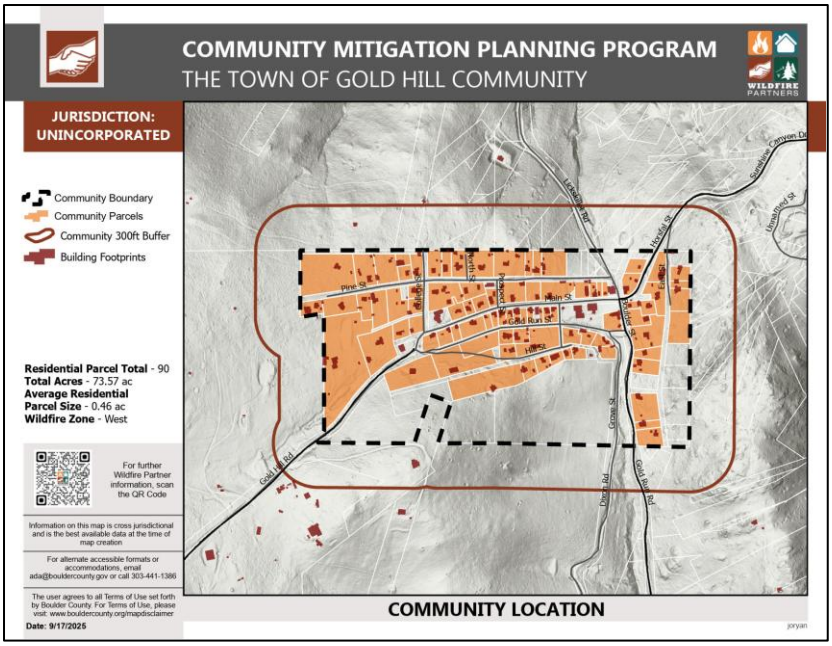
WILDFIRE MITIGATION PLANNING COMMUNITY ADVISING REPORT
Town of Gold Hill, Boulder, Colorado
2025



Wildfire mitigation is an important step towards reducing the risk of your homes and community being destroyed by wildfire. Initial ignitions are almost always caused by embers. Key tactics to significantly reduce ignition potential during wildfire include hardening structures; employing ignition resistant materials during upgrades, remodels, and new construction; creating adequate defensible space; providing emergency access and water supply; and performing routine maintenance on private and communal property.

Community mitigation involves working with neighbors, adjacent landowners, and agency partners whenever possible to reduce risk. This is particularly important where structures are separated from each other by less than 50 feet (or even more under extreme wind conditions) since there is a high probability that fire will spread from structure to structure creating and urban conflagration. Communities that are adjacent to wildland fuels (forest, grasslands, and tall-grass agricultural holdings) will need to consider how to support both the built and natural environments most effectively. Preventing structure ignitions is key to living with fire.

KEY MESSAGES

- ☐ Work As a Community
- ☐ Actively Maintain Your Mitigation
- ☐ Active Shared Engagement
- ☐ Understand There Are No Guarantees

KEY CONTACTS AND INFORMATION

COMMUNITY INFORMATION:
Community Name: Town of Gold Hill
Community Size: Approximately 175 homes
Number of Residents: Approximately 250
Fire District: Gold Hill Fire Protection District (GHFPD) **All-volunteer department
Primary Contact Name & Email: Marcus Moench (marcus.moench@gmail.com)
Second Contact Name & Email: Boyd Brown (boydb061249@gmail.com)

WILDFIRE PARTNERS ADVISOR:
Name: Meg Halford
Email: mhalford@bouldercounty.gov 720-388-0264
Program contact: info@wildfirepartners.org; 303-441-1420

SUMMARY AND COMMUNITY DESCRIPTION

MEETING SUMMARY and TOWN BACKGROUND: On July 16, 2025, Boulder County's Wildfire Partners staff Meg Halford met with residents Marcus Moench, Boyd Brown and Dan Maedke (absent for site visit but involved in committee) in the Town of Gold Hill to complete a Community Wildfire Planning Site assessment. Gold Hill is an unincorporated community in Boulder County, Colorado. Gold Hill is located to the northwest of Boulder, perched on a mountainside above Left Hand Canyon at an elevation of 8,300 feet.

The town contains numerous historic wooden structures, some restored in recent years, as well as decaying ruins from its mining days. It has a small museum and a two-room schoolhouse, and the Gold Hill School. Other businesses include the General Store and the Gold Hill Inn. The town is laid out on a small grid of dirt streets. The Fourmile Fire (2010) burned up to the southern boundary of the town and destroyed homes in an adjacent subdivision. The Lefthand and Calwood fires (2020) again highlighted the vulnerability of the town to wildfire.

PROPERTY AND DEMOGRAPHIC CHARACTERISTICS:
Residential type/s: Historical buildings and homes. Single family homes, rental properties
Ownership model: Largely owner occupied, and renters.
Structure Separation Distance: Less than 20 ft. spacing between most homes. Several homes on mountain slopes are 50 ft. or greater between homes
Average Lot Size: Less than ¼ acre-½ acre, few properties over ½ acre lot size
Primary building materials: Widely varied (historic wood framing, Log structures, single and double pane windows, asphalt shingles, metal roofs etc.)
Structure Vulnerability Level: High level of structure ignitability within the town. Fuels and other clutter/materials within First 5 feet of homes out to property line.
Auxiliary Fuels: Fuels such as sheds, outbuildings, firewood, and other flammable

materials are common throughout the community
Other Risk Factors: Due to the proximity of homes, coupled with the use of less resilient building material in the construction of homes within the community, fire is likely to spread more quickly from structure to structure through radiant heat as well as direct flame contact than it would for traditionally built homes.
Values at risk: Historic buildings and history, Gold Hill Inn, General Store, Museum, School, water and natural environment assets
Vulnerable Populations: Approximately 30-35% of residents over 60, lower income, and 5% renters
Evacuation Routes: The Town of Gold Hill has several ingress/egress routes including Sunshine Canyon, Gold Hill Run Road from Four Mile Canyon, Lick Skillet Road and Gold Hill Road from the Peak-to-Peak Highway. All routes include roads that transition from two lane paved roads that are in most part improved dirt roads leading into town. The roads are steep and windy in sections. Primary evacuation routes are Gold Hill Road to Peak-Peak Highway going west out of town and to the east Sunshine Canyon Drive. All routes could be comprised by a wildland fire depending on direction of fire and weather conditions.
Slope/Aspect: 0-5% within the town and 5-3% + (average) on slope sides outside of the main town area.
Proximity to Wildland Fuels: The town is surrounded on all sides and aspects by wildland fuels.
Vegetation Types: Montane Forest Types: Ponderosa pine, mixed conifer, lodgepole with grassy and shrub understory. Open grass meadows, aspen also are present
Wildland Fire Characteristics: The Town of Gold Hill can be characterized as having a high risk for wildland fire. Weather, topography, and vegetation could create surface, ground and crown fires.

LOCAL WILDLAND FIRE CHARACTERISTICS: Gold Hill faces significant wildfire risk due to its location in dense, steep, and rugged terrain within the Wildland-Urban Interface (WUI). Key wildfire characteristics include densely forested, fuel-laden north slopes susceptible to rapid crown fire spread, complex access roads, a history of large fires like the 2010 Fourmile Canyon Fire, and the overall increasing risk from climate change-driven hotter and drier conditions.

Terrain and fuel characteristics

- **Steep, rugged canyons:** The complex topography features steep canyons and densely forested slopes. Steep grades allow fire to spread rapidly uphill, increasing intensity and speed.
- **Dense forests:** A century of fire suppression has resulted in unnaturally dense forests with high levels of flammable vegetation, or "fuels". The thick montane forests provide "ladder fuels" that allow surface fires to climb into the tree crowns and

become uncontrollable crown fires.

- **Winds:** Strong, unpredictable winds are a significant factor in fire behavior in the Gold Hill area. They can drive fires rapidly across the landscape, push embers far ahead of the fire front, and cause sudden shifts in fire directions.
- **Drought and climate:** The region's dry climatic conditions and frequent droughts create a higher risk of ignition. Climate change is expected to escalate fire risk in the coming decades.

Community and structural vulnerability

- **Wildland-Urban Interface (WUI):** Gold Hill is a WUI community that is characterized by small lots of ¼- ½ acres size where homes are built directly adjacent to dense, flammable wildlands. This places homes and the community at high risk for an urban conflagration (home to home ignition), primarily from ember showers and radiant heat.

- **Limited access:** The area's limited access via steep, winding dirt roads creates major challenges for evacuations and firefighting efforts.
- **Home ignition:** Research shows that most home destruction during wildfires is caused by embers and surface fires igniting the "Home Ignition Zone" (HIZ). This emphasizes the need for individual homeowner mitigation, in addition to landscape-level forest management.
- **Mitigation efforts:** In response to the high risk, the community has become proactive in its mitigation efforts. The Gold Hill Forest Restoration Project is working to thin forests, and residents are engaged in home-hardening and community-wide preparedness activities.

KEY RECOMMENDATIONS

The following Key Recommendations apply specifically to the Town of Gold Hill and are based upon observations from our site visit. They will be divided into four categories:

1. **Structure/Home Hardening**
    - Approach this action as a community-wide effort to ensure residents in blocks or groups (from home to home) sign up and complete Wildfire Partners individual home assessments.
    - Given the proximity of homes next to each other the more homes that complete home assessments and subsequently complete home hardening actions and defensible space actions the higher the percentage becomes of protecting the community from an “urban conflagration” (home to home ignitions where the

homes become the fuel in a wildland fire-harder to control).
    - Prioritize protecting the community as a whole with engaging as many homeowners as possible into home hardening and defensible space actions to protect and remove receptive and flammable materials from embers and firebrands.
2. **Defensible Space**
    - For small lots, defensible space should focus on creating a "fire-safe" zone around homes by removing or reducing flammable materials. This includes clearing vegetation, removing debris, and creating space between plants and structures. The key is to minimize the chance of a fire spreading to your home from the surrounding landscape.
3. **Community fuels mitigation**
    - Roads: Focus on fuels reduction along roadways within and leading into the community to remove fuels that could impede evacuation efforts out of the town.
    - Community-wide and or larger landscape scale fuels mitigation: Partner with other agencies to support implementation of strategic fuels mitigation around the Town of Gold Hill.
4. **Community Resiliency & Preparedness**
    - **Evacuation planning and preparation should** be a high priority for the Town of Gold Hill residents. Planning and preparedness must be coordinated with the Gold Hill Fire Protection District and local disaster management agencies.
        - **Evacuation drills**- To practice community wildfire evacuation drills, first develop a community-wide wildfire action plan and practice it regularly, including clear evacuation routes, meeting places, and communication strategies. Promote the drills through local leaders and signage, then on drill day, simulate a real-world scenario by sounding an alarm, and have families grab their Go-Bags and drive a designated route to their meeting place. The goal is to practice thinking through the steps calmly and efficiently to ensure a quick and orderly evacuation. Work with the Gold Hill Protection District and other local disaster management agencies in Boulder County to organize an evacuation practice drill for the town residents.

        - **Evacuation routes and signs**: evacuation routes should be identified and mapped and accessible for all residents to review and become familiar with. Consider investing in evacuation route markers and signs. The plan should include identifying obvious choke points and challenges and alternate safe and approved routes out of the town.
    - **Outreach and Education**
        - Community outreach and education are crucial for wildfire preparedness. It is recommended to host a minimum of one wildfire outreach event a year via town events (barbeques, presentations and

webinars etc.). Your local Fire Protection District, County Wildfire Partners, and other partners can help host, present or table at events. https://wildfirepartners.org/outreach-education/

- Focus on providing residents with the knowledge and resources to protect themselves, their homes, and their communities from wildfire risks. This includes educating about wildfire behavior, evacuation procedures, home hardening actions, creating defensible space around homes, and utilizing fire-resistant materials**.**

I. STRUCTURE/HOME HARDENING:

Science has shown that modifying the home ignition zone can significantly reduce the risk of home ignition during a wildfire where structures are at least 30-50 feet apart. Due to the small lot sizes in Gold Hill, it becomes more critical for all (or as many as possible) homeowners within the community to engage in home hardening actions. Home hardening, also known as wildfire hardening, refers to the process of making a home more resistant to wildfire, particularly ignition from embers. This involves using fire-resistant materials, managing vegetation, and creating a defensible space around the home. Essentially, it's about reducing the home's vulnerability to flames, heat, and embers during a wildfire. This also allows time for residents to evacuate safely and provides time and safety to emergency and fire responders to further protect homes.

In communities such as Gold Hill, the majority of homes are historical homes that were built long before 1993 (when WUI building codes were adopted) and where homes have very little space separation from each other, it is critical for the community to approach structure and home hardening in groups or blocks to protect homes as much as possible from home-to-home ignition and subsequently becoming and urban conflagration.

While modifications must be approached carefully to preserve their historical integrity, home hardening actions and retrofitting homes with ignition-resistant materials can significantly increase the chances of home surviving wildfire or other disasters.

A “community approach” could positively impact the chances of each residents own home surviving a wildfire by modifying conditions on their own property. Since each home in Gold Hill is unique, each faces individual challenges to home hardening. I recommend encouraging each homeowner to get an individual home assessment to identify their own specific vulnerabilities. What follows are general observations that are common to the community in general.

❖ **Roofing:** (roof, gutters, eaves, debris)

Hardening your home's roof is a critical step for wildfire protection, as wind-blown embers

can travel for miles and easily ignite a combustible roof. The highest level of protection comes from installing a Class A-rated roof assembly and sealing all potential entry points for embers, such as vents and eaves. Class A roofing includes metal roofing, clay and concrete tiles, slate, asphalt fiberglass shingles, and fiber cement.

Many roofs, not all, in Gold Hill consist of wood shake shingles or Class B or C roofing (lowest rated fire-resistant roofing). Individual home assessments should be done to help assess roofs and their class fire rating. Ideally, metal roofs are the highest rated roof to protect homes from ember intrusion, however, we recognize that most residents don't have the means to replace their entire roofs. In these cases, residents must keep roofs

Metal Roofing example

Non-Class A Roof example

❖ **Vents:** (soffit, roof, gable, basement)

Due to the age of homes, it was observed that several homes had under-screened vents on many of the roofs or in some cases no roof vents at all. Homeowners can and should invest in screening vents to prevent ember intrusion. Replace or cover vents with noncombustible metal mesh with openings between 1/16 and 1/8 inches. Avoid plastic or fiberglass mesh as it can melt and burn. Homeowners can either replace old vents with commercially available ember-resistant vents or retrofit existing vents with metal mesh secured with screws, staples, or other noncombustible fasteners. This should be evaluated on a case-by-case basis during an individual home assessment.

❖ **Siding:**

A wide variety of building materials have been utilized in Gold Hill. Wood siding, log cabins with chunking, cedar wood shingles and log milled lumber. Many of the homes have siding that extends to ground level and is exposed to vegetation or woody debris (leaves, pine needles, mulch etc.).




If replacing wood or shingle siding is not an option (which is the case for most homeowners), consider using fire-retardant paint or applying fire-resistant gel coating to the existing siding. To harden a home against wildfires, using fire-resistant siding is crucial. Non-combustible materials like stucco, brick, stone, metal and fiber cement are best, while wood or vinyl should be avoided.

❖ **Base of Walls:** Many homes within the community exhibited ember intrusion vulnerabilities at the base of their outside walls.

Vulnerabilities at the base of walls

- **Gaps and Openings:** Small cracks and gaps around the foundation, between siding panels, or where the siding meets a deck can allow embers to enter wall cavities.
- **Combustible Materials:** Combustible materials located near the base of walls, like wood mulch, dry leaves, firewood, or flammable plants, can ignite from ember contact, potentially spreading fire to the structure.
- **Exposed Wall Cavities:** If the gap between the siding and foundation leaves the stud wall cavity exposed, embers can enter and ignite combustible materials within the wall.

Strategies to prevent ember intrusion at the base of walls

- **Remove Combustible Materials:** Clear the area within 5 feet of your home's exterior (Zone Zero) of any flammable materials, including wood mulch, dry leaves, firewood, and plastic furniture. Consider replacing them with non-combustible alternatives like gravel or stone.
- **Non-combustible Material at Wall Base:** A minimum of 6 vertical inches of noncombustible material, such as metal flashing, brick, stone, fiber-cement siding, or concrete, at the bottom of exterior walls can prevent embers from accumulating and igniting the walls.
- **Seal Gaps and Cracks:** Use fire-rated caulk or other sealants to close openings in the siding, around windows and doors, and at the foundation to prevent ember entry.

❖ **Decking:** (materials, hazards/clutter/lattice)
Decking materials vary from house to house. Wood decks, especially those with narrow

spacing between boards or joists, can allow embers to penetrate and ignite combustible materials underneath. Accumulated leaves, needles and other debris underneath, on or near the deck can easily catch fire from embers and will ignite wooden decks and subsequently be a wick to homes.

- **Pop-outs and Overhangs:** Some noted.
  Vulnerability: Eaves, overhangs, and soffits are often constructed of non-fire-resistant materials like wood or vinyl, making them susceptible to ignition by embers and radiant heat.
  Ember and heat traps: Overhangs and the upper portion of exterior walls can trap windborne embers, convective heat, and radiant heat, creating a high-risk area.
  Spread pathways: Once ignited, fire in eaves, overhangs, or soffits can spread rapidly onto the roof, into the attic, and along the exterior wall, potentially engulfing the entire structure.

- **Windows:** The majority of homes and businesses in Gold Hill have single paned windows. Single pane windows are significantly more vulnerable to radiant heat from a fire than double-pane windows or those with tempered glass. Radiant heat can cause single-pane glass to crack and break, allowing burning embers to enter a structure and ignite interior contents. This can happen even before the flames directly reach the window.

II. DEFENSIBLE SPACE

Science has shown that modifying the fuels within 30-50 feet of a structure can significantly reduce fire intensity and the risk of home ignition during wildfire. Even on smaller acre lots, creating defensible space around homes is crucial to protecting it from wildfires. Defensible space refers to the buffer you create between a building and the surrounding wildland and in cases protection of home-to-home ignition, designed to slow or stop the spread of wildfire and protect homes from ignition by embers, flames, or radiant heat. Landscaping and vegetation will need to be assessed on a case-by-case basis as each of the resident lots are unique. The community should use the general defensible zone concepts for smaller parcel lots (1/4-1/2 acre) as well as understanding the Defensible Space Zones and principles as described below:

❖ **Defensible space on smaller lots:**

- **Prioritize Close-In Zones:** Focus your efforts on Zone 1 and Zone 2, which are critical for protecting your home's immediate perimeter.
- **Maximize Space:** Even with limited space, aim for the recommended clearances between structures and vegetation as much as possible.
- **Work with Neighbors:** On small lots, your defensible space might extend onto your neighbors' properties. Collaborate with them to understand and reduce shared risks, particularly by thinning vegetation and maintaining spacing between structures.
- **Plant Selection:** Choose fire-resistant plants that are strategically placed to diminish the likelihood of ignition, lower fire intensity, and reduce how quickly a fire spreads.

❖ **Defensible Space Zones:**

Defensible space is typically divided into zones, with varying levels of fuel reduction needed in each.

- **Zone 1 (0-5 feet from the home - the noncombustible zone):** This area demands the most thorough removal of potential fuels. The goal is to prevent flames from directly reaching homes.
    - **Priorities:** Remove all dead vegetation, including leaves, pine needles, and weeds from your roof, gutters, and yard. Use hardscaping materials like gravel, pavers, concrete, or noncombustible mulch to surround the house. Avoid combustible bark or wood mulches, landscape timbers or boards.
    - **Maintenance:** Regularly clear this zone of debris and monitor for new growth.

- **Zone 2 (5-30 feet from the home - the lean, clean, and green zone):** This zone transitions away from the home, and fuels should be significantly reduced.
    - **Priorities:** Clear all dead vegetation, including plants, grass, and weeds. Trim trees to keep branches a minimum of 10 feet from other trees and from your roof and chimney. Avoid placing plants, shrubs, or trees directly against the house. Do not allow vines or other climbing plants to grow on the house or attached structures.
    - **Maintenance:** Clean pine and leaf litter annually. If considering new landscaping prioritize plants and shrubs with:
        - High moisture content.
        - Deciduous varieties tend to be more fire resistant than evergreens.
        - Low resin or oil content.
        - Little or no seasonal accumulation of dead material.
        - Open branching habits.

- **<u>Zone 3 (30-100 feet from the home - the reduced fuel zone):</u>** This outermost zone focuses on slowing flame movement, pushing fire to the ground, and reducing ember production.
    - **Priorities:** Reduce overall fuel load by spacing plants out and thinning vegetation. Remove low-hanging or dead branches.
    - **Maintenance:** Create horizontal and vertical space between shrubs and trees.

❖ **Fencing:** Various types of wood fencing are found throughout the community. Fences can act as fuses, drawing fire from one property to another and from the backyards into direct contact with homes. Fencing is considered a part of a "fuel" within the defensible space zones. To mitigate the risk of fire spread via fences within defensible space zones, consider the following recommendations below:

Ideally, wood fencing should be phased out when fences are replaced. Until then, wildfire mitigation best practice is to replace at least the final 5 feet (8-10 is better) of wood fencing that contacts directly to the home with a noncombustible material like metal/iron, masonry, or fiber cement.

While not ideal, split-rail style fencing has more robust timbers and less overall material than many other styles so it could be appropriate for use at property boundaries further than 30 feet from structures.

It is important to keep wooden fences regularly free of vegetation, grass, shrubs, dried leaves, needles, wooden mulch or chips at the base of the fence to a minimum of 1 ft. on each side of the fence. Ideally, all residents would maintain a noncombustible zone (bare ground, gravel) on both sides of any wood fencing in the community.



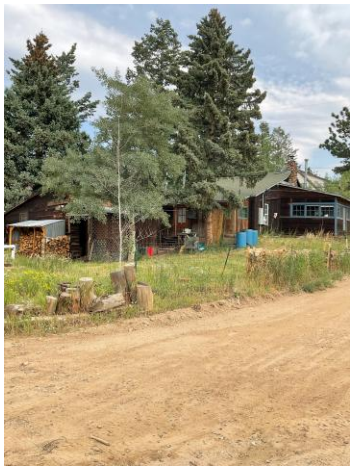
- **Junipers**: Junipers near homes are not a high-level concern in Gold Hill. However, Junipers that are present in defensible space zones, especially within 0-30 (out to 100 ft if possible) feet of structures, wooden fences, roads and walkways, junipers should be removed due to their high flammability and tendency to create ember traps. Their fine-textured foliage and numerous branches create abundant fuel that dries out quickly and ignites easily.

They are high in volatile oils (burn hot) dense (i.e. a lot of biomass in a compact plant); and unpleasant to maintain (tend to be overgrown and trap debris under their needles). Junipers are prone to ignition from embers landing in the debris beneath and are also prone to ignition from radiant heat, often from a fair distance away. Large masses of junipers along roadways that ignite could impede egress/ingress during a wildfire. Junipers next to homes could lead to home ignition and could also impede evacuation from the home.

III. Fuels Mitigation:

Vegetation in town and on resident lots: vegetation in the immediate town area (homes, businesses and roads) consists of a variety of tree, shrub and grass species:

- Tree Species: Ponderosa pine, Douglas-fir, Aspen, Lodgepole pine etc.
- Shrubs: Rabbit brush, mountain mahogany, sage brush, chokecherry etc.
- Grasses: Rocky Mountain fescue, Junegrass, brome grasses, western wheatgrass etc.



Due to the small lot sizes, vegetation on individual properties varies significantly in density and variety. Managing the vegetation, such as pruning low lying branches and over-hanging limbs near roofs, cleaning out and removing dead and unhealthy woody debris, to complete removal are some of the important actions that are important to manage that will help improve individual and community resiliency.

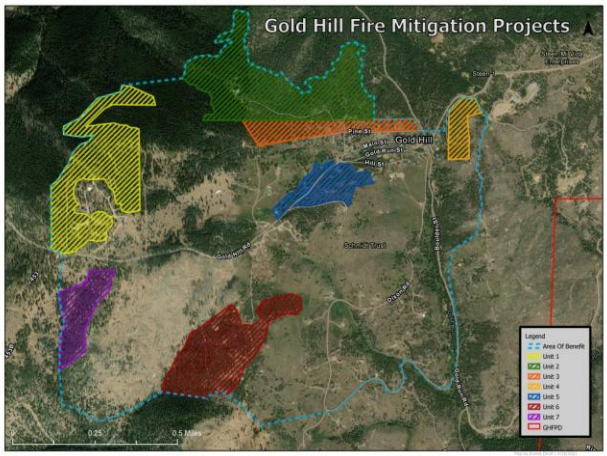
Low limb mature conifers as needed to a height of 2-4 feet from the ground to enable raking beneath. This helps prevent surface fire from climbing from the ground to the treetops. If the tree is less than 9-12 feet tall, low limb to 1/3rd the height of the tree only so as not to stress the tree. Slash and vegetative debris should be disposed of or stored safely (in a noncombustible container or structure). Encourage raking and removal of dead leaves in the fall. Wood mulch should be removed or minimized within 15 feet of structures.

Wildland Fuel: The town is surrounded by slopes with dense mixed conifer forests, aspen, shrubs and grasses that pose a significant threat of carrying a crown fire and producing embers during a wildland fire. The steep slopes, topography and different landownership pose challenges in mitigating the fuels surrounding the town of Gold Hill. It is critical to partner with city, county and other land managers to work collaboratively and strategically to help mitigate areas and reduce fuel (i.e., fuelbreaks, tree crown spacing) surrounding Gold Hill.




Seek opportunities to build or extend past treatment areas completed within or adjacent to the Town of Gold Hill:

- The Gold Hill Forest Restoration Project (~150 acres mitigated via mechanical and hand-thinning and mastication) has been in progress since 2023 in partnership with the Boulder Watershed Collective (BWC) and the Boulder Longmont Conservation District (BVLCD).



- **Auxiliary Fuels:** Fuels such as sheds/outbuildings/barns, firewood, RVs etc. are common and pose a significant risk on both an individual and community level.

Mitigations will vary on a case-by-case basis since the needs of each homeowner are unique

IV. COMMUNITY RESILIENCY & EMERGENCY PREPAREDNESS:

Effective wildfire evacuation planning involves residents being situationally aware and prepared. The community and residents should work with the Gold Hill Fire Protection district and other emergency agencies to identify and establish multiple escape routes and practicing evacuation residents. It's crucial to stay informed about fire conditions and follow official evacuation orders promptly. Furthermore, consider creating a family communication plan and ensuring your home is prepared with a to-go bag with key essentials and having clear address signage.

- **Egress/Evacuation: (High Priority Action)**
  Evacuation issues in Gold Hill stem from the town's limited, narrow unimproved roads, which are insufficient for large-scale evacuations during emergencies, potentially creating deadly traffic jams.

A more detailed presentation solely focused on emergency preparedness may be

available from your emergency management agency. Residents should understand when and how to evacuate from their neighborhood and how to help each other. Factors to consider include pets – evacuating for a neighbor who isn't home; livestock – how to evacuate livestock, where to take large animals, how to help neighbors; mobility challenged residents; creating a go-list.

Consider whether you have community members with special needs who might need assistance in an evacuation. Consider whether there are plans in place for neighbors to evacuate pets that are home alone during a wildfire. Determine if there are other considerations that should be addressed around community resiliency. Continue to partner with Gold Hill Fire Protection district to ensure hydrants are maintained and the updated response protocols are communicated appropriately to community members.

- **Wildfire Preparedness at the community-level**: Key actions include residents registering for emergency alerts, preparing individual "go-bags" and evacuation plans, residents should ensure they have wildfire insurance coverage, and creating defensible space around homes. The community should also conduct drills, maintain clear neighborhood evacuation routes, and have visible home address signs to ensure a coordinated response to a wildfire threat.
    - **Signing up for BOCO alerts:** https://boulderodm.gov/preparedness/alert-and-warning-system/
    - **Ready-Set-Go:** https://bouldercounty.gov/disasters/wildfires/preparing-for-a-wildfire/

- **Community Outreach and Education**

  Key Components:

  Raising Awareness:

  Informing residents about wildfire risks, creating a shared understanding of potential threats, and emphasizing the importance of preparedness.

  Fostering Action:

  Engaging residents to take tangible steps to prepare themselves, their homes, and their neighborhoods for wildfires.

  Promoting Collaboration:

  Encouraging neighbors to work together, share information, and develop solutions to reduce wildfire risks within their community.

The Town of Gold Hill leaders can host several community outreach and education programs by leveraging Boulder County's Wildfire Partners programs to assist with outreach and education, tabling, presentations and workshops. Collaborative neighborhood efforts, financial incentives, and specific educational resources can further enhance fire preparedness for residents.

Educate residents about the importance of wildfire mitigation best practices (including the need for maintenance) and emergency preparedness. Understanding the “why” will be motivating and make doing the “what” more palatable. Wildfire Partners can partner with Gold Hill leaders to deliver a presentation to your community that will highlight the information in this report and include information about emergency preparedness.

POTENTIAL AGENCY PARTNERS:

Consider partnership with the following agencies:

Boulder County Office of Disaster Management – Emergency and Disaster Preparedness trainings. Monika Weber, Coordinator, mweber@bouldercounty.gov
BoCo Emergency Alert Sign-up https://member.everbridge.net/453003085612231/login
Boulder County Sheriff's Office: Fire Management and mitigation crew
Seth McKinney or Dustin Blair: https://bouldercounty.gov/safety/sheriff/law/fire-management/
Boulder County Parks and Open Space: https://bouldercounty.gov/departments/parks-and-open-space/
Boulder County Wildfire Partners – more about various programs at www.wildfirepartners.org

- Assistance with education and outreach to residents
- Continued assistance with advising and community mitigation planning
- Community Chipping, Community Clean-up
- Rebate programs for home hardening and mitigation actions
- Youth Corp Program
- Individual Home Assessments

Boulder Longmont Valley Conservation District (BVLCD):
Boulder Watershed Collective
Kirin Riddell, Fire Adapted Communities Coordinator, kirin@boulderwatershedcollective.org
Colorado State Forest Service: Boulder Field Office-Ben Pfohl
https://csfs.colostate.edu/boulder/
Gold Hill Fire Protection District - https://www.goldhillfire.org/

- Emergency planning
- Response and alert
- Structure protection

***Bureau of Land Management (BLM)*:** https://www.blm.gov/maps/colorado
USFS-Boulder Ranger District: https://www.fs.usda.gov/r02/arp/offices/boulder-ranger-district-office

GENERAL - WILDFIRE MITIGATION BEST PRACTICES

ROOF AND EAVES

Standards:

Your roof should be in good condition with no missing tiles or shingles, clear of debris, and no gaps greater than 1/8 inch, especially along the roof's edge.

Why It Matters

Because it is a large surface where embers may land, the roof is the most vulnerable part of a home during a wildfire. While your home may only be subjected to the flaming front of a wildfire for a few minutes, your roof can be subjected to wind-blown embers for a much longer period of time. Wind-blown embers can travel great distances ahead of the main fire, landing on roofs and igniting combustible debris.

Most roofing has a rough surface and numerous cracks that can trap wind-blown embers and fire brands. If debris have accumulated at certain locations, embers can ignite these materials and enable the fire to spread to the rest of your home. Embers tend to collect along the edges of complex rooflines, in roof valleys and especially in gutters.

Ongoing Maintenance

✓ Check the roof at least twice a year for combustible debris. Remove as needed.
✓ Check gutters at least twice a year for combustible debris and remove as needed.
✓ Repair all missing shingles or tiles.
✓ Fill/screen any gaps along the roof edge to prevent embers from getting under the exterior roofing material.
✓ Check to make sure roof and soffit vents are properly screened.

EXTERIOR WALLS AND SIDING

Standards

- Siding should be in good condition free of gaps and holes greater than 1/8 inch that would allow embers to penetrate. If replacing, ignition resistant material is best.
- There should be a noncombustible or ignition resistant surface protecting the bottom 6 inches of combustible siding, including unprotected exterior insulation and sheathing.
- Garage doors should be able to close and seal completely.
- Vents should be screened and flappers able to close completely.

Why It Matters

The exterior walls of a home and its components are most affected by radiant heat from a fire and, if there is not effective defensible space, by direct flame contact. Embers tend to accumulate at the base of the siding making the base of the home most vulnerable.

Openings, like windows and vents, provide a direct path for flames or embers to reach a building's interior. Windows are one of the weakest parts of a building during a wildfire event because they usually break before the building ignites. Without proper screening, vents provide an entry point for embers to intrude and ignite combustible material inside the home.

Ongoing Maintenance

✓ Regularly examine your siding, vents and windows for gaps greater than 1/8 inch where embers can accumulate, lodge or directly enter your home. Fill any gaps with caulk or chinking.

✓ Fill bird holes and remove nests (unless occupied) and try to discourage birds from pecking at siding.

✓ Maintain 6 inches or more of exposed foundation between the home's combustible siding (including unprotected exterior insulation and sheathing) and the adjacent ground by removing soil and/or covering the bottom of the siding with a noncombustible or ignition resistant material.

✓ Replace the seals and gaskets around your garage door to prevent gaps.

DECKS, PORCHES, & FENCES

Standards

- Deck boards should be well maintained and free of deep knot holes and flakes.
- If replacing, use a noncombustible material or a composite vs wood.
- If the edge of a deck or porch touches the ground, rake as needed to prevent debris from building up against the fascia. Better yet, protect these areas of the deck by covering them with a noncombustible or ignition resistant material.
- Avoid storing combustible items on your deck including firewood, combustible deck furniture and cushions.
- Avoid wood fencing when possible. If rebuilding, switch to a noncombustible material for the entire fence if possible.
- If wood is the primary fencing material, retrofit the section that directly contacts the home to a distance of 5-10 feet.
- Remove vegetation from directly contacting your fence and replace with gravel or other noncombustible material.

Why it Matters

Decks and fences are especially vulnerable to direct flame contact, radiant heat, and blowing embers. This is particularly true as the wood ages. Well-maintained decks are typically ignited by other fuel sources (combustible material and items on top of and underneath). Fences are often ignited when embers land in fine fuels that have blown up against the fencing. A burning deck, porch or attached fence will expose your home to radiant heat and flames, potentially igniting combustible siding and breaking glass in windows and doors.

Ongoing Maintenance

✓ Regularly clean out debris from between deck board joints and deck-to-wall intersections.
✓ Avoid storing combustible items on the deck including firewood, combustible deck furniture and cushions.
✓ Check the condition of wood deck boards and structural support members and replace or repair rotted members.

<u>NONCOMBUSTIBLE ZONE 1A (0-5 FEET)</u>

Standards:

- Zone 1A extends out 3-5 feet from structures, under decks, and at least 2 feet past the driplines of decks, bay windows, eaves, and overhangs within 6 feet of ground level.
- At a minimum, ground surfaces in this zone must be covered with a noncombustible material, such as 2" of 3/4" gravel over a fabric weed barrier.
- Additional options include concrete, pavers, flagstone or similar hardscape surfaces.
- No vegetation, landscaping, or combustible items should be introduced.
- Don't use bark/combustible mulch for landscaping purposes.

Why it Matters

"Noncombustible Zone 1A" provides a critical barrier to protect your home against approaching wildfires. Most homes destroyed by wildfire are started by embers and/or grass (surface) fires igniting combustible materials on or near the home. The first five feet surrounding a home's walls, decks and other attachments should be non-combustible, easy to maintain, and clear of combustible materials.

During a wildfire, windblown embers rain down on your home. They collect or become lodged in the same locations where leaves, snow and pine needles tend to accumulate, such as where your walls meet the ground, in interior corners, and on and under decks. These areas should be kept clear of combustible debris and should not be used for storage.

Ongoing Maintenance

✓ Periodically check this zone to ensure that it remains free of combustible material.

✓ Weed and remove wind-blown debris (leaves, grass, pine duff, etc.) several times a year.
✓ Remove combustible stored and wind-blown items from under your deck.
✓ Avoid storing even non-combustible items against, under, or near any structures as they will trap debris like dried grass and leaves.

ZONE 1 (5-30 FEET)

Standards

- Few, if any, conifers should be present in Zone 1.
- Keep all trees trimmed back from the home's roof and siding.
- All junipers should be removed whenever possible because they are highly combustible.
- Retained conifer trees should be low limbed to a height of about 3 feet from the ground.
- Grass should be less than 4 inches tall within 30 feet of any structures.
- Similarly, there should be no shrubs or tall vegetation within 10 feet of the end of any remaining conifer tree branches. This will prevent fire from jumping into the trees from the ground.
- Landscaping closest to the home should be low, lean, and green. Plant in islands and break these up with boulders, pathways, and other hardscape elements.
- Avoid using wood mulch.
- Rake up autumn leaf-fall as dried leaves can easily ignite.

Why it Matters

The objective of mitigation work in Zone 1 is to reduce the amount of radiant heat your home is exposed and to prevent flames from touching your home's walls and windows during a wildfire. In Zone 1, natural and manmade fuels are treated, cleared or reduced to slow the spread and reduce intensity of wildfire. Since it is close to your home, you must be aggressive when thinning trees and shrubs in this zone.

If firefighters are unable to protect your home during a wildfire, having an effectively mitigated Zone 1 will increase your home's chances of survival.

Ongoing Maintenance:

✓ Regularly cut grasses and weeds to a maximum height of 4 inches.
✓ Maintain spacing of shrubs and conifer trees as they grow.
✓ Rake to prevent duff accumulation under trees.
✓ Low limb conifer trees to around 3 feet from the ground. Maintain as needed.
✓ Remove all resulting slash, cuttings, and debris in a timely manner.

ACCESSORY STRUCTURES & PERSONAL PROPERTY

Standards

- **Accessory structures** like sheds or detached garages, especially those within 30 feet

of the primary residence, should be mitigated to the same standard as your residence. They could become additional fuel or a combustion source during a wildfire.

- **Firewood** should always be stored at least 30 feet from any structures and at least 10 feet from the dripline of conifer trees. If that's not possible due to property constraints, store firewood in a noncombustible container or shed.
- **Personal Items/Toys** should be stored at least 30 feet from any structures and away from trees. This would include fuel sources like RVs, boats, motorcycles and other stored items.
- **Above Ground Propane Tanks** should have gravel or bare ground under and at least 5 feet out from the tank.

Why it Matters

Outbuildings, fences, arbors, pergolas, trellises, playground equipment, gazebos, boats, RV's, firewood piles, propane tanks and other combustible personal property located within 30 feet of your home will increase its vulnerability to wildfire. Once ignited, these items burn intensely, bringing large flames and embers near your home. If ignited, large outbuildings (like garages and sheds) will burn much longer than a typical tree, resulting in longer ember and heat exposure to your home.

Items connected directly to the home are particularly hazardous because they can act as a wick, carrying fire directly to the structure. In addition, many homes have been lost because of improper firewood storage. Firewood piles can easily ignite, and once ignited, they burn intensely.

Ongoing Maintenance

✓ Check outbuildings periodically to insure they are protected from ember and surface fire ignition.
✓ Avoid storing combustible items, including firewood and personal property, in locations that would contribute to the loss of your home during a wildfire.
✓ Make sure your firewood pile is still in a safe location.
✓Refrain from stacking items against the side of your house as they'll trap blowing needles, and leaves, etc. which are susceptible to ember ignition.
✓ Rake and weed around your above-ground propane tank at least twice a year.

FINAL TAKE-AWAYS

Implementing effective wildfire mitigation in our communities is not a one-time project. Living in the wildland/grassland urban interface comes with responsibilities and challenges.

Wildfires are dynamic and unpredictable events that can expose vulnerabilities in our homes' defenses. The more action taken to properly prepare and maintain our homes and landscapes, the more we can reduce the negative impacts of wildfire to our communities.

Landscaping: In many cases, creating fire resilient landscapes requires us to rethink traditional landscaping practices and aesthetics. A common practice in conventional landscapes is to include foundation plantings wherein shrubs or other vegetation are placed against structures, or trees are planted too close to structures and their branches are allowed to overhang roofs. Plants are often placed too closely together, and too close to structures, without accounting for their mature size. When siting vegetation, choose the right plant for the right place. This means choosing species that are appropriate for the planting site, such as small shrubs for confined areas that won't become so large they engulf surrounding vegetation or structures, choosing fire resistant plants for fire-prone areas, or using regionally appropriate plants that don't require a lot of additional inputs (water, fertilizer, maintenance) to keep them healthy.

Evacuation: Residents should know to go early! Leave soon enough to avoid being caught in fire, smoke, or road congestion. Do not wait to be told by authorities to leave. If you are advised to leave, do not hesitate—leave as quickly as possible.

Lessons Learned: During the 2021 Marshall Fire, rapid fire spread during the first hours overwhelmed fire suppression efforts leaving homes to withstand flames and embers undefended. Even if there had been unlimited firefighting resources available, they could not have mobilized fast enough, nor would it have been safe for them to protect all homes. While there are no guarantees, the measures outlined here are designed to help support the best possible outcome for your home and forest during a wildfire event.

DISCLAIMERS

THERE ARE NO GUARANTEES

While the purpose of the Wildfire Mitigation Assessment is to reduce the risk of fire damage to your home or property, following the recommendations in this Assessment does not guarantee prevention of such damage. Wildfire mitigation work around your home can give firefighters the best chance to defend and protect your property from wildfires and can also substantially increase your safety and reduce the risk to life and property. However, wildfire is unpredictable and can be impossible to stop or control, regardless of what mitigation efforts you have taken. Wildfire Partners and Boulder County make 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 our wildfire mitigation

program.

GENERAL - EMERGENCY PREPAREDNESS

EMERGENCY PREPAREDNESS CHECKLIST

- ☐ Confirm that your house address sign is visible from the road at night.

- ☐ Update your homeowners' insurance coverage periodically. Make sure you keep pace with increases in the cost of construction, providing the coverage necessary to recover and rebuild.

- ☐ Perform a home inventory using photos or video inventory. Save this file in the Cloud or off-site. It will be invaluable should you need a list for an insurance claim. Watch this 3- minute video for helpful tips: https://www.youtube.com/watch?v=X0N-b1GtQDs

- ☐ Practice evacuating your home within 15 minutes, ensuring you take important items. Remember to close all windows before leaving to prevent embers from getting into the house. Remove all combustible items from the deck if there's time.

- ☐ Prepare a written GRAB-LIST of items to take when evacuating. Update the list periodically and keep in a prominent place. Make sure to include medications for people and pets.

- ☐ Sign up to receive free emergency alerts with Boulder County Office of Disaster Management, https://member.everbridge.net/453003085612231/login

- ☐ Develop a plan to communicate with your family and designate a spot to meet up. Establish a safe location where your family can re-convene, and/or assign an out-of-town contact to serve as a liaison between family members.

- ☐ Plan for someone, perhaps a neighbor, to evacuate pets if you're not home.

IF YOU FEEL UNSAFE OR ARE TOLD TO EVACUATE, GO ASAP!