

Last Week's Fire Disaster Is a Wakeup Call for Building More Fire-Resistant Homes

My column on Nov. 29, 2018, followed the wildfire that took out the entire town of Paradise, California.

Last week we experienced a similar tragedy in our northern suburbs of Superior and Louisville. The difference was that this fire was driven by hurricane force winds that are all too common along the foothills.

Those winds weren't limited to that area, and it was clear to Rita and me that a spark on Lookout Mountain (to which our home backs) might well have led to a similar catastrophe for the city of Golden. There's no way to stop a fire driven by such winds.

You probably noticed, as I did, that the fire spared some houses while completely consuming adjoining houses, so perhaps it's possible to increase the chances of being one of those skipped houses in a future wind-driven wildfire. Was it just luck, or did those homes have any features that may have helped spare them?

Today I'll describe some features that might increase the chances of a home being skipped.

In high wind or low, it's important to recognize that fires spread from home to home primarily by wind-blown embers. You've probably heard of insurance companies requiring homes in the "wildland urban interface" to create a "defensible space" around them by removing trees and other combustibles within, say, 20 to 30 feet of the home.

Useful as that might be, it's more important that burning embers from further away not land on combustible material such as dead leaves, shrubbery, a wood deck, or a shingle roof.

There's a website on this topic, www.DisasterSafety.org/wildfire. One of the links on that website that you'll find useful is "What to do if a wildfire is approaching."

California is, understandably, a leader in researching and rating building materials based on their fire resistance. Google "Wildland Urban Interface Products" to find

Cal-Fire's 48-page handbook dated Dec. 14, 2021, listing construction materials in 7 categories: decking; exterior windows; exterior wall siding and sheathing; exterior doors; under-eave protection; vents; and non-wood roof covering/assemblies. (I've posted a link for it at www.GoldenREblog.com.)

If I were to invest in making my own home more fire resistant (which I am seriously considering in the wake of last week's fires), here are some of the things I would investigate;

Metal roofing: I like the look of what is called "stone-coated steel" roofing. It looks from a distance like wood shake roofing. There's an HOA in south Jeffco which requires wood shake roofing, but it will allow this kind of metal roofing. (It does not allow the more commonly used composition shingle roofing.)

Roof sprinklers: I have often thought it would make sense to install sprinkler heads at strategic locations on my roof to wet the roof if a fire is approaching. I'm going to ask a plumber about this concept. Sprinklers that douse the exterior walls might also be a good idea. I found on Amazon a kit of 2 roof sprinklers with gutter, wall or fence mounting and 50 feet of hose for \$179.95, but I like the idea of permanent sprinkler heads with through-the-roof plumbing, which I think my HOA would find less objectionable.

Motorized rolling metal shutters: I have seen these installed on a few Jeffco homes. They're marketed for privacy and security, but they completely cover the windows when lowered and would surely help protect against fire. Some such systems allow the shutters to be operated via an app on your smartphone. One vendor is www.SomfySystems.com. Think of this as another reason for having a home battery backup system (which we have ordered) in case of power failure.

Non-combustible siding: The most common siding being installed by local builders is "Hardie

Board" from James Hardie. Although it can be mistaken for wood siding, it is actually a non-combustible fiber cement product. It's only 1/4 inch thick, however, so it only provides short-term protection and does not qualify as fire resistant, so it matters what is underneath it. (Refer to that Cal-Fire handbook of siding products.)

Special attention should be paid to the underside of roof overhangs, balconies and decks, where flames can be trapped. Roof soffits in most homes have vents which combine with vents on the roof to circulate outside air through the attic. Unfortunately, this design can also allow the introduction of wind-blown embers into the attic. One way to eliminate these vents is to do what Meritage Homes did in building Arvada's Richards Farm subdivision. The insulation of those homes is closed-cell foam sprayed onto the underside of the roofs, rather than the more typical blown-in cellulose or fiberglass batts resting on the floor of the attic, as is found in most homes. The attic in such homes becomes conditioned (i.e., heated) space, eliminating the need for soffit and roof vents. Meritage probably didn't consider that making the homes more energy efficient in this way had the added benefit of making them more resistant to ember intrusion in a wildfire.

In past columns, I have promoted the all-electric home for sustainability and health reasons, but last week's fires have provided another reason for doing away with natural gas. A large number of homes that were not destroyed are nevertheless enduring days and possibly weeks without natural gas for heating during some bitterly cold days. If any of those homeowners had switched to heat

pumps for space heating and for hot water (as I have recommended), they would not be affected by the long delay involved in restoring gas service to their neighborhood. That might be an additional inducement to make the switch away from natural gas.

Homeowners in that area are being urged to boil water, so they might consider buying a countertop **induction burner**, which can boil water in one or two minutes, versus 10 or more minutes on a conventional range. I found 110V models online for \$49-79.

It is not uncommon for homes to have "safe rooms" to which homeowners can retreat in case of a home invasion. If such a room were constructed in a basement with cinderblock walls, a metal door, and a concrete-and-metal ceiling, it might double as a survival room in the event of a wildfire when evacuation is a risky alternative. Given the increase in tornadoes due to climate change, it could also serve as a tornado shelter.

Although I have not researched it, I would guess that taking some of these precautions — especially metal roofing and the rolling metal shutters — might help to reduce your insurance premiums, as well as to possibly save your life and property in case of wildfire.

Help for Fire Victims

If someone you know lost their home in last week's fires and decides to relocate rather than rebuild, have them call us. We will rebate 75% of our earned commission to any buyer who lost their home and all their furnishings in the fire, so they can use that money to buy new furnishings. You can donate, too, at www.CommFound.org.

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