

Wildfire Series



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Wildfire-resistant Landscape Plants for Michigan

Mark F. Hansen, Michigan State University Extension

R. Thomas Fernandez, Department of Horticulture, Michigan State University

Michael R. Penskar, Michigan Natural Features Inventory, Michigan State University Extension

Introduction

Selecting the correct landscape plants to place next to or near your home could save it from catching fire. When wildfires occur, the fire moves along the ground or through brush or forests by igniting the vegetation or fuels ahead. If flammable vegetation is planted too close to a home or building and the vegetation ignites, it could also ignite the structure. Figure 1 depicts how coniferous trees can ignite and “torch” during a wildfire. If these trees were growing next to a house or building, the structure would surely ignite. This is why it is important to select fire-resistant plants when landscaping around the home.

Most Michigan residents are surprised to learn that Michigan experiences as many as 8,000 to 10,000 wildland fires each year. These forest fires, brush fires and grass fires destroy or severely damage 100 to 200 homes, barns and outbuildings annually. This can happen when firebrands (floating embers or pieces of burning debris) land in dry leaves that have collected under decks, around landscape plants and in eavestroughs, setting the



Figure 1. Some trees and plants can burn intensely. (Courtesy of Michigan DNR.)

leaves on fire. Firebrands can also ignite a wood roof. Many structures also catch fire when flames or intense heat from burning vegetation catches the deck or sides of the house on fire. Firefighters at a wildfire in dune grass near Shelby, Michigan, in 2005 (Figure 2) reported flames as high as 20 feet. Two homes were destroyed in the fire, and a number of others had fire damage. In these situations, vegetation planted or allowed to grow too close to the house served as fuel, igniting the wooden stairways, decks and siding.

To help prevent homes and buildings from catching fire — i.e., to make them “firewise” — simply eliminate these ignition points by creating defensible space around the home. This can be achieved, in part, through proper landscape plant selection and placement. Plants that do not burn easily are less likely to set a building on fire.

Any Plant Can Burn

It is important to understand that any plant can burn if the plant is dry enough or if it is exposed to intense heat long enough. This is true even of plants that are defined as fire-resistant. A fire-resistant plant possesses several characteristics that make it less likely to ignite. For example, conifers and certain other plants contain resins and can ignite even when green; they also produce intense flames and heat. Plants such as maple, dogwood and Michigan holly do not contain such resins. Fire-resistant plants also have foliage and stems that retain moisture, such as hosta. Plants that retain dead leaves or needles, such as juniper, are not considered fire-resistant because these dead plant parts can serve as ignition points or intensify a fire. Fire-resistant landscape plants should be your first choice if you live in a rural





Figure 2. This wildfire in dune grass near Shelby, Michigan, in 2005 produced flames 20 feet high and destroyed two homes. (Courtesy of Michigan DNR.)

area or an urban community bordered by natural vegetation where wildfire is a possible threat.

Even before homeowners consider the right trees, shrubs and ground covers, they should look at all landscape issues. For example, a dry lawn can burn and carry a fire to the home or other structure. Lawns should be watered, and dead lawn litter should be raked and either removed from the property or composted. A green lawn will not carry a fire.

Wildfire-resistant Plant Species

The species of trees, shrubs and ground covers in Table 1 are considered wildfire-resistant and are recommended for Michigan's climate. Remember that any plant may burn if the plant tissue becomes very dry and if the vegetation is exposed to intense heat for a period of time. Therefore, no plant is completely fireproof. In addition, some plants containing resins will burn even when green. The term "fire-resistant" in this bulletin refers to plants that will not ignite easily as long as they are alive, green and watered. It does not apply to dead plants or dead leaves and plant debris from these plants.

The plants and trees listed were selected after the authors reviewed and compared 15 fire-resistant plant lists from the United States, Canada and Tasmania. Because basic research where plants were exposed to fire in a laboratory setting is limited, most of the species are listed on the basis of observations of survival after being exposed to real wildfire or structural fire situations. In some cases, an entire genus is listed in the table; in other genera, only selected species are listed. One must also recognize that although the canopy of *Quercus* species (oak trees) will typically not ignite, dead oak leaves on the ground do not decompose quick-

ly and are very flammable. Oak leaves serve as one of the more common fuel threats in Michigan wildfires. Therefore, it is important to keep oak leaves and other dead leaves, needles and plant debris from collecting around foundations and under decks

Your local lawn and garden centers may sell or have access to many of the fire-resistant plant species mentioned in this publication. An excellent source of information on local landscape dealers is the MSU Extension office in your county. Both the landscape dealer and the Extension agent can provide information on growing characteristics, required growing conditions, winter hardiness and planting sites required for various species.

Locating Shrubs and Trees in the Landscape

Where you locate ornamental plants is just as critical as the species selected. Spacing between trees and shrubs is important so that fire cannot jump from a plant to a structure or from one plant to another and finally to your home. Spacing depends on the species selected. It is also important to remember that the distance between two plants will decrease as they grow larger. Space plants according to their mature size, not their size at planting. The spruce trees shown in Figure 3 were planted too close to the home and are now a threat because of direct flames and radiant heat if the trees ignite.

When creating defensible space in the yard, provide a minimum of 3 feet of clearance between the building and landscape plants. Non-flammable landscape material such as limestone, marble chips or even mineral soil can be used in this area. Avoid using organic mulch such as peat or wood chips within the 3-foot barrier. These materials can ignite when dry.



Figure 3. The spruce trees in this photo are located too close to the house. If they catch fire, they will likely create enough radiant heat to ignite the home. (Courtesy of MSU Extension.)



Table 1. Wildfire-resistant landscape plants for Michigan.

Botanical name	Common name	Category	Winter hardiness zones***	Native to Mich.**	Descriptors
Groundcovers					
<i>Achillea tomentosa</i>	Woolly yarrow	ground cover	zones 3-7	No	herbaceous perennial
<i>Ajuga reptans</i>	Carpet bugleweed	ground cover	zones 3-9	No	herbaceous perennial
<i>Arctostaphylos uva-ursi</i>	Kinnikinnick or bearberry	ground cover	zones 2-6	Yes	evergreen
<i>Armeria maritima</i>	Sea pink thrift	ground cover	zones 4-8	No	herbaceous perennial
<i>Asarum canadense</i>	Canadian ginger	ground cover	zones 3-7	Yes	herbaceous perennial
<i>Cotoneaster adpressus praecox</i>	Early cotoneaster	ground cover	zones 5-7	No	deciduous
<i>Epimedium</i> spp.	Barrenwort	ground cover	most spp in zone 5-8	No	herbaceous perennial
<i>Festuca cinerea</i>	Blue fescue	ground cover	zones 5-9	No	herbaceous perennial
<i>Festuca rubra</i>	Red fescue	ground cover	SCD*	SCD*	herbaceous perennial
<i>Fragaria</i> spp.	Wild strawberry	ground cover	SCD*	SCD*	perennial
<i>Gaultheria procumbens</i>	Wintergreen	ground cover	zones 4-8	No	evergreen
<i>Hedera helix</i>	English ivy	ground cover	zones 4-10	No	evergreen
<i>Hosta</i> spp.	Plaintain lily/ hosta lily	ground cover	zones 3-9	No	herbaceous perennial
<i>Iberis sempervirens</i>	Evergreen candytuft	ground cover	zones 3-8	No	herbaceous perennial
<i>Mahonia repens</i>	Dwarf Oregon grape	ground cover	zones 5-7	No	woody evergreen
<i>Pachysandra terminalis</i>	Japanese pachysandra	ground cover	zones 4-9	No	herbaceous evergreen
<i>Phlox subulata</i>	Creeping phlox	ground cover	zones 2-8	No	herbaceous perennial
<i>Potentilla neumanniana</i>	Spring cinquefoil	ground cover	zones 4-7	No	woody perennial
<i>Sedum album</i>	Green stonecrop	ground cover	zones 4-7	No	herbaceous perennial
<i>Sedum spathyuifolium</i>	Stonecrop	ground cover	zones 6-9	No	herbaceous perennial
<i>Thymus praecox</i>	Mother of thyme	ground cover	zones 5-8	No	herbaceous perennial
<i>Thymus praecox arcticus</i>	Creeping thyme	ground cover	zones 5-8	No	herbaceous perennial
<i>Thymus pseudolanuginosus</i>	Woolly thyme	ground cover	zones 5-8	No	herbaceous perennial
Perennials					
<i>Achillea filipendulina</i>	Fernleaf yarrow	perennial	zones 3-8	No	herbaceous perennial
<i>Achillea millefolium</i>	White yarrow	perennial	zones 3-9	Yes	herbaceous perennial
<i>Achillea</i> spp.	Yarrow	perennial	SCD*	SCD*	herbaceous perennial
<i>Allium schoenoprasum</i>	Chives	perennial	zones 4-7	SCD*	herbaceous perennial
<i>Antennaria</i> spp.	Pussytoes	perennial	SCD*	SCD*	herbaceous perennial
<i>Aquilegia</i> spp.	Columbine	perennial	SCD*	No	herbaceous perennial
<i>Arabis alpina</i>	Rock cress	perennial	zones 5-7	No	herbaceous perennial
<i>Artemisia caucasica</i>	Silver spreader or Caucasian sagebrush	perennial	zones 5-9	No	herbaceous perennial
<i>Aurinia saxatilis</i>	Basket of gold	perennial	zones 3-7	No	herbaceous perennial
<i>Bergenia cordifolia</i>	Heartleaf bergenia	perennial	zones 4-8	No	semi-evergreen herbaceous perennial
<i>Bergenia</i> spp.	Bergenia	perennial	SCD*	No	semi-evergreen herbaceous perennial
<i>Campanula poscharskyana</i>	Serbian bellflower	perennial	zones 3-7	No	herbaceous perennial

*SCD — Species and/or cultivar dependent.

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(continued)



Table 1. (cont.) Wildfire-resistant landscape plants for Michigan.

Botanical name	Common name	Category	Winter hardiness zones***	Native to Mich.**	Descriptors
Perennials (continued)					
<i>Campanula rotundifolia</i>	Harebell	perennial	zones 2-7	No	herbaceous perennial
<i>Carex</i> spp.	Sedges	perennial	SCD*	SCD*	herbaceous perennial
<i>Caryopteris xclandonensis</i>	Blue mist spirea	perennial	zones 5-9	No	herbaceous to woody perennial
<i>Centranthus ruber</i>	Red valerian	perennial	zones 5-8	No	herbaceous perennial
<i>Cerastium tomentosum</i>	Snow in summer	perennial	zones 2-10	No	herbaceous perennial
<i>Coreopsis auriculata nana</i>	Dwarf coreopsis	perennial	zones 4-9	No	herbaceous perennial
<i>Coreopsis</i> spp.	Coreopsis	perennial	SCD*	SCD*	herbaceous perennial
<i>Dianthus deltoides</i>	Maiden pinks	perennial	zones 3-8	No	herbaceous perennial
<i>Dianthus plumarius</i>	Pinks	perennial	zones 3-8	No	herbaceous perennial
<i>Dianthus</i> spp.	China pinks	perennial	zones 3-8	No	herbaceous perennial
<i>Epilobium angustifolium</i>	Fireweed	perennial	zones 3-7	Yes	herbaceous perennial
<i>Erigeron</i> hybrids	Fleabane	perennial	zones 4-7	SCD*	herbaceous perennial
<i>Fragaria chiloensis</i>	Wild strawberry	perennial	zones 4-8	No	herbaceous perennial
<i>Gaillardia xgrandiflora</i>	Blanket flower	perennial	zones 2-9	No	herbaceous perennial
<i>Geranium cinereum</i>	Hardy geranium	perennial	zones 5-7	No	herbaceous perennial
<i>Geranium sanguineum</i>	Blood red geranium	perennial	zones 3-8	No	herbaceous perennial
<i>Geranium</i> spp.	Geranium	perennial	zones 3-8	No	most species perennial, some annual
<i>Helianthemum nummularium</i>	Sunrose	perennial	zones 5 - 7	No	mounding
<i>Heuchera sanguinea</i>	Coral bells	perennial	zones 3-8	No	herbaceous perennial
<i>Iberis sempervirens</i>	Candytuft	perennial	zones 3-8	No	herbaceous perennial
<i>Iris missouriensis</i>	Wild blue iris	perennial	zones 3-8	No	herbaceous perennial
<i>Iris</i> spp.	Iris	perennial	SCD*	No	most species perennial, some annual
<i>Lavandula angustifolia</i>	Lavender	perennial	zones 5-9	No	herbaceous perennial
<i>Leucanthemum xsuperbum</i>	Shasta daisy	perennial	zones 4-9	No	herbaceous perennial
<i>Liriope muscari</i>	Blue lily-turf	perennial	zones 6-9	No	herbaceous perennial
<i>Lupinus</i> spp.	Lupine	perennial	SCD*	SCD*	not strong performers in Michigan
<i>Oenothera macrocarpa</i>	Evening primrose	perennial	zones 4-7	No	herbaceous perennial
<i>Oenothera</i> spp.	Primrose	perennial	SCD*	SCD*	herbaceous perennial
<i>Papaver</i> spp.	Poppy	perennial	SCD*	No	most species perennial, some annual
<i>Penstemon</i> spp.	Beard tongue	perennial	SCD*	SCD*	most species perennial, some annual
<i>Phlox drummondii</i>	Creeping phlox	perennial	zones 4-9	No	herbaceous perennial
<i>Potentilla</i> spp.	Potentilla	perennial	SCD*	SCD*	most species perennial, some annual
<i>Salvia</i> spp.	Sage	perennial	SCD*	No	most species perennial, some annual

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(continued)



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Perennials (continued)					
<i>Santolina chamaecyparissus</i>	Lavender cotton	perennial	zones 6-10	No	mounding
<i>Sempervivum tectorum</i>	Hens and chicks	perennial	zones 3-7	No	herbaceous perennial
<i>Solidago</i> spp.	Goldenrod	perennial	SCD*	SCD*	herbaceous perennial
<i>Stachys byzantina</i>	Lamb's ear	perennial	zones 4-7	No	herbaceous perennial
<i>Thymus praecox arcticus</i>	Creeping thyme	perennial	zones 5-8	No	herbaceous perennial
Shrubs					
<i>Amelanchier alnifolia</i>	Alder-leaved serviceberry	shrub	zones 4-5	No	deciduous, also small tree
<i>Amelanchier</i> spp.	Serviceberry	shrub	zones 4-9	SCD*	deciduous, also small tree
<i>Arctostaphylos uva-ursi</i>	Bearberry	shrub	zones 2 - 6	Yes	creeping shrub
<i>Aronia arbutifolia</i>	Red chokeberry	shrub	zones 5-8	No	deciduous, also small tree
<i>Aronia melanocarpa</i>	Black chokeberry	shrub	zones 3-8	Yes	deciduous
<i>Berberis buxifolia</i>	Box-leaf barberry	shrub	zones 5-8	No	evergreen
<i>Berberis xmentorensis</i>	Mentor barberry	shrub	zones 5-8	No	deciduous
<i>Buddleia davidii</i>	Butterfly bush	shrub	zones 5-9	No	deciduous, also small tree
<i>Chaenomeles speciosa</i>	Flowering quince	shrub	zones 4-8	No	deciduous
<i>Clethra alnifolia</i>	Summersweet	shrub	zones 4-9	No	deciduous
<i>Cornus sericea</i>	Yellowtwig dogwood/ red osier dogwood	shrub	zones 2-8	No	deciduous
<i>Corylus avellana</i>	European filbert	shrub	zones 4-8	No	deciduous, also small tree
<i>Cotinus coggygria</i>	Royal purple smoketree	shrub	zones 5-8	No	deciduous
<i>Cotoneaster apiculatus</i>	Cranberry cotoneaster	shrub	zones 4-7	No	deciduous
<i>Cotoneaster divaricatus</i>	Spreading cotoneaster	shrub	zones 4-7	No	deciduous
<i>Cotoneaster horizontalis</i>	Rock cotoneaster	shrub	zones 5-7	No	deciduous
<i>Cotoneaster</i> spp.	Cotoneaster	shrub	SCD*	No	SCD*
<i>Daphne xburkwoodii</i>	Burkwood daphne	shrub	zones 4-7	No	semi-evergreen
<i>Deutzia gracilis</i>	Slender deutzia	shrub	zones 4-8	No	deciduous
<i>Forsythia xintermedia</i>	Lynwood border forsythia	shrub	zones 5-8	No	deciduous
<i>Hibiscus syriacus</i>	Rose of Sharon	shrub	zones 5-8	No	deciduous, also small tree
<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea	shrub	zones 5-8	No	deciduous
<i>Hydrangea quercifolia</i>	Oakleaf hydrangea	shrub	zones 5-9	No	deciduous
<i>Ilex verticillata</i>	Michigan holly	shrub	zones 3-9	Yes	deciduous
<i>Mahonia repens</i>	Creeping mahonia	shrub	zones 5-7	No	evergreen, also ground cover
<i>Mahonia</i> spp.	Creeping grape holly	shrub	SCD	No	evergreen
<i>Myrica pensylvanica</i>	Northern bayberry	shrub	zones 3-6	No	deciduous

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(continued)



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Shrubs (continued)					
<i>Philadelphus</i> spp.	Mock orange	shrub	SCD*	No	deciduous
<i>Potentilla fruticosa</i>	Shrubby cinquefoil	shrub	zones 2-6	Yes	deciduous
<i>Prunus americana</i>	Native plum	shrub	zones 3-8	Yes	deciduous, also small tree
<i>Prunus besseyi</i>	Sand cherry	shrub	zones 3-6	No	deciduous
<i>Prunus tomentosa</i>	Nanking cherry	shrub	zones 3-7	No	deciduous
<i>Pyracantha</i> spp.	Pyracantha	shrub	SCD*	No	can have fireblight problems on more vigorous selection
<i>Rhus</i> spp.	Sumac	shrub	SCD*	SCD*	SCD*
<i>Ribes alpinum</i>	Green mound Alpine currant	shrub	zones 2-7	No	deciduous
<i>Rosa carolina</i>	Carolina cose	shrub	zones 4-9	Yes	deciduous
<i>Rosa wichuriana</i>	Memorial rose	shrub	zones 5-8	No	semi-evergreen
<i>Rubus</i> spp.	Raspberry	shrub	SCD*	SCD*	deciduous
<i>Shepherdia canadensis</i>	Russet buffaloberry	shrub	zones 2-6	Yes	deciduous
<i>Shepherdia argentea</i>	Silver buffaloberry	shrub	zones 2-6	No	deciduous, also small tree
<i>Spiraea japonica</i>	Daphne spiraea	shrub	zones 4-8	No	deciduous
<i>Spiraea nipponica</i>	Snowmound Nippon spiraea	shrub	zones 4-8	No	deciduous
<i>Spiraea xvanhouttei</i>	Vanhoutte spiraea	shrub	zones 3-8	No	deciduous
<i>Symphoricarpos albus</i>	Snowberry	shrub	zones 3-7	Yes	deciduous
<i>Syringa</i> spp.	Lilac	shrub	SCD*	No	deciduous
<i>Syringa vulgaris</i>	Common lilac	shrub	zones 3-7	No	deciduous
<i>Syringa xprestoniae</i>	Preston lilac	shrub	zones 3-7	No	deciduous
<i>Viburnum trilobum</i>	American cranberrybush viburnum	shrub	zones 2-7	Yes	deciduous
<i>Viburnum trilobum</i> 'Compactum'	Dwarf American cranberrybush viburnum	shrub	zones 2-7	No	deciduous
<i>Viburnum carlesii</i>	Korean spice viburnum	shrub	zones 4-8	No	deciduous
<i>Viburnum dentatum</i>	Arrowwood viburnum	shrub	zones 2-8	No	deciduous
<i>Viburnum lentago</i>	Nannyberry	shrub	zones 3-7	No	deciduous, also tree
<i>Viburnum plicatum</i> var. <i>tomentosum</i>	Doublefile viburnum	shrub	zones 5-8	No	deciduous
<i>Viburnum prunifolium</i>	Blackhawk viburnum	shrub	zones 3-9	Yes	deciduous
<i>Viburnum xburkwoodii</i>	Burkwood viburnum	shrub	zones 5-8	No	deciduous
<i>Viburnum xrhynchodophylloides</i>	Willowwood or Allegheny viburnum	shrub	zones 5-8	No	deciduous
<i>Weigela florida</i>	Old fashioned weigela	shrub	zones 5-8	No	deciduous

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(continued)



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Trees (continued)					
<i>Acer campestre</i>	Hedge maple	tree	zones 4-8	No	deciduous
<i>Acer griseum</i>	Paperbark maple	tree	zones 5-7	No	deciduous
<i>Acer palmatum</i>	Japanese maple	tree	SCD*	No	deciduous
<i>Acer platanoides</i>	Norway maple	tree	zones 4-7	No	deciduous
<i>Acer rubrum</i>	Red maple	tree	SCD*	Yes	deciduous
<i>Acer saccharum</i>	Green Mountain sugar maple	tree	zones 4-8	Yes	deciduous
<i>Acer</i> spp.	Maple	tree	SCD*	SCD*	deciduous
<i>Aesculus hippocastanum</i>	Horsechestnut	tree	zones 4-7	No	deciduous
<i>Alnus cordata</i>	Italian alder	tree	zones 5-7	No	deciduous
<i>Betula nigra</i>	River birch	tree	zones 3-9	No	deciduous
<i>Betula</i> spp.	Birch	tree	SCD*	SCD*	deciduous
<i>Carpinus betulus</i>	Upright European hornbeam	tree	zones 4-7	No	deciduous
<i>Catalpa speciosa</i>	Northern catalpa	tree	zones 4-8	No	deciduous
<i>Celtis occidentalis</i>	Common hackberry	tree	zones 2-9	Yes	deciduous
<i>Cercis canadensis</i>	Eastern redbud	tree	zones 5-9; best from local seed source	Yes	deciduous
<i>Cercis</i> spp.	Redbud	tree	zones 5-9; best from local seed source	SCD*	deciduous
<i>Cornus florida</i>	Flowering dogwood	tree	zones 5-8; best from local seed source	Yes	deciduous
<i>Crataegus phaenopyrum</i>	Washington hawthorn	tree	zones 4-8	No	deciduous
<i>Crataegus</i> spp.	Hawthorn	tree	zones 4-7	SCD*	deciduous
<i>Fagus</i> spp.	Beech	tree	SCD*	No	deciduous
<i>Fagus sylvatica</i>	European beech	tree	zones 4-7	No	deciduous
<i>Gleditsia triacanthos</i>	Honeylocust	tree	zones 4-9	SCD*	deciduous
<i>Gymnocladus dioica</i>	Kentucky coffee tree	tree	zones 3-8	Yes	deciduous
<i>Juglans</i> spp.	Walnut	tree	zones 4-7	Yes	deciduous
<i>Liquidambar styraciflua</i>	American sweetgum	tree	zones 5-9		deciduous
<i>Liriodendron tulipifera</i>	Tulip tree	tree	zones 4-9	Yes	deciduous
<i>Magnolia stellata</i>	Star magnolia	tree	zones 4-9	No	deciduous
<i>Magnolia xsoulangiana</i>	Saucer magnolia	tree	zones 4-9	No	deciduous
<i>Malus</i> spp.	Crabapple	tree	SCD	SCD*	deciduous
<i>Nyssa sylvatica</i>	Black gum	tree	zones 4-9	Yes	deciduous
<i>Plantanus occidentalis</i>	Eastern sycamore	tree	zones 4-9	Yes	deciduous
<i>Platanus xacerifolia</i>	London planetree	tree	zones 4-8	No	deciduous

*SCD — Species and/or cultivar dependent.

**Michigan's critical dune guidelines allow only native plants to be used within 100 feet of the crest of a dune. In addition, any alteration on the lake side of the dune requires a permit, including establishing or reestablishing.

***Winter hardiness refers to the ability of the plant to withstand average low winter temperatures. Winter hardiness zones listed in the table refer to the USDA National Arboretum Plant Hardiness Zone Map (see page 12) which can also be found at <http://www.usna.usda.gov/Hardzone/ushzmap.html>. Other factors will also affect the suitability of a plant for a particular climate, such as heat, humidity, soil characteristics, and water availability.

(continued)



Table 1. (cont.) Wildfire-resistant landscape plants for Michigan.

Botanical name	Common name	Category	Winter hardiness zones***	Native to Mich.**	Descriptors
Trees (continued)					
<i>Populus</i> spp.	Aspens, cottonwoods, poplars	tree	SCD*	SCD*	deciduous
<i>Populus tremuloides</i>	Quaking aspen	tree	zones 1-6	Yes	deciduous
<i>Prunus cerasifera</i> 'Atropurpurea'	Flowering plum	tree	zones 5-8	No	deciduous
<i>Prunus serrulata</i>	Kwanzan Oriental cherry	tree	zones 5-7	No	deciduous
<i>Prunus subhirtella</i>	Higan cherry	tree	zone 5-8	No	deciduous
<i>Prunus virginiana</i>	Chokecherry	tree	zones 2-6	Yes	deciduous
<i>Prunus xyedoensis</i>	Yoshino cherry	tree	zones 5-8	No	deciduous
<i>Pyrus calleryana</i>	Callery pear	tree	zones 5-8	No	deciduous, may break under heavy snow/ice loads
<i>Quercus alba</i>	White oak	tree	zones 3-9	Yes	deciduous
<i>Quercus macrocarpa</i>	Bur oak	tree	zones 3-8	Yes	deciduous
<i>Quercus rubra</i>	Red oak	tree	zones 3-7	Yes	deciduous
<i>Quercus</i> spp.****	Oak	tree	SCD*	SCD*	deciduous
<i>Salix</i> spp.	Willow	tree	SCD*	SCD*	deciduous
<i>Sorbus aucuparia</i>	European Mountain ash	tree	zones 3-7	No	deciduous, several pest problems
Vines					
<i>Campsis radicans</i>	Trumpet vine	vine	zones 4-9	No	deciduous
<i>Clematis hybrids</i>	Clematis	vine	SCD*	No	deciduous
<i>Lonicera sempervirens</i>	Trumpet honeysuckle	vine	zones 4-9	No	deciduous
<i>Lonicera xheckrottii</i>	Goldflame honeysuckle	vine	zones 4-9	No	semi-evergreen
<i>Parthenocissus quinquefolia</i>	Virginia creeper	vine	zones 4-9	Yes	deciduous
<i>Wisteria sinensis</i>	Chinese wisteria	vine	zones 5-8	No	deciduous

*SCD — Species and/or cultivar dependent.

**Michigan's critical dune guidelines allow only native plants to be used within 100 feet of the crest of a dune. In addition, any alteration on the lake side of the dune requires a permit, including establishing or reestablishing.

***Winter hardiness refers to the ability of the plant to withstand average low winter temperatures. Winter hardiness zones listed in the table refer to the USDA National Arboretum Plant Hardiness Zone Map (see page 12) which can also be found at <http://www.usna.usda.gov/Hardzone/ushzmap.html>. Other factors will also affect the suitability of a plant for a particular climate, such as heat, humidity, soil characteristics, and water availability.

(continued)



Leave at least 30 feet of defensible space between the building and solid stands of natural vegetation. Studies from two major wildfires in the western United States have shown that 85 to 90 percent of homes that survived those wildfires had 30 to 50 feet of defensible space and fire-resistant roofing materials. Liquid propane tanks, stacks of firewood and other potential fuels should also be located outside of this perimeter.

Houses and structures built at the crest of a hill should have 60 feet of defensible space because fire traveling uphill will move faster, be more intense and radiate more heat than a wildfire moving on level ground.

The term “ladder fuels” describes low-hanging branches and limbs that could catch fire from a wildfire moving across the ground. If the tree is combustible, such as a spruce or pine, the fire will ignite the lower branches and move upward. Should this happen, the radiant heat given off could set a nearby house or building on fire. Remove limbs and branches of combustible ornamental landscape trees within 6 to 8 feet of the ground so that fire cannot move from the ground to the lower branches of the tree and then into the canopy.

When you're planting any tree or shrub, it is important to match the species with the conditions in the planting site. Some species may grow better in sandy soils than in heavy clay soils. Some will do better than others in poorly drained areas. Other species may do better in the sun than in the shade. This information is often included on a tag attached to the tree or shrub at the garden center. If there is no tag, ask an informed employee about the preferred environment before purchasing. Again, your local Extension office will likely have this information as well. To obtain more information on planting landscape plants, obtain a copy of Extension bulletin E-2941, *A Guide for the Selection and Use of Plants in the Landscape*, from your county Extension office.

Maintaining the Yard and Shrubbery

If the landscape is not maintained properly, a wildfire can move across the yard and ignite a home and other structures. To decrease this possibility, keep your lawn mowed and watered. A green lawn is unlikely to catch fire and will typically serve as a protective barrier around the home. On the other hand, a yard that is managed in natural vegetation or a lawn that has become very dry could allow a wildfire to move across it and pose a danger of igniting a deck or wood siding and then the house. The home and garage shown in Figure 4 were damaged because tall grass was allowed to grow too close to the structures.

It is also important to provide adequate water for newly planted trees and shrubs. Once these plants have grown and have established extensive root systems, they should usually be able to absorb sufficient nutrients from the soil and from lawn fertilizers. Regular watering will still be necessary, however, to reduce the possibility of ignition. Ornamental plants may or may not need special fertilization. This can be determined by a soil test, which is available through your local Extension office. For more information, pick up a copy of North Central Region publication 356, *Fertilizing Garden & Landscape Plants & Lawns*, from your county Extension office.



Figure 4. A wildfire in a grassy field melted the siding on this garage and home.

(Courtesy of Michigan DNR.)



Summary

Each year in Michigan, wildfires damage or destroy homes and other structures. A firewise home requires adequate defensible space, fire-resistant building materials, and eavestroughs and spaces around and under the base of the home kept clean of accumulated plant litter and debris. Firewise homeowners also place other fuels such as LP tanks and firewood stacks at a safe distance from the home (Figure 5). Adding fire-resistant

plants and pruning trees can greatly increase the chances that a home or outbuilding will still be standing after a wildfire passes, while also providing the esthetics that the homeowner desires.

For more information on Michigan wildfires and protecting your home and family, pick up copies of Extension bulletins E-2831, *Protect Your Michigan Home from Wildfire*, and E-2882, *Understanding Wildfire Behavior in Michigan*, from your county Extension office.

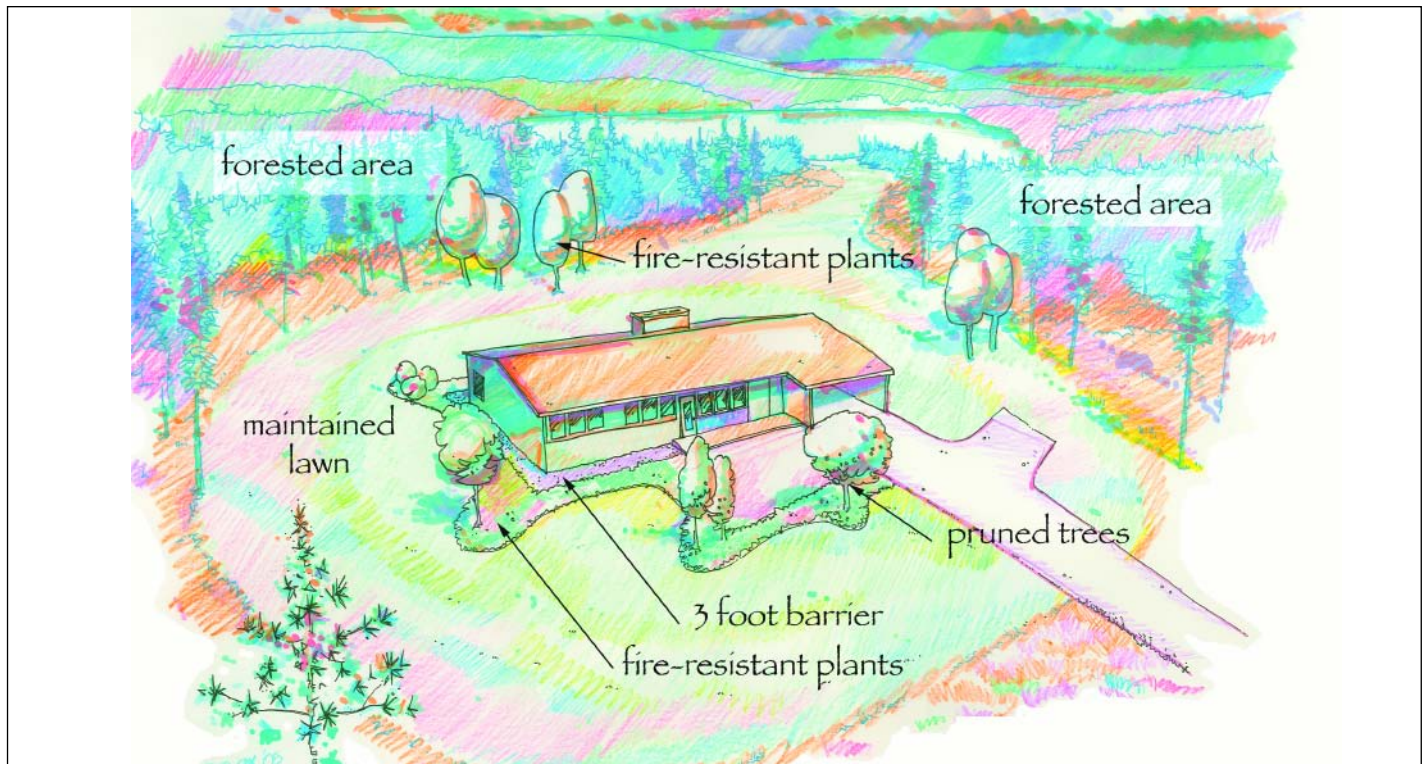


Figure 5. Firewise landscaping reduces the chance of wildfire damage to a home.

(Courtesy of Dr. Jon Bryan Burley, ASLA, associate professor, LAP director, MSU.)



Supporting Resources:

Wildfire in Michigan
www.firewise.msu.edu

Firewise Communities, 2009
www.firewise.org

Firewise Plant Lists, 2009,
Firewise Communities/USA.
www.firewise.org/usa/fw_plantlists.htm

Living With Fire: A Guide for the
Black Hills Homeowner.
[www.state.sd.us/doa/forestry/
publications/Living%20With%20Fire.pdf](http://www.state.sd.us/doa/forestry/publications/Living%20With%20Fire.pdf)

Firewise Plants Offer Colorful Choices
for Fire Safe Gardens
[www.firewise.org/usa/files/Arkansas
PlantGuide.pdf](http://www.firewise.org/usa/files/ArkansasPlantGuide.pdf)

Fire Resistant Landscaping Plants
for the Sierra Springs Area
<http://ceeldorado.ucdavis.edu/files/4017.pdf>

Firewise Plant Materials
[www.ext.colostate.edu/pubs/natres/
06305.html](http://www.ext.colostate.edu/pubs/natres/06305.html)

Making Your Landscape More Resistant to Wildfires
www.firewise.org/usa/files/florida.pdf

Protecting and Landscaping Homes
in the Wildland/Urban Interface
[www.cnr.uidaho.edu/extforest/Fire
ProtectBro.pdf](http://www.cnr.uidaho.edu/extforest/FireProtectBro.pdf)

Fire-Resistant Plants for Montana Landscapes
[http://extn.msu.montana.edu/
publications.asp](http://extn.msu.montana.edu/publications.asp)

Firewise Plant Materials
[http://aces.nmsu.edu/defensible_zone/
protect/docs_pdf/fire_wise.pdf](http://aces.nmsu.edu/defensible_zone/protect/docs_pdf/fire_wise.pdf)

Firewise Plant Materials
[www.ces.ncsu.edu/forestry/pdf/ag/
firewise_landscaping.pdf](http://www.ces.ncsu.edu/forestry/pdf/ag/firewise_landscaping.pdf)

Fire-Resistant Plants for Home Landscapes
[http://extension.oregonstate.edu/
catalog/html/pnw/pnw590/pnw590.pdf](http://extension.oregonstate.edu/catalog/html/pnw/pnw590/pnw590.pdf)

Fire Retardant Garden Plants for the Urban Fringe
and Rural Areas
[www.fire.tas.gov.au/mysite/
publications/1709%20Brochure.pdf](http://www.fire.tas.gov.au/mysite/publications/1709%20Brochure.pdf)

Quick Guide to Firewise Shrubs
[www.interfacesouth.org/products/pdf/
Shrub_Flammability.pdf](http://www.interfacesouth.org/products/pdf/Shrub_Flammability.pdf)

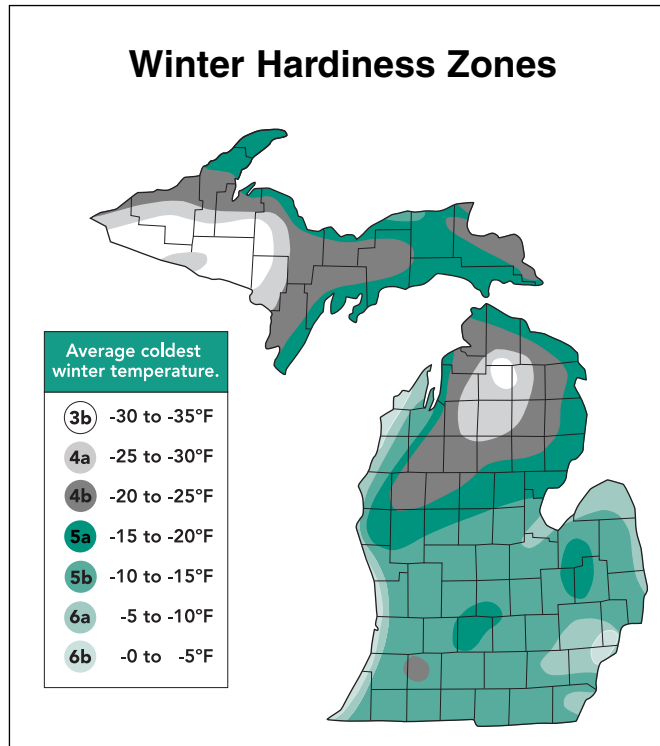
Firewise Plants for Utah Landscapes
[www.utahfireinfo.gov/prevention/
firewiseplants.pdf](http://www.utahfireinfo.gov/prevention/firewiseplants.pdf)

Fire Resistant Plants
[www.srd.gov.ab.ca/wildfires/firesmart/
default.aspx](http://www.srd.gov.ab.ca/wildfires/firesmart/default.aspx)

Fire Resistant Plants for your Landscape
[http://plumasfiresafe.org/Documents/PNF_BRD
%20Fire%20Resistant%20Plants.pdf](http://plumasfiresafe.org/Documents/PNF_BRD%20Fire%20Resistant%20Plants.pdf)

Firewise Landscaping
[http://estore.osu-extension.org/
productdetails.cfm?PC=2050](http://estore.osu-extension.org/productdetails.cfm?PC=2050)





For an online version of the USDA National Arboretum Plant Hardiness Zone Map for North America, go to:
<http://www.usna.usda.gov/Hardzone/ushzmap.html>

Other publications in the **Wildfire Series** are available from your MSU county Extension office or the MSU Bulletin Office, 117 Central Services Bldg., Michigan State University, East Lansing, MI 48824.

E-2831, Protect Your Michigan Home from Wildfire
E-2882, Understanding Wildfire Behavior in Michigan



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