Whether or not a site can be irrigated will greatly influence location of hardscape (concrete, asphalt, wood decks, etc.), plant selection, and placement. Prevailing winds, seasonal weather, local fire history, and characteristics of native vegetation surrounding the site are additional important considerations.

Photo courtesy of L. Johnstone

Higher moisture content plants near the house

The 30 feet closest to a structure is the most critical defensible space area. This is an area where highly flammable fuels are kept to a minimum and plants are kept green throughout the fire season. Use well-irrigated perennials here. Another choice is low growing or non-woody deciduous plants. Lawn is soothing visually, and is also practical as a wildfire safety feature. But, extensive areas of turf grass may not be right for everyone.

Some good alternatives include clover, groundcovers, and conservation grasses that are kept green during the fire season through irrigation. Rock mulches are good choices. Patios, masonry, or rock planters are excellent fuel breaks and increase wildfire safety. Be creative with boulders, riprap, dry streambeds, and sculptural inorganic elements.

When designing a landscape for defensible space, remember less is better. Simplify visual lines and groupings. A fire safe landscape lets plants and garden elements reveal their innate beauty by leaving space between plants and groups of plants. In firescaping, the open spaces are more important than the plants.

Incorporate the following **defensible space principles**:

- Create a minimum 30' defensible space area around structures (larger if there is a slope).
- Remove dead vegetation.
- Create "islands" of plants with space between.
- Create separation between layers of vegetation eliminating the "ladder" of fuels.
- Keep it green & low growing – "lean, clean, and green."

Gilmer, M. 1994. *California Wildfire Landscaping*. Taylor Publishing Company. Dallas, Texas

Maire, R.G. 1979. *Landscape for Fire Protection*. University of California Agriculture Extension Service. Los Angeles, California.

Smith, E. & G. Adams. 1991. *Incline Village/Crystal Bay Defensible Space Handbook*. University of Nevada. Reno, Nevada.

Contact your University of Nevada Cooperative Extension office for a free copy of "***Living with Fire – A guide for the homeowner***"

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Fact Sheet 01-33

Firescaping

Landscape Design For Defensible Space

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Photo Courtesy of Calif. Dept. of Forestry & Fire Protection

When a wildfire comes through your neighborhood, could your house survive on its own?

What is Firescaping?

Firescaping is landscape design that reduces house and property vulnerability to wildfire. The goal is to develop a landscape with a design and choice of plants that offer the best defensible space and enhance the property. The ideal is to surround the house with things that are less likely to burn. It is imperative when building homes in wildfire prone areas that fire safety be a major factor in landscape design. Appropriate manipulation of the landscape can make a significant contribution toward wildfire survival.

Firescape integrates traditional landscape functions and a design that reduces the threat from wildfire. It does not need to look different than a traditional design. In addition to meeting a homeowner's aesthetic desires and functional needs such as entertaining, playing, storage, and erosion control – firescape also includes planting for fire safety, vegetation modification techniques, use of fire safety zones, and defensible space principles.

Planting for Fire Safety

Through proper plant selection, placement, and maintenance, we can diminish the possibility of ignition, lower fire intensity, and reduce how quickly a fire spreads, all of which increase a home's survivability.

In firescaping, plant selection is primarily determined by a plant's ability to reduce the wildfire threat. Other considerations may be important such as appearance, ability to hold the soil in place, and wildlife habitat value.

Photo courtesy of L. Johnstone

Avoid evergreens near the house

The traditional foundation planting of junipers is not a viable solution in a firescape design. Minimize use of evergreen shrubs and trees within 30 feet of a structure, because junipers, other conifers, and broadleaf evergreens contain oils, resins, and waxes that make these plants burn with great intensity. Use ornamental grasses and berries sparingly because they also can be highly flammable. Choose "fire smart" plants. These are plants with a high moisture content. They are low growing. Their stems and leaves are not resinous, oily, or waxy.

Deciduous trees are generally more fire resistant than evergreens because they have a higher moisture content when in leaf, a lower fuel volume when dormant, and typically do not contain flammable oils.

Photo courtesy of L. Johnstone

Choose "fire smart" plants

Placement and maintenance of trees and shrubs is as important as actual plant selection. When planning tree placement in the landscape, remember the tree's size at maturity.
Keep tree limbs at least 15 feet from chimneys, power lines, and structures. Specimen trees can be used near a structure if pruned properly and well irrigated.

Fire Safety Zones

Firescape design for defensible space uses driveways, lawns, walkways, patios, parking areas, areas with inorganic mulches, and fences constructed of non-flammable materials such as rock, brick, or cement to reduce fuel loads and create fuel breaks. Fuel breaks are a vital component in every firescape design. Water features, pools, ponds, or streams can also be fuel breaks. Areas where wildland vegetation has been thinned or replaced with less flammable plants are the traditional fuel break. Remember, while bare ground is an effective fuel break, it is not recommended as a firescape element due to aesthetic, soil erosion, and other concerns.

Photo courtesy of L. Johnstone

Brick as fuel break

Firescape Considerations

A home located on a brushy site above a south or west facing slope will require more extensive defensible space landscape planning than a house situated on a flat lot with little vegetation around it. Boulders and rocks become fire retardant elements in a design.