

## Fighting wildfires during the design stage

### Architects plan for fire resistance



**FIRE RING** -This Stephen Dynia Architects-designed residence is within the town limits of Jackson and butts right up against Snow King. It was completed in August 2013. It is 4,900 square feet and is in one of the Wildland Urban Interface zones of Teton County. There is an exterior layer of gypsum board behind all of the siding. The lot is steep and heavily wooded, and this contributes to the hazard rating of the house lot. stephen dynia architects

100-foot radius around the structure that is split into two zones. The first is 30 feet from the building and requires 10-foot spacing between crowns of trees and removing any branches below 10 feet from the ground, as well as dead wood or brush. The next 70 feet should have 8 feet between the crowns and require thinning branches 8 feet from the ground, as well as dead wood and brush, Weaver said.

Most people make these adjustments because they have to. There aren't many people retrofitting their homes or landscaping in other areas because they want to, he said.

In 1988 people in Teton County watched the Yellowstone Fires rip through the National Park.

"We looked up North and said 'Whoa, if that can happen up there, it can happen here,'" said Kathy Clay, a board member of the International Association of Wildland Fires. She is also fire marshal for both Teton County and the town of Jackson. The fire marshal at the time proposed new regulations the county commissioners voted down. It took 20 years and a board of various stakeholders, but in 2008, Teton County adopted the International Wildland-Urban Interface Code, Clay said. They mapped out danger zones, and homes within the area are reviewed. Things like access to water and nearby trees are evaluated.

For architects, designing homes in the interface changes the design, said Brett Bennett, architectural technician with Ward and Blake architects.

There has to be access for emergency vehicles and back-up water sources, he said. Roofing material has to meet certain specifications. Decks might need to be built with heavier framing, which have a higher fire rating. Roofs can't have vents and structures must be a certain distance from vegetation and trees. A wood-sided home might need an additional layer that is more fire resistant.

It adds a significant amount of time onto a project because of the communication with the firm and the

Kelsey Dayton

The days of the wooden cabin nestled amongst the trees with a large elevated deck that holds your wood pile on top and provides extra storage below is becoming a thing of the past as wildfires are changing how homes are built and maintained.

Despite fires threatening homes near Jackson and Casper in recent years, most people still aren't adapting how they build homes – unless they have to. Regulations in Teton and Natrona counties require some new houses to meet standards that will make homes more defensible against wildfire.

Natrona County implemented a zoning rule in 2005 for people living in the Casper Mountain area, said Sam Weaver, Natrona County Firewise Project Coordinator. Residents must establish a defensible space around a home or cabin if remodeling or building a new structure. The rules deal with a

county, he said. Materials can also be more expensive. Most requests for designing defensible homes come from those that have to because of regulation. And many of those people learn about the regulations once the architect firm looks up the property and verifies it falls within the interface, Bennett said.

Most of the design features required by living in the interface are details, said Kate Parent, an architect with Stephen Dynia architects.

Sometimes you can't see the modifications because they are items like not venting a roof or adding exterior drywall underneath siding, she said. Depending on the homes location there are different parameters that must be met. People don't usually request additional modifications to make their homes more defensible, other than what is required, she said.

There is still some struggle in Teton County in getting homes defensible, Clay said. There are some homeowner associations that don't want pine trees thinned, even when residents request them removed, but people are becoming more aware, especially after fires come near the area.

"They pay a little more attention when there is smoke on the mountain," she said.

Clay said she didn't know of any firms that market themselves as specializing in wildfire defensible design, but that all of the Teton County firms understood and had experience working with the regulations.

However, there are landscaping companies that market themselves on specializing in wildland fire defense.

Harry Statter, owner of Firewise Landscapes in Jackson was driving between Jackson and Boise in 2001. He noticed a burned area from an Idaho fire that went right up to the houses. He knew there had to be landscaping techniques that could prevent fires from taking homes. He already owned a landscape ecology firm, but business escalated when in 2002 he renamed it and started promoting fire prevention work.

Statter works with the county and fire Marshall and sometimes with contractors in finding a balance in forest function, landscape design and a defensible home. The company looks not just at where vegetation is, but what kind, and makes adjustments for how different species burn.

Most people call if their insurance company requires changes in landscaping or they have a home in the interface and need to meet country regulations. Some call during fire season if a fire nears their area.

"Then it can be too late," Statter said.

While business increased a little due to trees in the area dying from mountain pine beetle, most people don't think about clearing vegetation until a fire is burning.

"At the end of the day, it's kind of like a flood – it's not in peoples thoughts until the water is rising," he said. "So how do you save your house when the flames are rising?"

When in 2012 a fire started on Snow King Mountain in Jackson, it wasn't homes in the designated interface that were threatened, Statter said. It was buildings in town. Events like that made more people aware of their landscaping and he thinks more people will be proactive in the future. Landscaping can prevent a fire from taking a house or give emergency responders more time to fight a fire.

People wanting to make their homes more defensible need to plan for work in early summer before fire season begins.

### **Changes you can make to your home**

- Seal off areas. “Air equals embers,” said Kathy Clay a board member of the International Association of Wildland Fires and Teton County and the Town of Jackson’s Fire Marshall. Embers can travel up to half a mile ahead of a fire and start a new blaze. This includes vents, attics and crawl spaces.
- Evaluate vegetation around your house. Consult with fire experts on the distances different vegetation should have from the home.
- Use metal or asphalt shingles on your roof.
- If you have vents in the ceiling, screen them so sparks can’t enter.
- Screen open areas below decks.
- Store firewood at least 30 feet away from the house during the summer.
- If your home is near a fire, don’t forget to clear the deck of overstuffed furniture and combustible items like propane tanks.
- Complete a home inventory every few years so that if something does happen, you know everything that was in the house.

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