

# Creating defensible space around

## Some homeowners find aesthetic appeal increases in addition to bolstering fire resistance

By Ron Graham

Wildfires have burned hundreds of thousands of acres in the United States, forced evacuations, burned structures, and claimed lives.

For Wyoming homeowners, there are many things that can be done during a weekend to increase the survivability of structures.

Defensible space generally refers to the area between a structure and an oncoming wildfire in which vegetation and the structure have been modified to reduce the threat of wildfire. Defensible space allows firefighters to operate more safely and efficiently. Some key concepts include vegetative management, increasing structure survivability, and promoting firefighter safety.

Homeowners are responsible for creating defensible space. Waiting until a wildfire threatens your property is too late.

### Define Defensible Space

The first step is defining your defensible space. Evaluate your home's building materials. Is it wood sided, log construction, or more fire-resistant material such as brick or stucco? Is the roofing material wood shake, composite roofing material, or metal? How is it designed? Does it include valleys in the roof that would catch embers? In case of a wildfire, a structure becomes another source of fuel, and a homeowner must evaluate this fuel source.

The building(s) and surrounding area for 100 to 200 feet is often

referred to as the home ignition zone and should all be evaluated, too. In addition to the home's exterior materials and design, the potential for ignition depends on the amount of heat applied to the home from the flames within the home ignition zone. Home ignitions can be caused by embers originating in the home ignition zone either by igniting the home directly or igniting materials up against the home.

Homeowners should take several factors into consideration to define their defensible space. Is there a build-up of leaves, pine or spruce needles, and other combustibles on the roof? If so, remove them annually. Install a spark arrestor on your chimney.

Are there wooden decks and fences attached to the structure? Having a fire resistant break where a deck or fence approaches the structure is a good practice. Concrete steps can replace wooden steps leading up to the structure, and a wood fence could end short of a structure. Inserting a section of metal fence is a good practice as well.

Don't forget to look at the rain gutters and soffit vents. Gutters can become filled with pine needles, leaves, and small twigs that create a fuel bed in which fire embers can land. Clean the gutters annually. Check the soffits to see if they are enclosed or if they have vented small openings that will not allow embers to blow inside.

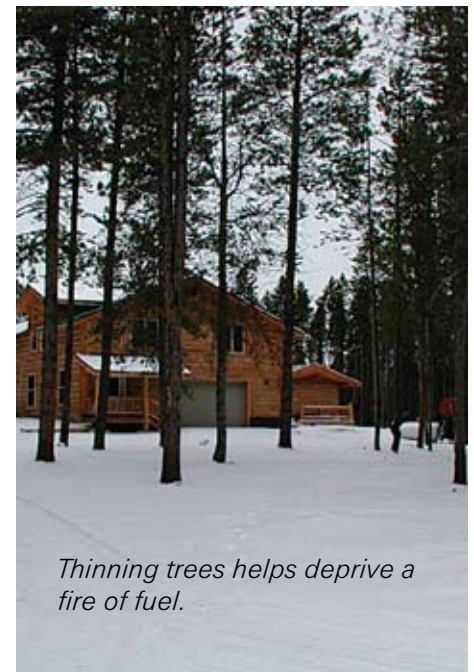
During wildfire season, removing flammable furniture on decks,

doormats, and other possible fuel sources adjacent to the structure are important. Decks should be enclosed with a non-flammable material. Skirting, lattice, and mesh screen are common examples.

### Look at Landscaping, Vegetation

Next, look at the landscaping and vegetation immediately adjacent to the structure. Is there flammable vegetation that has direct contact with the structure? Removing all flammable vegetation within 3 feet of the structure is recommended. Replace vegetation with fire-resistant plant materials. An article detailing fire-resistant vegetation is on page 6 of the publication [http://agecon.uwyo.edu/insuringsuccess/BarnyardsAndBackyards/2006BAndB/Insert\\_2006\\_05.pdf](http://agecon.uwyo.edu/insuringsuccess/BarnyardsAndBackyards/2006BAndB/Insert_2006_05.pdf).

Move wood piles on decks or those piled against the structure to about 30 feet away. Clear brush away from woodpiles. Tanks containing



*Thinning trees helps deprive a fire of fuel.*

# property is homeowner responsibility



*Lodgepole pine before (left) and after thinning to create defensible spaces. Many homeowners report an increase in aesthetic appeal.*

propane and other flammable liquids should be at least 30 feet from the structure.

Many homes that have ignited during wildfires did so from vegetation that made direct contact with the structure. Many of these ignite after the large flaming front of the fire passed and small remaining ignition sources were undetected by firefighters. Keeping grass mowed and weeds trimmed are simple maintenance items homeowners should perform regularly.

Having a garden hose hooked to a working water source can be an aid to both the homeowner and firefighter in the event of a wildfire. Replacing landscape materials such as bark and mulch with a more fire-resistant material, such as rock, is recommended.

## **Trim Branches, Prune Trees**

Remember to trim tree branches that hang over the roof. Prune branches up at least 6 feet from the ground, and remove shrubs underneath branches. This will reduce the chance of them acting as a ladder

fuel, transferring fire from the ground surface vertically, where they can give off embers that may contact the structure.

Creating defensible space does not end here. The homeowner should now expand the defensible space out another 30 feet. In this zone, all trees should be pruned up to around 6 feet. Some trees may need removed so the distance between the crowns is increased. This distance will depend on the type of tree and the amount of slope the tree is on. The most helpful information source would be a forester. Remove all diseased, insect-infected, and dead trees in this zone. Trim weeds, mow grass, and rake up leaves, needles, and dead and down material that contribute to available fuel for an approaching fire.

Keeping debris piles small and manageable, and spacing them will allow piles to be burned with more control. Piles no larger than 4 feet by 4 feet are recommended. Only burn when winds are low or during the winter months. Covering the piles will keep them dry and allow for

burning in the winter. Follow any local laws when burning debris piles.

Consider alternatives to burning such as composting or hauling the material to a community burn pile or compost program.

Repeat this process, extending your defensible perimeter out another 60-200 feet, depending on the slope of the property, the direction the slope faces, and the amount of fuel on the property. Aspect can determine the type and amount of vegetation that grows on a site and the fuel temperatures during the heating cycle of the day. North and east aspects warm earlier; south and west slopes receive solar heating later. See [Firewise.org](http://Firewise.org) for more information.

It is important to consider neighboring property as a source to spread fire to your property. If your neighbors have a heavy fuel load and do not mitigate their fuels, consider being more aggressive in your mitigation efforts. Consider a fuel break around the property. A shaded fuel break leaves some trees in the break area. The idea is to keep some shade on the ground to lower the ground

fuel temperature. This will create a break in the forest canopy and provide firefighters an area to work in while protecting the structure. Consult a forester if considering a fuel break.

Visiting and working with neighbors is encouraged. Oftentimes, homeowners working together can accomplish more and organize things like community slash removal days.

### **Ensure Adequate Entry to Property**

The responsible homeowner will check to see that the ingress/ egress of their property will allow fire equipment traffic. Narrow driveways with no turnouts and bridges that will not support lengthy, heavy equipment pose a threat to firefighter safety. Having house numbers and address signs clearly visible help firefighters quickly locate properties.

In some cases, as a result of creating defensible space and mitigating fuels, property owners have experienced increased aesthetic appeal on their property and in some cases report an increase in property value. Another incentive is the availability and cost of homeowners insurance. Some insurance companies will not insure a property that has defensible space issues and is in a high wildfire threat area.

There are too few firefighters with too little equipment to safely protect every home. If homeowners want to increase the survivability of their home during a wildfire, creating defensible space and becoming "Firewise" is the answer.



## **Becoming Firewise**

The national Firewise Communities program is a multi-agency effort designed to reach beyond fire departments and agencies by involving homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire before a fire starts.

If you belong to a homeowners association, consider working toward making your community a Firewise community. More information on becoming Firewise can be found at [Firewise.org](http://Firewise.org) and [www.firewisewyoming.com/](http://www.firewisewyoming.com/).

In Wyoming, there are cost-share programs to assist homeowners in creating defensible space. The programs provide financial assistance to create defensible space, reduce hazardous fuels, treat slash, and create fuel breaks. Many residents have taken advantage of the cost-share programs since 2001.

More information can be found by contacting your local Wyoming State Forestry Division office (offices and contacts at <http://slf-web.state.wy.us/forestry/offices.aspx>), county fire warden (<http://slf-web.state.wy.us/forestry/warden.aspx>), or local fire departments.

Some counties have local coordinators who work with the Wyoming State Forestry Division to help educate homeowners on creating defensible space and explain cost-share opportunities.

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