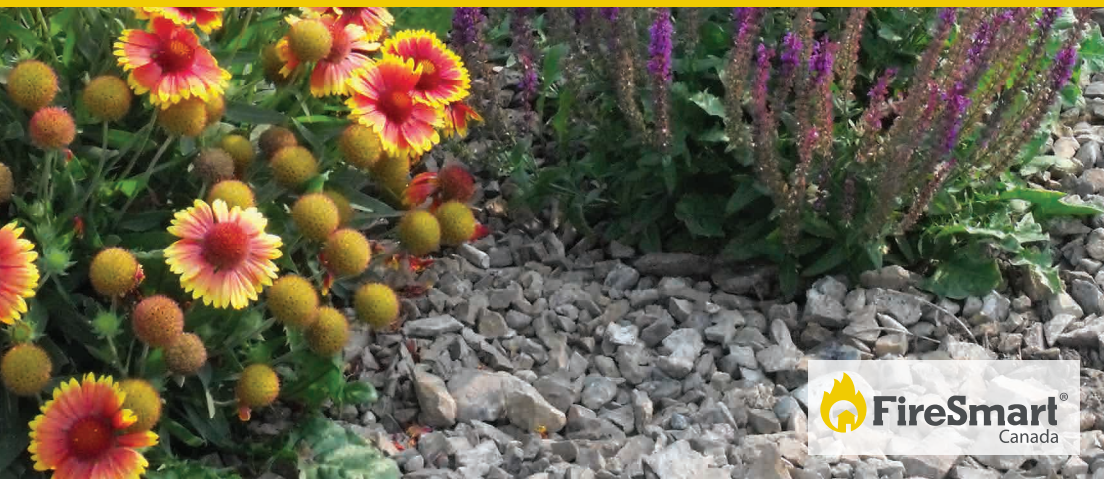




**FireSmart® Guide to Landscaping**  
Second Edition



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# Protect Your Home From Wildfire

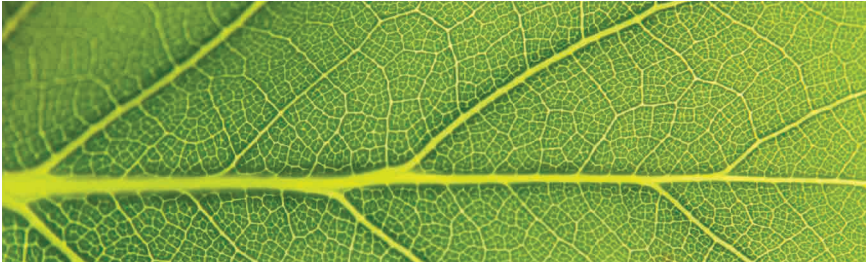
Wildland fires are a natural part of most wildland ecosystems in Canada. An increasing number of homes are built in or on the boundary of these wildland areas– this is known as the wildland/urban interface. Homeowners building and living in the wildland/urban interface, must take special precautions to protect their lives and property.

## FireSmart® Priority Zones

The FireSmart program identifies 4 priority zones that must be managed to reduce the wildfire threat to your home. The Non-Combustible Zone, Priority Zone 1 and Priority Zone 2 are the most critical—this is known as the Home Ignition Zone (HIZ). Homeowners, builders and landscapers should focus on reducing the risks in the HIZ.



In addition to the actual building design and construction material used to construct your home, the type of plant material and the design of the landscape immediately adjacent to your home is a critical factor in determining the likelihood of your home surviving a wildfire. It is important to select fire resistant plant material and design your landscape to reduce the risk, while maintaining a functional and watersmart landscape appropriate to your growing zone. This document is a guide to get you started. FireSmart Canada recommends that you seek site-specific advice from a landscaping professional with FireSmart expertise.



## What are Fire Resistant Plants?

Fire resistant plants are those that do not readily ignite from flame or other ignition sources. These plants can be damaged or even killed by fire; however, their foliage and stems do not significantly contribute to the fuel and fire intensity.

### Characteristics of fire-resistant plants

- ▶ Moist, supple leaves
- ▶ Little dead wood and tendency not to accumulate dead material
- ▶ Water-like sap with little or no odour
- ▶ Low amount of sap or resin material

### Characteristics of Highly Flammable Plant

- ▶ Contain fine, dry, dead material within the plant
- ▶ Plant stem, branches and leaves contain volatile waxes, terpenes or oils
- ▶ Leaves are aromatic
- ▶ Gummy, resinous sap with a strong odour
- ▶ Loose papery bark

\* Avoid landscaping with highly flammable plants around your home.

## Appropriate Plant Selection

Selecting the right plant for the right spot depends on a number of factors.

### Choose the plants for your Hardiness Zones

When selecting plants for your landscape, ensure that you select plants that are appropriate to your area and hardiness zone. This indicates the ability of a plant to withstand an average minimum temperature. There are currently two systems used for classifying hardiness, the Canadian Hardiness Zone and the United States Department of Agriculture (USDA) Hardiness Zone System. Most gardening enthusiasts, commercial horticulture and industry professionals reference the USDA system. Because of this, Natural Resources Canada (NRCAN) created a second map called the Extreme Minimum Temperature Zones, essentially a Canadian version of the USDA system. This guide references the Extreme Minimum Temperature Zones map.

When choosing a plant, you want to pick a plant that falls within your zone or the next colder zone. For example, if you are in USDA zone 5, you can choose plants that are suitable for zones 1- 5.

The NRCAN Extreme Minimum Temperature Zone map can be found at <http://www.planthardiness.gc.ca/?m=1>

## Plant Water Requirements



In many wildland/urban interface areas water usage is also an ongoing concern. In some areas, watering restrictions or bans during summer months are common. This raises the concern of increased wildfire risk due to dry landscape vegetation. Even in the driest regions of Canada , homeowners can conserve water, and have beautiful FireSmart landscapes.

## **Plan your Landscape for Water Use**

There are many beautiful trees, shrubs and flowers with low water requirements that are also FireSmart (see the FireSmart plant list). If you choose FireSmart plants with higher water requirements, group them together so you can water your yard more efficiently.

## **Consider Xeriscaping**

We all love beautiful surroundings. Xeriscaping is a method of gardening that doesn't sacrifice beauty to conserve water. In fact, if a landscape isn't attractive, then it isn't a xeriscape. The principles of xeriscaping can be applied to any landscape style and can be as plain or elaborate as desired.

## **Reasons to Xeriscape**

The average Canadian uses 326 litres of water per day. In dry climates of Canada, summertime water usage can be as high as 2200 litres of water per person, per day! Eighty percent of the water consumed in the summer is used outdoors to water grass, hose driveways and to wash vehicles.

In addition to using less water, a xeriscape garden requires less weeding, fertilizing, pruning, mowing and pesticides.

## **Xeriscaping is Relative**

Drier climates of Canada can receive as little as 200 mm of rainfall per year, while wetter areas can receive 1500 mm of precipitation, or more! So, plants that are considered xeriscape in some places may not be suitable in others

## **Turf and Water Use**

A well maintained lawn can serve as an effective firebreak as part of your FireSmart landscape. Lawns can also add to the enjoyment of your yard, to property values, and help cool your home in the summer, reducing energy for air-conditioners. However, most lawns are much larger than required and consume high amounts of water in comparison to most other plantings.

- ▶ Take a look at your lawn and ask yourself these questions:
- ▶ How much of my lawn is actually walked or played on?
- ▶ Is it there because I don't know what else to do with that area?
- ▶ Are there areas that are difficult or dangerous to mow?

- ▶ Could sections of the lawn be replaced by groundcovers, shrubs or ornamental grasses that need less water and maintenance?
- ▶ Are there areas where hard surfaces like walkways or decks would make the living space more practical?

### **Caution: Bark Mulch and Pine Needle Mulch**

Bark mulch, pine needle mulches and other plant-based mulches offer many benefits to gardens. However, these mulches are susceptible to ignition from wildfire embers or cigarettes, increasing the fire threat to your home. When landscaping against your home, consider using gravel mulch, rock mulch, or a combination of plant mulch and decorative rock mulch to reduce the risk.

### **Plant Exposure**

Whether an area is sunny or shady, windy or protected, exposure will determine what plants will flourish where.

### **Landscape Value**

Try to plant for year round interest and enjoyment by considering more than just flowers. Think about colour and texture of leaves, bark and fruit, along with overall branching and shape of various plants.



### **Maintenance**

Plants vary greatly in the amount of care required to keep them looking attractive. Select plants that realistically meet your gardening time constraints.

### **Invasive and Noxious Plants**

You can help prevent the establishment and spread of invasive plants in Canada by knowing what you're planting. If you are unsure, check with credible sources to confirm that you are not planting invasives.

# Wildlife Conflicts and Your Landscape

In many wildland/urban interface areas most plants will attract wildlife. In most cases this does not result in conflict of high consequence. In some cases, however, it can result in very dangerous situations for both humans and wildlife. The most prominent example is that of human/bear conflicts. Consider these tips to reduce this conflict potential

## **Fruit Trees**

- ▶ Pick fruit and allow it to ripen indoors or pick daily as it ripens. Do not allow windfall to accumulate on the ground.
- ▶ If you do not want the fruit, prune the tree vigorously to prevent blossoms or spray spring blossoms with a garden hose to knock them off.
- ▶ If you would like to make the fruit available to others, contact a local fruit exchange program or food bank.

Consider using electric fencing to protect your fruit trees.

If you no longer want to manage your tree, consider replacement with a native, non-fruit bearing variety.

## **Berry Bushes**

- ▶ Berries should be picked as they ripen.
- ▶ Consider replacing your bushes with native, non-fruiting varieties if you do not want the fruit.



TREES		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	Common Name							
<i>Acer circinatum</i> *	Vine Maple	4	fs-psh	4.5 - 6 m			●	
<i>Acer ginnala</i>	Amur Maple	2	fs-psh	4.5 - 6 m			●	
<i>Acer glabrum</i> *	Rocky Mountain Maple	4	fs-psh	3 - 4.5 m			●	
<i>Acer grandidentatum</i> *	Big-tooth Maple	4	fs-psh	3 - 6 m			●	
<i>Acer macrophyllum</i>	Bigleaf Maple	5	fs	9 - 23 m				●
<i>Acer palmatum</i>	Japanese Maple	5 - 6	ps	4.5 - 7.5 m				●
<i>Acer platanoides</i>	Norway Maple	3	fs	12 - 15 m			●	●
<i>Acer rubrum</i>	Red Maple	3	fs	12 - 18 m				●
<i>Acer saccharinum</i>	Silver Maple	3	fs	15 - 21 m			●	●
<i>Aesculus hippocastanum</i>	Horsechestnut	3	fs	12 - 15 m			●	
<i>Alnus rubra</i> *	Red Alder	5	fs-psh	13 - 15 m			●	
<i>Alnus tenuifolia</i> *	Mountain Alder	5	fs	6 - 7.5 m			●	
<i>Amelanchier alnifolia</i>	Saskatoon	4	fs-psh	2.5 - 3.5 m		●		
<i>Arbutus menziesii</i> *	Madrone	7	fs	6 - 30 m		●		
<i>Betula occidentalis</i> *	Water Birch	2	fs-sh	6 - 9 m				●
<i>Betula</i> spp.	Birch	2 - 9	fs	9 - 12 m				●
<i>Carpinus betulus</i>	Hornbeam	4	fs	12 - 18 m				●
<i>Catalpa speciosa</i>	Catalpa	4	fs	12 - 15 m			●	
<i>Celtis occidentalis</i>	Common Hackberry	2	fs-psh	12 - 15 m			●	
<i>Cercis canadensis</i>	Eastern Redbud	4	fs	7.5 - 10.5 m			●	
<i>Cornus florida</i>	Flowering Dogwood	5	fs	6 - 9 m				●
<i>Crataegus</i> spp.	Hawthorn	3 - 4	fs	4.5 - 6 m			●	
<i>Fagus sylvatica</i>	European Beech	4	fs	15 - 18 m				●
<i>Fraxinus americana</i>	White Ash	3	fs	12 - 18 m			●	
<i>Fraxinus pennsylvanica</i>	Green Ash	3	fs	12 - 18 m		●	●	●
<i>Ginkgo biloba</i>	Ginkgo, Maidenhair Tree	3	fs	15 - 25 m			●	

TREES		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
<i>Gleditsia triacanthos</i>	Honeylocust	3	fs	9 - 21 m	●			
<i>Gymnocladus dioicus</i>	Kentucky Coffee Tree	3	fs	12 - 15 m			●	
<i>Juglans cinerea</i>	Butternut	3	fs	12 - 18 m			●	
<i>Juglans nigra</i>	Black Walnut	4	fs	12 - 18+ m			●	
<i>Koelreuteria paniculata</i>	Golden Raintree	5	fs	9 - 12 m	●			
<i>Laburnum watereri</i>	Golden Chain Tree	5	fs-psh	3.5 - 4.5 m			●	
<i>Larix occidentalis</i>	(mature) Western Larch	4	fs	30 - 55 m			●	
<i>Liquidambar styraciflua</i>	Sweetgum	5	fs	18 - 23 m			●	
<i>Liriodendron tulipifera</i>	Tulip Tree	4	fs	21 - 27 m				●
<i>Maackia amurensis</i>	Amur Maackia	3	fs	6 - 9 m			●	
<i>Malus spp.</i>	Crab Apple - Ornamental	4 - 8	fs-psh	4.5 - 6 m	●	●		
<i>Morus alba</i>	Mulberry	4	fs-psh	9 - 15 m			●	
<i>Nyssa sylvatica</i>	Blackgum, Black Tupelo	3	fs-psh	9 - 15 m				●
<i>Phellodendron amurense</i>	Amur Corktree	3	fs	9 - 14 m				●
<i>Pinus nigra</i>	Austrian Pine	4	fs	15 - 18 m			●	
<i>Pinus ponderosa</i>	(mature) Ponderosa Pine	3	fs	18 - 30 m	●			
<i>Platanus acerifolia</i>	London Planetree	4	fs-psh	21 - 30 m			●	
<i>Platanus racemosa</i>	Western or California Sycamore	7	fs	12 - 24 m			●	
<i>Populus spp. *</i>	Cottonwood	2 - 3	fs	40 m			●	
<i>Populus tremuloides</i>	Trembling Aspen, Quaking Aspen	1	fs-psh	9 - 12 m			●	●
<i>Prunus cerasifera</i>	Flowering Plum	4	fs	4.5 - 9 m	●			
<i>Prunus maackia</i>	Amur Cherry	2	fs-psh	10.5 - 13.5 m			●	
<i>Prunus padus commutata</i>	Mayday Tree	3	fs-psh	9 - 12 m			●	
<i>Prunus serotina</i>	Black Cherry	3	fs-psh	15 - 18 m			●	
<i>Prunus virginiana</i>	Chokecherry	2	fs	6 - 9 m			●	

<i>Prunus virginiana</i> 'Schubert'	Schubert Chokecherry	3	fs-psh	6 - 9 m	●	
<i>Pyrus</i> spp.	Pear	3 - 8	fs	9 - 15 m	●	
<i>Quercus alba</i>	White Oak	3	fs	15 - 25 m		●
<i>Quercus falcata</i>	Southern Red Oak	7	fs	21 - 24 m		●
<i>Quercus garryana</i> *	Garry Oak	6	fs	12 - 27 m		●
<i>Quercus macrocarpa</i>	Bur Oak	2	fs	21 - 24 m		●
<i>Quercus palustris</i>	Pin Oak	4	fs	15 - 21 m		●
<i>Quercus rubra</i>	Red Oak	4	fs	18 - 23 m		●
<i>Rhus copallina</i>	Shining Sumac	4	fs	8 m		●
<i>Rhus typhina</i>	Staghorn Sumac	3	fs-psh	4.5 - 7.5 m	●	●
<i>Robinia psuedoacacia</i> 'Purple Robe'	Purple Robe Locust	3	fs	9 - 12 m		●
<i>Salix babylonica</i>	Weeping Willow	5	fs	9 - 12 m		●
<i>Sassafras albidum</i>	Sassafras	4	fs-psh	9 - 18 m		●
<i>Sophora japonica</i>	Japanese Pagoda Tree	4	fs-psh	15 - 21 m		●
<i>Sorbus aucuparia</i>	European Mountain Ash	3	fs-psh	6 - 9 m	●	●
<i>Sorbus scopulina</i> *	Western Mountain Ash	2 - 4	fs-psh	15 - 25 m		●
<i>Tilia</i> spp.	Linden					● ●

SHRUBS		Hardness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	Common Name							
<i>Amelanchier</i> sp.	Saskatoon, Serviceberry	4	fs-psh	2.5 - 3.5 m		●		
<i>Amorpha fruticosa</i> *	False Indigo, Indigobrush	4	fs-psh	4.5 m			●	
<i>Aronia</i> spp.	Chokeberry	3 - 4	fs-psh	1.8 - 3 m			●	
<i>Atriplex</i> sp. *	Saltbrush	6	fs	0.9 - 1.8 m	●			
<i>Buddleia</i> sp.	Butterfly Bush	5	fs	3 - 4.5 m			●	
<i>Caluna vulgaris</i>	Heather	4	fs-psh	10 - 60 cm			●	
<i>Caragana arborescens</i>	Siberian Peashrub	2	fs-psh	4.5 - 6 m	●	●		

SHRUBS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	Common Name							
Caryopteris x clandonensis	Blue-mist Spirea	5	fs-psh	0.90 - 1.5 m	●			
Ceanothus gloriosus	Point Reyes Ceanothus	7	fs-psh	30 - 90 cm	●			
Ceanothus ovatus	Ceanothus	4	fs-psh	60 - 90 cm	●			
Ceanothus prostratus *	Mahala Mat	5	fs	2.5 - 7.5 cm	●			
Ceanothus spp.	Snowbrush, Buckbrush, Sticky Laurel	4	fs-psh	0.5 - 3 m	●			
Chaenomeles spp.	Quince	4	fs-psh	0.6 - 3 m			●	
Chrysothamnus spp.	Rabbitbrush, Rabbitbush	3	fs	1 m	●			
Cistus purpureus	Orchid Rockrose	8	fs	0.90-1.20 m		●		
Cornus sericea	Red-twig Dogwood, Redosier Dogwood	2	fs	2.1 - 3 m		●	●	●
Corylus cornuta *	Beaked Hazelnut, Filbert	4	fs-psh	1.2 - 2.4 m	●			
Cotinus coggygria	Smoke Tree	4	fs	3 - 4.5 m	●			
Cotoneaster acutifolius	Cotoneaster, Peking	4	fs-psh	1.8 - 3 m	●	●		
Cotoneaster apiculatus	Cotoneaster, Cranberry	4	fs-psh	90 cm			●	
Daphne x burkwoodii	Daphne, Carol Mackie	4	fs-psh	0.60 - 1.2 m			●	
Elaeagnus commutata	Silverberry	2	fs	1.8 - 3.5 m	●			
Euonymus alatus 'Compactus'	Burning Bush	4	fs-psh	1.2 - 1.8 m				●
Forsythia spp.	Forsythia	4 - 5	fs	2.5 - 3 m	●	●		
Gaultheria shallon	Salal	6	fs-psh	0.30 - 3 m				●
Hamamelis spp.	Witchhazel	3 - 5	fs-psh	1.8 - 9 m			●	
Hibiscus syriacus	Rose of Sharon	5	fs-psh	2.5 - 3.5 m			●	
Holodiscus discolor	Oceanspray	5	fs-psh	1.8 - 2.7 m			●	
Hydrangea quercifolia	Oakleaf Hydrangea	5	fs-psh	1.2 - 1.8 m			●	
Kerria japonica	Japanese Kerria	4	ps	0.9 - 1.8 m			●	
Ligustrum spp.	Privet	3-8	fs-psh	1.8 - 4.5 m			●	
Lonicera tatarica	Tatarian Honeysuckle	3	fs-psh	3 - 3.5 m			●	

SHRUBS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
Mahonia aquifolium	Oregon Grape	3	fs-psh	1.5 - 1.8 m	●	●		
Mahonia repens	Creeping Holly	3	fs-psh	30 - 45 cm			●	
Paxistima myrtifolia	Oregon Boxwood	5	fs-psh	0.30 - 1.2 m				●
Philadelphus sp.	Mock Orange	4	fs-psh	1.8 - 2.4 m	●	●		
Physocarpus opulifolius	Ninebark	2	fs-psh	1.5 - 3 m	●	●		
Potentilla fruticosa	Potentilla, Cinquefoil	2	fs-psh	0.3 - 1.2 m	●			
Prunus besseyi	Western Sandcherry	3	fs-psh	1.2 - 1.8 m			●	
Prunus cistena	Purple-Leaf Sand Cherry	2	fs-psh	2 - 3 m			●	
Prunus tomentosa	Nanking Cherry	2	fs-psh	1.8 - 3 m			●	
Prunus triloba	Flowering Almond / Double Flowering plum	3	fs-psh	3.5 - 4.5 m		●	●	
Prunus virginiana melanocarpa*	Western Chokecherry	2	fs-psh	5.5 - 7.5 m			●	
Purshia tridentata *	Antelope Bitterbrush	3	fs	1 - 2 m			●	
Pyracantha coccinea	Firethorn / Pyracantha	6	fs-psh	1.8 - 5.5 m			●	
Rhamnus frangula	Tallhedge Glossy Buckthorn	2	fs-psh	2.5 - 3.5 m			●	
Rhododendron macrophyllum*	Pacific Rhododendron	6	fs-psh	1.8 - 3.6 m				●
Rhododendron occidentale	Western Azalea	6	fs-psh	1.5 m				●
Rhus aromatica	Fragrant Sumac	3	fs-psh	0.6 - 1.8 m	●			
Rhus glabra	Smooth Sumac	2	fs-psh	2.75 - 4.5 m		●		
Rhus trilobata *	Sumac, Skunkbrush	4	fs-psh	0.9 - 1.8 m		●		
Ribes alpinum	Alpine Currant	2	fs-psh	0.90 - 1.8 m		●	●	
Rosa rugosa 'Hansa'	Rugosa Rose	2	fs-psh	1.5 - 1.8 m		●	●	
Rosa woodsii *	Wood's Rose	4	fs-psh	0.90 - 1.8 m			●	
Rubus sp.	Raspberry	3 - 5	fs-psh	2 - 150 cm			●	
Salix spp.	Willow e.g. Blue Fox	2	fs	1.8 - 3 m				●
Sambucus spp.	Elderberry	3 - 5	fs-psh	1.5 - 9 m		●		

Santolina chamaecyparissus	Santolina, Grey Lavender, Lavender Cotton	6	fs	30 - 60 cm	●	
Shepherdia spp.	Buffaloberry	2	fs	1.8 - 3.0 m	●	
Spiraea alba *	Meadowsweet	3	fs-sh	0.9 - 1.8 m		●
Spiraea douglasii	Western Spiraea, Hardhack	4	fs-psh	0.90 - 1.8 m		●
Spiraea spp.	Spiraea	3	fs-psh	0.60 - 1.2 m	●	●
Symphoricarpos albus	Snowberry	3	fs-psh	1.2 - 1.8 m	●	
Syringa vulgaris	Common Lilac	3	fs-psh	1.5 - 4.5 m	●	●
Vaccinum spp.	Blueberry	2 - 8	fs-psh	0.15 - 3.5 m		●
Viburnum acerifolium	Maple Leaf Viburnum	3	sh	1.2 - 1.8 m		●
Viburnum edule *	High-bush Cranberry	5	fs	1.8 - 2.5 m		●
Viburnum trilobum	Cranberry Bush	2	fs-psh	1.2 - 3.5 m		●

VINES AND GROUNDCOVER		Hardiness (Zone(s))	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
Ajuga reptans	Carpet Bugle	4	fs-psh	10 - 25 cm			●	
Antennaria rosea	Pussytoes	4	fs	10 - 30 cm		●	●	
Arctostaphylos uva-ursi	Kinnickinnick	2	fs-psh	10 - 20 cm	●	●		
Armeria maritima	Thrift	4	fs-psh	15 - 25 cm		●		
Artemisia caucasica	Silver Spreader	4	fs-psh	15 - 20 cm		●		
Artemisia stelleriana	Beach Wormwood, Dusty Miller	3	fs	20 cm		●		
Campsis radicans	Trumpet Vine	4	fs	6 - 12 m			●	
Cerastium tomentosum	Snow-In-Summer	3	fs-psh	15 - 30 cm		●		
Cotoneaster dammeri	Cottoneaster, Bearberry	5	fs-psh	30 - 45 cm			●	
Cotoneaster horizontalis	Cotoneaster, Horizontalis	4	fs-psh	60 - 90 cm			●	
Duchesnea indica	Mock Strawberry	5	fs-psh	<15 cm			n/a	
Euonymus fortunei	Wintercreeper	4	fs-sh	10 - 15 cm			●	
Gaultheria procumbens	Wintergreen	3	fs-psh	15 cm			●	

Lamium sp.	Dead Nettle	3	fs-psh	10 - 30 cm		●
Lathyrus latifolius	Perennial Sweet Pea	3	fs-psh			●
Liriope spicatum	Lily-turf	4	fs-sh	20 - 30 cm		●
Lonicera sp.	Honeysuckle	4	fs-psh	spread 3+m		●
Pachysandra terminalis	Japanese Spurge	5	fs-psh	15 - 20 cm		●
Parthenocissus quinquefolia	Virginia Creeper	3	fs-sh	9 - 15+ m		● ●
Potentilla neumanniana 'Nana'	Spring Cinquefoil, Creeping Potentilla	4	fs-psh	5 - 10 cm		●
Rosa setigera	Climbing Rose	4	fs-psh	1.0 - 4.5 m		●
Sedum sp.	Stonecrop, Sedum (creeping)	3	fs-psh	5 - 30 cm	●	
Thymus praecox	Creeping Thyme	3 - 4	fs-psh	2.5 - 10 cm		● ●
Thymus pseudolanuginosus	Wooly Thyme	3	fs	7.5 - 10 cm		●
Thymus spp.	Thyme	3 - 5	fs	1 cm		●
Vinca major	Large Periwinkle	7	ps-sh	30 - 45 cm		●
Vinca minor	Periwinkle	3	fs - sh	7 - 15 cm		●

GRASSES		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	Common Name							
Agropyron cristatum	Wheatgrass, Crested, Western	3	fs	50 - 100 cm	●			
Bouteloua gracilis	Mosquito Grass, Blue Grama Grass	3	fs	30 cm	●	●		
Buchloe dactyloides	Buffalograss	4	fs	30 cm		●	●	●
Carex spp.	Sedges	4 - 8	fs-psh	30 - 45 cm				●
Dactylis glomerata *	Orchardgrass	5	fs-psh	30 - 60 cm		●		
Elymus elymoides *	Squirreltail Grass	3	ps	30 - 60 cm		●		
Festuca arundinacea	Fescue, Tall	2	fs-psh	1.2 m			●	●
Festuca cinerea	Fescue, Blue	4	fs-psh	10 - 20 cm		●		
Festuca rubra	Fescue, Creeping Red	5	fs-psh	5 - 7.5 cm				●
Koeleria macrantha	Junegrass	4	fs-psh	30 - 60 cm			●	

Lolium spp.	Ryegrass	4 - 6	fs	30 - 80 cm	● ●
Pascopyrum smithii *	Western Wheatgrass	5	fs	30 - 90 cm	●
Poa fendleriana *	Muttongrass	3	ps	30 - 60 cm	n/a
Poa secunda *	Sandberg Bluegrass	2	fs	30 cm	n/a
Scirpus atrovirens *	Bulrushes	3	fs	1 - 1.5 m	n/a
Sporobolus cryptandrus *	Sand Dropseed	5	fs	1 m	n/a
Heterostipa comata *	Porcupine Grass, Needle-and-thread Grass	3	psh	90 cm	●

PERENNIALS AND BIENNIALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
Achillea sp.	Yarrow	4	fs	15 - 90 cm	●			
Aconitum spp. *	Monkshood	3	fs-psh	45 - 60 cm				●
Alcea rosea	Hollyhock	3	fs	120 - 180 cm			●	●
Alchemilla sp.	Lady's Mantle	3	ps	30 cm			●	
Allium sp.	Chives	4	fs-psh	30 - 60 cm	●	●		
Anaphalis margaritacea	Pearly Everlasting	4	fs	20 - 90 cm	●			
Anemone blanda	Windflower	5	fs-psh	15 - 30 cm			●	
Aquilegia sp.	Columbine	3	fs-psh	25 - 90 cm			●	
Arabis sp.	Rockcress	3	fs	<30cm			●	
Armeria maritima	Sea Pinks	3	fs-psh	15 - 30 cm			●	
Artemisia frigida *	Pasture Sage, Fringed Sage	3	fs	30 - 60 cm	●			
Asarum caudatum *	Wild Ginger, Winterfat	7	ps	10 cm			●	
Asclepias incarnata	Swamp Milkweed	3	fs-psh	1.2 m			●	
Aster puniceus *	Swamp Aster	2	fs-psh	50 - 100 cm			●	
Aster spp.	Aster	3	fs	0.15 - 1.8 m			●	
Aubrieta deltoidea	False Rockcress	4	fs-psh	7.5 - 20 cm	●			
Aurinaria saxatilis	Basket of Gold	3	fs	20 - 45 cm	●	●		



PERENNIALS AND BIENNIALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
<i>Bergenia cordifolia</i>	Bergenia	3	fs-psh	30 - 35 cm				●
<i>Campanula rotundifolia</i>	Common Harebell	3	fs-psh	15 - 30 cm			●	
<i>Centranthus ruber</i>	Red Valerian	4	fs-psh	60 - 75 cm	●			
<i>Claytonia lanceolata</i> *	Spring Beauty	5	fs	15 - 45 m				●
<i>Convallaria majalis</i>	Lily-of-the-valley	2	sh	<30 cm				●
<i>Coreopsis auriculata</i> var. <i>Nana</i>	Coreopsis, Dwarf Mouse Ear	3	fs	30 - 60 cm		●		
<i>Coreopsis</i> sp.	Coreopsis, Tickseed	3	fs-psh	25 - 60 cm	●			
<i>Delosperma cooperi</i>	Ice Plant - Purple	5	fs-psh	2.5 - 10 cm		●		
<i>Delosperma nubigenum</i>	Ice Plant - Yellow	4	fs-psh	2.5 - 7.5 cm	●			
<i>Delphinium</i> sp.	Delphinium	3	fs-psh	30 - 210 cm			●	
<i>Dianthus</i> sp.	Dianthus, Garden Carnation, Pinks	3	fs-psh	5 - 30 cm			●	
<i>Dodecatheon meadia</i>	Shooting Star	4	sh-psh	50 cm				●
<i>Doronicum</i> sp.	Leopard's Bane	4	fs-psh	30 - 60 cm			●	
<i>Echinacea purpurea</i>	Purple Coneflower	3	fs	60 - 90 cm			●	
<i>Epilobium angustifolium</i> *	Fireweed	3	fs-psh	60 - 90 cm	●			
<i>Erigeron</i> hybrids	Fleabane	4	fs	<30 cm	●			
<i>Erysimum asperum</i> *	Western Wallflower	3	fs-psh	30 cm			●	
<i>Eupatorium maculatum</i>	Joe Pye Weed	5	fs-psh	1 - 1.5 m			●	
<i>Eupatorium perfoliatum</i>	Boneset	3	fs-psh	50 - 100 cm			●	
<i>Euphorbia epithymoides</i>	Cushion Spurge	3	fs	30 - 45 cm	●			
<i>Fragaria</i> sp. *	Strawberry, Wild	5	fs	20 - 25 cm			●	
<i>Gaillardia</i> sp.	Blanket Flower	3	fs	20 - 90 cm	●			
<i>Galium boreale</i> *	Northern Bedstraw	5	sh	<30 cm				●
<i>Geranium cinereum</i>	Cranesbill, Grayleaf	4	fs-psh	10 - 15 cm	●		●	
<i>Geranium maculatum</i>	Cranesbill, Wild Geranium	5	fs-psh	45 - 75 cm			●	

PERENNIALS AND BIENNIALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
<i>Geranium sanguineum</i>	Cranesbill, Blood-red	3	fs-psh	10 - 30 cm			●	
<i>Geum triflorum</i> *	Old Man's Whiskers, Prairie Smoke	5	fs-psh	45 cm				●
<i>Helianthemum nummularium</i>	Sun Rose	3	fs-psh	30 - 50 cm		●		
<i>Hemerocallis</i> hybrids	Daylily	3	fs-psh	30 - 120 cm		●	●	
<i>Heuchera sanguinea</i>	Coral Bells, Heuchera	3	fs-psh	30 - 50 cm		●	●	
<i>Hosta</i> sp.	Hosta, Plantain Lily	3	fs-psh	15 - 90 cm				●
<i>Iberis sempervirens</i>	Candytuft	3	fs	23 - 30 cm			●	
<i>Ipomopsis aggregata</i> *	Scarlet Gilia	7	fs-psh	30 - 60 cm	●			
<i>Iris missouriensis</i> *	Rocky Mountain Iris	3	fs	30 - 60 cm			●	
<i>Kniphofia uvaria</i>	Red-Hot Poker	4	fs	30 - 120 cm		●	●	
<i>Lavandula</i> sp.	Lavender	4	fs	30 - 60 cm			●	
<i>Leucanthemum x superbum</i>	Shasta Daisy	4	fs-psh	60 - 90 cm		●	●	
<i>Leucocrinum montanum</i> *	Sand Lily, Star Lily	6	fs	<30 cm				n/a
<i>Liatris punctata</i> *	Dotted Gayfeather	3	fs	30 - 60 cm				
<i>Limonium latifolium</i>	Sea-lavender, Statice	4	fs	75 cm			●	
<i>Linum perenne</i>	Perennial Flax	2	fs-psh	30 - 50 cm		●		
<i>Lupinus argenteus</i> *	Silver Lupine	3	ps	30 - 90 cm		●		
<i>Lupinus</i> hybrids	Lupine, Russell Hybrids	4	fs-psh	45 - 120 cm			●	
<i>Medicago sativa</i>	Alfalfa	5	fs	100 cm				n/a
<i>Mertensia lanceolata</i> *	Narrow-leaved Chiming Bells	3	ps	30 - 60 cm				n/a
<i>Mertensia virginica</i>	Virginia Bluebells	3	ps	50 cm				●
<i>Monarda fistulosa</i>	Wild Bergamot, Native Beebalm	3	fs-psh	30 - 60 cm		●		
<i>Nepeta racemosa</i>	Catmint	3	fs	30 - 60 cm		●	●	
<i>Oenothera</i> spp.	Primrose	3	fs-psh	15 - 30 cm		●		

PERENNIALS AND BIENNIALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
<i>Onoclea sensibilis</i>	Sensitive Fern	4	sh-psh	50 cm				●
<i>Opuntia polycantha</i> *	Prickly Pear Cactus	3	fs	5 - 60 cm		●		
<i>Papaver orientale</i>	Oriental Poppy	3	fs-psh	60 - 90 cm			●	
<i>Penstemon</i> spp.	Penstemon, Beardtongue	3	fs-psh	10 - 120 cm		●		
<i>Perovskia atriplicifolia</i>	Russian Sage	4	fs	90 - 150 cm		●	●	
<i>Phlox subulata</i>	Moss Phlox	3	fs	10 - 15 cm			●	
<i>Platycodon grandiflorus</i>	Balloon Flower	3	fs	75 - 90 cm			●	
<i>Polemonium</i> spp.	Jacob's Ladder	2	fs-psh	30 - 90 cm			●	
<i>Potentilla fissa</i> *	Bigflower Cinquefoil, Leafy Potentilla	4	ps	30 cm			n/a	
<i>Potentilla nepalensis</i>	Nepal Cinquefoil	5	fs-psh	45 - 60		●		
<i>Pulsatilla patens</i>	Pasque Flower	5	fs-psh	30 cm			●	●
<i>Ratibida columnifera</i>	Prairie Coneflower, Mexican Hat	3	fs	60 cm			●	
<i>Rudbeckia fulgida</i>	Black-eyed Susan	3	fs	60 - 90 cm			●	
<i>Salvia</i> spp.	Sage, Perennial Salvia	3 - 5	fs	30 - 120 cm		●	●	
<i>Saponaria</i> sp.	Soapwort	2	fs	10 - 23 cm		●		
<i>Saxifraga hirsuta</i>	Saxifrage	5	fs-psh	15 cm			●	●
<i>Sedum spectabile</i>	Stonecrop, Sedum (upright)	3	fs-psh	30 - 45 cm		●		
<i>Sempervivum</i> sp.	Hen-and-chicks	4	fs-psh	5 - 15 cm	●			
<i>Solidago missouriensis</i> *	Prairie Goldenrod, Missouri Goldenrod, Smooth Goldenrod	3	fs	30 - 60 cm			●	
<i>Stachys byzantina</i>	Lamb's Ears	4	fs	30 - 38 cm		●	●	
<i>Tanacetum coccineum</i>	Painted Daisy	5	fs-psh	60 cm		●		
<i>Thermopsis montana</i>	False Lupine	3	fs-psh	60 - 90 cm			●	
<i>Tradescantia occidentalis</i> *	Prairie Spiderwort, Western Spiderwort	4	fs-psh	45 cm		●		

Verbena hastata	Blue Vervain	3	fs	50 - 150 cm	●
Veronica spicata	Veronica, Speedwell	3	fs-psh	2.5 - 15 cm	●
Viola canadensis *	Canadian Violet	3	fs-psh	30 cm	●
Waldsteinia sp. *	Barren Strawberry	4	ps	<30 cm	n/a
Yucca filamentosa	Yucca	4	fs-psh	60 - 90 cm	●

ANNUALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
Antirrhinum majus	Snapdragon	n/a	fs	60 - 90 cm			●	●
Gazania ringens	Gazania	n/a	fs	20 - 40 cm			●	
Geranium sp.	Geranium	n/a	fs-psh	30 - 45 cm		●	●	
Lantana sp.	Lantana	n/a	fs	45 - 75 cm		●		
Lathyrus odoratus	Sweet Pea	n/a	fs-psh	2 m			●	
Salvia spp.	Salvia	n/a	fs	15 - 45 cm			●	
Senecio cineraria	Dusty Miller	n/a	fs	30 - 60 cm		●	●	
Viola sp.	Pansy	n/a	fs-psh	15 - 20 cm			●	●

BULBS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
Scientific Name	Common Name				Very Low	Low	Medium	High
Allium cernum	Nodding Onion	3	fs-psh	30 cm			●	
Crocus sp.	Crocus	5 - 8	fs	6 - 14 cm		●		
Lilium sp.	Lily	4 - 5	fs-psh	60 - 180 cm			●	
Narcissus sp.	Daffodil	4	fs	30 - 60 cm		●		
Tulbaghia violacea	Society Garlic	7	fs	30 cm			●	
Tulipa sp.	Tulip	4	fs-psh	15 - 90 cm			●	

## LEGEND INFO

\* NATIVE PLANTS THAT MAY NOT BE COMMERCIALY AVAILABLE

Irrigation requirements during growing season:

Less than 350 mm (14")



About 350-450 mm (14-18")



About 450 mm+ (18"+)



About 500 cm+ (20"+)



Some plants fit into more than one water use category as they are more adaptable.

## SUN/SHADE

Prefers full sun

fs

Prefers full sun to part shade

fs-psh

Part sun

ps

Prefers full shade

sh

For greatest success and efficient water use, group plants together with similar water requirements.

Not all plants are suitable for every area. Check plant specific requirements.

Turfgrass is in a category all itself - it uses 890 - 1020 mm (35-40 inches) per year.

*Poa pratensis*

Kentucky Bluegrass

## PLANTS TO AVOID

**Scientific Name**

**Common Name**

*Cortaderia selloana*

Pampas Grass

*Genista* sp.

Broom

*Ilex* spp.

Holly

*Juniperus* spp.

Juniper

*Pennisetum* spp.

Fountain Grass

*Picea pungens*

Colorado Spruce

*Pinus* sp.

Pine

*Taxus* spp.

Yew

*Thuja* spp.

Cedar, Arborvitae

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\*WUCOLS is the acronym for Water Use Classification of Landscape Species

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