fuels. Treatment methods include tree thinning, pruning, pile burning, broadcast prescribed burning, and fuel mastication. Effective treatments reduce fire intensity and extreme fire behavior by decreasing tree density, increase crown spacing, and decreasing ladder and surface fuels.

Strategically located, high-quality fuel treatments can create tactical options for fire suppression, as can previously burned areas. Firefighters benefitted from fuel treatments in the Red Feather Lakes area as tactical features during the Cameron Peak Fire. Treatments are credited with helping firefighters protect the Great Stupa at the Shambhala Mountain Center.

Restoration-style treatments can meet both ecological and fuel reduction objectives in ponderosa pine and dry-mixed conifer forests. Most of the forested area within and around the GVFPD are ponderosa pine or mixed-conifer forest types, and many of these forests had fewer trees prior to Euro-American settlement due to a higher frequency of wildfires. A holistic approach to forest restoration reduces crown-fire hazard, increases the abundance and diversity of grasses, shrubs, and wildflowers, and improves habitat for many wildlife species, including deer and elk. *See section 4 of the 2022 CWPP for more information on fuel treatments.*



Landscape-Scale Coordination

Altering potential wildfire behavior and restoring ecological conditions requires a landscape-scale approach to treatments, so it is important to promote forest management within and around the GVFPD. Most of the priority treatment locations identified in the 2022 CWPP fall on public and privately-owned land, sparking the need for community-wide commitment to decrease shared fire risk.

The GVFPD is already collaborating with land managers and other partners to begin implementing strategic fuel treatments. Partners include the Ben Delatour Scout Ranch, Coalition for the Poudre River Watershed, Colorado State Parks and Wildlife, CSFS, Larimer County Office of Emergency Management, Larimer County Sheriff's Office Emergency Services, Larimer Conservation District, Larimer County Conservation Corps, The Nature Conservancy, and U.S. Forest Service.

Are you and your neighbors interested in creating linked defensible space?

See *Section 3* of the 2022 CWPP to learn about defensible space.

See *Section 4* for funding opportunities.

See *Section 5* for contact info of implementation partners to discuss plans for creating linked defensible space.

Slash Management

Thinning, harvesting, or other forest management operations often increase surface fuel loads and can fail to achieve fire mitigation objectives if fuels created by the harvest activities (also known as slash) are not addressed. Slash can include small trees, limbs, bark, and treetops. Slash management is a critical step in the forest management process, and it is unwise, ineffective, and even dangerous to conduct poor-quality fuels treatments that fail to reduce canopy fuels, result in increased surface fuel loads, and do not receive maintenance treatments.

Methods for managing slash come with different benefits and challenges. Lop-and-scatter and mastication are common methods; however, these approaches do not remove surface fuels from the site, they only rearrange them. It can take a decade or more for slash to decompose to a point where it no longer poses a significant fire hazard. Broadcast prescribed burning and pile burning are more effective at removing surface fuels.

Residents in GVFPD have experienced difficulties with slash management, like many other communities in Colorado. The GVFPD is proposing several changes to address challenges with slash management in the community, including judiciously relaxing slash burning prohibitions, increasing resident awareness of the county and state burn permitting systems, and increasing resident training on proper burning methods. The GVFPD encourages residents to participate in the [Colorado Certified Burner Program](#) administer for the Department of Fire Prevention and Control to learn about pile burning and receive civil liability protection if burns that were properly planned, approved, and executed result in damage from smoke or flames.



*Pile burning can be a safe and effective method to consume slash created by thinning operations.
(Photo credit: Coalition for the Poudre River Watershed).*

The GVFPD and other stakeholders are committed to implementing recommendations from the CWPP to move the community closer to fire adaptation.

Below are strategic actions for GVFPD, residents, HOAs, community groups, public land managers, county, state, and federal agencies, and non-profit conservation groups to accomplish in the short-, mid-, and long-term (see definitions below). Some activities have low financial cost but require a fundamental shift in attitudes and behavior to prioritize wildfire risk mitigation. Other actions are more substantial and require commitment and collaboration across the community to pool resources, apply for grants, and make incremental steps towards meaningful change.

Implementation Phases

Short-term actions	Mid-term actions	Long-term actions
<ul style="list-style-type: none"> • Can be implemented within the remainder of 2022 • Can be accomplished within the current funding capacity for the GVFPD, HOAs, and residents • Can occur within the context of the current GVFPD volunteer organization, with modest expansion • Can capitalize on current relationships with emergency response partners, non-profit organizations, and HOAs 	<ul style="list-style-type: none"> • Can be implemented within 18-24 months, generally in 2023 and 2024 • Will require expansion of the current GVFPD volunteer organization • Requires new cooperative relationships with emergency response partners and non-profit organizations • Actions that are already in the planning stages and have some portion of funding already identified 	<ul style="list-style-type: none"> • Will take planning starting within 18-24 months so implementation can occur after 2024 • Requires multi-year planning and funding • Requires extensive grant funding • Requires local staffing beyond volunteers

Implementation Activities and Responsibilities

Recommendation	Responsibility	Timeline
Category: Fire Adapted Communities		
Adopt the Fire Adapted Communities as the overarching vision and strategy for CWPP implementation.	GVFPD, HOAs, residents	Short-term
Maintain designation as a Firewise community.	GVFPD	Short-term
Volunteer during GVFPD's FireWise Education Day during the summer to encourage residents to implement home hardening and defensible space.	Residents	Short-term

Recommendation	Responsibility	Timeline
Category: District Capacity and Outreach		
Form a volunteer group called the CWPP Implementation Committee, or other mutually agreeable name to continue momentum developed by the CWPP.	GVFPD	Short-term
Become a volunteer with the GVFPD to inspire fellow residents to engage in wildfire mitigation and emergency preparedness.	Residents	Short-term
Improve the GVFPD website, social media, and other outreach materials to increase resident awareness of wildfire risk and resources available for mitigation.	GVFPD	Short-term
Cooperate with adjacent fire protection districts to establish a cooperative paid position to increase capacity.	GVFPD	Long-term
Category: Home Ignition Zone		
Engage in annual maintenance of your home ignition zone.	Residents	Short-term
Use the CSFS The Home Ignition Zone guide as the foundation for defensible space and home hardening.	HOAs and residents	Short-term
Serve on HOA working teams and speak with HOA leadership to support community-wide action around wildfire mitigation and advocate for HOA regulations that align with the CSFS The Home Ignition Zone guide.	Residents	Short-term
Establish defensible space around homes, detached garages, storage buildings, barns, and other structures so that the home can stand alone without relying on limited firefighting resources.	HOAs and residents	Short- to mid-term
Conduct home assessments to provide specific recommendations to individual homeowners.	GVFPD volunteers and/or CWPP committee	Mid-term
Category: Linked Defensible Space and Fuel Treatments		
Focus initial efforts on mitigating fire risk in CWPP plan units with extreme fire risk (Land Moon, Red Feather Highlands, North Rim, and Glacier View Meadows 2).	GVFPD, HOAs, residents, and other partners	Short- to mid-term
Discuss shared risk and encourage neighborhood-wide implementation of defensible space, for example through walking tours of well-mitigated properties.	HOAs and residents	Mid-term
Build off the CWPP to identify projects that improve linked defensible space and create mosaic landscapes.	GVFPD, HOAs, and residents	Mid-term
Work together to pool financial and other resources and pursue grants.	GVFPD, HOAs and residents	Mid- to long-term
Continue collaborating with large landowners and public lands to conduct priority fuel treatments.	GVFPD and other partners	Mid- to long-term

Recommendation	Responsibility	Timeline
Category: Slash Management		
Develop a slash management strategy, including judiciously relaxing slash burning prohibitions.	GVFPD and HOAs	Short-term
Increase resident awareness of the county and state burn permitting systems.	GVFPD	Short-term
Participate in the Colorado Certified Burner Program to learn proper burning methods.	Residents	Short- to mid-term
Implement a community chipping program.	GVFPD and HOAs	Mid-term
Increase resident training on proper burning methods.	GVFPD	Mid-term
Category: Evacuation Preparedness		
Develop a family evacuation plan and go-bags. Plans should include considerations of pets and livestock if applicable.	Residents	Short-term
Cooperate with neighbors to develop plans for evacuating children who may be home alone or residents with mobility impairments or other special needs.	Residents	Short-term
Increase resident awareness of evacuation planning, processes, and NOCO Alert.	GVFPD	Short-term
Sign up for emergency notification through the NOCO Alert.	Residents	Short-term
Provide access to water supplies on properties for firefighters when evacuating. Residents must not turn on sprinklers during evacuation.	Residents	Short-term
Cooperate with emergency response partners to conduct district-wide evacuation drills.	GVFPD and emergency response partners	Mid-term
Category: Firefighter Access and Evacuation Safety		
Improve driveway access for firefighters.	Residents and HOAs	Mid-term
Determine management responsibilities for maintaining roadside conditions across the district.	GVFPD	Mid-term
Coordinate efforts to mitigate hazardous conditions along roadways.	GVFPD and local land managers	Mid- to long-term

The Glacier View CWPP is a **call to action!** Becoming a fire adapted community and decreasing wildfire risk takes concerted effort, time, and coordination. Use the risk analyses and implementation recommendations from the CWPP to spark action on your property and across your neighborhood and entire community. The need to protect lives, safety, and property from wildfire is too great to wait.