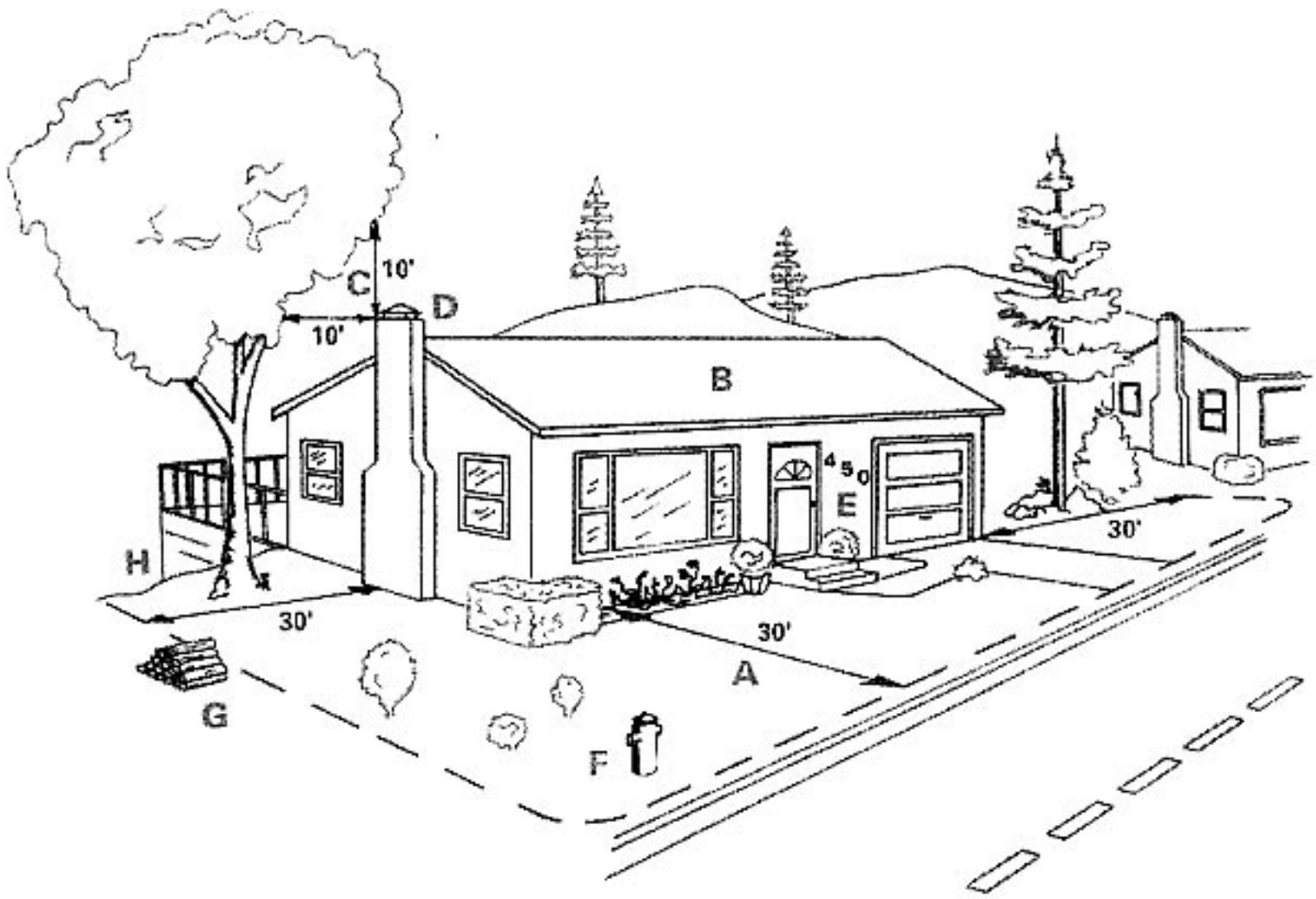
Fire Safe, California!

Make Your Home Fire Safe!



Millions of Californians live in residential developments that border fire-prone wildlands. Each year, hundreds of homes in these "suburban" and rural areas are lost to wildfire outbreaks. According to the California Department of Forestry and Fire Protection (CDF), homeowners can substantially increase the chance of their home surviving a wildfire by following these fire safe practices:

A Maintain a "defensible" space around your home by clearing all flammable vegetation a minimum of 30 feet around the structure. Clear dead leaves and branches to leave widely spaced ornamental shrubbery and trees.

B Clean all needles and leaves from the roof, eaves and rain gutters.

C Trim tree limbs within 10 feet of your chimney and trim all dead limbs hanging over your house or garage.

D Cover your chimney outlet or flue with a spark arresting 1/2" mesh screen.

E Make sure your address is clearly visible for easy identification in an emergency.

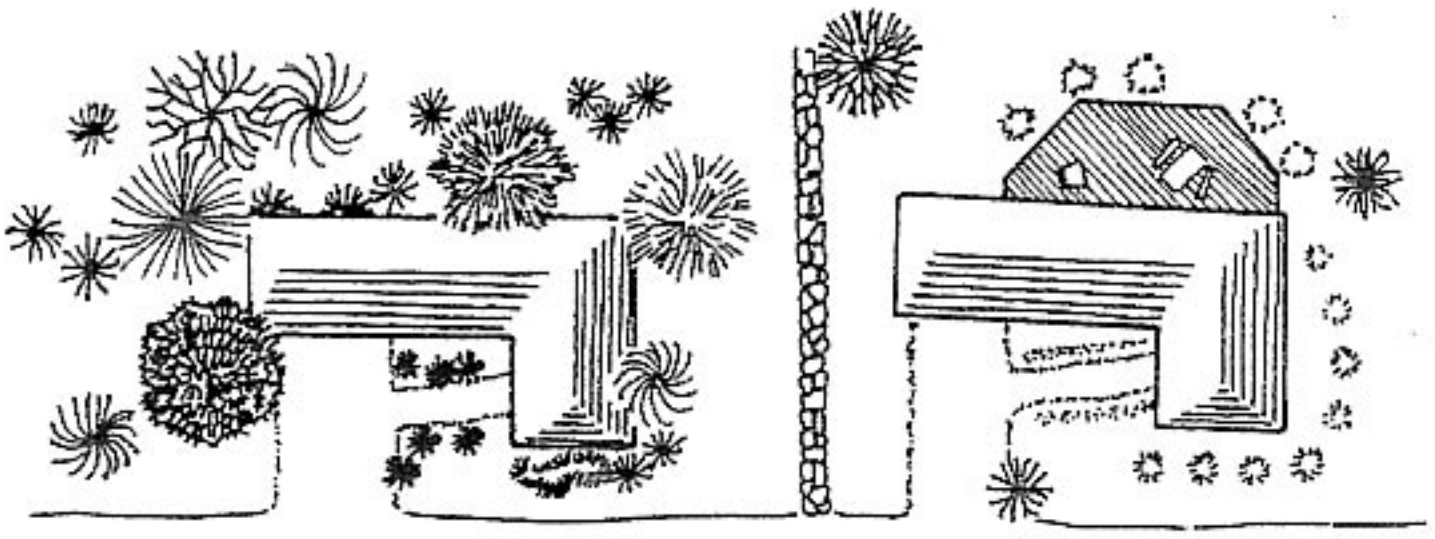
F Make sure your home is located near a fire hydrant, or that you have a water storage supply of at least 2,500 gallons for use in emergency situations.

G Stack woodpiles at least 30 feet from buildings, fences and other combustible materials.

H Clear all vegetation and other flammable materials from beneath your deck. Enclose undersides of elevated decks with fire resistive materials.

For more information, contact the nearest CDF office listed in your telephone directory under State of California, or your local fire department.

Select landscape vegetation based on fire resistance and ease of maintenance, as well as visual enhancement of your home and property. Generally, fire resistive plants:



*Grow close to the ground
*Have a low sap or resin content
*Grow without accumulating dead branches, needles or leaves
*Are easily maintained and pruned
*Are, in many cases, drought-tolerant

Your local fire protection agency or local nursery can provide listings of those fire resistive plants adapted to your local climate.

Stay away from unsafe ornamental landscaping plants, such as junipers, which may actually increase the fire risk to your home.

2. DEFENSIBLE SPACE

LANDSCAPE MAINTENANCE

Defensible space refers to that area between a house and an oncoming wildland fire where the vegetation has been modified to reduce the wildfire threat and which provides an opportunity for firefighters to safely defend the house. It is a key area which can make the difference between a house surviving a wildland fire or being destroyed. Many of the basic elements of a good defensible space plan are already in place if you have included the suggestions outlined in this booklet in your home and landscape construction or remodeling plans. However, landscape maintenance is a key element in overall good defensible space programs for homes in wildland areas.

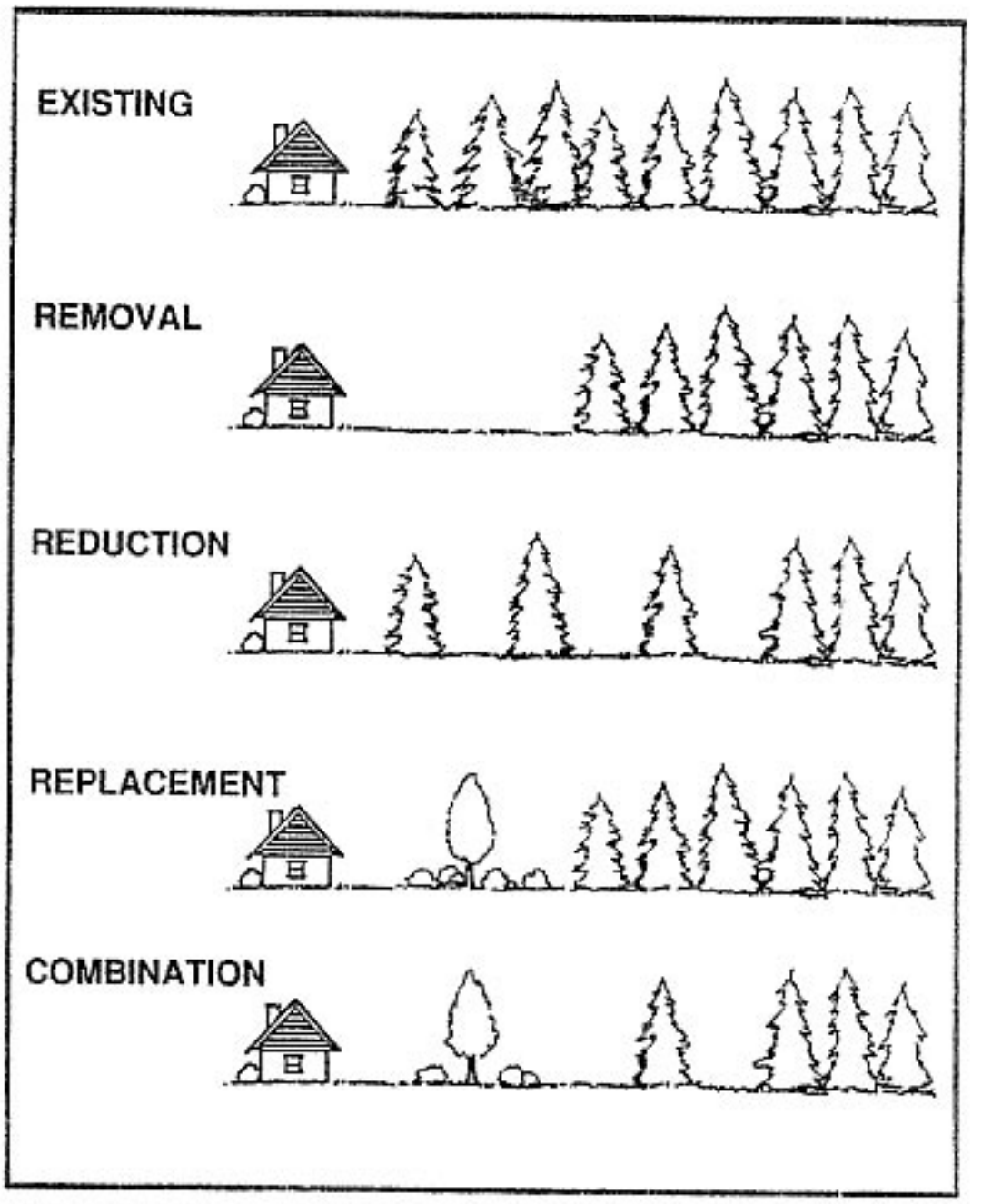
All vegetation, including naturally occurring native plants and introduced species utilized in residential landscape plans, is a potential fuel to feed a wildland fire. The type, amount, and arrangement of vegetation available for burning has a dramatic effect on fire behavior. If vegetation is properly modified, a wildland fire can be slowed down, the length of the flames shortened, and the amount of heat reduced, all of which contribute to the survival of a house in a wildfire.

There are basically Three R's in the modification of fuels or vegetation for defensible space:

Removal: This technique involves the elimination of entire plants, particularly trees and shrubs from the site. Examples of removal would be the cutting down of a dead tree or the cutting out of a flammable shrub.

Reduction: The removal of plant parts, such as branches or leaves, would constitute reduction. Examples of reduction modification are pruning wood from a shrub, removing low tree branches, and mowing dried grass.

Replacement: Replacement is the substitution of less flammable plants for more hazardous vegetation. For example, removal of a dense stand of flammable shrubs and planting an irrigated, well maintained flower bed would be a type of replacement modification.



The laws in Nevada and California require the clearing of all flammable vegetation a minimum of 30-feet around your home and other structures. This does not mean you have to live with a ring of bare dirt around your home. You can create a defensible space and also beautify your property. However, the 30-foot minimum distance required by the law,may not be sufficient to establish an adequate defensible space zone, depending upon the location of your home and the percent of the slope.

By establishing slope percentage, you can determine the distance in each direction from your house in which some form of modification of vegetation must take place in order to provide a good defensible space zone. Once you have determined distances, mark your zones using construction flagging, ribbon or similar material tied to shrubs, tree branches or stakes. The area necessary to create an effective defensible space may exceed the limits of your property, however. Be sure to determine adjacent property boundaries and ownership. Do not implement defensible space concepts on adjacent property without first securing written permission of the property owner.

Within the marked area establish graduated defensible space zones by following the Three R's of vegetation or fuels modification by following these 7 steps:

1. **Determine the amount of defensible space necessary, property boundaries and ownership of adjacent parcels.**

2. **Evaluate the area surrounding your home in terms of being a defensible space.** Are there any dead fuels, such as dead trees and shrubs, dead branches lying on the ground, yellowed and dried grasses and forbs or brown needles present? Is there a continuous horizontal layer of vegetation through which wildland fire could spread? If so, create a separation between shrubs by removing every other shrub or, create islands or groups of shrubs with wide separations between them.

3. **Develop a plan for correcting the problems identified during step No. 2, coordinate with adjacent land owners if necessary, and incorporate existing formal landscape features.**

4. **Secure necessary permits and have trees marked for removal by a qualified forester(if applicable).** When removing vegetation, do so in a manner which will result in a minimum of soil disturbance. Remove dead trees. It is not necessary to remove all small trees, which represent the next generation of mature trees in forest and wildland areas. Thin out crowded groups of small trees and aim for a uniform distribution. Leave a variety of age classes or sizes of small trees and a mixture of different species for diversification. Elimi-nate ladder fuels which can provide a step up from ground fires into tree crown fires by removing lower tree branches at least six-feet in height from

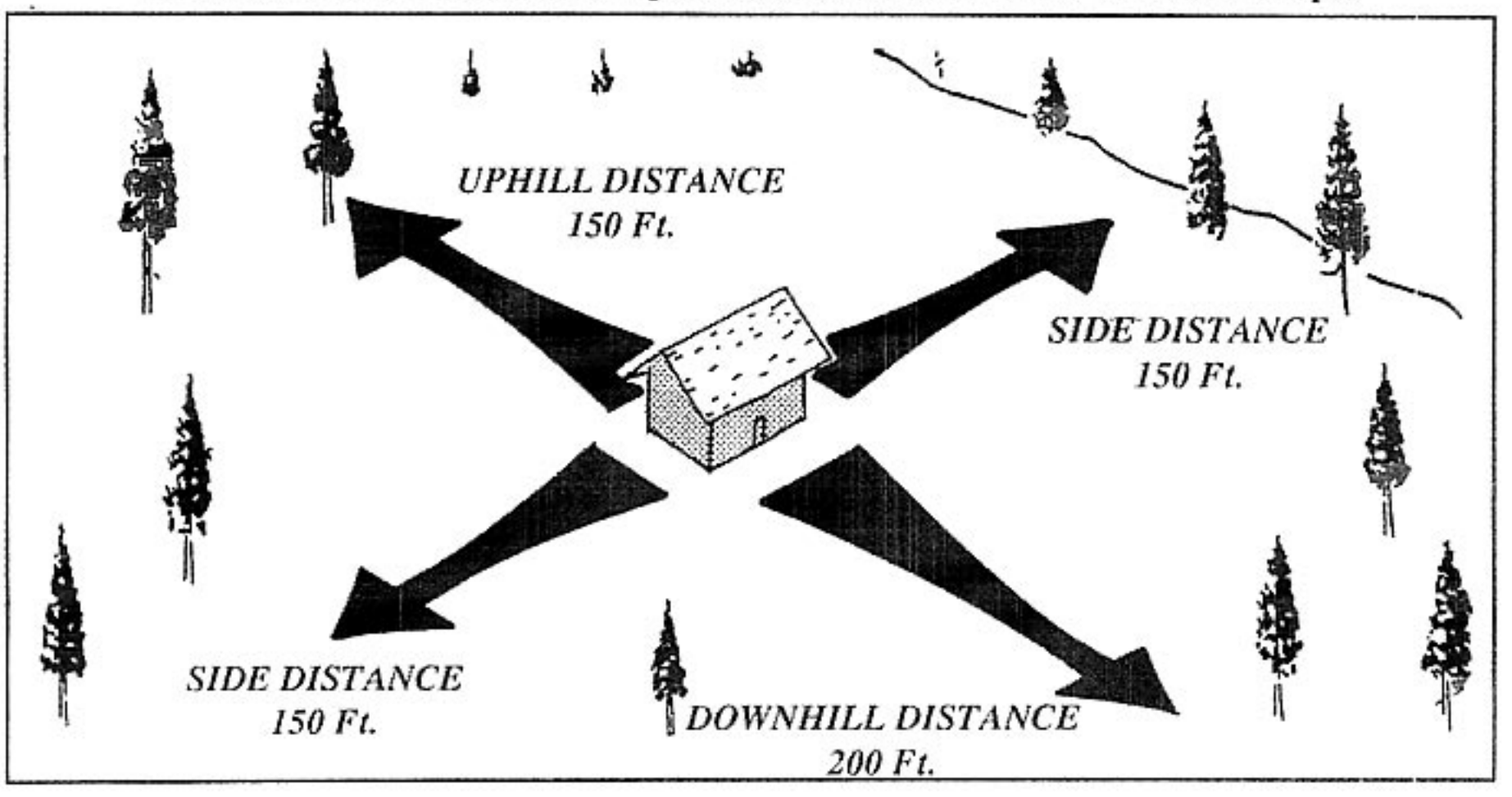
Defensible Space Distance From House Per Slope Percentage

Adapted From 'Wildland Home Fire Risk Meter,' Simmeran and Fisher 1990

PERCENT SLOPE	Uphill	Sides	Downhill
Level to 20%	100 Feet	100 Feet	100 Feet
21% to 40%	150 Feet	150 Feet	200 Feet
41% to 60%	200 Feet	200 Feet	400 Feet

*Distances Refer To Direction of Slope From The House

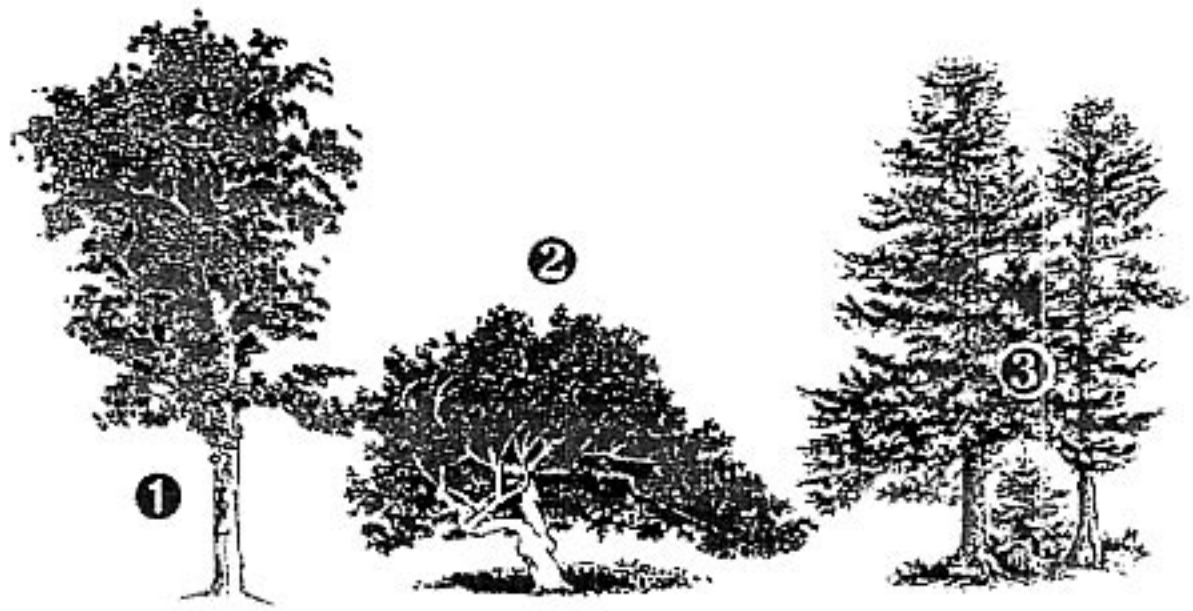
Recommended Defensible Space Distances For A 30-Percent Slope



the ground. Prune shrubs to a minimum two-feet in height. Homes situated in more dense wildland settings may require different application. Check with your local fire protection agency for guidance in development of defensible space around your home.

5. **Implement the plan developed in step No. 3.**

6. **Remove all slash generated by fuel modification efforts as soon as possible.** Utilize a chipper to chip woody slash material which can then be used as mulch in home landscape plans. Suitable wood can be saved and used for firewood. Slash can be hauled to landfills which accept it either by property owners, sanitation departments when allowed, and by private contractors. If a permit has been obtained and if done according to fire and air quality regulations, slash piles can be burned. Be sure to contact your local fire protection agency for burning permit requirements and information.



The arrangement of the trees that make up the fuel surrounding your home have different properties that can affect fire protection and the most effective safety zone around your home. 1. This tree has been trimmed so that no branches are close to the ground. 2. This small tree is close to the ground and can be more easily ignited from burning grasses and low growing plants. 3. Small trees and plants growing underneath trees provide ladder fuels, which allow grass fires to jump to the branches of the larger trees and spread even more

7. **Maintain your defensible space on a routine basis.**

FIRE RESISTANT PLANT SPECIES

There are no fireproof plant species, so choice of plants, spacing and maintenance are crucial elements in any defensible space landscaping plan and when replacing natural vegetation. Some plants are much less likely to burn than others. In general, plants that are green and well irrigated burn slowly when ignited.

The following includes various species and how they can be used to improve fire safety by incorporating them in your landscape and defensible space plans. This list should not be considered all-inclusive. Be sure to check with your local fire protection agency or local nursery for fire resistive plants that are suited to your specific weather conditions.

GROUND COVER

Replace bare spaces and weedy patches near your home with ground covers, including turf (when irrigated, turf can provide an effective firebreak), perennial flower beds, vegetable gardens, fire resistant clump grasses and mulches.

Herbaceous perennials and annuals also require irrigation. These species include low growing or spreading plants like seedums, sempervivum, potentilla, snow in summer, vinca, virginia creeper, wheat grass, rice grass, tall fescue, marigold, zienna, strawberries, clover and others.

Plant perennial bunch grass, such as crested wheat grass, at least 10 to 20 feet and as much as 300 feet wide around the perimeter of your property to create a fire resistive vegetation perimeter. Crested wheat grass is largely fire resistant and does not usually require irrigation. It will help suppress the growth of highly flammable annuals such as cheatgrass. Grass can be grazed or occasionally mowed to further reduce fuel accumulation.

Mulch helps control erosion, conserve moisture, and reduce weed growth. It can be organic, such as straw, compost, leaf mold, bark chips, shredded leaves, or lawn clippings; or it can be inorganic, including plastic materials, gravel, rock, and decomposed granite. Avoid using pine bark and thick layers of pine needles. They tend to smolder and are difficult to extinguish. Additional information on mulches is available from the Cooperative Extension Service.

PERENNIALS

Choose hardy perennial flowers that are adapted to the climate. These green, leafy, succulent plants are harder to burn. Irrigation and regular weeding improves the fire resistance of yarrow, flax, columbine, pennstemon, low sage, shasta daisy, pinks, sulferflower, giallardia, daylilly, candytuft, iris, lupin, primrose, poppy, dusty miller, lambs ears and others.

SHRUBS

Some deciduous shrubs can be used in foundation plantings if maintained, watered and well spaced. Evergreens such as dwarf conifers and junipers tend to ignite easily; avoid them unless well spaced. Place them at least 20 feet from any structure and prune regularly.

If maintained, hedge rows can deflect wind and filter wind-blown embers. Plant continuous deciduous hedges at least 30 feet from your home only if you will irrigate and remove dead branches regularly. Fire resistant shrubs include bush cherries, hedging roses, bush honeysuckles, currant, cotoneaster, sumac, tamarisk lilac, shrub apples and buffalo berry.

TREES

Deciduous trees can be clumped, scattered, or planted in greenbelts or windbreak patterns. Evergreen trees tend to ignite easily and should be avoided unless well spaced.

Selection of trees is not as important as placement. Inside the yard, space trees at least 30 feet apart and prune to a height of 8-10 feet. Crowns should not touch and branches should not overhang your house. Reduce combustible material under and between trees. Large areas or difficult sites may require professional assistance.

A well designed deciduous windbreak can slow or even stop a fire before it reaches structures. Plant windbreak trees no more than 10 feet apart and at least five times the mature tree height from the area to be protected, or 100 feet. Plant on flat areas or at the base of slopes. Fast growing trees require frequent irrigation to keep them healthy. Maples, poplars, willows, aspen and birch all require moist root zones to remain fire resistant.

Additional information on the use and care of plants is available from the Cooperative Extension Service, U.S. Soil Conservation Service, Nevada Division of Forestry State Nursery and local nursery and landscape professionals.

ADDITIONAL PRECAUTIONS

There are a number of precautions that should be taken in order to make your defensible space program work. These can be accomplished as part of your regular maintenance program:

❒ Remove dead tree limbs over-hanging your roof and any limbs within 15 feet of your chimney.

❒ Stack firewood and scrap wood piles at least 30 feet from any structure. And, clear away any flammable vegetation within 10 feet of these wood piles. Many homes have survived as a fire moved past, only to burn later from a wood pile that ignited after fire-fighters moved on to protect other homes.

❒ Locate liquefied petroleum gas (LPG) tanks and any fuel storage containers at least 30 feet from any structure. Clear flammable vegetation at least 10 feet around all such tanks.