

Marketing the Finest Ranch & Recreational Properties

A Private Homeowner's Guide to Wildfire Defense

BY LINDSEY NOBLE

Fire is a naturally occurring event, and Nature's way of clearing out choking debris in forests and rangelands — debris which crowds trees and inhibits the growth of palatable vegetation for wildlife. Fire also improves grazing pasture for cattle, burning off sagebrush and noxious weeds. For these reasons, controlled burns overseen by fire protection agencies can be extremely beneficial for both native fire-adapted ecosystems and for ranches. But as a result of aggressive and effective wildfire suppression on public lands for many years, flammable fuels have been building up in forests, increasing the risk of out-of-control, catastrophic wildfires which destroy private homes and other structures and threaten lives. It's no longer a matter of if, but when wildfire will strike.

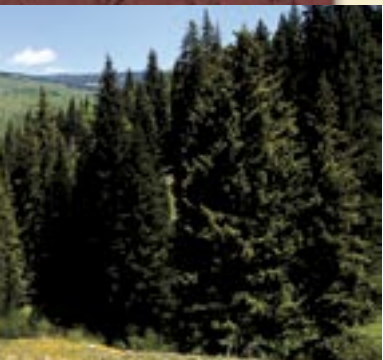
After the exceptionally severe wildfire season of 2000, the federal government adopted the National Fire Plan. This plan stresses the need for assorted fire management agencies to reduce the fuel buildup of living plant material including grasses, scrub and small trees as well as dead plant material like dried grasses and standing or fallen dead trees on the "wildland-

urban interface": the state and federal lands adjacent to structures, private development, and communities. However, due to the increasing amount of development in rural areas, neither governmental firefighting agencies nor local fire departments are able to protect everyone.

Homeowners in rural areas need to be particularly aware of the limitations of rural fire protection agencies. Most rural fire departments are staffed by volunteers. This means that response time and the number of firefighters available at any given time can be highly variable, especially during the work week. Equipment and water supplies may also be limited in rural areas, and difficult access to remote properties may further hinder firefighting efforts.

It is imperative that private homeowners, especially in rural areas, take personal responsibility for maintaining the areas around their homes in such a way that increases their odds of surviving a wildfire. In order to protect homes and other structures in the path of wildfires, there are a number of precautionary measures ranch and homeowners can take to reduce the risk of loss of lives and property.

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DEFENSIBLE SPACE

One way to start is by creating “defensible space” around structures on properties to reduce wildfire threat. In the publication “*Living With Fire, A Guide for the Homeowner*”, the University of Nevada at Reno Cooperative Extension offers the following six steps to creating an effective defensible space:

1. Evaluate Your Property Characteristics

Determine the size of the defensible space necessary to protect your home. The defensible space is a distance extending outward from the sides of the home, the radius of which is determined by the type of vegetation and the steepness of the terrain. Use the table below to determine the recommended radius of defensible space around your home.

Using Table 1, find the percent slope that best represents your property, find the vegetation type which best describes the plants growing on your property, and then locate the number in feet corresponding to your slope and vegetation. This is the recommended defensible space radius around your home. If the recommended distance goes beyond your property boundaries, contact the adjacent property owner to work in cooperation with them in creating a continuous defensible space. Do not work on someone else’s property without their permission.

2. Remove Dead Fuel

Remove dead vegetation from the defensible space area — this includes dead trees, dead attached or fallen branches, dead grasses, pine needles, leaves, and firewood stacks. (See Table 2 on page 11)

3. Break Up Dense Vegetation

Evaluate the density of vegetation in your defensible zone. The denser and more continuous the vegetation, the greater the fire risk. Try breaking up dense vegetation by creating space between plants or small groups of plants. The recommended distances between tree canopies ranges from 10 feet apart on flat or moderately sloped ground, to 30 feet apart on very steep slopes. Be careful when removing shrubs and trees from steep slopes, as these are highly erodable areas when soil is disturbed. It may be necessary to prevent soil erosion by replacing flammable vegetation with other plant materials. Although there are no “fireproof” species, certain plants are more resistant to fire due to higher moisture content or greater drought tolerance. (See end of article for fire-resistant species reference.)

4. Remove Ladder Fuels

Evaluate your defensible zone for the presence of “ladder fuels” — in other words, mid-height fuels like shrubs which can allow flames to climb from ground level to higher fuels, such as trees. Try to provide separation between the layers of vegetation to prevent this problem. Within the defensible space area, a vertical separation of three times the height of the lower fuel is recommended. In other words, a tree whose lowest branches are at three times the height of the adjacent grass or shrubs is recommended. The height difference between the tree and the adjacent vegetation can be increased by trimming away the lower branches of the tree, or mowing or trimming the adjacent vegetation, or both.

5. Create A “Lean, Clean and Green Zone”

Maintain a “Lean, Clean and Green” zone for 30 feet around your house, the most important part of your

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Table 1

RECOMMENDED DISTANCES — STEEPNESS OF SLOPE			
Vegetation Type	Flat to gently sloping: 0 to 20% grade	Moderately steep: 21% to 40% grade	Very steep: +40% grade
Wildland grasses, weeds, and widely scattered shrubs with grass understory	30 Feet	100 Feet	100 Feet
Shrubs	100 Feet	200 Feet	200 Feet
Trees (if substantial grass and shrub understory is present, use values shown above)	30 Feet	100 Feet	200 Feet

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defensible zone. This means maintaining small amounts of flammable vegetation, removing all accumulations of dead plant materials and flammable debris, and making sure the plants you do have are well-watered and green throughout the fire season.

The Lean, Clean, and Green Checklist

- a. Emphasize the use of low growing herbaceous (non-woody) plants that are kept green during the fire season through irrigation if necessary. Herbaceous plants include lawn, clover, a variety of groundcovers, bedding plants, bulbs, perennial flowers, and conservation grasses.
- b. Emphasize use of mulches, rock, and non-combustible hard surfaces (concrete sidewalks, brick patios, and asphalt driveways).
- c. Deciduous ornamental trees and shrubs are acceptable if they are kept green and free of dead plant material, ladder fuels are removed, and individual plants or groups of plants are arranged so that adjacent wildland vegetation cannot convey a fire through them to the structure. Shorter deciduous shrubs are preferred.
- d. Minimize the use of ornamental coniferous shrubs and trees (such as juniper, arborvitae, and mugo pine) and tall exotic grasses (such as pampas grass).
- e. Where permitted, most wildland shrubs and trees should be removed from this zone and replaced with more desirable alternatives. Individual specimens or

small groups of wildland shrubs and trees can be retained so long as they are kept healthy and free of dead wood, are pruned to reduce the amount of fuel and height, and ladder fuels are removed.

- f. For some areas substantial removal of wildland vegetation may not be allowed. In these instances, wildland vegetation should conform to the recommendations presented in steps 2 through 4. Please become familiar with local requirements before removal of wildland vegetation.
- g. Tree limbs within 15 feet of a chimney, encroaching on power lines, or touching the house should be removed.

6. Maintain Your Defensible Space

Do an annual review of the entire area and apply these steps on a regular basis. Maintain and water your “lean, clean and green” area constantly, especially during fire season. A defensible space which took a great deal of effort to create can quickly disappear if neglected.

The entire article, “*Living With Fire, A Guide for the Homeowner*” can be viewed online at <http://www.unce.unr.edu/publications/SP98/SP9804.pdf>.

For an extensive list of fire-resistant species and fire-wise landscaping tips, see “*FireWise Plant Materials*”, written by F.C. Dennis for the Colorado State University Cooperative Extension. You can find this excellent article online at: http://www.rockymountainwildlandfire.info/csu_factsheets/FireWise%20Plant%20Materials.pdf.

Table 2

DEAD FUEL TYPE	RECOMMENDED PRACTICES
Standing dead trees	Remove all standing dead trees from within the defensible space area.
Down dead trees	Remove all down dead trees from within the defensible space if they have recently fallen and are not embedded into the ground. Downed trees that are embedded into the soil, which cannot be removed without soil disturbance, should be left in place. Remove all exposed branches from an embedded downed dead tree.
Dead shrubs	Remove all dead shrubs from the defensible space area.
Dried Grasses	Once grasses have dried out (cured), remove from the defensible space area.
Dead needles, leaves, branches, and cones (on the ground)	Reduce thick layers of pine needles to a depth of two inches or less. Do not remove all needles. Take care not to disturb the “duff layer” (dark area at the ground surface where needles are decomposing) if present. Remove dead cones, twigs, leaves, and branches.
Dead needles, leaves, branches, and cones (other than on the ground)	Remove all dead leaves, branches, twigs, and needles still attached to living trees and shrubs to a height of 15 feet above the ground. Routinely remove all debris that accumulates on the roof and in rain gutters.
Firewood and other combustible debris	Locate firewood and other combustible debris (wood scraps, grass clippings, leaf piles, and such) at least 30 feet away- and uphill, if possible- from the house.



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