



# Understanding Home Hardening

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Home hardening is a set of measures taken to protect homes from wildfire — reducing the susceptibility of homes to ignition from embers, radiant heat, or direct flames. Ember storms occur when burning particles are carried by wind, often traveling up to a mile ahead of the fire front, landing in vulnerable areas like roofs, gutters, vents, decks, and corners where debris gathers. Strengthening these weak points is essential to minimizing the risk of ignition.

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## Defining the Home Ignition Zone

This concept divides the area around a home into zones to reduce fire risk:

- **Immediate Zone (0–5 feet):** Keep this area clear of vegetation and flammable items like wood mulch. Use non-combustible materials like gravel or stone for landscaping. Clean gutters regularly to remove dry debris where embers might settle.
- **Intermediate Zone (5–30 feet):** Implement fire-resistant landscaping practices. Trim trees and shrubs to prevent fire from spreading to the structure.
- **Extended Zone (30–100 feet):** Thin out vegetation, remove potential fire fuels, and prune tree branches to reduce ladder fuels that can carry fire upward.

## Roof & Gutter Maintenance

Use fire-resistant roofing materials like metal, tile, or Class A-rated shingles. Ensure roofing materials are properly secured to prevent ember penetration. Clean gutters to remove dry debris, or install systems designed to prevent debris accumulation.

### Dormers, Skylights & Roof Complexities

Areas like dormers, roof joints, and other features where embers naturally accumulate need measures that prevent embers from igniting the structure:

- **Install metal flashing.** Add flashing or drip edges at joints where dormers connect to the roof, protecting roof decking and eliminating entry points for embers.
- **Fill gaps.** Check for and seal any gaps where roofing meets vertical walls, as these can act as traps for embers.
- **Watch angles and low-slope roofs.** These become natural spots for leaf and debris accumulation, which embers can ignite — clean regularly.

- **Maintain and clean.** Regularly remove debris from roof features, especially around dormers or re-entrant corners where roof sections meet.
- **Use fire-resistant materials.** Class A materials — metal, clay, or composite shingles — resist ember damage.
- **Keep noncombustible zones.** Structures under or near dormers should use hardscaping (stone, gravel) and stay clear of vegetation within five feet of walls and roof.

## Vent & Window Protection

- Cover vents with 1/16- to 1/8-inch metal mesh to block embers. Opt for vents specifically designed to prevent ember intrusion.
- Use dual-pane tempered glass windows to minimize cracking under high heat and reduce the possibility of fire entering the home.

**A telltale sign of an unscreened vent: dead bugs in light fixtures or solar tube skylights. If bugs can get in, embers can too.**

## Siding & Fencing

- Use ignition-resistant materials like fiber cement, stucco, or brick on exterior walls and decks.
- For fences, choose non-combustible materials, especially where they connect directly to the house — a fence that can catch fire brings the fire right to your door.

## Emergency Access Improvements

- Ensure your home and address are easily identifiable by emergency personnel, even in poor visibility like wildfire smoke. Use address numbers at least 4 inches tall and reflective if possible. Platte Canyon Fire Protection District will make address number signs for you at cost.
- Check that driveways and access gates are wide and functional for emergency vehicles.
- Per the International Fire Code (IFC), driveways should have a minimum width of 20 feet, a minimum vertical clearance of 13 feet 6 inches, and a maximum grade of 10% unless approved by a Fire Code official.

### **Park County Code Enforcement**

Handles fire code regulations and enforcement in Park County, Colorado.

**Address:** 856 Castello Avenue, Fairplay, CO 80440

**Phone:** 719-836-2771

## Garage Doors

Garage doors are a potential weak spot during wildfires, as embers can enter through gaps and ignite materials inside. Steps to improve fire protection:

- **Install weather sealing.** Ensure edges have weather seals to block embers, smoke, and heat. Check regularly and replace if damaged.
- **Repair gaps or damage.** Inspect for gaps, cracks, or damage that might let embers through, and repair promptly.
- **Upgrade with fire-resistant materials.** If replacing a door, consider a fire-rated or non-combustible material, paired with fire-resistant weatherstripping.
- **Keep the garage clean.** Regularly remove flammable items like dry leaves or cardboard. Store fuel or other flammable liquids in fire-resistant containers.
- **Secure openings and pet doors.** Seal any pet door or vent to prevent ember entry.

## Decks

- **Build with fire-resistant materials.** Use non-combustible or ignition-resistant options like fire-resistant composite decking, metal, or concrete. Avoid untreated wood.
- **Seal gaps and joints.** Ensure no gaps between deck boards or where the deck meets the house. Use fire-resistant caulking or metal flashing.
- **Create a non-combustible zone beneath.** Keep the area under the deck free of firewood, leaves, mulch, or stored furniture; use gravel, stone, or bare soil instead.
- **Enclose the underside.** Use cement board or metal mesh (openings no larger than 1/8 inch), especially important for decks low to the ground.
- **Maintain a clean deck.** Regularly clear leaves, pine needles, and other debris.
- **Use fire-resistant furniture.** Avoid storing flammable items like propane tanks on the deck.
- **Install metal flashing** where the deck connects to the siding of your house.

Home hardening doesn't guarantee your home will not ignite during a wildfire — but it will increase the odds of your home surviving one.

### Further reading:

[See the Nearly 100-Year-Old "Miracle House" That Survived the Lahaina Wildfire — CBS News](#)  
[A Malibu Mansion Survived the Wildfires — Experts Explain Why It and Others Were Left Unscathed](#)

## If Wildfire Is Threatening: Last-Minute Checklist

Quick actions to take in the moments before a wildfire reaches your property:

### Spark Arrester

Install an approved spark arrester on chimneys.

### Siding & Trim

Fill gaps with quality caulk; replace materials in poor condition.

### Woodpiles

Move firewood stacks and scrap lumber at least 30 feet from the house.

### Patio Furniture

Move combustible lounge chairs, tables, and hammocks inside.

### Porch & Deck Accessories

Remove newspapers, wicker baskets, door mats, pinecones, and dried arrangements. Move small propane tanks to the garage; move 5-gal.+ tanks away from the house to vent safely.

### Flowerboxes

Remove wooden flowerboxes from beneath windows.

### Eaves

Cover open eaves with plywood or fiber-cement sheathing, using tongue-and-groove joints — not butt joints.

### Flowerbeds

Replace wood mulch with noncombustible types; remove dead plant debris near the house, buildings, or wooden fences. Swap ornamental junipers for low-growing irrigated shrubs.

### Vehicles

Close windows. Back into the garage and close the door, or park away from the house.