

Take proven steps to harden your home and landscape against wildfire



In the face of escalating wildfire threats, it is more important than ever for homeowners who live in the wildland urban interface (WUI) to take steps to protect their home and property in the event of a wildfire. The majority of homes lost to wildfires are ignited by embers and small flames, which can be mitigated through strategic home-hardening measures.

Creating defensible space and implementing home-hardening strategies are critical steps in the defense of homes and communities. By retrofitting your home with ignition-resistant materials and creating more wildfire-resistant landscapes, you can significantly reduce vulnerability to wildfire.

Common home ignition sources

While many people assume direct flame contact is the biggest threat to their home during a wildfire, the most common form of ignition is actually flying embers, also known as ember wash. Embers are windblown fragments that can travel up to a mile, landing on wooden decks, roofing materials, vegetation, or other debris. Embers can also enter homes through vents, eaves, and other openings, igniting flammable materials inside the structure.

Radiant heat is another common source of home ignition. The intense heat from a nearby wildfire can

raise the temperature of combustible materials around a home to the point of ignition, even if flames do not come in direct contact with the structure. Homes located close to dense, flammable vegetation are also at a greater risk during a wildfire, as the vegetation can act as a fuel source.

Creating defensible space

Defensible space is the area between a house and an oncoming wildfire, where vegetation has been modified to reduce the wildfire threat and to provide an opportunity for firefighters to effectively defend the house. For more information on creating defensible space on your property, check out the *Barnyards & Backyards* article “A Homeowners Guide: Understanding Defensible Space and Wildfire Preparedness” at <https://bit.ly/wildfire-preparedness>.

Home-hardening techniques

Beyond creating defensible space, homeowners can also take steps to harden the home itself against embers and radiant heat sources. When you harden your home against wildfire, you are trying to eliminate opportunities for embers to find a place to ignite the house. Proven home-hardening techniques include the following.

Vegetation

Maintain a 5-foot non-combustible zone around the home. Remove all vegetation and tree debris. Remove wood or rubber mulch, and consider using gravel instead. Do not allow vines to grow on buildings or within 5 feet of structures.



Photo by norbel, stock.adobe.com.

Roof and eaves

A home's roof is the most vulnerable part of the structure. A home-hardened roof should be made of fire-resistant materials such as composite, metal, clay, or tile. If using shingles, be sure they have a Class-A fire rating. Wood shingles are not recommended. Plug any gaps between roof material and sheathing to prevent ember entry.



Photo by Joseph Creamer, stock.adobe.com.

Chimneys

Cover the stove pipe or chimney opening with $\frac{3}{8}$ -inch to $\frac{1}{2}$ -inch metal mesh. This will help protect against ember entry and also keep any embers from your fire inside the chimney.



Photo by Victor, stock.adobe.com.

Vents

To prevent ember entry, use ember-proof vents or cover all vents with $\frac{1}{16}$ -inch to $\frac{1}{8}$ -inch metal mesh.



Photo by Tiffany, stock.adobe.com.

Eaves and soffits

If not present, install soffit made from fire-resistant materials to help keep embers from finding purchase in the eaves.



Photo by sommersby, stock.adobe.com.

Windows

Install dual pane windows; make sure one of the panes is tempered glass, which is more resistant to heat from a wildfire. It is also helpful to install metal screens on the inside of the window. If the window breaks, the screens provide another line of defense against embers.



Photo by Vastram, [stock.adobe.com](https://www.adobe.com/stock).

Walls and siding

Use fire-resistant materials, including fiber cement, stucco, or pretreated wood siding. Ensure that the siding meets the foundation at the bottom, to prevent embers from slipping underneath. Also, maintain at least 6 inches of vertical noncombustible material between the ground and the start of the siding.



Photo by ronniechua, [stock.adobe.com](https://www.adobe.com/stock).

Decks

Utilizing fire-resistant materials such as composite decking can greatly reduce the risk of combustion from embers during a wildfire. Clean under and on the deck to remove any flammable materials or debris. You can also minimize ember ignition by placing metal mesh around the base of the deck.

Patios and porches

Structures like pergolas and other patio covers should be made from the same fire-resistant materials as your deck and/or roof. Any outdoor furniture should also be made of fire-resistant materials. Move flammable items such as cushions inside on days when there's a Red Flag Warning.



Photo by coachwood, [stock.adobe.com](https://www.adobe.com/stock).

Rain gutters

Clean out rain gutters regularly to minimize flammable debris. Using non-flammable gutter covers can also help to minimize debris collection and reduce maintenance.



Photo by soupstock, [stock.adobe.com](https://www.adobe.com/stock).

Garage

Garages are especially susceptible to ember entry. Install weather stripping on all doors and ensure windows seal tightly. As with your home, use dual pane windows. Store all combustible and flammable liquids away from doors and windows to avoid ignition. Make sure you know how to operate your garage doors when there is no electricity.



Photo by trekandphoto, [stock.adobe.com](https://www.stock.adobe.com).

Fences

At a minimum, use non-flammable materials for all fences and gates that connect to a structure within 5 feet of the structure. This will help prevent the fence from burning up to the structure.



Photo by Kirk Fisher, [stock.adobe.com](https://www.stock.adobe.com).

Driveway and address labels

Your driveway must be wide enough for emergency vehicle access. Trim back trees and brush to allow fire engines and other emergency vehicles unobstructed access to your property.



Photo by ysbrandcosijn, [stock.adobe.com](https://www.stock.adobe.com).

Also, don't assume that emergency responders know where you are. Ensure that your address is clearly visible from the road. This will help firefighters respond quickly if you call them for help. To apply for an address or to check on current addressing for your property, contact your local county assessor or planning and zoning office.

A communal responsibility

While home-hardening techniques do not make your home fireproof, increasing the fire resistance of your home can help reduce the chance it will catch fire. Combined with a defensible space surrounding the property, these efforts can go a long way in helping your home survive a wildfire.

Remember, the decision to harden your home is not just a personal investment; it is a communal responsibility that protects lives, properties, and neighborhoods.

.....
Caleb Carter believes in home hardening *and* home gardening. He is district manager of the Weston County Natural Resource District and can be contacted at ccarter.wcnrd@gmail.com or (307) 746-3264.