



# What is this thing called Defensible Space?

There is much discussion in the newspapers, on television, and on the radio about defensible space these days because of the extremely dry conditions and the high fire danger throughout the western United States, especially in California.

## What is defensible space and how do I get some?

**Defensible Space**, in the context of fire control, is the natural and landscaped area around a structure that has been designed and maintained to reduce fire danger, sometimes called 'Firescaping'. "Defensible space" is also used in the context of wildfires, especially in the wildland-urban interface (WUI). This defensible space reduces the risk that fire will spread from the surroundings to structures, and provides firefighters easier access and a safer area to defend the fire from. Firefighters sometimes do not attempt to protect structures that lack adequate defensible space, as it is less safe for them and they are less likely to succeed in saving those structures.

## Defensible Space should be your first line of defense.

Defensible space could be the most valuable tool in protecting your home from wildland fires. In essence, this is the buffer between your home and the wildland that will either stop the spread of a fire or slow it to the extent that firefighters can save your home. Residents of high risk areas are painfully familiar with aerial photos of homes sitting intact on a block of charred skeletons — homes cleared of brush with specific landscaping that retards or resists flames.

This Defensible Space area need not be devoid of vegetation. By using naturally fire resistive plants that are spaced, pruned and trimmed, and irrigated, it minimizes the fuel mass available to ignite and also hampers the spread of a fire.

## Defensible Space is broken into two areas:

- The first 30 feet is the "**Defensible Space Zone**" or the lean-clean-green zone. It is where vegetation is kept to a minimum combustible mass. A guideline used in this zone can include retention of single specimens of trees or other vegetation provided they are well-spaced, well-pruned, and create a condition that avoids the spread of fire to other vegetation or to a building or other structure. To accomplish appropriate Defensible Space fuel reduction, plants are selectively thinned and pruned to reduce the combustible fuel mass of the remaining plants. The goal is to break up the more continuous and dense uninterrupted layer of vegetation.
- The second distance of 30 to 100 feet is the "**Reduced Fuel Zone**". This zone extends from each building or structure or to the property line, if it is less than 100 feet from the structure. In this zone, provide a fuel break by disrupting the vertical and/or horizontal continuity of flammable and combustible vegetation with the goal of reducing fire intensity, inhibiting fire in the crowns of trees, reducing the rate of fire spread, and providing a safer environment for firefighters to suppress wildfire. In this area of the defensible space, fuels/vegetation is separated vertically and horizontally depending on the vegetation type. This is done by: thinning, pruning, and removing selected vegetation; and limbing up trees from lower vegetation and the lateral separation of tree canopies.
- In both zones an important concept of Defensible Space is "**Fuel Ladder**" management. Like rungs on a ladder, vegetation can be present at varying heights from groundcovers to trees. Ground fuel such as dried grasses, can transmit fire to shrubs, which then transmit up tree branches into the tree canopy. A burning tree produces embers that can blow to new areas, spreading and making it more difficult to control a wildland fire. One guideline is for a typical separation of three times the height of the lower fuel to the next fuel ladder. For example, a 2-foot-high shrub under a tree would need a spacing of 6 feet to the lowest limbs of the tree. Since wildfires burn faster uphill than on flat land, fuel ladder spacing may need to be greater for slopes.

## **How to create defensible space around your home:**

The most logical approach is to first determine your fire risk, taking into account slope, wind patterns, and other factors. If your risk factor is high, multiply your defensible space by 150 percent.

- Landscape with fire resistant plants within the first 30 feet around your home and perform fuel reduction and pruning of both natural vegetation and landscaping to 100 feet around your home.
- Vary the height of your landscaping and space it out. The taller your plants or trees, the farther apart they need to be.
- Avoid tall shrubs and vines growing against structures.
- Skirt or limb mature trees to one-third of the height by cutting the lower branches. If the tree is 15 feet tall, remove branches five feet up the trunk.
- If shrubs and trees create a ladder effect, shrubs adjacent to increasingly taller trees, eliminate that ladder by selectively removing some of the “rungs” or more aggressive skirting of the taller trees.
- Remove dead limbs overhanging your roof and any limbs within 10 feet of your chimney.
- Avoid planting trees that will interfere with electrical lines. If tree branches are growing too close to power lines, call the utility company to prune. Don't attempt this yourself.
- If you have a heavily wooded area on your property, remove the weakest trees and leave a mix of older and younger trees. Remove low brush and dead growth.
- Stack firewood and construction materials 30 feet from any structure and clear vegetation within 10 feet of those piles.
- If you have a propane tank on your property, clear vegetation and combustible materials 10 feet around the tank.
- Keep the landscaping within your defensible space healthy with regular maintenance and irrigation.
- Clear flammable vegetation five feet from your driveway and 10 feet from your road frontage. Prune branches that overhang either your driveway or the public roadway.

## **Ongoing maintenance is important.**

Another important component is ongoing maintenance of the fire-resistant landscaping for reduced fuel loads and firefighting access. Fire resistive plants that are not maintained can become extremely dry, die, or collect deadwood debris, and become fire assistive. Irrigation systems and pruning can help maintain a plant's fire resistance. Maintaining access roads and driveways clear of side and low-hanging vegetation can allow large fire equipment to reach properties and structures.

The unintended negative consequences of erosion and native habitat loss can result from some unskillful defensible space applications. The disturbance of the soil surface, such as garden soil cultivation in landscaped areas and firebreaks destroy the native plant cover and expose open soil, accelerating invasive species of plants spreading and replacing native habitats.

In some wildland-urban interface areas, the vegetation clearance and brush removal activities for defensible space can result in mistaken excessive clear-cutting of native and introduced shrubs and perennials which exposes the soil to more light and less competition for invasive plant species, and also erosion and landslides. Negative aesthetic consequences to natural and landscaped areas can be minimized with integrated and balanced defensible space practices.

## **In addition to being important for your own and your neighbors safety, in California defensible space is required by Public Resources Code (PRC) 4291.**

For additional information on how to comply with defensible space clearance requirements, please visit:

the CAL FIRE website: [WWW.FIRE.CA.GOV](http://WWW.FIRE.CA.GOV)

the Firewise Communities/USA website: [www.firewise.org](http://www.firewise.org)

or the Graeagle Fire Protection District website: [www.graeaglefire.org](http://www.graeaglefire.org)