



FIREWISE: DEFENSIBLE SPACE

Defensible space is the area between your home and an oncoming wildfire. All vegetation, including native plants and ornamental plants, are potential fire fuel. Through proper planning, you can have both a beautiful landscape and a firewise home. Firewise landscapes should also include hardscape, such as granite paths and stone walls. These can act as fuel break and help to slow down or change the path of an approaching fire. Below are the best practices for defensible space.

Zone 1: The Home Ignition Zone is the house plus a 5-foot distance. The objective is to reduce windblown embers from a nearby fire from landing near the home and causing significant damage.

- Keep flammable materials away from this zone: pine needles, leaves, and organic mulches such as wood chips. Replace organic mulch with hardscape or landscape rocks.
- Shrubs and trees are not recommended this close to the house.
- Remove dead vegetation.
- Trim away branches within 10 feet of chimney.
- Remove branches overhanging your roof that may result in debris accumulation.
- Keep rain gutters and roof clean.
- Move woodpiles 30 feet or more away from all structures.
- Maintain diligently.
- Propane tanks: remove all flammable materials around tank (leaves, needles) and position the tank at least 30 feet from the house or other structures.

Zone 2: The objective of this zone is to create and maintain a landscape that, if ignited, will not readily transmit fire to the home. Depending upon the type of wildland vegetation in the area and the steepness of the slope, this zone should have an area at least 30-feet-wide that is “lean, clean, and green.”

- Lean – There is very little flammable vegetation and it has room to breathe.
 - ✓ Well-spaced groupings.
 - ✓ Shrubs under trees should be avoided.
- Clean – Remove dead vegetation.
 - ✓ Remove dead trees and fallen branches.
 - ✓ Remove pine needles and fallen leaves.
 - ✓ You should be able to rake under all plants for leaves and other materials.
- Green – Plants are healthy and green during fire season.
 - ✓ Replace more flammable species with less flammable plants.
 - ✓ Plants that are green and lush give better protection. If regularly watered and maintained to eliminate the accumulation of dry plant litter, these plants will be far less likely to carry fire to your home. While all plants will eventually burn, healthy ones with a high moisture content are more difficult to ignite.

Zone 3: The objective of this, the Reduced Fuel Zone, is to decrease the energy and speed of the wildfire by eliminating continuous, dense vegetation, both vertically and horizontally.

- Horizontally – Provide separation between plants or small groups of plants.
- Keep at least 10 feet between trees and shrubs on level ground and even more on slopes.
- Vertically – Vegetation that allows a fire to move from lower plants to taller ones is called “ladder fuel.”

- A vertical separation of 3 times the height of the lower plant is recommended. For example, if a 3-foot shrub is next to a tall tree, the separation should be at least 9 feet, created by either removing lower limbs from the tree, pruning the shrub shorter, or both.
- It's recommended that you trim tree branches up 10 feet, as measured from the uphill side.

The 3 R's of Defensible Space:

- **Removal:** Remove plants that are overcrowded or produce copious amounts of fine, dry fuels, and remove ladder fuels,
- **Reduction:** Clean out fine dry fuels such as dry twigs and leaves, especially near the ground. Removal of branches near eaves or wood fences. Mow tall grass, preferably before it dries.
- **Replacement:** Replace wooden fence gates under the eaves with wrought iron or similar non-flammable material. Install drip irrigation to keep plants green. Avoid putting plants in the following locations to minimize the movement of fire from vegetation to the home:
 - ✓ adjacent to the siding
 - ✓ under vents or eaves
 - ✓ tree limbs over the roof
 - ✓ under or near the deck

Fire Resistant Plant Characteristics: The moisture content of plants is an important consideration because high levels of plant moisture can lower fire risk and act as a heat sink, reducing the intensity and spread of fire. When choosing plants or identifying which plants to keep when performing fuel modification, look for fire resistant plants which have the following characteristics. Separate plant groupings with hardscape or rock mulch to break up any continuous plant fuels.

- Store water in leaves or stems
- Produce very little dead or fine material
- Possess extensive, deep root systems for controlling erosion
- Maintain high moisture content with limited watering
- Grows slowly and needs little maintenance
- Are low growing in form
- Contain low levels of volatile oils or resins
- Have an open, loose branching habit with a low volume of total vegetation

Fire resistant does not mean fireproof! Even fire resistant plants will burn if not well maintained. Be sure to keep all of your landscape plants healthy with appropriate watering, pruning, etc.

Flammable Plant Characteristics: Avoid purchasing or consider removing highly flammable plants:

- Retain amount of dead material within the plant
- Produce a large volume of litter
- Contain volatile substances such as: oil, resins, wax or pitch

Reference Materials for further reading:

- Wildfire Home Assessment & Checklist: http://disastersafety.org/wp-content/uploads/wildfire-checklist_IBHS.pdf
- Homeowner's Checklist Cal Fire <http://www.readyforwildfire.org/docs/files/File/Checklist.pdf>
- Home Landscaping for Fire: http://firecenter.berkeley.edu/docs/CE_homelandscaping.pdf

For help with your garden problems, call the Master Gardener hotline at 565-2608, visit the Master Gardener information desk in the University of California Cooperative Extension office (133 Aviation Blvd., #109, Santa Rosa), or ask a Master Gardener at your local farmers market, the Sonoma County Fair or other event. Visit <http://ucanr.edu/sites/scmg/> for additional publications.

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