



Firewise Landscaping Checklist



Firewise Landscaping

FIREWISE

When designing and installing a firewise landscape, consider the following:

- Local area fire history.
- Site location and overall terrain.
- Prevailing winds and seasonal weather.
- Property contours and boundaries.
- Native vegetation.
- Plant characteristics and placement (duffage, water and salt retention ability, aromatic oils, fuel load per area, and size).
- Irrigation requirements.

To create a firewise landscape, remember that the primary goal is fuel reduction. To this end, initiate the zone concept. Zone 1 is closest to the structure; Zones 2-4 move progressively further away.

- Zone 1.** This well-irrigated area encircles the structure for at least 30' on all sides, providing space for fire suppression equipment in the event of an emergency. Plantings should be limited to carefully spaced low flammability species.
- Zone 2.** Low flammability plant materials should be used here. Plants should be low-growing, and the irrigation system should extend into this section.
- Zone 3.** Place low-growing plants and well-spaced trees in this area, remembering to keep the volume of vegetation (fuel) low.
- Zone 4.** This furthest zone from the structure is a natural area. Selectively prune and thin all plants and remove highly flammable vegetation.

Also remember to:

- Be sure to leave a minimum of 30' around the house to accommodate fire equipment, if necessary.
- Widely space and carefully situate the trees you plant.
- Take out the "ladder fuels" — vegetation that serves as a link between grass and tree tops. This arrangement can carry fire to a structure or from a structure to vegetation.
- Give yourself added protection with "fuel breaks" like driveways, gravel walkways, and lawns.

When maintaining a landscape:

- Keep trees and shrubs properly pruned. Prune all trees so the lowest limbs are 6' to 10' from the ground.
- Remove leaf clutter and dead and overhanging branches.
- Mow the lawn regularly.
- Dispose of cuttings and debris promptly, according to local regulations.
- Store firewood away from the house.
- Be sure the irrigation system is well maintained.
- Use care when refueling garden equipment and maintain it regularly.
- Store and use flammable liquids properly.
- Dispose of smoking materials carefully.
- Become familiar with local regulations regarding vegetation clearances, disposal of debris, and fire safety requirements for equipment.
- Follow manufacturers' instructions when using fertilizers and pesticides.

Access additional information on the Firewise home page: www.firewise.org

Please see the other side of this sheet for the *Firewise Construction Checklist*.



Firewise Construction Checklist

When constructing, renovating, or adding to a firewise home, consider the following:

- Choose a firewise location.
- Design and build a firewise structure.
- Employ firewise landscaping and maintenance.

To select a firewise location, observe the following:

- Slope of terrain; be sure to build on the most level portion of the land, since fire spreads more rapidly on even minor slopes.
- Set your single-story structure at least 30 feet back from any ridge or cliff; increase distance if your home will be higher than one story.

In designing and building your firewise structure, remember that the primary goals are fuel and exposure reduction. To this end:

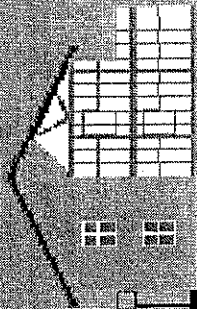
- Use construction materials that are fire-resistant or non-combustible whenever possible.
- For roof construction, consider using materials such as Class-A asphalt shingles, slate or clay tile, metal, cement and concrete products, or terra-cotta tiles.
- Constructing a fire-resistant sub-roof can add protection as well.
- On exterior wall facing, fire resistive materials such as stucco or masonry are much better choices than vinyl which can soften and melt.
- Window materials and size are important. Smaller panes hold up better in their frames than larger ones. Double pane glass and tempered glass are more reliable and effective heat barriers than single pane glass. Plastic skylights can melt.
- Install non-flammable shutters on windows and skylights.
- To prevent sparks from entering your home through vents, cover exterior attic and underfloor vents with wire screening no larger than 1/8 of an inch mesh. Make sure under-eave and soffit vents are as close as possible to the roof line. Box in eaves, but be sure to provide adequate ventilation to prevent condensation.
- Include a driveway that is wide enough to provide easy access for fire engines (12 feet wide with a vertical clearance of 15 feet and a slope that is less than 5 percent). The driveway and access roads should be well-maintained, clearly marked, and include ample turnaround space near the house. Also provide easy access to fire service water supplies, whenever possible.
- Provide at least two ground level doors for easy and safe exit and at least two means of escape (i.e., doors or windows) in each room so that everyone has a way out.
- Keep gutters, eaves, and roofs clear of leaves and other debris.
- Make periodic inspections of your home, looking for deterioration such as breaks and spaces between roof tiles, warping wood, or cracks and crevices in the structure.
- Periodically inspect your property, clearing dead wood and dense vegetation at distance of at least 30 feet from your house. Move firewood away from the house or attachments like fences or decks.

Any structures attached to the house, such as decks, porches, fences, and outbuildings should be considered part of the house. These structures can act as fuel bridges, particularly if constructed from flammable materials. Therefore, consider the following:

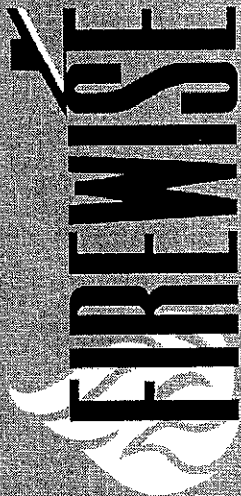
- If you wish to attach an all-wood fence to your house, use masonry or metal as a protective barriers between the fence and house.
- Use metal when constructing a trellis and cover it with high-moisture, low flammability vegetation.
- Prevent combustible materials and debris from accumulating beneath patio decks or elevated porches. Screen or box-in areas below patios and decks with wire screen no larger than 1/8 inch mesh.
- Make sure an elevated wooden deck is not located at the top of a hill where it will be in direct line of a fire moving up slope. Consider a terrace instead.

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Firewise Construction I





OREGON STATE
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EXTENSION SERVICE

Fire-Resistant Plants for Oregon Home Landscapes

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Introduction

When landscaping around a home, most homeowners are interested in creating a landscape that is aesthetically pleasing, complements their home, and has variations in color, texture, flowers, and foliage. If your home is located in or adjacent to forests or rangeland, you also should consider the flammability of plants within your home landscape.

Flammable plant material in your landscape can increase the fire-risk around your home. The 1991 Oakland Hills Fire in California is a prime example of how flammable plant material (Eucalyptus trees) can act as fuel and contribute to the intensity of a wildfire. Over 3,000 homes were destroyed in that devastating wildfire.

Therefore, homeowners should take active steps to minimize or reduce the fuel and fire-hazard around their homes, *including* planting fire-resistant plants. Good placement of fire-resistant trees, for example, can, in fact, help protect your home by blocking intense heat.

There is a wide array of trees and other plants to choose for your landscape that are both attractive (Figure 1) and fire-safe. This publication provides a diverse list of plant material divided into perennials, groundcovers, trees, and shrubs.

What are fire-resistant plants?

Fire resistant plants are plants that don't readily ignite from a flame or other ignition sources. Although fire-resistant plants can be damaged or even killed by fire, their foliage and stems don't



Figure 1. Basket-of-Gold beneath Quaking Aspen; both are fire-resistant.

contribute significantly to the fuel and, therefore, the fire's intensity.

Plants that are fire-resistant have the following characteristics:

- Leaves are moist and supple.
- Plants that have little dead wood and tend not to accumulate dry, dead material within the plant.
- Sap is water-like and does not have a strong odor.

Most deciduous trees and shrubs are fire-resistant. However, it's important to remember that even fire-resistant plants can burn, particularly if they are not maintained in a healthy condition.

In contrast, plants that are highly flammable have these general characteristics:

- Contain fine, dry or dead material within the plant such as twigs, needles, and leaves.

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Fire-Resistant Plant Materials for Oregon

Groundcovers 18" and lower

| Scientific Name | Common Name | Scientific Name | Common Name |
|--------------------------------|----------------------|-------------------------------|----------------------------|
| <i>Ajuga reptans</i> | Carpet bugle | <i>Echeveria species</i> | Hens and chicks |
| <i>Arctostaphylos uva-ursi</i> | Kinnikinnick | <i>Fragaria species</i> | Wild strawberry |
| <i>Ceanothus prostratus</i> | Squaw carpet (C,E,S) | <i>Pachysandra terminalis</i> | Japanese pachysandra (W,S) |
| <i>Cerastium tomentosum</i> | Snow -in-summer | <i>Phlox subulata</i> | Creeping phlox |
| <i>Delosperma nubigenum</i> | Yellow iceplant | <i>Sedum species</i> | Sedum or stonecrops |
| <i>Delosperma cooperi</i> | Purple/Pink iceplant | <i>Thymus praecox</i> | Creeping thyme |
| <i>Duchesnea indica</i> | Mock strawberry | <i>Vinca minor</i> | Periwinkle |

Perennials 18" or taller

| Scientific Name | Common Name | Scientific Name | Common Name |
|---------------------------------|--------------------|--------------------------------|------------------|
| <i>Achillea species</i> | Yarrow | <i>Hemerocallis hybrids</i> | Daylilies |
| <i>Allium schoenoprasum</i> | Chives | <i>Heuchera species</i> | Coral bells |
| <i>Armeria maritima</i> | Sea thrift | <i>Hosta species</i> | Hosta lilies |
| <i>Aurinia saxatile</i> | Basket-of-Gold | <i>Iris species</i> | Iris |
| <i>Bergenia cordifolia</i> | Heartleaf bergenia | <i>Kniphofia uvuria</i> | Red-hot poker |
| <i>Carex species</i> | Sedges | <i>Linum perenne</i> | Blue flax |
| <i>Coreopsis species</i> | Coreopsis | <i>Lupinus species</i> | Lupine |
| <i>Epilobium angustifolium</i> | Fireweed | <i>Oenothera missouriensis</i> | Evening primrose |
| <i>Geranium species</i> | Hardy geraniums | <i>Penstemon species</i> | Penstemon |
| <i>Helianthemum nummularium</i> | Sun rose | <i>Stachys byzantina</i> | Lamb's ear |

Shrubs—broadleaf evergreen

| Scientific Name | Common Name | Scientific Name | Common Name |
|--|---------------------|----------------------------------|----------------------------|
| <i>Cotoneaster species</i> | Cotoneaster | <i>Mahonia repens</i> | Creeping holly |
| <i>Daphne x burkwoodii</i> var. 'Carol Mackie' | Carol Mackie daphne | <i>Pachystima myrsinites</i> | Oregon boxwood |
| <i>Gaultheria shallon</i> | Salal (S,W) | <i>Rhododendron macrophyllum</i> | Pacific rhododendron (S,W) |
| <i>Ligustrum species</i> | Privet | <i>Rhododendron occidentale</i> | Western azalea (S,W) |
| <i>Mahonia aquifolium</i> | Oregon grapeholly | <i>Yucca species</i> | Yucca |

Shrubs—deciduous

| Scientific Name | Common Name | Scientific Name | Common Name |
|--|----------------------|--|------------------|
| <i>Acer circinatum</i> | Vine maple | <i>Philadelphus species</i> | Mockorange |
| <i>Acer glabrum</i> | Rocky Mountain maple | <i>Rhus species</i> | Sumac |
| <i>Amelanchier alnifolia</i> | Pacific serviceberry | <i>Ribes species</i> | Currant |
| <i>Buddleia davidii</i> | Butterfly bush | <i>Rosa woodsii</i> | Wood's rose |
| <i>Caryopeteris x clandonensis</i> | Blue-mist spirea | <i>Spiraea x bumalda 'Goldflame'</i> | Goldflame spirea |
| <i>Cornus stolonifera</i> | Redtwig dogwood | <i>Spiraea douglasii</i> | Western spirea |
| <i>Euonymus alatus</i> | Burning bush | <i>Symphoricarpos albus</i> | Snowberry |
| <i>Holodiscus discolor</i> | Oceanspray | <i>Syringa species</i> | Lilac |

Trees—evergreens

| Scientific Name | Common Name | Scientific Name | Common Name |
|--|---------------------|--------------------------|------------------|
| <i>Larix occidentalis</i> | Western larch (C,E) | <i>Pinus lambertiana</i> | Sugar pine (C,S) |
| <i>Pinus contorta</i> var. <i>contorta</i> and var. <i>murrayana</i> | Lodgepole pine | <i>Pinus ponderosa</i> | Ponderosa pine |

Trees—deciduous

| Scientific Name | Common Name | Scientific Name | Common Name |
|---|----------------------------|--------------------------------|----------------------------|
| <i>Acer macrophyllum</i> | Bigleaf maple (S,W) | <i>Gleditsia triacanthos</i> | Honeylocust |
| <i>Acer platanoides</i> | Norway maple | <i>Gymnocladus dioica</i> | Kentucky coffee tree |
| <i>Acer rubra</i> var. <i>Sunset</i> | Sunset maple | <i>Juglans species</i> | Walnut |
| <i>Aesculus hippocastanum</i> | Horsechestnut | <i>Liquidambar styraciflua</i> | American sweetgum (S,W) |
| <i>Alnus rubra</i> | Red alder (S,W) | <i>Malus species</i> | Crabapple |
| <i>Alnus tenuifolia</i> | Mountain alder (C,E) | <i>Populus species</i> | Aspen/cottonwoods |
| <i>Betula species</i> | Birch | <i>Prunus virginiana</i> | Chokecherry |
| <i>Catalpa speciosa</i> | Western catalpa | <i>Quercus garryana</i> | Oregon white oak (S,W) |
| <i>Celtis occidentalis</i> | Common hackberry | <i>Quercus palustris</i> | Pin oak |
| <i>Cercis canadensis</i> | Eastern redbud | <i>Quercus rubra</i> | Red oak |
| <i>Cornus florida</i> | Flowering dogwood (S,W) | <i>Robinia pseudoacacia</i> | Black locust |
| <i>Fagus species</i> | Beech | <i>Salix species</i> | Willow |
| <i>Fraxinus species</i> | Ash | <i>Sorbus aucuparia</i> | Mountain ash |

-continued from page 1

- Leaves, twigs, and stems contain volatile waxes, terpenes, or oils.
- Leaves are aromatic (strong smell when crushed)
- Sap is gummy, resinous and has a strong odor.
- May have loose or papery bark.

Both ornamental and native plants can be highly flammable. An example of a highly flammable ornamental shrub often planted in home landscapes is ornamental juniper. Examples of highly flammable native shrubs include bitterbrush, manzanita, sagebrush, and ceanothus. Avoid planting these plants around your home.

-Adapted from University of California Cooperative Extension Hortscript, 1996, No. 18.

How this list was developed

This list was developed by evaluating fire-resistant plant lists developed for other regions and screening the scientific literature on plant flammability. Included in this list are plants adapted to grow in Oregon in either irrigated or non-irrigated landscapes. However, most of the plants on this list require some level of irrigation to survive during the dry summer months, particularly in central and eastern Oregon.

All of these plants are adaptable in Oregon unless specified by a C, E, S, or W. Plants indicated by these letters are suitable only for the regions listed below:

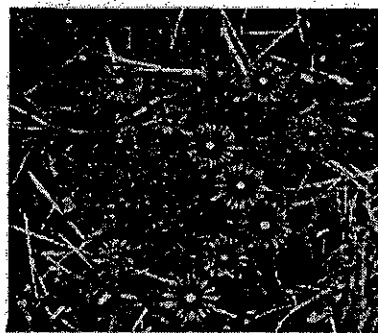
C = Central Oregon E = Eastern Oregon
S = Southern Oregon W = Western Oregon

Plant descriptions and availability

For a detailed description of the plants on this list, consult local nurseries or refer to the Sunset Western Garden Book and the A-Z Encyclopedia

Figure 2.

Purple Iceplant



of Garden Plants. These publications can be obtained at local bookstores or nurseries. If you are unable to find some of these plants locally, check out the Oregon Nurseryman's Association website for plant availability at:

<http://www.nurseryguide.com>

Scroll down to "Search For..." and click on Plants by Name. Type in the name of the plant you are interested in and the search will give you a list of nurseries that carry the plant.

Help us identify other fire-resistant plants

If you know of other fire-resistant plants suitable for Oregon, let us know. You can contact the authors by phone, letter, or email. We will then research your plant and, if it fits the criteria, we will add it to the list.

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