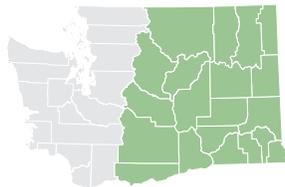




Fire-Resistant Plants for Eastern Washington



A Step-by-Step Guide for
Choosing the Right Plant for
the Right Place



Master Gardener
Program

WASHINGTON STATE UNIVERSITY
EXTENSION

15	GROUNDCOVERS
29	HERBACEOUS PERENNIALS
39	VINES
43	DECIDUOUS SHRUBS
49	BROADLEAF EVERGREEN SHRUBS
55	NON-TURF GRASSES
59	TREES

4	INTRODUCTION
5	FIRE OCCURRENCE
6	FIRE RESISTANCE
8	HOME IGNITION ZONES AND LANDSCAPE ZONES
11	MAINTENANCE
12	NOTES ON TREES, PLANTS
13	INVASIVE PLANTS AND NOXIOUS WEEDS
13	WEB RESOURCES
14	PLANT CHARACTERISTICS
76	REFERENCE
78	GLOSSARY
80	INDEX

ACKNOWLEDGMENTS

The information and photos in this publication have been gathered from numerous sources, all of which are listed in the literature-referenced section. Some images are credited next to the photos.

This publication lists only fire-resistant plants that are in other Firewise documents. Master Gardener volunteers did not perform any empirical research, but only compiled existing information about plants that are likely to thrive in Eastern Washington. We wish to thank those who “went before us” in researching and gathering this valuable information.

SPECIAL THANKS TO

- Washington State University (WSU) Chelan/Douglas County Master Gardener volunteers
- Washington State University (WSU) Extension staff
- Washington State Department of Natural Resources staff
- Al Murphy, project coordinator and author

WASHINGTON STATE UNIVERSITY (WSU) MASTER GARDENERS

WSU Master Gardeners are university-trained community volunteers who provide research-based, sustainable landscape education to communities across Washington State.

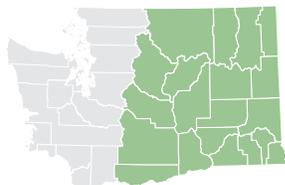
Volunteers teach about environmental stewardship through providing information about best gardening practices for the goal of protecting natural resources in a sustainable manner.

WSU Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local extension office.

DISCLAIMER

This document contains suggestions and recommendations based on professional judgment, experience, and research. It is intended to serve only as a guide. The compilers of the information contained in this document and the publisher disclaim all warranties with respect to the information in the document and assume no liability or responsibility with respect to the information contained herein.

Fire-Resistant Plants for Eastern Washington



A Step-by-Step Guide for Choosing the Right Plant for the Right Place

PUBLISHED JUNE 2021



Master Gardener Program

WASHINGTON STATE UNIVERSITY
EXTENSION

INTRODUCTION

A well-designed landscape around a home is key to reducing the risk of loss from a wildland fire. Maintaining that landscape is essential to providing defensible space for the home and for providing for the safety of firefighters when a wildland fire occurs.

All vegetation is potential fuel for a fire. There is no absolutely fire-proof vegetation. All plants will burn if the conditions are right. There are, however, plants that are FIRE-PRONE, and those that are FIRE-RESISTANT. The use of fire-resistant vegetation and proper maintenance are paramount in reducing the risk of home losses in the Wildland Urban Interface (WUI).

Landscapes change over time. Plants mature to their genetically predetermined size. We often landscape with small, young plants only to be amazed at the mature size some plants achieve years later. Plan ahead! Plant the appropriate plants in the correct areas.

To minimize fire danger, keep in mind plants' sizes at maturity and appropriate plant location.

When Selecting Plants and Plant Locations, Consider These Major Points:

Climate & Soil: Is the selected plant hardy for the climate zone? Will it grow well in the type of soil it is going to be planted in?

Root Space: Are the roots of the plant going to cause future problems to areas such as septic drain fields, sidewalks, or foundations in the selected location?

Plant Height: Does the selected plant have the room to grow to its pre-determined genetic height in the selected area?

Plant Spread: Does the selected plant have room to spread to its pre-determined genetic width?

Design the landscaping to include a combination of fire-resistant vegetation and non-combustible materials such as decorative bricks, walls, paths, patios, rock mulches, and other attractive fire-resistant features.

PURPOSE

The purpose of this publication is to provide building owners guidance and education about ways to landscape property with fire-resistant plants. Fire-resistant plants placed in the appropriate areas around homes and businesses, coupled with proper maintenance, can help reduce damage from wildland fires.

OBJECTIVES

Provide homeowners, businesses, and landscapers in Eastern Washington counties with examples of plant species to use in landscapes to lessen the potential for losses from wildland fires.

Inform residents about landscaping techniques which can be used in fire-prone environments to reduce the risk of experiencing loss from a wildland fire.

Understand the need and value of planting different types of plants in different areas around a structure in the Wildland Urban Interface (WUI).

Gain an appreciation of favorable plant attributes that are more fire-resistant.

Understand less-favorable plant attributes that are more fire-prone and, therefore, less desirable in close proximity to a structure.



Fire Occurrence in Eastern Washington

Historically wildfire would burn an area every 6 to 30 years in Eastern Washington. This frequent fire interval has been a part of the Eastern Washington's ecosystem since the retreat of the Continental glaciers more than 10,000 year ago. Wildland fire is an essential part of the environment in this area. It serves as a key component in maintaining a healthy and productive ecosystem.

To minimize fire risks in the fire-prone environment of Eastern Washington, property owners should properly site buildings, use appropriate construction materials, and select fire-resistant plants in their landscapes.

Firebrands (Sparks or Embers)

Wildfire threatens homes in three ways: direct contact by flames, radiated heat, and firebrands (burning embers). More homes burn due to firebrands than due to any other cause. When fire conditions are right, firebrands can be lofted high into the air and transported more than a mile from the main fire. Firebrands also can be carried by wind and fire whirls.

If firebrands land in easily ignitable materials such as dried grass, fallen leaves, wood shake roofs, leaf or needle-filled gutters, a new fire easily can start. Home owners can take action to reduce the ignition potential on and immediately adjacent to the home to combat incoming firebrands.

HOW TO USE THIS PUBLICATION

The plants in this guide are divided into seven (7) categories:

Page number	Plant category
15	GROUNDCOVERS
29	HERBACEOUS PERENNIALS
39	VINES
43	DECIDUOUS SHRUBS
49	BROADLEAF EVERGREEN SHRUBS
55	NON-TURF GRASSES
59	TREES

Plant Profile Example

Scientific name	Common name
<i>Lamium armenum</i> DEAD NETTLE	
	<p>Hardiness Zone: 4-8 Size: H/W 10'x24' Suculent: No Landscape Zone: 1, 2 or 3</p> <p>Characteristics & Problems: A tufted-to-small-mat-forming perennial from a stout rootstock. Do not plant <i>L. galiobdolon</i> because it is invasive.</p>
 <p>Sun and water needs</p>	<p>Short comments that provide information about the unique qualities or specific problems of each plant</p>

FIRE RESISTANCE

Some landscape plants are described and marketed as fire-resistant. It is important to remember, given certain conditions, that all plants can burn regardless of how they are classified. In general, select plants that are low-growing, open-structured, and less-resinous (oily or waxy). Plant maintenance and placement are equally important as the species of plants selected for the site. Maintenance and landscape management (e.g., pruning, watering, and cleanup) have a greater impact on whether or not a plant ignites than does the species.



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, proper pruning, etc.

CONSIDERATIONS



When choosing plants for a fire-resistant landscape, select plants with the following characteristics:

- **High moisture content in leaves**
(these ignite and burn more slowly).
- **Little or no seasonal accumulation**
of dead vegetation.
- **Open branching habits**
(they provide less fuel for fires).
- **Fewer total branches and leaves**
(again, less fuel for fires).
- **Slow-growing**, so less pruning is required (to keep open structure as noted above).
- **Non-resinous material on the plant**
(i.e. stems, leaves, or needles that are not resinous, (oily, or waxy). Junipers, pines, spruces, and firs are resinous and highly flammable.

FIRE RESISTANCE



Landscape with Noncombustible Materials

Using masonry, gravel, or stone walls to separate plant groups adds to the variety and improves the fire resistance of a landscape by breaking up fuel continuity. Use decorative rock, gravel and/or stepping stones in pathways. Cement driveways, walkways, water features and retaining walls also break up continuity. **Replace bare, weedy, or unsightly patches of ground near your home with groundcover, turf grass, non-turf grasses, rock gardens, vegetable gardens, and inorganic mulches.**



Mulches

Mulches used around the landscape are valuable because they conserve moisture and help reduce weed growth. Organic mulches, such as bark, are often used. However, firebrands from a wildland fire can ignite dry bark mulch, conveying the fire to a building.

Consider using less-flammable types of mulch such as gravel or decorative rock, or a combination of wood bark mulch surrounded by decorative rock mulch. **Choose the location of plants or garden beds that require organic mulches carefully** so not too much bark mulch is near the home or outbuildings. Fine (less than 1/4 inch particles) or stringy organic mulches ignite and burn more rapidly than larger chunks. When exposed to fire, thick mulch layers (greater than 2 inches deep) tend to smolder and are difficult to extinguish. **Do not use wood or bark mulches within 3 to 5 feet of the house.** Instead consider colored rock, rock cinders (scoria, sometimes referred to as lava rock), pavers or other non-flammable, inorganic materials.



Building Materials

The home design, location, construction materials, and access all influence its survivability during a wildland fire. The most exposed portion of your home is the roof. **Class C or better roofing offers fire resistance** and greatly improves the likelihood of the structure surviving a wildland fire. The use of fire-resistant building materials such as cement board siding, dual-pane windows, boxing in eaves, and metal screening (1/8" or less) covering vents reduces the probability of ignition of one's home. Make sure decks and fencing are in good repair and free of clutter and debris. **Remember, if it is attached to your house, it is part of your house!** Consider the use of metal gates and other non-flammable materials to separate fences and decks from your home. Lawn furniture, decorations and other flammable items may serve as receptor of firebrands and pose an increased risk to your home. See www.firewise.org for additional information about building materials and construction standards.



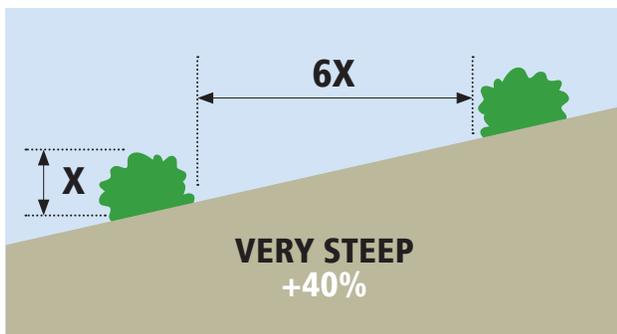
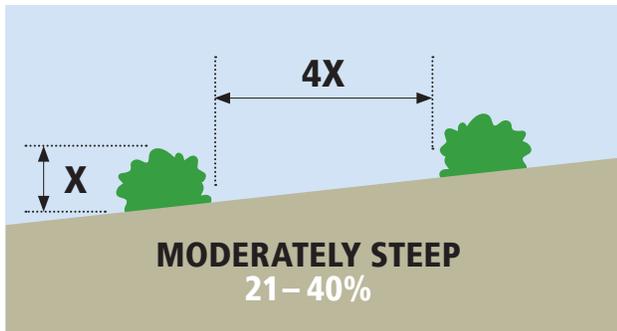
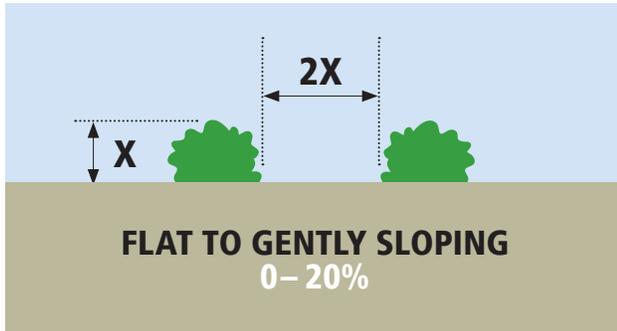
Defensible Space

The most important person in preventing a structure from burning in a wildland fire is the property owner. Home owners, not fire departments, have the responsibility to take action before a fire ever happens. Actions taken before the fire often determine the final outcome. **Creating defensible space around a home is one of the most important and effective steps one can take to protect families,** firefighters and homes from catastrophic wildfire. Defensible space is the area between a structure and an oncoming wildfire (or between a burning structure and wildland vegetation) where nearby vegetation has been modified to reduce a wildfire's intensity and ability to spread. Having a defensible space not only protects homes, it also helps protect those who are defending homes by providing safe ingress and egress.

SEPARATION DISTANCE

Recommended Separation Distances for Shrubs and Small Conifers

For areas with dense brush and small conifer trees, the recommended separation distance is dependant upon shrub height and steepness of slope. Specific recommendations are presented below.



Note: Separation distances are measured between canopies (outermost branches) and not between trunks.

If your home is located on a 10% slope and the brush is 4-feet tall, the separation distance would be two times the shrub height or 8 feet. The recommended separation distance can be accomplished by removing plants or through pruning that reduces the diameter or height of shrubs (shorter means less separation is needed). Removal works best for sagebrush. For shrubs which readily resprout, pruning to reduce height may be the best approach.

REDUCING IGNITION

HOME IGNITION ZONE AND LANDSCAPE ZONES

The Home Ignition Zone (HIZ) begins at the home and extends out as far as 100 to 200 feet depending on the characteristics of adjacent lands. Keeping and maintaining the Home Ignition Zone lean, clean and green reduces ignition risk and the fire spread potential. Within the Home Ignition Zone, a fire-resistant landscape can be created by reducing flammable fuels. A method to accomplish this is to establish landscape zones that start at the home and move progressively outward. These Landscape Zones (LZ) within the Home Ignition Zone can be used when selecting fire-resistant vegetation in fire-prone environments.

There are three Landscape Zones:

Landscape Zone 1 is closest to the home, while Landscape Zones 2 and 3 subsequently extend out from the structure 30 feet and 100 feet, respectively.

Within this Home Ignition Zone of 100 feet this publication makes recommendations for specific fire-resistant plants suitable for Landscape Zones 1, 2 and 3.

Landscape Zone 1, (LZ1) 5 ft. out from the house,

or structure when constructed with one-hour flame-resistant siding, and 10-feet from a structure when constructed with a non-flame-resistant siding.

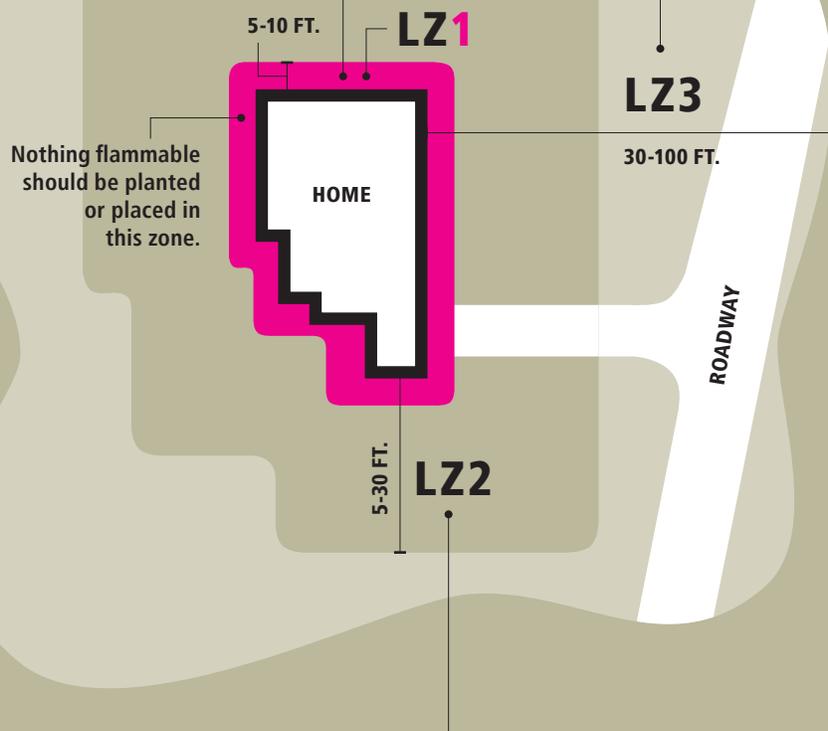
Nothing flammable should be planted or placed in this zone. This includes trees, brush, tall grass, leaves, firewood piles, bark mulch, and other flammable materials.

- Carefully examine under decks and in dense vegetation for accumulated dead material and debris.
- Prune trees that have branches and foliage that hang into Landscape Zone 1 to eliminate the possibility of fire moving to the structure.
- Within this zone, low-flammable plants can be planted; assure they are properly cared for and maintained. The desired categories of plants in LZ1 are groundcovers, vines, sod grasses, bulbs, and annual and perennial herbaceous plants.

Landscape Zone 3, (LZ3) 30-100 ft. from the house

Remove yard debris and thin vegetation for a distance of 30 feet away from the house or structure. Properly designed driveways within LZ3 can provide a fuel break as well as safe ingress and egress for fire suppression resources.

- On slopes greater than 20%, one should extend the thinning of vegetation to 100 feet or more on the downhill side of the home or structure.
- Shrubs and ground covers should be selected based on mature height, not the size at the time of planting.
- Low and moderately flammable plants are acceptable in this location. Density of plant material also should be minimized.
- Brush and weeds should be mowed at least annually. Terracing of steep slopes will help slow wildfire spread, but this depends on wind speed and fuel availability.
- Trees in LZ3 should have a minimum of 10 to 15 feet of space between tree crowns to prevent the spread of fire. Desired categories of plants in LZ3 include groundcovers, vines, turfgrass, annual and perennial herbaceous plants, broadleaf evergreen and deciduous shrubs and deciduous trees, and non-turf grasses.



Landscape Zone 2, (LZ2) 5-30 ft. from the house

Maintain a well-kept lawn or other suitable landscape in this area.

- Avoid evergreens that ignite easily and burn quickly. Use raised beds, rock gardens, stone walkways, walls, water features, and patios to create visual interest and fuel breaks.
- Trees planted in LZ2 should have both a vertical and horizontal clearance distance of at least 30 feet from the house or structure at mature height and spread.
- Leave 10 to 15 feet of space between the edges of tree crowns to avoid fire transfer. The desired categories of plants in LZ2 are

groundcovers, turfgrass, vines, sod grasses, bulbs, annual and perennial herbaceous plants, broadleaf evergreen and deciduous shrubs, small and medium sized deciduous trees, and select non-turf grasses.

FIRE RESISTANCE

LANDSCAPE ZONES SUMMARY

LESS FIRE-RESISTANT

MORE FIRE-RESISTANT



Conifers

Grasses

Shrubs

Deciduous Trees

Perennials

Annuals

Vines

Groundcovers

Succulents

Keeping and maintaining the Home Ignition Zone lean, clean and green reduces ignition risk and the fire spread potential.



LZ1
0-10 FT.



WITHIN 10 FT. OF THE STRUCTURE

- **Plant no trees or shrubs.**
- Use only inorganic mulch. (Rubber mulch is not acceptable for use.)
- Plant fire-resistant plants with high moisture content.



LZ2
10-30 FT.



WITHIN 10-30 FT. OF THE STRUCTURE

- In this zone, use plants that are well spaced, pruned up, lean, clean, and green.
- Avoid dead fuels to create a very low fire-spread potential.
- Plant single trees that are pruned at least 10 ft. from the ground.
- Plant single shrubs. Keep well groomed.
- Clean up dead fuels.
- Eliminate continuous ground fuel and ladder fuels.



LZ3
30-100 FT.



WITHIN 30-100 FT. OF THE STRUCTURE

- In this zone, use well-spaced and pruned-up plants to minimize potential for crown ignition. Native conifers and shrubs are acceptable vegetation in this landscape zone. The intent in this zone is to keep any ignitions at a low fire intensity.
- Maintain well-spaced trees with crowns well separated.
- Eliminate ladder fuels.
- Minimize ground/surface fuels.
- Keep shrubs pruned, thinned, and well-spaced.

MAINTENANCE

MAINTENANCE IS ESSENTIAL TO A FIRE-RESISTANT LANDSCAPE

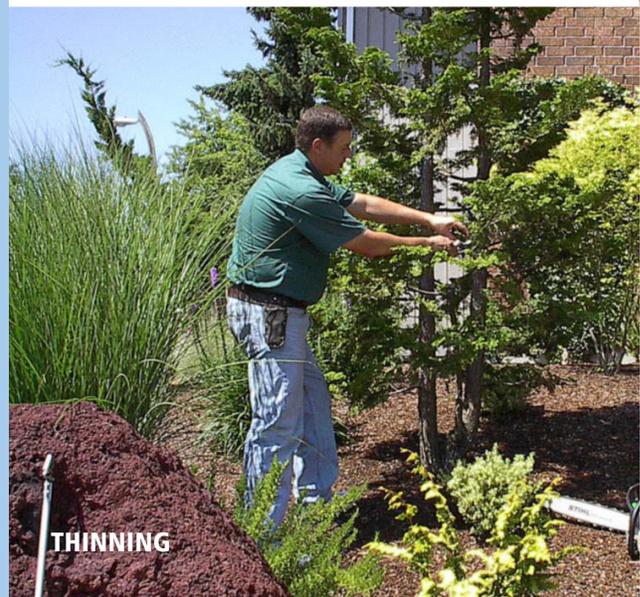
Plants listed as fire-resistant, if allowed to grow unchecked and poorly maintained, can become fire hazards. Proper maintenance of landscaping is crucial and cannot be ignored. Remember: “Lean, clean, and green” are the essentials to a fire-resistant landscape.

Maintenance Practices for Fire-Resistant Landscapes

- Washing dead debris out of plants
- Pruning to remove ladder fuels
- Thinning
- Spacing
- Raking
- Weeding
- Mowing/Weed Eating
- Watering
- Clean roofs and gutters
- Using only inorganic mulch close to structures
- Removing dead fuels
- Cleaning up and properly disposing of yard waste
- Separating shrubs horizontally so they are no closer than twice their height
- Separating plants vertically so the space between the top of a shrub and the lower branches of a tree are at least three times the height of the shrub
- Practice “Lean, Clean and Green” maintenance at least 30 feet around the structure
- Reduce spread and intensity
- Prevent ignitions



MOWING



THINNING

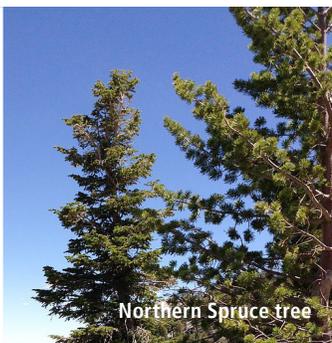


CLEANING ROOF & GUTTERS

NOTES ON TREES, PLANTS



Maple tree



Northern Spruce tree



Turfgrass



Pear tree

Maples (Genus Acer)

Maples produce many seeds that germinate at a high rate. One tree can produce thousands of seeds each year. When these wind-dispersed seeds germinate, they grow into plants that can displace natives as well as landscape plants. To keep maples in the desired locations, annual maintenance is required. Weeding out unwanted maple seedlings will help keep the area lean, clean and green.

Fruit-bearing Trees

Eastern Washington is an important fruit-growing region. To protect the valuable commercial fruit production in the area, the County Horticultural Pest Board may require a homeowner/occupant to spray or remove a fruit tree. Organic and conventional spray schedules are available, from the County Horticultural Pest Board. The following pests specifically are required to be prevented and controlled:

- Codling moth and San Jose Scale on apples and pears.
- Pear psylla on pears.
- Western cherry fruit fly and spotted wing drosophila on cherries.

This publication intentionally omits orchard-type fruit-bearing trees so as to not encourage homeowners to plant potentially problem-causing vegetation. If homeowners and occupants choose to select orchard-type fruit-bearing trees or shrubs, it is imperative that they perform proper maintenance and pest control. Ornamental flowering fruit trees with fruit less than 3/8 inch in diameter are considered safe but should be monitored for pests.

Deciduous Trees

These are trees that shed their leaves at the end of a growing season and regrow them at the beginning of the next growing season. Most deciduous trees bear flowers and have woody stems and broad leaves rather than needle-like leaves.

Deciduous trees are fire-resistant, as a general rule. In Eastern Washington counties shade in the summer and sun in the winter are desired amenities. Most deciduous trees do a good job of providing these attributes, while conifers do not provide the same attributes. Consider the use of deciduous trees in place of conifers on the east, west and south sides of your home for summer shade, winter sun, and fire-resistant characteristics.

Conifers

Conifers are evergreen trees or shrubs of the class Coniferinae (or group Coniferales) including pine, fir, spruce, and other cone-bearing trees and shrubs. This category also includes yews and their plant relatives that bear drupe-like seeds.

Most conifers do not possess fire-resistant attributes. However, some conifers are very fire resilient, meaning they are adapted to survive in fire-prone environments. Many people enjoy conifers for the other characteristics these trees offer. To help reduce the flammability of conifers, owners can employ maintenance techniques to reduce fire hazards. Some of these techniques include spacing, thinning, pruning, removing dead needles in the tree, raking, planting a proper distance from structures (greater than 30 feet), as well as keeping the area clean and properly disposing of vegetative debris. It is important to keep in mind that these trees continue to pose a fire hazard.

Turfgrasses, Annuals and Bulbs

Annuals, bulbs and turfgrasses planted anywhere in Landscape Zones 1, 2, or 3 can provide an excellent fuel break around a home or business. These plants create defensible space for the home and firefighters. These plants, when properly maintained, have a very high moisture content, grow close to the ground, and are difficult to ignite..

WEB RESOURCES

HIMALAYAN BALSAM: PHILIP HALLING



Himalayan Balsam, an invasive weed

Invasive Plants and Noxious Weeds

Invasive plants, not native to a specific location, unfortunately have been introduced to the landscape. They tend to spread.

An invasive plant is a plant which grows aggressively, spreads, and displaces other plants. Invasive plants tend to appear on disturbed ground, and the most aggressive can actually invade healthy ecosystems.

A “noxious weed,” according to the Washington State Noxious Weed Control Board, is the legal term used for an invasive, non-native plant that is so aggressive it harms the local ecosystem or disrupts agricultural production. These plants crowd out native plant species that fish and wildlife depend upon. They also cost farmers, orchardists and ranchers millions of dollars because of control efforts and lost production.

None of the plants in this publication are on the Noxious Weed List as of the date of publication. However, there are some species in this publication that can be considered invasive if proper care and maintenance are not performed.



Hardiness Zones and Heat Zones

The United States Department of Agriculture (USDA) Plant Hardiness Zone Map (<http://planthardiness.ars.usda.gov/PHZMWeb/InteractiveMap.aspx>) is the standard gardeners use to determine which plants are most likely to thrive at a location. The map is based on the average annual minimum winter temperature.

Much of Eastern Washington is within Plant Hardiness Zones 5 to 7 depending on your specific location within the counties. It is important to remember that the zones are based on average annual minimum temperatures, not the lowest winter temperature experienced. For this reason, one may choose plants that will survive in lower winter temperatures.

American Horticulture Society Heat Zones have the same concept with a zone range from Zone 1 to Zone 12. **Plants with a heat zone rating between 4 and 7 will generally thrive in Eastern Washington counties depending on your specific location.**

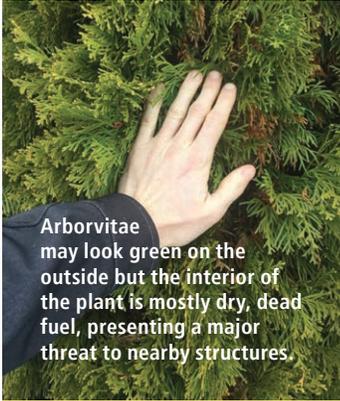
AVERAGE ANNUAL EXTREME MINIMUM TEMPERATURE

Temp (F)	Zone	Temp (F)	Zone
-60 to -55	1a	10 to 15	8a
-55 to -50	1b	15 to 20	8b
-50 to -45	2a	20 to 25	9a
-45 to -40	2b	25 to 30	9b
-40 to -35	3a	30 to 35	10a
-35 to -30	3b	35 to 40	10b
-30 to -25	4a	40 to 45	11a
-25 to -20	4b	45 to 50	11b
-20 to -15	5a	50 to 55	12a
-15 to -10	5b	55 to 60	12b
-10 to -5	6a	60 to 65	13a
-5 to 0	6b	65 to 70	13b
0 to 5	7a		
5 to 10	7b		



THE PLANT HARDINESS ZONE MAP IS USED TO DETERMINE WHICH PLANTS ARE MOST LIKELY TO THRIVE.

PLANT CHARACTERISTICS



Arborvitae may look green on the outside but the interior of the plant is mostly dry, dead fuel, presenting a major threat to nearby structures.



UNFAVORABLE



Arborvitae, the common name given to at least eight different species and cultivars of the genus *Thuja*, are one of the most fire-prone, and least fire-resistant

shrubs planted in Eastern Washington. Arborvitae is not a recommended fire-resistant plant. There are several species of juniper that also are not recommended fire-resistant species. Both arborvitae and juniper have a thin covering of green vegetation and a dense mat of dead, very flammable material underneath the green covering.

Plants that are not recommended for use in fire-prone environments.

The plants in this category have some common characteristics:

- High surface area to volume ratio, that is they have fine-textured parts.
- Low moisture content.
- High percentage of dead fuel matter or debris.

Unfavorable Trees

Pine, Firs, Larch, Spruce, Douglas-Fir, Yew, Arborvitae, Hemlock, Cedar/Juniper

Unfavorable Shrubs

Bitterbrush, sagebrush, Mugo pine, Arborvitae, Juniper, Yew

Unfavorable Grasses

Pampas grass, Cheat grass, 'Karl Foerster'

FAVORABLE

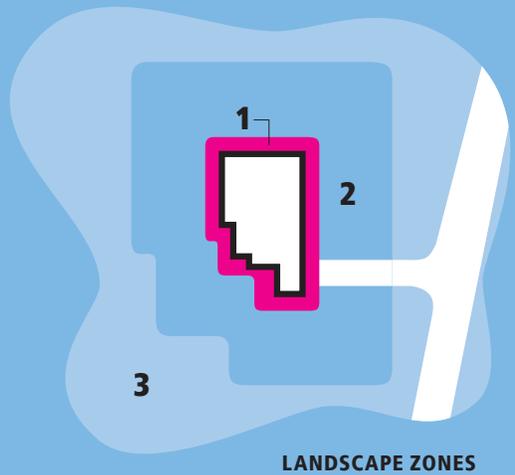


Plants that are recommended for use in fire-prone environments.

The plants in this category have some common characteristics:

- Low growing
- Herbaceous plant parts
- Open configuration
- High moisture content/succulent parts
- Water-like sap
- Broad leaves
- Low accumulation of dead materials
- Tight bark

GROUNDCOVERS



ABOUT THIS SECTION

A category of low-growing or trailing plants generally used to carpet the ground. These plants are used to cover bare ground and create a uniform appearance.

Groundcovers are ideal for Landscape Zone 1. These plants can be utilized in all three landscape zones (LZ 1, 2, or 3) to provide cover and diversity to one’s yard. They are low to the ground, generally have high moisture content, usually require low maintenance, and are, in most cases, difficult to ignite.

KEY TO SYMBOLS



Prefers full sun (6 or more hours).



Prefers part shade.



Prefers full shade (6 or more hours). Avoid afternoon sun.



Very low water-use plant; performs well in dry sites.



Low water-use plant; performs well with minimal supplemental irrigation.

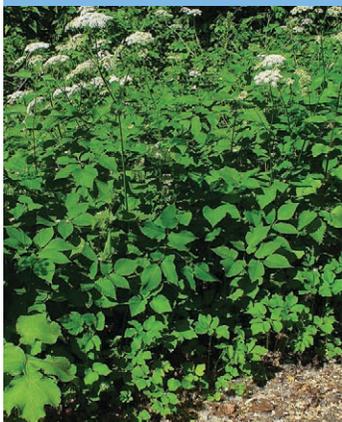


Moderate water-use plant; performs well with supplemental irrigation.



High water-use plant performs well with regular irrigation.

Aegopodium podagraria
BISHOP'S WEED



Hardiness Zone: 4-9
Size: H/W 6"x24"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Becomes invasive if over watered.
Good for shady areas.



Ajuga reptans
CARPET BUGLEWEED



Hardiness Zone: 4-8
Size: H/W 4"x24"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
This low-growing bugleweed will spread by stolons to form an attractive, mat-like ground cover.



BISHOP'S WEED: H. ZELL; ANTENNARIA MICROPHYLLA: MATT LAVIN; ANTENNARIA PARVIFOLIA: KEN RAIZ

Antennaria dioica
RUBRA' PUSSYTOES



Hardiness Zone: 3-9
Size: H/W 6"x12"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Tiny white to pale pink flowers bloom in late spring to early summer on stems rising to 10" tall.



Antennaria microphylla
LITTLE-LEAF PUSSYTOES



Hardiness Zone: 3-8
Size: H/W 6"x18"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Ideal for open sunny places or is good for rock gardens and around stepping stones and pathways.



Antennaria parvifolia
JAPANESE SPURGE



Hardiness Zone: 4-7
Size: H/W 2"x24"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Blooms first appear in early spring and continue into late spring. Features small, tubular flower heads in tight terminal clusters.



Antennaria rosea
PINK PUSSYTOES



Hardiness Zone: 4-7
Size: H/W 12"x12"
Suculent: No
Landscape Zone: 1, 2 or 3x

Characteristics & Problems:
Establishes quickly. Ideal for erosion control in dry areas where few other flowers will grow.



ROCKCRESS: ANDREY ZHARKIKH; ARTEMISIA SCHMIDTIANA: JAMES ST. JOHN; ARTEMISIA CAUCASICA: GHISLAINE118 (AD); ARTEMISIA STELLERIANA: QWERTY234; ARTEMISIA VIRIDIS: FRANCISCO MANUEL BLANCO

Arabisspecies & cultivars
ROCKCRESS



Hardiness Zone: 4-7
Size: H/W 6"x6"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Easily grown in gritty or sandy, well-drained soils in full sun. Tolerates hot, dry conditions.



Arctostaphylos uva-ursi
KINNICKINNICK



Hardiness Zone: 4-8
Size: H/W 6"x15"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
Fruit green in summer, ripening to red in fall. Fruit sometimes remains throughout winter.



Artemisia schmidtiana 'Silvermound'
SILVER MOUND ARTEMISIA

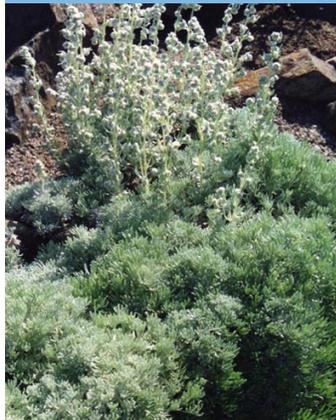


Hardiness Zone: 3-9
Size: H/W 2"x8"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
Silvery, aromatic foliage is finely textured with silky pubescence. Excellent accent for borders.



Artemisia caucasica
SILVER SPREADER



Hardiness Zone: 4-7
Size: H/W 5"x24"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
Prostrate low grower.



Artemisia stelleriana
SILVER BROCADE



Hardiness Zone: 2-9
Size: H/W 6"x24"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Plants form a spreading mat of bright silvery-white scalloped leaves.



Artemisia viridis
CREEPING ARTEMISIA



Hardiness Zone: 3-8
Size: H/W 2"x8"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
Needs some shade.



Aubrieta deltoidea
ROCKCRESS



Hardiness Zone: 4-8
Size: H/W 8"x15"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Low-growing, mat-forming habit. Ideal for rock gardens and front of borders. Produces vivid purple-red flowers in late spring and early summer.



Aurinia saxatilis
BASKET-OF-GOLD



Hardiness Zone: 4-7
Size: H/W 2"x15"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Low-growing, spreading habit. Produces profuse bright yellow spring blossoms that are particularly attractive in rock gardens.



Callirhoe involucrata
POPPY MALLOW



Hardiness Zone: 4-8
Size: H/W 6"x36"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Plants typically form a low foliage mound from 6-9" tall on procumbent stems which spread along the ground to 3' wide.



Aubrieta species & cultivars
FALSE ROCKCRESS



Hardiness Zone: 4-7
Size: H/W 2"x15"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Colorful flowers cover plants in spring. Flowers generally four-petaled, cross-shaped and can be purple, pink or white.



Bellium minutum
MINIATURE MAT DAISY



Hardiness Zone: 5-9
Size: H/W 12"x36"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Bellium covers itself with blooms all through spring and early summer.



Campanula poscharskyana
SERBIAN BELLFLOWER



Hardiness Zone: 3-8
Size: H/W 6"x18"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Prostrate, sprawling habit. Typically forms a low, mounding ground cover.



CAMPANULA CARPATICA: JERZY OPIOLA; CONVALLARIA MAJALIS: CONVALLARIA: ZAHRA DA; DUCHESHEA INDICA: WOUTER HAGEN; DELOSPERMA BASUTICUM: C.T. JOHANSSON

Campanula carpatica
CARPATHIAN BELLFLOWER



Hardiness Zone: 3-8
Size: H/W
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Typically forms low-growing clumps of basal foliage which slowly spread to form an attractive ground cover.



Cerastium tomentosum
SNOW-IN SUMMER



Hardiness Zone: 3-7
Size: H/W 12"x3"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
A short-lived, low-growing, mat-forming perennial which is typically massed in sunny locations.



Cerastostigma plumbaginoides
HARDY PLUMBAGO



Hardiness Zone: 5-9
Size: H/W 8"x48"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
A wiry, mat-forming perennial which spreads by rhizomes to form an attractive ground cover.



Convallaria majalis
LILY-OF-THE-VALLEY



Hardiness Zone: 3-8
Size: H/W 2"x8"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Bell-shaped, sweetly fragrant, white flowers (corollas to 1/3" long) which bloom in early to mid-spring. For use in shady areas where aggressive spreading is desired.



Ducheshea indica
MOCK STRAWBERRY



Hardiness Zone: 5-9
Size: H/W 4"x3"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Known for its small, red fruit, yellow flowers, and little leaves.



Delosperma basuticum
WHITE EYED ICE PLANT



Hardiness Zone: 5-10
Size: H/W 1"x24"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Good soil drainage is essential for, particularly in winter where moist-to-wet soils can be fatal.



Delosperma cooperi
PURPLE ICE PLANT



Hardiness Zone: 5-10
Size: H/W 4"x30"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Heat, drought and salt tolerant, this adaptable plant thrives with little care, even in rocky, unimproved soils.

Delosperma cooperi
PINK ICE PLANT



Hardiness Zone: 5-10
Size: H/W 1"x24"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

The neon-like intensity of the flowers' color and length of bloom enhance the ornamental interest. Succulent, fleshy, cylindrical, medium-green leaves.

Delosperma hybrid 'John Proffit'
JOHN PROFFIT ICE PLANT



Hardiness Zone: 5-10
Size: H/W 1"x24"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Good soil drainage is essential, particularly in winter where moist-to-wet soils can be fatal.

Delosperma nubigenum
YELLOW ICEPLANT



Hardiness Zone: 4-10
Size: H/W 3"x30"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Mat-forming species that reportedly has the best winter hardiness of the ice plants currently in cultivation. It typically grows to only 2" tall but spreads to 20" wide.

Dianthus species & hybrids
PINKS



Hardiness Zone: 2-9
Size: H/W 12"x16"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Flowers bloom from late spring to late summer with continued but somewhat sporadic additional bloom into fall.

Ephedra regeliana
CREEPING EPHEDRA



Hardiness Zone: 4-7
Size: H/W 6"x24"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Slowly creeps with more leafless, thin, green stems which look like a miniature equisetum until they become bejeweled with red fruits in mid to late summer.

SILVER BROCADE: KRZYSZTOF ZIARNEK; KEIRRAZI; GALIUM BOREALE: AARON CARLSON; GALIUM ODORATUM: BJORN TRAEGER; DEAD NETTLE: THINH HOANGUYEN; LIRIOPE MUSCARI: SYRIO

Fragaria species & cultivars
STRAWBERRIES



Hardiness Zone: 3-9
Size: H/W 9"x24"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Several varieties and cultivars available.



Fragaria indica 'Pink Panda'
SILVER BROCADE



Hardiness Zone: 3-9
Size: H/W 8"x48"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Prompt removal of fruit as it appears encourages additional flowering.



Galium boreale
NORTHERN BEDSTRAW



Hardiness Zone: 3-8
Size: H/W 8"x40"
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
 Can be difficult to find in commerce because usually few nurseries, other than native plant specialists, sell it.



Galium odoratum
SWEET WOODRUFF



Hardiness Zone: 4-8
Size: H/W 8"x24"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Small, fragrant, 4-petaled, white flowers appear in loose cymes in spring.



Lamium armenum
DEAD NETTLE



Hardiness Zone: 4-8
Size: H/W 10"x24"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 A tufted-to-small-mat-forming perennial from a stout rootstock. Do not plant *L. galiobdolon* because it is invasive.



Liriope muscari
LIRIOPE



Hardiness Zone: 5-10
Size: H/W 4"x24"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Has good tolerance for heat, humidity and drought.



Liriope spicata
LIRIOPE



Hardiness Zone: 4-10
Size: H/W 9"x15"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

A rhizomatous, grass-like perennial which forms a clump of narrow, arching, glossy, dark green leaves (to 1/4" wide) typically growing 9-15" high.



Pachysandra terminalis 'Green Sheen'
JAPANESE SPURGE



Hardiness Zone: 4-9
Size: H/W 8"x15"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Flowers are not particularly showy, but on close inspection are quite attractive.



Penstemon davidsonii
DAVIDSON'S PENSTEMON



Hardiness Zone: 5-8
Size: H/W 2"x12"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Huge lavender-pink flowers held over its dark green evergreen foliage.



Marrubium rotundifolium
SILVER EDGED HOREHOUND



Hardiness Zone: 4-9
Size: H/W 10"x18"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

One of the best xeric groundcovers for poor soil areas with hot, sunny growing conditions.



Penstemon caespitosus
MAT PENSTEMON



Hardiness Zone: 4-7
Size: H/W 8"x48"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Lavender-purple, two-lipped flowers (to 1/4" long) with hairy throats bloom in summer.



Penstemon davidsonii v. menziesii
GREEN MAT PENSTEMON



Hardiness Zone: 4-8
Size: H/W 2"x12"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Evergreen, with beautiful flowers that are very attractive to hummingbirds.



PHLOX STOLONIFERA: DAVID J. STANG; SAPONARIA OCYMOIDES: HIGH COUNTRY GARDENS; SAPONARIA OFFICINALIS: CONSULTANTAS; SAPONARIA X LEMPERGII 'MAX FREI': DAVID STANG

Phlox subulata
CREEPING PHLOX



Hardiness Zone: 4-8
Size: H/W 6"x24"
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
A vigorous groundcover phlox that blooms in mid-spring.



Phlox stolonifera
CREEPING PHLOX



Hardiness Zone: 5-9
Size: H/W 12"x18"
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
Loose clusters of fragrant, tubular, lavender flowers as large as to 3/4" wide.



Phlox x procumbens
CREEPING PHLOX



Hardiness Zone: 5-9
Size: H/W 6"x12"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
Excellent for edging, cascading over walls, or as a groundcover.



Saponaria ocymoides
ROCK SOAPWORT



Hardiness Zone: 2-10
Size: H/W 6"x24"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
Lovely pink flowers in spring draw attention.



Saponaria officinalis
BOUNCING BETT



Hardiness Zone: 4-8
Size: H/W 8"x3"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
Can be invasive. It may persist for years around abandoned home sites and other areas.



Saponaria x lempergii 'Max Frei'
GIANT FLOWERED SOAPWORT



Hardiness Zone: 3-7
Size: H/W 6"x48"
Suculent: No
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
Clusters of pink flowers (1"wide) cover the plant in summer..



Sedum lanceolatum
YELLOW STONECROP

Hardiness Zone: 5-9
Size: H/W 4"x12"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Cannot grow in shade. Thrives in dry or moist soil and can tolerate drought.

Sedum rupestre
STONECROP

Hardiness Zone: 5-8
Size: H/W 6"x20"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Excellent groundcover. Ideal for border fronts or rock gardens.

Sedum sichotense
CREEPING STONECROP

Hardiness Zone: 4-9
Size: H/W 3"x6"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Flat, tapering, toothed green leaves turn glowing crimson in fall. Yellow bloom in summer..

***Sedum sieboldii* 'October Daphne'**
OCTOBER DAPHNE STONECROP

Hardiness Zone: 5-9
Size: H/W 4"x12"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Large light-blue leaves trimmed with rose edges. Arched stems. Rose-pink flowers.

***Sedum spathulifolium* & cultivars**
STONECROP

Hardiness Zone: 3-9
Size: H/W 5"x18"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

The wild variety grows on rocky outcroppings and along trail.

***Sedum spurium* & cultivars**
STONECROP

Hardiness Zone: 3-8
Size: H/W 4"x12"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Thick, succulent, opposing, flattened leaves (to 1" long) with wedge-shaped bases are toothed near the ends..

THYMUS SERPYLLUM: AGNIESZKA KWIECIEŃ, NOWA; VERONICA OLTENSIS: MADRYTALENT

Sempervivum tectorum & cultivars

HENS & CHICKS



Hardiness Zone: 4-10
Size: H/W 6"x10"
Suculent: Yes
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Primarily grown in gardens for their attractive and unusual foliage.



Stachys byzantina

LAMBS' EAR



Hardiness Zone: 4-8
Size: H/W 4"x24"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
 Leaves evergreen in warm climates, but will depreciate considerably in harsh winters.



Thymus praecox

CREeping THYME



Hardiness Zone: 4-10
Size: H/W 2"x48"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
 Clusters of tiny, tubular, whitish-to-rose-purple flowers appear in summer. Flowers are attractive to bees.



Thymus serpyllum & cultivars

MOTHER OF THYME



Hardiness Zone: 4-8
Size: H/W 2"x48"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
 A hairy, prostrate, creeping, woody-based perennial primarily grown as an ornamental ground cover. Rarely used in cooking.



Veronica liwanensis

SPEEDWELL



Hardiness Zone: 3-8
Size: H/W 1"x18"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Small erect clusters of blue flowers appear above the foliage (to 2" tall) in late spring, covering the mat with a profuse blossoms. Can be invasive into lawns.



Veronica oltensis

SPEEDWELL



Hardiness Zone: 4-9
Size: H/W 8"x8"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Profuse blue flowers cover this groundcover in spring. Can be invasive into lawns.



Veronica gentianoides
GENTIAN SPEEDWELL



Hardiness Zone: 4-7
Size: H/W 12"x18"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Easily grown in average, medium, well-drained soil in full sun.



Veronica pectinata
WOOLY SPEEDWELL



Hardiness Zone: 4-7
Size: H/W 6"x9"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Deer resistant. Evergreen.



Veronica peduncularis
CREEPING VERONICA



Hardiness Zone: 6-9
Size: H/W 9"x12"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
After the main flush of bloom, a sparse, intermittent rebloom might continue throughout summer.



Veronica rupestris
PROSTRATE SPEEDWELL



Hardiness Zone: 4-8
Size: H/W 9"x12"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Sparse, intermittent rebloom might occur in summer and fall.



Veronica austriaca sub.teucrium
LARGE SPEEDWELL



Hardiness Zone: 4-8
Size: H/W 18"x12"
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
Blue flowers in spring on mounding-to-sprawling plants clad with toothed, oblong, green leaves.



Vinca minor
LESSER PERIWINKLE



Hardiness Zone: 4-8
Size: H/W 6"x18"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
Tubular, lavender blue, phlox-like flowers (to 1" across) appear in the leaf axils in spring and continue to flower intermittently throughout summer into fall.



BARREN STRAWBERRY, S. RAE

Waldsteinia species, varieties & cultivars
BARREN STRAWBERRY



Hardiness Zone: 4-7
Size: H/W 5"x12"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Features 5-petaled yellow flowers (3/4" diameter) which bloom singly or in clusters in spring.

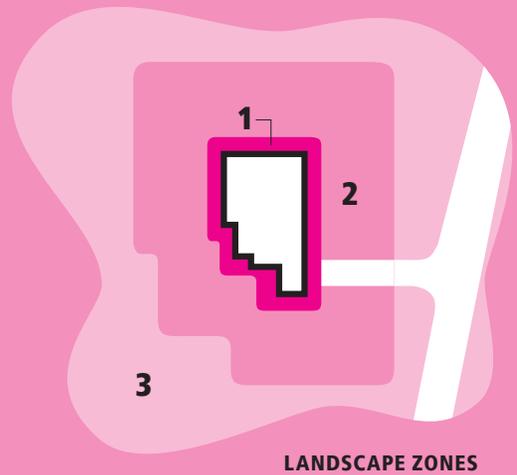


FIRE-RESISTANT DOES NOT MEAN FIREPROOF!

Even fire-resistant plants will burn if not well maintained. Be sure to keep all of your landscape plants healthy with appropriate watering, proper pruning, etc.



HERBACEOUS PERENNIALS



LANDSCAPE ZONES

ABOUT THIS SECTION

Plants in this category have soft rather than woody tissues, die to the ground in winter, and re-sprout the following spring.

These plants can be planted in Landscape Zone 1 as well as in Landscape Zones 2 and 3. These plants can add a wide variety of color and texture to a landscape.

KEY TO SYMBOLS



Prefers full sun
(6 or more hours).



Prefers part shade.



Prefers full shade
(6 or more hours). Avoid
afternoon sun.



Very low water-use plant;
performs well in dry sites.



Low water-use plant;
performs well with minimal
supplemental irrigation.



Moderate water-use
plant; performs well with
supplemental irrigation.



High water-use plant
performs well with regular
irrigation.

HERBACEOUS PERENNIALS

Achillea species
YARROW

Hardiness Zone: 4-8
Size: H/W 6"-23"x12"-24"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Easily reseeds.
 Drought tolerant.

**Agastache species**
HYSSOP

Hardiness Zone: 5-9
Size: H/W 1'-4"x1'-2'
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Easy to grow, no serious problems.

**Alcea rosea**
HOLLYHOCK

Hardiness Zone: 4-8
Size: H/W 72"x24"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Biennial or short-lived.

**Alchemilla species**
LADY'S MANTLE

Hardiness Zone: 4-8
Size: H/W 15"x24"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Self-seeding, clumping perennial.

**Allium species**
CHIVES/ONION

Hardiness Zone: 4-8
Size: H/W 12"-24"x20"-24"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Easy to grow. More than 700 species available..

**Anemone blanda species**
WINDFLOWER

Hardiness Zone: 4-8
Size: H/W 8"x6"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Naturalizes by rhizomes and reseeding.



Aquilegia species
COLUMBINE



Hardiness Zone: 3-9
Size: H/W 10"-36"x10"-12"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Short-lived, but will reseed.



Armeria maritima
SEA THRIFT



Hardiness Zone: 4-8
Size: H/W 6"-10"x8"-12"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Low-growing mounded tuft.



Asclepias species
MILKWEED



Hardiness Zone: 4-8
Size: H/W 24"x6"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Food source for Monarch butterfly..



Aster species
ASTER



Hardiness Zone: 4-8
Size: H/W 24"x12"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Easy to grow. Blooms in fall.



Aurinia saxatilis
BASKET-OF-GOLD



Hardiness Zone: 3-7
Size: H/W 8"-18"x1'-2'
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Low-growing, spreading habit. Bright yellow flowers.



Baptisia species
FALSE INDIGO



Hardiness Zone: 4-8
Size: H/W 3"x3"
Suculent: No
Deciduous
Landscape Zone: 2 or 3
Characteristics & Problems:
 Slow-expanding clumps with deep root system.



HERBACEOUS PERENNIALS

***Bergenia cordifolia* & cultivars**

PIG SQUEAK



Hardiness Zone: 3-8
Size: H/W 12"-14"x12"-18"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Clump-forming perennial often grown as groundcover.

***Campanula species* & cultivars**

BELLFLOWER



Hardiness Zone: 3-8
Size: H/W 6"-30"x12"-18"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Clump-forming. Spreads by rootstocks. Reseeds, but not to point of being unmanageable.

***Centranthus ruber***

JUPITER'S BEARD



Hardiness Zone: 4-8
Size: H/W 24"x24"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Can be somewhat invasive in average soils.

***Chamerion angustifolium***

FIREWEED



Hardiness Zone: 3-7
Size: H/W 22'-3'x2'-3'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
 Native. Spreads by rhizomes and seeds. Can be aggressive.

***Coreopsis species***

COROPSIS OR TICKSEED



Hardiness Zone: 3-9
Size: H/W 10"-24"x12"-18"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 70-80 species available. Shear late summer for rebloom.

***Delphinium species* & cultivars**

DELPHINIUM



Hardiness Zone: 3-7
Size: H/W 1'-7'x1'-3'
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:
 Requires protection from strong winds, staking.



Dianthus species & cultivars

PINKS



Hardiness Zone: 4-8
Size: H/W 6"-12"x1"-18"
Suculent: No
Evergreen
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Forms compact mound. Prefers slightly alkaline soil.

**Echinacea purpurea**

CONEFLOWER



Hardiness Zone: 3-8
Size: H/W 2'-3'x1.5'-2'
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Good cut flower. Birds like cones in winter.

**Erigeron species**

FLEABANE



Hardiness Zone: 4-8
Size: H/W 6"-12" x 12"-18"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

About 200 species of annuals, biennials, perennials.

**Gaillardia species & cultivars**

BLANKET FLOWER



Hardiness Zone: 3-10
Size: H/W 8"-36"x12"-24"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Look for disease-resistant varieties. Cut back to encourage late fall bloom.

**Geranium species**

CRANESBILL HARDY GERANIUM



Hardiness Zone: 4-9
Size: H/W 4"-6"x10"-12"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Plants may be cut back to rejuvenate.

**Guem triflorum**

PRAIRIE SMOKE



Hardiness Zone: 4-9
Size: H/W 18"x12"
Suculent: No
Semi-Evergreen
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Spreads by rhizomes and can be naturalized. Likes dry, well-drained soil.



HERBACEOUS PERENNIALS

Helianthemum nummularium

SUN ROSE



Hardiness Zone: 4-7
Size: H/W 8"-12"x12"-16"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Low-growing, woody stemmed, shrub-like habit.

Hemerocallis cultivars

DAYLILY



Hardiness Zone: 3-9
Size: H/W 1'-4'x1'-3'
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 More than 60,000 cultivars. Flowers open for 1-2 days. Flowers produced in succession, so bloom time is extended.

Heuchera species & cultivars

CORAL BELLS



Hardiness Zone: 3-8
Size: H/W 12"x20"x12"-15"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Herbaceous, clump forming. Remove stems of spent flowers to encourage rebloom.

Hosta species & cultivars

PLANTAIN LILY



Hardiness Zone: 3-8
Size: H/W 6"-36"x20"-24"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Genus of about 70 shade-loving, rhizomatous, clump-forming perennials.

Iris species & cultivars

IRIS, TALL BEARDED



Hardiness Zone: 3-10
Size: H/W 16"-30"x14"-24"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Several varieties available including dwarf, tall bearded, Japanese, and Siberian.

Kniphofia species & hybrids

RED-HOT POKER



Hardiness Zone: 4-9
Size: H/W 1'-4'x2'-3'
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Best in evenly moist, well-drained soil. Intolerant of wet, heavy soils.

Lavandula species
LAVENDER

Hardiness Zone: 4-8
Size: H/W 1'-3' x 1'-4'
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Although it contains scented oils, this plant is slow to ignite if kept moist.

**Leucanthemum x superbum**
SHASTA DAISY

Hardiness Zone: 4-8
Size: H/W 36"x36"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:

Long-lasting summer bloomer.

**Lilium species & hybrids**
LILIES

Hardiness Zone: 4-8
Size: H/W 3' x 6"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Genus of about 100 species of bulbous plants including Asiatic, oriental, and trumpet.

**Linum perenne**
BLUE FLAX

Hardiness Zone: 2-8
Size: H/W 12"-20"x12"-14"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Reseeds. Deadhead to encourage new flowers.

**Lupinus species & cultivars**
LUPINE

Hardiness Zone: 4-6
Size: H/W 18"-48" x 24"-26"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Deadhead spent flowers to encourage rebloom. Attractive tall border plant.

**Monarda species & hybrids**
BEE BALM

Hardiness Zone: 4-8
Size: H/W 24" x 32"-36"
Suculent: No
Semi-Evergreen
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Attracts bees, butterflies, and hummingbirds when massed.



HERBACEOUS PERENNIALS

***Oenothera* species & hybrids**
EVENING PRIMROSE

Hardiness Zone: 3-7
Size: H/W 6"-12"x12"-24"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Showy. Somewhat aggressive spreading habit.

***Papaver orientale***
ORIENTAL POPPY

Hardiness Zone: 3-7
Size: H/W 2'-3'x1'-2'
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Tends to need support. Foliage dies back after bloom in early summer.

***Penstemon* species & hybrids**
BEARDTONGUE

Hardiness Zone: 3-8
Size: H/W 4"-48"x6"-36"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Excellent for low-water garden.

***Phlox paniculata***
SUMMER PHLOX

Hardiness Zone: 4-8
Size: H/W 3'x12"-18"
Suculent: No
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Many cultivars available. Look for mildew-resistant types.

***Polemonium* species**
JACOB'S LADDER

Hardiness Zone: 3-8
Size: H/W 24"x24"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Foliage may scorch in too much sun. Needs consistently moist soil.

***Ratibida columnifera***
PRAIRIE CONFLOWER

Hardiness Zone: 4-9
Size: H/W 18"-24"x12"-24"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:
 Intolerant of moist, heavy, clay soil. Drought tolerant.



Rudbeckia fulgida
BLACK-EYED SUSAN

Hardiness Zone: 3-9
Size: H/W 2'x2'
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:
 Biennial or short-lived perennial.
 Freely self seeds.

**Salvia species & hybrids**
SAGE

Hardiness Zone: 4-9
Size: H/W 18"-28"x2"4-34"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:
 Hardiness varies among species.
 Formal, spike-like flowers in many colors. Remove spent blooms to promote reblooming.

**Veronica prostrate, longifolia, spicata**
SPEEDWELL

Hardiness Zone: 4-8
Size: H/W 12"-20"x12"-15"
Suculent: No
Deciduous
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Taller varieties might need support. Deadhead or shear back to promote regrowth and rebloom.

**Yucca filamentosa**
ADAM'S NEEDLE

Hardiness Zone: 4-6
Size: H/W 2'x3'
Suculent: Yes
Evergreen
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Best of yuccas for low maintenance, drought-resistant landscaping.

**Zauschneria garrettii 'Orange Carpet'**
CREEPING HUMMINGBIRD CARPET

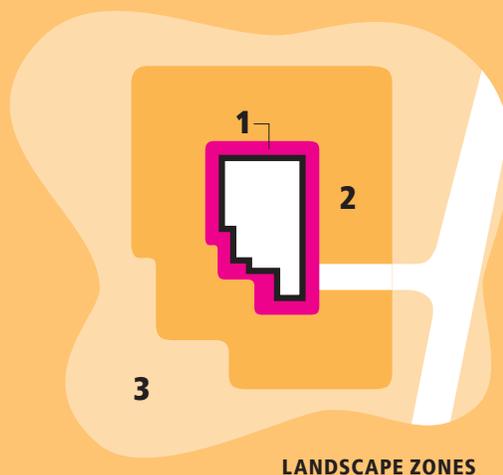
Hardiness Zone: 5-9
Size: H/W 18"x25"
Suculent: No
Deciduous
Landscape Zone: 2 or 3

Characteristics & Problems:
 Regular watering promotes continuous flowering.





VINES



LANDSCAPE ZONES

ABOUT THIS SECTION

Plants in this category have long, slender stems. They trail or creep on the ground, or climb by winding themselves about a support or holding fast with tendrils or claspers.

These plants can be used in Landscape Zones 2 or 3. If vines are used in Landscape Zone 1, annual maintenance to remove the previous year's growth and dead vegetation is required to maintain healthy growth and keep the vines fire-resistant. Without proper maintenance all deciduous vines will act as ladder fuels.

Only use vines in Landscape Zone 1 if they are properly maintained. Proper placement and grooming help keep vines in a desired location while meeting the landscape objectives.

KEY TO SYMBOLS



Prefers full sun
(6 or more hours).



Prefers part shade.



Prefers full shade
(6 or more hours). Avoid
afternoon sun.



Very low water-use plant;
performs well in dry sites.



Low water-use plant;
performs well with minimal
supplemental irrigation.



Moderate water-use
plant; performs well with
supplemental irrigation.



High water-use plant
performs well with regular
irrigation.

***Actinidia kolomikta* 'Arctic beauty'**

KIWI VINE



Hardiness Zone: 4-8
Size: H/W 20'x10'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Requires a substantial trellis.
 Protect spring growth.

***Akebia quinata***

CHOCOLATE VINE



Hardiness Zone: 4-8
Size: H/W 30'x9'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Rampant grower.
 Reseeds readily.

***Bignonia capreolata* 'Tangerine beauty'**

CROSSVINE



Hardiness Zone: 5-9
Size: H/W 35'x9'
Landscape Zone: 2 or 3

Characteristics & Problems:

Vigorous, woody fast-growing vine.

***Campsis radicans***

TRUMPET VINE



Hardiness Zone: 4-9
Size: H/W 40'x10'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Rampant grower through seeds and roots.

***Campsis x tagliabuana* 'Madame Galen'**

TRUMPET CREEPER



Hardiness Zone: 4-9
Size: H/W 20'x12'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

Rampant grower through seeds and roots.

***Clematis species & cultivars***

CLEMATIS*



Hardiness Zone: 5-9
Size: H/W 15'x15'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:

*Clematis orientalis is a Class A weed in Chelan County.



Humulus lupulus

HOPS



Hardiness Zone: 4-8
Size: H/W 15'x15'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Must be pruned and maintained appropriately to be fire-resistance.



Hydrangea anomala subspecies petiolaris

CLIMBING HYDRANGEA



Hardiness Zone: 4-8
Size: H/W 50'x6'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Non-showy yellow fall color. Fragrant white flowers in flat-topped clusters in late spring, early summer.



Lonicera sempervirens 'Magnifica'

TRUMPET HONEYSUCKLE



Hardiness Zone: 4-7
Size: H/W 11'x8'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Rampant grower. Readily reseeds. Reproduces via roots.



Lonicera heckrottii 'Goldflame'

HONEYSUCKLE



Hardiness Zone: 5-9
Size: H/W 15'x6'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 L. japonica Japanese honeysuckle can be rampant grower through seed and roots.



Parthenocissus quinquefolia

VIRGINIA CREEPER



Hardiness Zone: 3-9
Size: H/W 30'x30'
Landscape Zone: 1, 2 or 3

Characteristics & Problems:
 Rampant grower. Reseeds readily.



Vitis coignetiae

CRIMSON GLORY VINE



Hardiness Zone: 5-9
Size: Variable
Landscape Zone: 2 or 3

Characteristics & Problems:
 Good fall color. Insignificant flowers, inedible purplish black berries.



***Vitis vinifera* 'Purpurea'**
PURPLELEAF GRAPE



Hardiness Zone: 6-9
Size: H/W 9'x9'
Landscape Zone: 2 or 3

**Characteristics
& Problems:**

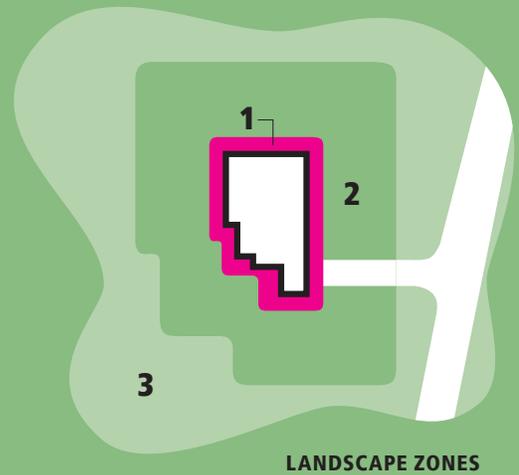
Grapes are adapted to a wide variety of soil conditions. Irrigation can be detrimental except for table or raisin grapes.



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, proper pruning, etc.

DECIDUOUS SHRUBS



ABOUT THIS SECTION

These are woody, multi stemmed plants that lose their leaves in fall and become dormant during the winter. Plants shed their leaves as an adaptation to prevent winter damage. Deciduous shrubs are best located in Landscapes zones 2 and 3.

KEY TO SYMBOLS

-  Prefers full sun (6 or more hours).
-  Prefers part shade.
-  Prefers full shade (6 or more hours). Avoid afternoon sun.
-  Very low water-use plant; performs well in dry sites.
-  Low water-use plant; performs well with minimal supplemental irrigation.
-  Moderate water-use plant; performs well with supplemental irrigation.
-  High water-use plant performs well with regular irrigation.

Amelanchier species
SERVICEBERRY

Hardiness Zone: 4-5
Size: H/W 12'x8'
Landscape Zone: 3
Characteristics & Problems:
 White-pink flowers yield blue berries. Attractive fall color. Resprouts.

**Ceanothus americanus**
NEW JERSEY TEA

Hardiness Zone: 4-8
Size: H/W 3'x5'
Landscape Zone:
Characteristics & Problems:
 Requires winter cold protection.

**Cornus sericea**
RED OSLER DOGWOOD

Hardiness Zone: 4-8
Size: H/W 8'x10'
Landscape Zone: 2 or 3
Characteristics & Problems:
 White flowers yield red ornamental fruit. Red branches provide winter color. Cut back at least every 5 years.

**Corylus cornuta**
FILBERT, BEAKED HAZEL

Hardiness Zone: 4-8
Size: H/W 4'x8'
Landscape Zone: 2 or 3
Characteristics & Problems:
 A small, suckering, deciduous shrub. Typically found in rich thickets, woodland borders, along streams and in clearings.

**Euonymus alatus 'Compactus'**
DWARF BURNING BUSH

Hardiness Zone: 4-8
Size: H/W 4'x6'
Succulent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
 Leaves turn brilliant red in autumn. Grows best on eastern exposure.

**Forsythia species**
FORSYTHIA

Hardiness Zone: 5-8
Size: H/W 15'x15'
Landscape Zone: 3
Characteristics & Problems:
 Showy yellow flowers bloom in early spring. Fertilize and prune post-bloom. Select low-growing variety.



HIBISCUS: LUIGI RIGNANESI, CALPHOTOS; HOLODISCUS: HARLAN B. HERBERT, BUGWOOD.ORG; PHILADELPHUS: WILLIAM M. CIESLA, FHMI, BUGWOOD.ORG; RHAMNUS FRANGULA 'ASPELENIFOLIA': KARDUELS; RHAMNUS 'COLUMNARIS': ROBERT H. MOHLER/ROCK; RHUS GLABRA: KEIR MORSE, CALPHOTOS

Hibiscus syriacus
ROSE OF SHARON



Hardiness Zone: 5-8
Size: H/W 12'x10'
Landscape Zone: 3
Characteristics & Problems:
Leaves emerge in late spring. Depending on variety, flowers are lavender, white, rose, or bluish. Can serve as a hedge.



Philadelphus hybrid species
MOCK ORANGE



Hardiness Zone: 4-8
Size: H/W 8'x8'
Landscape Zone: 2 or 3
Characteristics & Problems:
Fragrant pretty white flowers. Leggy growth habit. Prune every other year.



Rhamnus frangula 'Columnaris'
TALL HEDGE BUCKTHORN



Hardiness Zone: 2-7
Size: H/W 12'x3'
Landscape Zone: 3
Characteristics & Problems:
Can become leggy. Fruit can be messy when it falls to ground. Can be planted to form a hedge.



Holodiscus discolor
OCEANSPRAY



Hardiness Zone: 5-9
Size: H/W 6'x6'
Landscape Zone: 2 or 3
Characteristics & Problems:
Features clusters of small white flowers.



Rhamnus frangula 'Asplenifolia'
FERNLEAF BUCKTHORN



Hardiness Zone: 2-7
Size: H/W 11'x9'
Landscape Zone: 3
Characteristics & Problems:
Fern-like foliage. Prefers morning sun and afternoon shade. Grows best in moist, rich soil. When it falls, fruit can be messy on ground.



Rhus glabra
SMOOTH SUMAC



Hardiness Zone: 3-9
Size: H/W 10'x5'
Landscape Zone: 3
Characteristics & Problems:
Provides red fall color. Forms thickets. Can be invasive. Use on slopes.



DECIDUOUS SHRUBS

Rosa hybrida
NEARLY WILD ROSE

Hardiness Zone: 4-8
Size: H/W 3'x4'
Landscape Zone: 3
Characteristics & Problems:
 Pink blossoms all summer.

**Rosa woodsii**
WOOD'S ROSE

Hardiness Zone: 4-8
Size: H/W 6'x6'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Every 5 years in early spring, prune to 12 inches. Resprouts readily.

**Spiraea bumaldi 'Bumalda'**
JAPANESE SPIREA

Hardiness Zone: 3-8
Size: H/W 4'x4'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Pink flowers. Prune after flowering.

**Spiraea japonica 'Goldmound'**
GOLDMOUND SPIREA

Hardiness Zone: 3-8
Size: H/W 3'x4'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Pink flowers. Prune after flowering.

**Syringa species**
LILAC

Hardiness Zone: 3-7
Size: H/W 3'x7'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Prune after flowering.

**Viburnum carlesii 'Korean spice'**
KOREAN SPICE VIBURNUM

Hardiness Zone: 4-7
Size: H/W 5'x7'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Pink buds become fragrant, white flower clusters. Prefers acidic, moist soil.



VIBURNUM IMAGES: DAVID J. STANG

Viburnum opulus 'Compactus'
SNOWBALL BUSH



Hardiness Zone: 3-8
Size: H/W 6'x6'
Landscape Zone: 3
Characteristics & Problems:
 White flat-top flowers yield red fruit. Prefers acidic, moist soil.



Viburnum opulus 'Roseum'
EUROPEAN SNOWBALL VIBURNUM

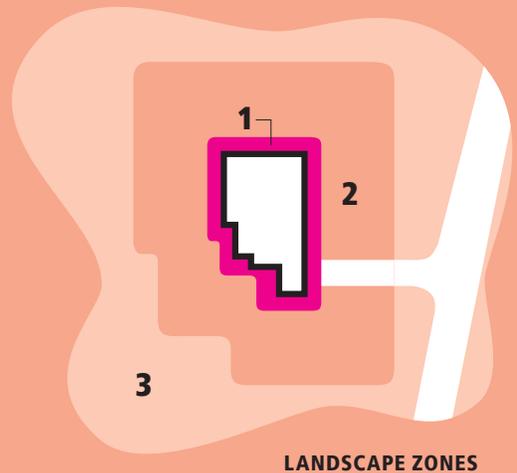


Hardiness Zone: 3-8
Size: H/W 12'x12'
Landscape Zone: 3
Characteristics & Problems:
 Large 3" snowball flower heads. No berries. Red-yellow fall color. Prefers moist, acidic soil.





BROADLEAF EVERGREEN SHRUBS



ABOUT THIS SECTION

These are woody, multi-stemmed plants that retain their leaves throughout the year. Broadleaf evergreen shrubs do shed their leaves, but only a few at a time and on a constant cycle, so there never appears to be any change. Broadleaf evergreen shrubs can provide year-round screening/privacy and are much more fire-resistant than coniferous evergreen shrubs. These shrubs are best located in Landscape zones 2 and 3.

Note: Plants that hold their leaves through winter may suffer winter damage due to the cold and dry climate in our area. These plants usually will put on new healthy green leaves in the spring.

KEY TO SYMBOLS



Prefers full sun
(6 or more hours).



Prefers part shade.



Prefers full shade
(6 or more hours). Avoid
afternoon sun.



Very low water-use plant;
performs well in dry sites.



Low water-use plant;
performs well with minimal
supplemental irrigation.



Moderate water-use
plant; performs well with
supplemental irrigation.



High water-use plant
performs well with regular
irrigation.

BROADLEAF EVERGREEN SHRUBS

Atriplex confertifolia

SHADESCALE SALTBUCH



Hardiness Zone: 3-4
Size: H/W 1'x3'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
 Drought tolerant.

***Berberis thunbergii* 'Crimson Pygmy'**

JAPANESE BARBERRY



Hardiness Zone: 5-8
Size: H/W 1'x2'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
 A spiny, broad-rounded, deciduous shrub with obovate green leaves. Leaves typically turn attractive shades of orange, yellow and red in fall.



BERBERIS THUNBERGII 'CRIMSON PYGMY': LIAM KAPLAN;

***Berberis x lologensis* 'Apricot Queen'**

WARTY BARBERRY



Hardiness Zone: 5-8
Size: H/W 10'x10'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
 Dense grower with delicately arching branches. Small, dark evergreen leaves have bright, bluish-white undersides. Hidden stems are full of needle-sharp spines that make Berberis verruculosa an excellent barrier hedge.

***Ceanothus gloriosus***

POINT REYES CEANOTHUS

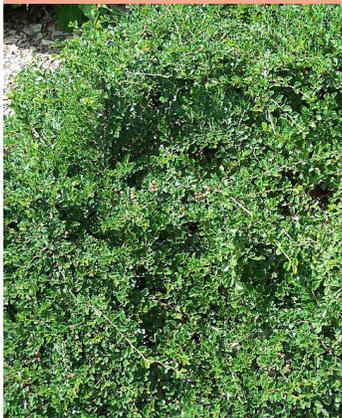


Hardiness Zone: 7-9
Size: H/W 3'x6'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
 Varieties available. Small, wide-spreading shrub with dark-green, leathery foliage and purple-blue flowers in spring. Useful on steep slopes. Needs to be protected from wind. Lives 5-10 years.

***Cotoneaster species***

COTONEASTER



Hardiness Zone: 5-8
Size: H/W 1'x3'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
 Some are deciduous. Vary in size from 6" ground cover to 10' hedge plant. All species of cotoneaster feature a wide spread three times or more their height, glossy leaves, and red or black fall and winter berries. Most species shrug off adverse conditions like drought, strong winds, salt spray, infertile soil and variable pH.

***Cotoneaster dammeri***

BARBERRY COTONEASTER



Hardiness Zone: 5-8
Size: H/W 1'x6'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:
 Low-growing variety; makes good ground cover. In spring small white flowers, followed in late summer by red berries. Fall foliage is bronze/purple.



DAPHNE X BURKWOODII: CAROL MACKIE; MAHONIA AQUIFOLIUM: JEAN TOSTI

***Daphne x burkwoodii* 'Carol Mackie'**
CAROL MACKIE DAPHNE



Hardiness Zone: 4-8
Size: H/W 4'x4'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems: Semi-evergreen shrub with variegated leaves. Features fragrant, pink/white star-shaped flowers in spring.



Daphne cneorum
ROCK DAPHNE



Hardiness Zone: 5-8
Size: H/W 1'x3'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems: Low growing with bright hot-pink fragrant flowers that open mid spring. Can be kept at almost any size by pruning after flowering. Highly fragrant, showy flowers. Keep from excessively wet soils. Can tolerate hot sun and drought.



Euonymus x fortunei
WINTER CREEPER



Hardiness Zone: 4-7
Size: H/W 4'x3.5'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems: A low-growing, erect to semi-erect shrubby form which typically grows as a dense, sprawling, tangled, bushy mat. Features lustrous, ovate to elliptic, toothed, dark green leaves (1-1.5" long) edged with gold. Leaves turn pinkish-red in fall and winter. Inconspicuous, greenish-white flowers might appear in June. Flowers at best sparse, but usually not present. If given support, 'Emerald 'n' Gold' will climb a wall.



Lonicera pileata
PRIVET HONEYSUCKLE



Hardiness Zone: 5-9
Size: H/W 3'x8'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems: Dense, spreading, evergreen to semi-evergreen shrub which is typically grown as a high ground cover. Glossy green leaves to 1 1/4" long. Small fragrant yellowish-white flowers in spring. Flowers give way to small translucent purple berries (1/4" wide) which mature in fall.



Mahonia aquifolium
OREGON GRAPEHOLLY



Hardiness Zone: 3-9
Size: H/W 5'x6'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems: Upright growth habit. Shiny, dark-green foliage in summer. Yellow flowers open in spring, followed by blue/black berries in late summer. In autumn leaves turn red-purple.



Mahonia repens
CREEPING OREGON GRAPE



Hardiness Zone: 3-8
Size: H/W 1.5'x2'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems: Similar to Oregon grapeholly, but smaller. Yellow flowers produce blue/black berries. Spreading branches feature green leaves that turn red/purple in autumn.



BROADLEAF EVERGREEN SHRUBS

Paxistima myrtifolia
OREGON BOXWOOD

Hardiness Zone: 5-8
Size: H/W 4'x4'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Thick, light-green leaves on low-growing shrub. Remains more compact in areas with full sun.

***Prunus laurocerasus***
CHERRY LAUREL

Hardiness Zone: 6-8
Size: H/W 18'x25'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Broad, dense, spreading habit. No fall color. Tiny, cup-shaped, creamy white flowers in upright clusters bloom from the leaf axils in April-May. Highly fragrant flowers give way to somewhat inconspicuous black drupes that ripen in mid-summer. This bitter fruit loved by birds.

***Pyracantha angustifolia 'Gnome'***
GNOME PYRACANTHA

Hardiness Zone: 6-7
Size: H/W 6'x8'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Noted for spring white flowers in drooping clusters, glossy green leaves, needle-like spines, and orange-red berries in fall.

***Potentilla fruticosa***
SHRUBBY CINQUEFOIL

Hardiness Zone: 3-8
Size: H/W 3'x3'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Easily grown in average, medium-moisture, well-drained soils in full sun. Best flowering occurs in full sun, but plants tolerate part shade. Established plants grow well in a wide range of conditions and have good drought tolerance. Plants have excellent winter hardiness. Prune in late spring after bloom.

***Prunus laurocerasus 'Otto Luyken'***
COMPACT CHERRY LAUREL

Hardiness Zone: 6-8
Size: H/W 4'x8'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Compact cultivar. Free-flowering.

***Pyracantha species & cultivars***
FIRETHORN, PYRACANTHA

Hardiness Zone: 6-8
Size: H/W 12'x10'
Suculent: No
Landscape Zone: 2 or 3

Characteristics & Problems:

Impenetrable shrub for informal hedges, hedgerows, or dense screens. Also effective when massed to cover slopes. Severe pruning performed after flowering will adversely affect fruit production. Espaliers trained on wall or fence. Best planted in areas where thorns will not present hazard.



RHODODENDRON MACROPHYLLUM; RANDY SMITH; RHODODENDRON AZALEA; BOTBIN; VIBURNUM; JOAQUIM ALVES GASPAR; YUCCA GLAUCA; NICK; YUCCA HARRIMANIAE; REBOU

Rhododendron macrophyllum
PACIFIC RHODODENDRON



Hardiness Zone: 6-9
Size: H/W 12'x12'
Suculent: No
Landscape Zone: 3
Characteristics & Problems:
Native to the Northwest. Dark green leaves. Pale pink to lavender flowers in spring. Grows best in acidic soil.



Rhododendron species & cultivars
RHODODENDRON/AZALEA



Hardiness Zone: 6-9
Size: H/W 1'x3'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
A genus of 500 to 900 species that includes both of what are commonly called rhododendrons and azaleas. Most are evergreen; some deciduous. Appreciated for their showy spring flowers and, in the case of evergreen types, for their attractive winter foliage. Colors range from white to pink, red, and purple.



Viburnum x burkwoodii cultivars and varieties
BURKWOOD VIBURNUM



Hardiness Zone: 5-8
Size: H/W 10'x5'
Suculent: No
Landscape Zone: 3
Characteristics & Problems:
Densely branched, multi-stemmed habit. Fragrant white flowers arranged in flat-topped cymes (2-4" wide) in spring. Flowers are followed by pendulous clusters of red berry-like drupes which ripen black. Fruit is not particularly showy. Glossy dark green leaves (to 4" long) turn maroon in fall.



Viburnum species & hybrids
VIBURNUM



Hardiness Zone: 2-9
Size: H/W 4'x15'
Suculent: No
Landscape Zone: 2 or 3
Characteristics & Problems:
Not all are evergreen. This group of shrubs has showy flowers, many of which are fragrant. Flowers followed by clusters of berries that may be yellow, orange, red, blue or black. Grow in full sun to partial shade in well-drained soil amended with organic matter. Useful in a shrub border or as a screen. Not bothered by rabbits, squirrels or deer.



Yucca glauca
SMALL SOAPWEED



Hardiness Zone: 4-6
Size: H/W 2'x4'
Suculent: Yes
Landscape Zone: 1 & 2
Characteristics & Problems:
Adapted to low-water growth conditions. Also known as small soapweed, soapweed yucca, Spanish bayonet, Great Plains yucca and beargrass. Yucca glauca forms colonies of rosettes.



Yucca harrimaniae 'Neomexicana'
NEW MEXICO YUCCA



Hardiness Zone: 4-6
Size: H/W 2'x2'
Suculent: Yes
Landscape Zone: 1 & 2
Characteristics & Problems:
Small species forming clumps of rosettes.



Yucca filamentosa
ADAM'S NEEDLE



Hardiness Zone: 4-10
Size: H/W 4'x3'
Suculent: Yes
Landscape Zone: 2 or 3

**Characteristics
& Problems:**

Swordlike, stiff leaves in various tones of green, gray-green or variegated yellow and green. In summer produces tall stalks topped by plumes of white flowers.

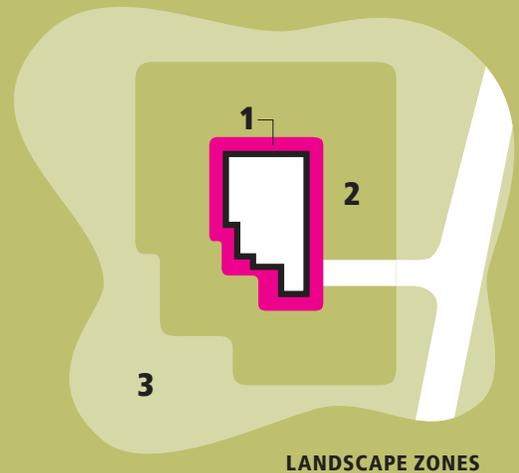
MORICORI



**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, proper pruning, etc.

NON-TURF GRASSES



ABOUT THIS SECTION

These generally are non-lawn-forming grasses, native or naturalized to the area. In most cases, they are non-invasive. Sometimes referred to as “conservation grasses,” they generally are deep-rooted, grow taller than turfgrasses (lawn grasses) and produce more flowering shoots than lawn grasses. Most non-turf grasses have deep roots and—once established—require little irrigation.

The primary objective of including non-turf grasses in this document is to provide alternatives to some of the non-native invasive plants that are common to Eastern Washington. Cheatgrass (*Bromus tectum*) (as well as several other introduced species) poses a high fire hazard in this area. The grasses listed here are less of a fire hazard and offer several other benefits that may be desirable to home owners.

Bunch grasses generally remain green two to four weeks longer than cheat grass and—if ignited—fire is generally less severe. All grasses, once dried, can become a fire hazard. For this reason they need to be mowed/cut to reduce the intensity and rate of spread of a potential wildland fire. There are several grass species listed here that are able to reduce the density of cheat grass. The probability of eliminating cheat grass entirely from a site is not high without intensive rehabilitation efforts over an extended period. Non-turf grass should be planted in landscape zone 2 & 3.

KEY TO SYMBOLS



Prefers full sun
(6 or more hours).



Prefers part shade.



Prefers full shade
(6 or more hours). Avoid
afternoon sun.



Very low water-use plant;
performs well in dry sites.



Low water-use plant;
performs well with minimal
supplemental irrigation.



Moderate water-use
plant; performs well with
supplemental irrigation.



High water-use plant
performs well with regular
irrigation.

NON-TURF GRASSES

Carex species & cultivars

SEDE



Hardiness Zone: 3-6
Size: H 12-20"
Form: Sod
Landscape Zone: 1, 2 or 3
Characteristics & Problems:
 Many different species. Prefers swampy areas.

Elymus wawawaiensis cultivars

SNAKE RIVER WHEATGRASS



Hardiness Zone: 3-6
Size: H 8-16"
Form: Bunch
Landscape Zone: 3
Characteristics & Problems:
 Good competitor with cheat grass. Stays green longer.

Festuca glauca

BLUE FESCUE



Hardiness Zone: 3-6
Size: H 6-10"
Form: Bunch
Landscape Zone: 2 or 3
Characteristics & Problems:
 Fine-textured. When watered stays green well into the summer.

Festuca idahoensis

IDAHO FESCUE



Hardiness Zone: 3-6
Size: H 6-10"
Form: Bunch
Landscape Zone: 2 or 3
Characteristics & Problems:
 Native bunchgrass with fine texture.

Festuca ovina

SHEEP FESCUE



Hardiness Zone: 3-6
Size: H 6-10"
Form: Bunch
Landscape Zone: 2 or 3
Characteristics & Problems:
 A species from Europe and Asia that has become somewhat naturalized in North America.

Koeleria glauca

BLUE HAIRGRASS



Hardiness Zone: 3-6
Size: H 6-24'
Form: Bunch
Landscape Zone: 2 or 3
Characteristics & Problems:
 Grows well in dunes and sandy soils.

Koeleria macrantha
PRAIRIE JUNEGRASS



Hardiness Zone: 3-6
Size: H 10-14"
Form: Bunch
Landscape Zone: 3

Characteristics & Problems:
Cool-season grass. Turns dormant in late summer.



Nassella tenuissima
MEXICAN FEATHER GRASS



Hardiness Zone: 3-6
Size: H 24-36"
Form: Bunch
Landscape Zone: 3

Characteristics & Problems:
Readily reseeds.



Pascopyrum smithii
WESTERN WHEATGRASS



Hardiness Zone: 3-6
Size: H 12-36"
Form: Sod
Landscape Zone: 2 or 3

Characteristics & Problems:
Often covered with a white coating, lending a silvery cast to its blue-green leaves.



Poa secunda
SANDBERG BLUEGRASS



Hardiness Zone: 3-6
Size: H 6-10"
Form: Bunch
Landscape Zone: 2 or 3

Characteristics & Problems:
Hardy grass that grows well in rocky areas.



Poa secunda 'Mountain Home'
SANDBERG BLUEGRASS



Hardiness Zone: 3-6
Size: H 6-10"
Form: Bunch
Landscape Zone: 2 or 3

Characteristics & Problems:
More drought tolerant than some grasses.



Pseudoroegneria cristatum
CRESTED WHEATGRASS



Hardiness Zone: 3-6
Size: H 12-16"
Form: Bunch
Landscape Zone: 3

Characteristics & Problems:
Early season, hardy grass. Course texture.



NON-TURF GRASSES

Pseudoroegneria spicata
BLUEBUNCH WHEATGRASS**Hardiness Zone:** 3-6**Size:** H 12-30"**Form:** Bunch**Landscape Zone:** 3**Characteristics
& Problems:**

Native bunchgrass.

***Pseudoroegneria spicata inermis***
BEARDLESS WHEATGRASS**Hardiness Zone:** 3-6**Size:** H 8-20"**Form:** Bunch**Landscape Zone:** 3**Characteristics
& Problems:**

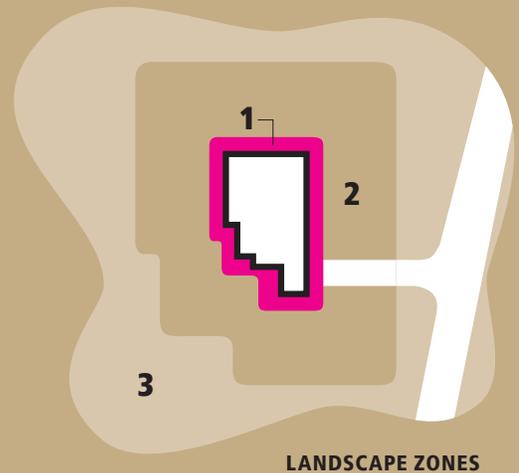
Good competitor with cheatgrass. Stays green longer.

***Sporobolus cryptandrus***
SAND DROPSEED**Hardiness Zone:** 3-6**Size:** H 8-20"**Form:** Bunch**Landscape Zone:** 3**Characteristics
& Problems:**

Produces a dense, sand-binding network of roots which can spread up to 2' laterally and 8' deep.



TREES



ABOUT THIS SECTION

Trees are woody perennial plants that have a single stem (trunk) generally growing to a height greater than 20 feet. A tree has a crown with lateral branches starting well above ground level.

There are two main categories of trees: deciduous and conifer. Most of the broadleaf trees in Eastern Washington are deciduous, they lose their leaves in the fall and grow new leaves in the next growing season. Conifers, cone bearing trees with needle-like leaves, make up the majority of evergreen trees that grow well in Eastern Washington.

Tree planting locations require fore thought. The size and shape of the mature tree must be considered. Larger trees need to be located in Landscape zone 3 while smaller/medium size trees can be planted in Landscape zones 2 or 3.

KEY TO SYMBOLS



Prefers full sun
(6 or more hours).



Prefers part shade.



Prefers full shade
(6 or more hours). Avoid
afternoon sun.



Very low water-use plant;
performs well in dry sites.



Low water-use plant;
performs well with minimal
supplemental irrigation.



Moderate water-use
plant; performs well with
supplemental irrigation.



High water-use plant
performs well with regular
irrigation.

TREES

Acer species
MAPLE

Hardiness Zone: 2-9
Size: H/W 75'x75'
Landscape Zone: 3
Characteristics & Problems:
 Often reseeds and sprouts.

Acer glabrum
ROCKY MOUNTAIN MAPLE

Hardiness Zone: 2-7
Size: H/W 30'x15'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Resprouts from root crown.
 Can be small tree or shrub.

Acer saccharum 'green mountain'
GREEN MOUNTAIN MAPLE

Hardiness Zone: 4-8
Size: H/W 60'x45'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Rapid growth rate. Straight central trunk branching to a narrow ovate head. Thickened and strong crotched. Thick deep-green foliage. Resistance to leaf hoppers and leaf scorch.

Acer Saccharum
SUGAR MAPLE

Hardiness Zone: 2-9
Size: H/W 80'x60'
Landscape Zone: 3
Characteristics & Problems:
 Source of maple syrup.
 Excellent shade tree. The sugar maple leaf is the national symbol of Canada.

Acer negundo
BOXELDER

Hardiness Zone: 2-9
Size: H/W 50'x35'
Landscape Zone: 3
Characteristics & Problems:
 Not recommended because of a variety of problems. Use cultivars in lieu of boxelder.

Acer negundo 'Sensation'
SENSATION BOXELDER MAPLE

Hardiness Zone: 2-8
Size: H/W 30'x25'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Grown for attractive foliage.

ACER NEGUNDO VIOLACEUM: JIM MOREFIELD; ACER GINNALA: HERMAN, D.E. ET AL. 1996; BIG LEAF MAPLE, AND ACER RUBRUM: FORESTRY IMAGES; AESCULUS: DAVID J. STANG

Acer negundo 'Violaceum'
BOXELDER



Hardiness Zone: 2-9
Size: H/W 15'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
Very pretty spring flowers.



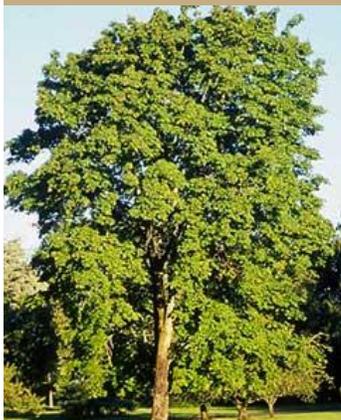
Acer ginnala varieties & cultivars
AMUR MAPLE



Hardiness Zone: 2-9
Size: H/W 30'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
Resprouts from root crown. Low-branched, multi-stemmed growth habit. Might become invasive by reseeding.



Acer macrophyllum
BIGLEAF MAPLE



Hardiness Zone: 4-9
Size: H/W 75'x50'
Landscape Zone: 3
Characteristics & Problems:
Native of Northwest. Leaves sometimes greater than 15" across.



Acer rubrum varieties & cultivars
RED MAPLE



Hardiness Zone: 3-9
Size: H/W 60'x40'
Landscape Zone: 3
Characteristics & Problems:
Adaptable. Easy to transplant and establish. Tolerant of many conditions.



Aesculus species
HORSECHESTNUT & BUCKEYE



Hardiness Zone: 4-9
Size: H/W 60'x50'
Landscape Zone: 2 or 3
Characteristics & Problems:
The genus *Aesculus*, with varieties called 'buckeye' and 'horse chestnut', comprises 13-19 species.



Aesculus hippocastanum
COMMON HORSECHESTNUT



Hardiness Zone: 4-8
Size: H/W 60'x50'
Landscape Zone: 3
Characteristics & Problems:
Resprouts from root crown. Water deeply to prevent root surfacing.



TREES

Aesculus hippocastanum 'Braumannii'

BRAUMANNII HORSE CHESTNUT



Hardiness Zone: 4-8
Size: H/W 60'x50'
Landscape Zone: 3
Characteristics & Problems:
 White flowers on this fruitless cultivar.

***Aesculus x carnea 'Briotii'***

RED HORSE CHESTNUT



Hardiness Zone: 5-8
Size: H/W 35'x35'
Landscape Zone: 2 or 3
Characteristics & Problems:
 A beautiful landscape tree for large lawns. Noted for its dark red flowers.



RED HORSE CHESTNUT: F.MARTIN; ALNUS SPECIES: WILLOW; BETULA SPECIES: RICHARD WEBB

Alnus species

ALDER



Hardiness Zone: 4-9
Size: H/W 40'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Resprouts from root crown.
 Not ideal ornamental tree.

***Alnus glutinosa***

BLACK ALDER



Hardiness Zone: 4-9
Size: H/W 50'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Resprouts from root crown.
 Not ideal ornamental tree.

***Alnus tenuifolia***

MOUNTAIN ALDER



Hardiness Zone: 5-9
Size: H/W 25'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Resprouts from root crown.
 Not ideal ornamental tree.

***Betula species***

BIRCH



Hardiness Zone: 2-9
Size: Varies
Landscape Zone: 2 or 3
Characteristics & Problems:
 A wide variety of fire-resistant birch is available.



WHITESPIRE BIRCH: FALLBROOK, CALIFORNIA; WATER BIRCH: FORESTRY IMAGES; BETULA NIGRA RIVER BIRCH: RICHARD WEBB, BUGWOOD.ORG; CARPINUS BETULUS: JOHN RUTER, UNIVERSITY OF GEORGIA; CATALPA ERUBESCENTIS: KEITH EDKINS

Betula populifolia 'Whitespire'
WHITESPIRE BIRCH



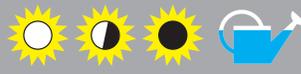
Hardiness Zone: 3-6
Size: H/W 40'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
Noted for its non-peeling chalky, white bark with dark chevron trunk patches appearing below each branch base and its long, pointed, triangular, green leaves.



Betula occidentalis
WATER BIRCH



Hardiness Zone: 4-6
Size: H/W 33'x15'
Landscape Zone: 2 or 3
Characteristics & Problems:
Resprouts from root crown. Basal buds & seeds.



Betula nigra 'Cully' Heritage
HERITAGE RIVER BIRCH



Hardiness Zone: 4-9
Size: H/W 55'x50'
Landscape Zone: 2 or 3
Characteristics & Problems:
One of the most disease-free birches.



Carpinus betulus
EUROPEAN HORNBEAM



Hardiness Zone: 4-8
Size: H/W 40'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
Name comes from the extremely hard wood that takes a horn-like polish.



Carpinus betulus 'Frans Fontaine'
FRANS FONTAINE HORNBEAM



Hardiness Zone: 4-8
Size: H/W 40'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
Columnar variety that can be hard pruned to create large-scale screens or hedges.



Catalpa x erubescens 'Purpurea'
PURPLE LEAF CATALPA



Hardiness Zone: 3-8
Size: H/W 45'x40'
Landscape Zone: 2 or 3
Characteristics & Problems:
Blackish-purple, heart-shaped leaves in spring.



TREES

Catalpa bignoniodes 'Nana'
UMBRELLA CATALPA

Hardiness Zone: 5-9
Size: H/W 20'x15'
Landscape Zone: 2 or 3

Characteristics & Problems:
Nonflowering. Good in small spaces, under power lines, or in street right-of-way.

***Catalpa speciosa***
NORTHERN CATALPA

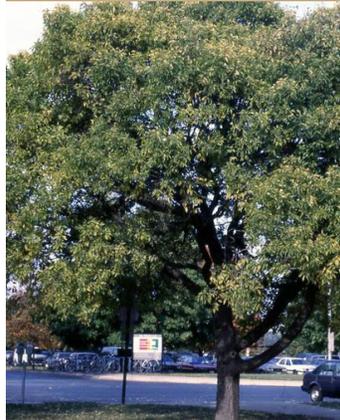
Hardiness Zone: 4-8
Size: H/W 90'x45'
Landscape Zone: 3

Characteristics & Problems:
Forms high canopy and deep roots.

***Celtis occidentalis***
COMMON HACKBERRY

Hardiness Zone: 2-9
Size: H/W 60'x50'
Landscape Zone: 3

Characteristics & Problems:
Resprouts from root crown. Tolerates heat, wind, drought, poor soil and air pollution.

***Celtis reticulata***
NETLEAF HACKBERRY

Hardiness Zone: 4-9
Size: H/W 30'x25'
Landscape Zone: 2 or 3

Characteristics & Problems:
Deep-rooted, so less likely to crack pavement and facilitates lawn growth beneath tree.

***Cercis canadensis varieties & cultivars***
EASTERN REDBUD

Hardiness Zone: 4-8
Size: H/W 35'x30'
Landscape Zone: 2 or 3

Characteristics & Problems:
Leaves turn pale yellow to greenish-yellow in fall. Several varieties and cultivars available.

***Cercocarpus montanus***
MOUNTAIN MAHOGANY

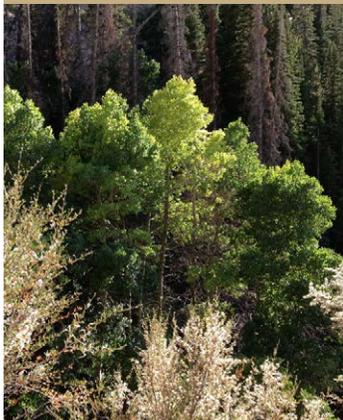
Hardiness Zone: 5-10
Size: H/W 12'x8'
Landscape Zone: 2 or 3

Characteristics & Problems:
A native American small tree which grows in dry foothills and lower mountain regions of the West.



CURL-LEAF MOUNTAIN MAHOGANY: F. MARTIN; PACIFIC DOGWOOD: PAUL SCHULTZ; CORNUS KOSA: DAVID J. STANG; RED TWIG DOGWOOD: USEPA ENVIRONMENTAL PROTECTION AGENCY; CORNUS FLORIDA, AND COTINUS COGGYGRIA: T. DAVIS SYDNOR

Cercocarpus ledifolius
CURL-LEAF MOUNTAIN MAHOGANY



Hardiness Zone: 4-8
Size: H/W 15'x12'
Landscape Zone: 2 or 3
Characteristics & Problems:
Can be considered an evergreen shrub or small tree depending on how maintained.



Cornus stolonifera
PACIFIC DOGWOOD



Hardiness Zone: 3-7
Size: H/W 15'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
Attractive flowers in the spring.



Cornus kousa
KOSA DOGWOOD



Hardiness Zone: 5-8
Size: H/W 15'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
A stunning flowering tree or large shrub with good fall color. Effective as shrub border.



Cornus sericea
RED TWIG DOGWOOD



Hardiness Zone: 3-8
Size: H/W 9'x12'
Landscape Zone: 2 or 3
Characteristics & Problems:
Small tree if pruned to remove canes; without pruning more like a shrub.



Cornus florida varieties & cultivars
FLORIDA FLOWERING DOGWOOD



Hardiness Zone: 5-9
Size: H/W 30'x25'
Landscape Zone: 2 or 3
Characteristics & Problems:
Prone to scorch in this area without some shade.



Cotinus coggygia varieties & cultivars
SMOKETREE



Hardiness Zone: 5-8
Size: H/W 25'x15'
Landscape Zone: 3
Characteristics & Problems:
Amount of fine fuel this tree produces results in lowered fire resistance rating.



TREES

Diospyros virginiana
AMERICAN PERSIMMON

Hardiness Zone: 4-9
Size: H/W 25'x30'
Landscape Zone: 2 or 3

Characteristics & Problems:
 Resprouts from root crown and buds. Frost sensitive.

***Fagus species***
BEECH

Hardiness Zone: 3-9
Size: H/W 80'x80'
Landscape Zone: 3

Characteristics & Problems:
 No serious insect or disease problems.

***Fagus sylvatica 'Aspleniifolia'***
FERNLEAF BEECH

Hardiness Zone: 4-7
Size: H/W 60'x60'
Landscape Zone: 3
Characteristics & Problems:
 Leaves turn golden brown in fall.

***Fagus sylvatica 'Dawycck purple'***
COLUMNAR PURPLE EUROPEAN BEECH

Hardiness Zone: 4-9
Size: H/W 50'x15'
Landscape Zone: 3
Characteristics & Problems:
 Dark purple foliage of this columnar tree is noticeable. In spring deep reddish-purple leaves emerge and darken to burgundy purple.

***Fagus sylvatica***
EUROPEAN BEECH

Hardiness Zone: 4-7
Size: H/W 60'x45'
Landscape Zone: 2 or 3
Characteristics & Problems:
 There are a number of varieties and cultivars.

***Fraxinus species***
ASH

Hardiness Zone: 3-9
Size: H/W 70'x40'
Landscape Zone: 2 or 3

Characteristics & Problems:
 Emerald ash borer is a problem for this genus. There are several varieties and cultivars.



WHITE ASH: NICHOLAS A. TONELLI; PURPLE ASH: DAVID J. STANG; MARSHALL GREEN ASH: CULTIVAR13; GINKGO BILOBA: AUTUM GOLD, AND THORNLESS HONEY LOCUST: DAVID J. STANG;

Fraxinus americana'
WHITE ASH



Hardiness Zone: 3-9
Size: H/W 60'x40'
Landscape Zone: 3
Characteristics & Problems:
There are several varieties and cultivars.



Fraxinus americana 'Autum purple'
AUTUMN PURPLE ASH



Hardiness Zone: 3-9
Size: H/W 80'x40'
Landscape Zone: 3
Characteristics & Problems:
Beautiful purplish-red fall color. Ash borer can become a problem.



Fraxinus pennsylvanica 'Marshall'
MARSHALL GREEN ASH



Hardiness Zone: 3-7
Size: H/W 60'x40'
Landscape Zone: 3
Characteristics & Problems:
Glossy, dark-green foliage turn yellow in fall. This cultivar is seedless.



Ginkgo biloba
MAIDENHAIR TREE



Hardiness Zone: 3-8
Size: H/W 80'x40'
Landscape Zone: 2 or 3
Characteristics & Problems:
An ancient genus of tree.



Ginkgo biloba 'Autum Gold'
AUTUMN GOLD



Hardiness Zone: 3-8
Size: H/W 40'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
Bright golden autumn leaves.



Gleditsia tricanthos inermis
THORNLESS HONEY LOCUST



Hardiness Zone: 3-8
Size: H/W 60'x50'
Landscape Zone: 3
Characteristics & Problems:
Thornless; Tolerant of poor soils, heat, drought, wind and cold.



TREES

Gleditsia triacanthos inermis 'Impcole'
IMPERIAL HONEYLOCUST

Hardiness Zone: 3-8
Size: H/W 40'x35'
Landscape Zone: 2 or 3
Characteristics & Problems:
 No fall color.

***Gleditsia triacanthos inermis 'Rubylace'***
RUBYFACE HONEYLOCUST

Hardiness Zone: 4-8
Size: H/W 30'x25'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Prone to wind change.

***Gleditsia triacanthos inermis 'Shademaster'***
SHADEMASTER

Hardiness Zone: 3-8
Size: H/W 70'x50'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Provides denser shade than other honeylocusts. Avoid planting near utility lines. Thornless.

***Gleditsia triacanthos inermis 'Sunburst'***
SUNBURST HONEYLOCUST

Hardiness Zone: 3-8
Size: H/W 40'x35'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Prone to wind damage.

***Gleditsia triacanthos inermis 'Skyline'***
SKYLINE HONEYLOCUST

Hardiness Zone: 3-8
Size: H/W 45'x35'
Landscape Zone: 2 or 3
Characteristics & Problems:
 A thornless and nearly seedless variety.

***Gymnocladus dioica***
KENTUCKY COFFEETREE

Hardiness Zone: 3-8
Size: H/W 70'x55'
Landscape Zone: 3
Characteristics & Problems:
 High canopy. Frost sensitive. Very fire-resistant tree.



ESPRESSO KENTUCKY: NASSERHALAWEH; JUGLANS MAJOR (ARIZONA WALNUT): BRUCE MARLIN; GOLDENRAIN TREE: STANZILLA; GOLDENCHAIN TREE: DAVID J. STANG; AMERICAN SWEETGUM: JERULON

Gymnocladus dioicus 'Espresso'
ESPRESSO KENTUCKY



Hardiness Zone: 3-7
Size: H/W 50'x35'
Landscape Zone: 2 or 3
Characteristics & Problems:
Free of insect and disease problems. Features classic elm-like form. Fruitless.



Juglans nigra
BLACK WALNUT



Hardiness Zone: 4-9
Size: H/W 65'x65'
Landscape Zone: 3
Characteristics & Problems:
Resprouts from root crown. Prone to disease.



Juglans major
ARIZONA WALNUT



Hardiness Zone: 5-9
Size: H/W 30'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
Bears small walnuts known in Spanish as "nogale".



Koelreuteria paniculata
GOLDENRAIN TREE



Hardiness Zone: 5-9
Size: H/W 40'x40'
Landscape Zone: 2 or 3
Characteristics & Problems:
Showy, long, yellow flowers. Reseeds readily.



Laburnum watereri
GOLDENCHAIN TREE



Hardiness Zone: 5-7
Size: H/W 30'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
Poisonous seed pods might pose danger to children or pets.



Liquidambar styraciflua
AMERICAN SWEETGUM



Hardiness Zone: 5-9
Size: H/W 80'x45'
Landscape Zone: 3
Characteristics & Problems:
Resprouts from root crown. Spiny fruit in yard could be a nuisance.



TREES

Liriodendron tulipifera
TULIP TREE

Hardiness Zone: 4-9
Size: H/W 100'x50'
Landscape Zone: 3
Characteristics & Problems:
 Roots may surface in lawn if not watered deeply and independently of turf.

Maackia amurensis
MAACKLA

Hardiness Zone: 3-7
Size: H/W 30'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Dark, olive-green leaves are attractive in summer but produce no fall color.

Maclura pomifera 'White shield'
WHITE SHIELD OSAGE-ORANGE

Hardiness Zone: 5-7
Size: H/W 30'x40'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Both fruitless and thornless.

Malus floribunda
JAPANESE FLOWERING CRABAPPLE

Hardiness Zone: 4-7
Size: H/W 15'x25'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Disease resistant. Slightly susceptible to scab, powdery mildew, and fireblight.

Morus alba
WHITE MULBERRY

Hardiness Zone: 4-8
Size: H/W 30'x50'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Tolerates heat, drought, wind, cold & air pollution. Berries produce a mess when they drop to ground.

Phellodendron amurense
AMUR CORKTREE

Hardiness Zone: 3-7
Size: H/W 45'x60'
Landscape Zone: 3
Characteristics & Problems:
 Noted for its attractive shape, bark and foliage.

ASPEN/COTTONWOOD/POPLAR: DOUG PAGE, USFS; BLM, BUGWOOD.ORG; QUAKING ASPEN: GERALD AND BUFF CORSI © CALIFORNIA ACADEMY OF SCIENCES; COLUMNAR SWEDISH ASPEN: W. CARTER; OAKS: RUDOLPHUS, SAWTOOTH OAK: FRANKLIN BONNER, USFS (RET.), BUGWOOD.ORG

Platanus acerifolia
LONDON PLANE TREE/SYCAMORE



Hardiness Zone: 4-8
Size: H/W 100'x75'
Landscape Zone: 3
Characteristics & Problems:
Plant 25'-30' from any concrete.



Populus species
ASPEN/COTTONWOOD/POPLAR



Hardiness Zone: 1-9
Size: H/W 60'x40'
Landscape Zone: 2 or 3
Characteristics & Problems:
Fairly short-lived genus, 50-70 years. Some species can be problematic.



Populus tremuloides
QUAKING ASPEN



Hardiness Zone: 1-6
Size: H/W 50'x30'
Landscape Zone: 3
Characteristics & Problems:
Sprouts readily, so can be problematic in landscapes.



Populus tremula 'Erecta'
COLUMNAR SWEDISH ASPEN



Hardiness Zone: 1-6
Size: H/W 40'x10'
Landscape Zone: 2 or 3
Characteristics & Problems:
Upright, columnar growth habit; does not sucker as much as quaking aspen.



Quercus species
OAKS



Hardiness Zone: 3-9
Size: H/W variable
Landscape Zone: 2 or 3
Characteristics & Problems:
Oaks cover a wide spectrum of size and habitat.



Quercus acutissima
SAWTOOTH OAK



Hardiness Zone: 6-9
Size: H/W 60'x60'
Landscape Zone: 3
Characteristics & Problems:
Sawtooth oak is considered a low-maintenance tree with good pest resistance.



TREES

Quercus alba
WHITE OAK

Hardiness Zone: 3-9
Size: H/W 75'x75'
Landscape Zone: 3
Characteristics & Problems:
 Most oaks survive periodic fires.

Quercus bicolor
SWAMP WHITE OAK

Hardiness Zone: 3-8
Size: H/W 55'x55'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Tolerates wet soil.

Quercus douglasii
BLUE OAK

Hardiness Zone: 5-8
Size: H/W 30'x50'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Medium-sized. Drought-resistant. Might retain its leaves year-round on moist sites.

Quercus gambelii
GAMBEL OAK

Hardiness Zone: 3-8
Size: H/W 10'x5'
Landscape Zone: 2 or 3
Characteristics & Problems:
 Higher tolerance to fire compared to other oaks.

Quercus garryana
OREGON WHITE OAK

Hardiness Zone: 6-8
Size: H/W 90'x60'
Landscape Zone: 3
Characteristics & Problems:
 Open-grown trees develop very broad, rounded crowns with massive, crooked branches on short, massive trunks.

Quercus lobata
VALLEY OAK

Hardiness Zone: 5-8
Size: H/W 75'x75'
Landscape Zone: 3
Characteristics & Problems:
 In autumn leaves turn yellow to light orange, but become brown during mid to late fall. Pewter-colored, rippled bark.

PIN OAK: RMCCREA; ENGLISH OAK: ZIBROWAY; COLUMNAR ENGLISH OAK: DEREK RAMSEY (RAM-MANI); CASCARA: JESSE TAYLOR

Quercus macrocarpa
BUR OAK



Hardiness Zone: 3-8
Size: H/W 60'x30'
Landscape Zone: 3
Characteristics & Problems:
Acorns can be an important source of food for wildlife.



Quercus palustris
PIN OAK



Hardiness Zone: 4-8
Size: H/W 75'x40'
Landscape Zone: 3
Characteristics & Problems:
Infrequently attacked by the common diseases of oaks.



Quercus robur
ENGLISH OAK



Hardiness Zone: 5-8
Size: H/W 70'x70'
Landscape Zone: 3
Characteristics & Problems:
Considered to be a low-maintenance tree with few problems.



Quercus robur 'Fastigiata'
COLUMNAR ENGLISH OAK



Hardiness Zone: 5-8
Size: H/W 60'x20'
Landscape Zone: 3
Characteristics & Problems:
Good substitute for lombard poplar.



Quercus rubra
RED OAK



Hardiness Zone: 4-8
Size: H/W 75'x70'
Landscape Zone: 3
Characteristics & Problems:
Generally a durable and long-lived tree.



Rhamnus purshiana
CASCARA



Hardiness Zone: 5-8
Size: H/W 30'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
Readily reseeds..



TREES

Robinia species
LOCUST

Hardiness Zone: 4-9
Size: H/W Variable
Landscape Zone: 2 or 3

Characteristics & Problems:

Numerous varieties best grown in dry or native planting areas. Regular watering promotes dense, weak branching which increases maintenance. Can be invasive.

Robinia pseudoacacia 'Purple Robe'
PURPLE ROBE LOCUST

Hardiness Zone: 4-8
Size: H/W 40'x30'
Landscape Zone: 2 or 3

Characteristics & Problems:

Very adaptable in tough environments.

Salix species
WILLOW

Hardiness Zone: 3-7
Size: H/W Variable
Landscape Zone: 2 or 3

Characteristics & Problems:

Readily sprouts and reseeds. Short-lived.

Salix alba
GOLDEN WILLOW

Hardiness Zone: 2-8
Size: H/W 65'x65'
Landscape Zone: 2 or 3

Characteristics & Problems:

White willow generally not recommended for residential landscapes. Susceptible to numerous diseases and insect pests.

Salix amygdaloides
PEACHLEAF WILLOW

Hardiness Zone: 3-7
Size: H/W 25'x40'
Landscape Zone: 2 or 3

Characteristics & Problems:

Grows very quickly. Short-lived. Can only spread by seeds, while most other willows can propagate from roots or snapped bits of twig.

Sophora japonica
JAPANESE PAGODA TREE

Hardiness Zone: 4-8
Size: H/W 75'x75'
Landscape Zone: 2 or 3

Characteristics & Problems:

Cultivated for its attractive compound foliage and fragrant late-summer flowers.

KOREAN MOUNTAIN ASH: KATHERINE WAGNER; RESS; EUROPEAN MOUNTAIN ASH: MATT LAVIN; WESTERN MOUNTAIN ASH: WALTER SIEGRUND; LITTLELEAF LINDEN: DINESH VALKE; CAUCASIAN LINDEN: PETR FLUPPOY

Sorbus alnifolia
KOREAN MOUNTAIN ASH



Hardiness Zone: 3-7
Size: H/W 50'x25'
Landscape Zone: 2 or 3
Characteristics & Problems:
Considered one of the best of the mountain ashes because of its pest resistance and form.



Sorbus aucuparia
EUROPEAN MOUNTAIN ASH



Hardiness Zone: 3-6
Size: H/W 30'x20'
Landscape Zone: 2 or 3
Characteristics & Problems:
Flowering ornamental.



Sorbus sitchensis
WESTERN MOUNTAIN ASH



Hardiness Zone: 2-7
Size: H/W 13'x13'
Landscape Zone: 2 or 3
Characteristics & Problems:
Small growth habit. Colorful berries attract birds.



Tilia americana
AMERICAN LINDEN



Hardiness Zone: 2-7
Size: H/W 80'x50'
Landscape Zone: 3
Characteristics & Problems:
Dense canopy may inhibit turf growth, if planted in or near lawn.



Tilia cordata
LITTLELEAF LINDEN



Hardiness Zone: 3-7
Size: H/W 70'x50'
Landscape Zone: 3
Characteristics & Problems:
Dense canopy may inhibit turf growth, if planted in or near lawn.



Tilia x euchlora
CAUCASIAN LINDEN



Hardiness Zone: 3-8
Size: H/W 40'x30'
Landscape Zone: 2 or 3
Characteristics & Problems:
Small cultivar of linden.



REFERENCE FURTHER READING AND WEBSITES FOR FIRE-RESISTANT PLANTS AND FIREWISE INFORMATION

Choosing the Right Plants for Northern Nevada's High Fire Hazard Areas

<https://extension.unr.edu/publication.aspx?PubID=3448>

This publication has a plant list and extensive Firewise information.

Fire Resistance of Plants Master Database & Placement of Species within Firewise Landscape Zones for Southern Idaho

<http://idahofirewise.org/assets/library/Homeowner%20Information/Firewise%20Landscaping/Fire%20Resistance%20of%20Plants%20Master%20Database.pdf>

This publication has a comprehensive plant list that rates plants by flammability. Also, it has a significant amount of fire-resistant plant information.

Firewise Plant Materials

<http://extension.colostate.edu/topic-areas/natural-resources/firewise-plant-materials-6-305/>

A publication from Colorado that has a comprehensive plant list and discusses landscaping and maintenance.

Protecting and Landscaping Homes in the Wildland/Urban Interface

<https://www.extension.uidaho.edu/publishing/pdf/SB/SB67.pdf>

A complete Firewise document that discusses a broad spectrum of topics starting with a plant list and including preventing loss of home and evacuation, if necessary.

Defensible Space Landscaping in the Urban/Wildland Interface: A compilation of fire performance ratings of residential landscape plants

<http://cesutter.ucanr.edu/files/156934.pdf>

A comprehensive reference source about plants, with citations.

Arizona Fire-resistant Plant List

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1291.pdf>

A list of trees, shrubs and grasses.

Fire-Resistant Plants for Home Landscaping

<https://catalog.extension.oregonstate.edu/pnw590>

A list and description of plants for Oregon and Washington.

California Division of Fire – CDF, Cal Fire

www.fire.ca.gov

Ready for Wildfire CDF website

www.readyforwildfire.org

Idaho Firewise

www.idahofirewise.org

Washington State University Extension Service

www.extension.wsu.edu/

University of Nevada- Reno

<https://www.unce.unr.edu/>

Living with fire.

www.livingwithfire.info

U.S. Forest Service

www.fs.fed.us

Bureau of Land Management.

www.blm.gov

National Interagency Fire Center.

www.nifc.gov

Cascadia Conservation District

<http://cascadiacd.org/wildfire-preparedness>

Fire adapted communities

www.fireadaptedcommunities.org

Fire-Resistant Plants for Oregon Home Landscapes. Fitzgerald, Stephen; Waldo, Amy Jo. OSU Extension Service

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_035870.pdf

Firewise Plant Materials. Dennis, F.C. CSU Cooperative Extension Natural Resources No. 6.305

<https://extension.colostate.edu/topic-areas/natural-resources/firewise-plant-materials-6-305/>

Washington State Department of Natural Resources

<https://washingtondnr.wordpress.com/category/wildfire/>

USDA Rocky Mountain Research Station.

<http://firelab.org>

National Fire Protection Association.

<http://www.nfpa.org/safety-information/fire-prevention-week>

National Interagency Fire Center

<http://www.nifc.gov/>

Protecting and Landscaping Homes in the Wildland and Urban Interface. Barkely, Y, C. Schnepf and J. Cohen. September 2010. University of Idaho Extension

<http://www.urbanforestrysouth.org/resources/library/ttresources/protecting-and-landscaping-homes-in-the-wildland-urban-interface>

Living with Fire: A Guide for the Homeowner.

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_020876.pdf

Fire education for landowners: Fuel reduction series. Information about fire behavior and fuels reduction methods from Oregon State University

<http://www.cof.orst.edu/cof/extended/extserv/wildlandfire/woodlandowners.php>

Let's Clear the Air About Outdoor Burning. Washington State Dept. of Ecology Website

<https://ecology.wa.gov/Air-Climate/Air-quality/Smoke-fire>

National Firewise. Website of the National Firewise Communities Program

<http://www.firewise.org/>

Chumstick Wildfire Stewardship Coalition. Example of an eastern Washington Firewise Community

<http://www.chumstickcoalition.org/>

Tolt Firewise. An Example of A Western Washington Firewise Community

<http://www.firewise.org/wildfire-preparedness/be-firewise/success-stories/washington/tolt.aspx?sso=0>

University of Idaho Extension Forestry.

<http://www.uidaho.edu/extension/forestry>

National Wildfire Coordinating Group (NWCg).

www.nwcg.gov

Colorado State University

<http://extension.colostate.edu/topic-areas/natural-resources/firewise-plant-materials-6-305/>

Fire-resistant Plants for Home Landscapes

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw590.pdf>

USDA Plants Database: Washington Noxious and Invasive Plant List

<http://plants.usda.gov/java/noxious?rptType=State&statefips=53>

Chelan County Noxious Weed List

http://www.co.chelan.wa.us/files/noxious-weed/documents/county_selected_list.pdf

Forestry Images

<https://www.forestryimages.org/>

Protecting and Landscaping Homes in the Wildland/Urban Interface

<https://www.uidaho.edu/extension/forestry/topic/fire>

National Resource Conservation Service (NRCS)

https://plants.usda.gov/factsheet/pdf/fs_elwa2.pdf

Marin County Firesafe Council

www.Firesafemarin.org

Fire-resistant Plants for Ashland Oregon

www.ashland.or.us

Eastern United State Fire Performance Plant Selector

<http://www.fire.sref.info/>

Missouri Botanical Garden.

<http://www.MissouriBotanicalGarden.org>

GLOSSARY

Annual Plant: A plant that completes its life cycle in one growing season.

Aspect: Cardinal direction toward which a slope faces.

Climate: The prevalent or characteristic meteorological conditions of any place or region and their extremes.

Deciduous Shrub: A woody, generally multi-stemmed plant that loses its leaves and becomes dormant during the winter.

Deciduous Tree: A tree that sheds its leaves at the end of a growing season and regrows them at the beginning of the next growing season. Most deciduous trees bear flowers and have woody stems and broad, rather than needle-like, leaves.

Drought: A period of relatively long duration with substantially below-normal precipitation, usually occurring over a large area.

Duff: The layer of decomposing organic materials below the litter layer of freshly fallen twigs, needles, and leaves and immediately above the mineral soil.

Ecosystem: An interacting natural system including all the component organisms together with the abiotic environment and processes affecting them.

Environment: The complex surroundings of an item or area of interest such as air, water, natural resources, and their physical conditions (temperature, humidity).

Evaporation: The transformation of a liquid to its gaseous state; heat is released by the liquid during this process.

Evergreen shrub: A woody, multi-stemmed shrub that retains its leaves throughout the year.

Fine Fuels: Fast-drying dead or live fuels, generally characterized by a comparatively high surface area-to-volume ratio, which are less than 1/4-inch in diameter and have a timelag of one hour or less. These fuels (grass, leaves, needles, etc.) ignite readily and are consumed rapidly by fire when dry.

Fire Frequency: A general term referring to the recurrence of fire in a given area over time.

Fire Hazard: A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.

Fire Interval: The number of years between two successive fire events for a given area; also referred to as fire-free interval or fire-return interval.

Fire Risk: The chance of fire starting as determined by the presence and activity of causative agents.

Firebrand: Any source of heat, natural or human-made, capable of igniting wildland fuels. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels.

Fire: Rapid oxidation, usually with the evolution of heat, fuel, oxygen and the interaction of the three.

Firewise: A national program that emphasizes community involvement and provides important information for residents to reduce the risk of wildland fire igniting homes.

Fuelbreak: A natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled.

Fuel: Any combustible material, especially wildland fuels.

Groundcover Plant: A low-growing or trailing group of plants usually used to cover bare earth and create a uniform appearance.

Hazard Fuel: A fuel complex defined by kind, arrangement, volume, condition, and location that presents a threat of ignition and resistance to control.

Hazard Reduction: Any treatment of living and dead fuels that reduces the potential spread or consequences of fire.

Hazard: Any real or potential condition that can cause injury, illness or death of personnel, or damage to, or loss of equipment or property.

Heat Zone: The American Horticultural Society (AHS) developed the Heat Zone Map, which parallels the USDA Hardiness Zone Map. This map is based on the number of "heat days" experienced in an area. A heat day is defined as a day in which the temperature climbs to over 86 degrees F. At this temperature, many plants begin to experience physiological damage and start to shut down. Heat Zones range from 1 (no heat days) to 12 (210 or more heat days).

Herbaceous Perennial: A plant with soft, rather than woody, tissues. Perennials die back to the ground each year but their roots remain alive and send up new top growth each spring.

Home Assessment: Evaluation of a dwelling and its immediate surrounding to determine its potential to escape damage by an approaching wildland fire. Includes the fuels and vegetation in the yard and adjacent to the structure, roof environment, decking and siding materials, prevailing winds, topography, fire history, etc., with the intent of mitigating fire hazards and risks.

Invasive Plant: A plant that is both non-native and able to establish on many sites, grow quickly, and spread to the point of disrupting plant communities or ecosystems.

Ladder Fuels: Fuels which provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. They help initiate and assure the continuation of crowning.

Landowner: The person or entity that owns the land or has the authority to convey title to others.

Limbing: Removing branches from a standing tree or shrub.

Live Fuel Moisture Content: Ratio of the amount of water to the amount of dry plant material in living plants.

Live Fuels: Living plants such as trees, grasses, and shrubs in which the seasonal moisture content cycle is controlled largely by internal physiological mechanisms, rather than by external weather influences.

Live Herbaceous Moisture Content: Ratio of the amount of water to the amount of dry plant material in herbaceous plants (i.e., grasses and forbs).

Live Woody Moisture Content: Ratio of the amount of water to the amount of dry plant material in shrubs.

Maintenance: The work of keeping something in proper condition, care or upkeep including taking steps to avoid something breaking down (preventative maintenance) and bringing something back to working order (corrective maintenance).

Native Species: A species which is a part of the original fauna or flora of the area in question.

Natural Barrier: Any area where lack of flammable material obstructs the spread of wildfires.

Non-turf grass: A grass that is generally not used in the formation of a lawn or in a continuous mat of grass. Often referred to as conservation grasses.

Noxious Weed: An invasive species of a plant which is designated as harmful to agricultural crops, ecosystems, or humans or livestock.

Probability of Ignition: The chance that a firebrand will cause an ignition when it lands on receptive fuels.

Risk: The chance of fire starting as determined by the presence and activity of causative agents. A chance of suffering harm or loss. A causative agent such as ignition source.

Shrub: A woody perennial plant differing from a perennial herb by its persistent and woody stem, and from a tree by its low stature and habit of branching from the base.

Slope Percent: The ratio between the amount of vertical rise of a slope and horizontal distance as expressed in a percent. One hundred feet of rise to 100 feet of horizontal distance equals 100 percent.

Spot Fire: Fire ignited outside the perimeter of the main fire by a firebrand.

Structure: A constructed object, usually a free-standing building above ground.

Tree: A woody perennial plant, typically having a single stem or trunk growing to a considerable height and bearing lateral branches at some distance from the ground.

Vine: A plant having a long, slender stem that trails or creeps on the ground or climbs by winding itself about a support or holding fast with tendrils or clasps.

Volatiles: Readily vaporized organic materials which, when mixed with oxygen, are easily ignited.

Wildland Fire: Any non-structure fire that occurs in vegetation or natural fuels. Wildland fire includes prescribed fire and wildfire.

Wildland Urban Interface (WUI): The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Describes an area within or adjacent to private and public property where mitigation actions can prevent damage or loss from wildfire.

Wildland: An area in which development is essentially non-existent, except for roads, railroads, powerlines, and similar transportation facilities. Structures, if any, are widely scattered.

INDEX

GROUNDCOVERS

SCIENTIFIC NAME	COMMON NAME	
Aegopodium podagraria.....	Bishop's weed	16
Ajuga reptans.....	Carpet bugleweed	16
Antennaria dioica.....	Rubra' pussytoes	16
Antennaria microphylla.....	Little-leaf pussytoes	16
Antennaria parvifolia.....	Small-leaf pussytoes	16
Antennaria rosea.....	Pink pussytoes	16
Arabis species & cultivars.....	Rockcress	17
Arctostaphylos uva-ursi.....	Kinnickinnick	17
Artemisia schmidtiana 'Silvermound'.....	Silver mound artemisia	17
Artemisia caucasica.....	Silver spreader	17
Artemisia stelleriana.....	Silver brocade	17
Artemisia viridis.....	Creeping artemisia	17
Aubrieta deltoidea.....	Rock cress	18
Aubrieta species & cultivars.....	False rockcress	18
Aurinia saxatilis.....	Basket-of-gold	18
Bellium minus.....	Miniature mat daisy	18
Callirhoe involucrata.....	Poppy mallow	18
Campanula poscharskyana.....	Serbian bellflower	18
Campanula carpatica.....	Carpathian bellflower	19
Cerastium tomentosum.....	Snow-in-summer	19
Ceratostigma plumbaginoides.....	Hardy plumbago	19
Convallaria majalis.....	Lily-of-the-valley	19
Duchesnea indica.....	Mock strawberry	19
Delosperma basuticum.....	White eyed ice plant	19
Delosperma cooperi.....	Purple ice plant	20
Delosperma cooperi.....	Pink ice plant	20
Delosperma hybrid 'John Proffit'.....	John Proffit Ice plant	20
Delosperma nubigenum.....	Yellow iceplant	20
Dianthus species & hybrids.....	Pinks	20
Ephedra regeliana.....	Creeping ephedra	20
Fragaria species & cultivars.....	Strawberries	21
Fragaria indica 'Pink Panda'.....	Mock strawberry	21
Galium boreale.....	Northern bedstraw	21
Galium odoratum.....	Sweet woodruff	21
Lamium armenum.....	Dead nettle	21
Liriope muscari.....	Liriope	21
Liriope spicata.....	Liriope	22
Marrubium rotundifolium.....	Silver edged horehound	22
Pachysandra terminalis 'Green Sheen'.....	Japanese spurge	22
Penstemon caespitosus.....	Mat penstemon	22
Penstemon davidsonii.....	Davidson's penstemon	22
Penstemon davidsonii v. menziesii 'Microphyllus'.....	Green mat penstemon	22
Phlox subulata.....	Creeping phlox	23
Phlox stolonifera.....	Creeping phlox	23
Phlox x procumbens.....	Creeping phlox	23
Saponaria ocymoides.....	Rock soapwort	23
Saponaria officinalis.....	Bouncing bett	23
Saponaria x lempergii 'Max Frei'.....	Giant flowered soapwort	23
Sedum lanceolatum.....	Yellow stonecrop	24
Sedum rupestre.....	Stonecrop	24
Sedum sichotense.....	Creeping stonecrop	24
Sedum sieboldii 'October Daphne'.....	October Daphne stonecrop	24
Sedum spathulifolium & cultivars.....	Stonecrop	24
Sedum spurium & cultivars.....	Stonecrop	24
Sempervivum tectorum & cultivars.....	Hens & chicks	25
Stachys byzantina.....	Lambs' ear	25
Thymus praecox.....	Creeping thyme	25
Thymus serpyllum & cultivars.....	Mother of Thyme	25
Veronica liwanensis.....	Speedwell	25
Veronica oltenis.....	Speedwell	25
Veronica gentianoides.....	Gentian speedwell	26
Veronica pectinata.....	Woolly speedwell	26
Veronica peduncularis.....	Creeping veronica	26
Veronica rupestris.....	Prostrate speedwell	26
Veronica austriaca sub.teucrium.....	Large speedwell	26
Vinca minor.....	Lesser periwinkle	26
Waldsteinia species, varieties & cultivars.....	Barren strawberry	27

HERBACEOUS PERENNIALS

SCIENTIFIC NAME	COMMON NAME	
Achillea species.....	Yarrow	30
Agastache species.....	Hyssop	30
Alcea rosea.....	Hollyhock	30
Alchemilla species.....	Lady's mantle	30
Allium species.....	Chives/Onion	30
Anemone blanda species.....	Windflower	30
Aquilegia species.....	Columbine	31
Armeria maritima.....	Sea thrift	31
Asclepias species.....	Milkweed	31
Aster species.....	Aster	31
Aurinia saxatilis.....	Basket-of-gold	31
Baptisia species.....	False indigo	31
Bergenia cordifolia & cultivars.....	Pig squeak	32
Campanula species & cultivars.....	Bellflower	32
Centranthus ruber.....	Jupiter's beard	32
Chamerion angustifolium.....	Fireweed	32
Coreopsis species.....	Coropsis or tickseed	32
Delphinium species & cultivars.....	Delphinium	32
Dianthus species & cultivars.....	Pinks	33
Echinacea purpurea.....	Coneflower	33
Erigeron species.....	Fleabane	33
Gaillardia species & cultivars.....	Blanket flower	33
Geranium species.....	Cranesbill hardy geranium	33
Guem triflorum.....	Prairie smoke	33
Helianthemum nummularium.....	Sun rose	34
Hemerocallis cultivars.....	Daylily	34
Heuchera species & cultivars.....	Coral bells	34
Hosta species & cultivars.....	Plantain lily	34
Iris species & cultivars.....	Iris, tall bearded	34
Kniphofia species & hybrids.....	Red-hot poker	34
Lavandula species.....	Lavender	35
Leucanthemum x superbum.....	Shasta daisy	35
Lilium species & hybrids.....	Lilies	35
Linum perenne.....	Blue flax	35
Lupinus species & cultivars.....	Lupine	35
Monarda species & hybrids.....	Bee balm	35
Oenothera species & hybrids.....	Evening primrose	36
Papaver orientale.....	Oriental poppy	36
Penstemon species & hybrids.....	Beardtongue	36
Phlox paniculata.....	Summer phlox	36
Polemonium species.....	Jacob's ladder	36
Ratibida columnifera.....	Prairie conflower	36
Rudbeckia fulgida.....	Black-eyed Susan	37
Salvia species & hybrids.....	Sage	37
Veronica prostrata, longifolia, spicata.....	Speedwell	37
Yucca filamentosa.....	Adam's needle	37
Zauschneria garrettii 'Orange Carpet'.....	Creeping hummingbird carpet	38

VINES

SCIENTIFIC NAME	COMMON NAME	
Actinidia kolomikta 'Arctic beauty'.....	Kiwi vine	40
Akebia quinata.....	Chocolate vine	40
Bignonia capreolata 'Tangerine beauty'.....	Crossvine	40
Campsis radicans.....	Trumpet vine	40
Campsis x tagliabuana 'Madame Galen'.....	Trumpet creeper	40
Clematis species & cultivars.....	Clematis	40
Humulus lupulus.....	Hops	41
Hydrangea anomala subspecies petiolaris.....	Climbing hydrangea	41
Lonicera sempervirens 'Magnifica'.....	Trumpet honeysuckle	41
Lonicera heckrottii 'Goldflame'.....	Honeysuckle	41
Parthenocissus quinquefolia.....	Virginia creeper	41
Vitis coignetiae.....	Crimson glory vine	41
Vitis vinifera 'Purpurea'.....	Purpleleaf grape	42

DECIDUOUS SHRUBS

SCIENTIFIC NAME	COMMON NAME	
Amelanchier species	Serviceberry	44
Ceanothus americanus	New Jersey tea	44
Cornus sericea	Red osier dogwood	44
Corylus cornuta	Filbert, Beaked hazel	44
Euonymus alatus 'Compactus'	Dwarf burning bush	44
Forsythia species	Forsythia	44
Hibiscus syriacus	Rose of Sharon	45
Holodiscus discolor	Oceanspray	45
Philadelphus hybrid species	Mock orange	45
Rhamnus frangula 'Aspelenifolia'	Fernleaf buckthorn	45
Rhamnus frangula 'Columnaris'	Tall hedge buckthorn	45
Rhus glabra	Smooth sumac	45
Rosa hybrida	Nearly wild rose	46
Rosa woodsii	Wood's rose	46
Spirea bumaldi 'Bumalda'	Japanese spirea	46
Spirea japonica 'Goldmound'	Goldmound spirea	46
Syringa species	Lilac	46
Viburnum carlesii 'Korean spice'	Korean spice viburnum	46
Viburnum opulus 'Compactus'	Snowball bush	47
Viburnum opulus 'Roseum'	European snowball viburnum	47

BROADLEAF EVERGREEN SHRUBS

SCIENTIFIC NAME	COMMON NAME	
Atriplex confertifolia	Shadescale saltbush	50
Berberis thunbergii 'Crimson Pygmy'	Japanese barberry	50
Berberis x lologensis 'Apricot Queen'	Warty barberry	50
Ceanothus gloriosus	Point Reyes ceanothus	50
Cotoneaster species	Cotoneaster	50
Cotoneaster dammeri	Berberis cotoneaster	50
Daphne x burkwoodii 'Carol Mackie'	Carol Mackie daphne	51
Daphne cneorum	Rock daphne	51
Euonymus x fortunei	Winter creeper	51
Lonicera pileata	Privet honeysuckle	51
Mahonia aquifolium	Oregon grapeholly	51
Mahonia repens Creeping	Oregon grape	51
Paxistima myrtifolia	Oregon boxwood	52
Potentilla fruticosa	Shrubby cinquefoil	52
Prunus laurocerasus	Cherry laurel	52
Prunus laurocerasus 'Otto Luyken'	Compact cherry laurel	52
Pyracantha angustifolia 'Gnome'	Gnome pyracantha	52
Pyracantha species & cultivars	Firethorn, pyracantha	52
Rhododendron macrophyllum	Pacific rhododendron	53
Rhododendron species & cultivars	Rhododendron/azalea	53
Viburnum x burkwoodii cultivars and varieties	Burkwood viburnum	53
Viburnum species & hybrids	Viburnum	53
Yucca glauca	Small soapweed	53
Yucca harrimaniae 'Neomexicana'	New Mexico yucca	53
Yucca filamentosa	Adam's needle	54

NON-TURF GRASSES

SCIENTIFIC NAME	COMMON NAME	
Carex species & cultivars	Sedge	56
Elymus wawawaiensis cultivars	Snake River wheatgrass	56
Festuca glauca	Blue fescue	56
Festuca idahoensis	Idaho fescue	56
Festuca ovina	Sheep fescue	56
Koeleria glauca	Blue hairgrass	56
Koeleria macrantha	Prairie junegrass	57
Nassella tenuissima	Mexican feather grass	57
Pascopyrum smithii	Western wheatgrass	57
Poa secunda	Sandberg bluegrass	57
Poa secunda 'Mountain Home'	Sandberg bluegrass	57
Pseudoroegneria cristatum	Crested wheatgrass	57
Pseudoroegneria spicata	Bluebunch wheatgrass	58
Pseudoroegneria spicata inermis	Beardless wheatgrass	58
Sporobolus cryptandrus	Sand dropseed	58

TREES

SCIENTIFIC NAME	COMMON NAME	
Acer species	Maple	60
Acer glabrum	Rocky Mountain maple	60
Acer saccharum 'green mountain'	Green Mountain maple	60
Acer Saccharum	Sugar maple	60
Acer negundo	Boxelder	60
Acer negundo 'Sensation'	Sensation boxelder maple	60
Acer negundo 'Violaceum'	Boxelder	61
Acer ginnala varieties & cultivars	Amur maple	61
Acer macrophyllum	Bigleaf maple	61
Acer rubrum varieties & cultivars	Red maple	61
Aesculus species	Horsechestnut & Buckeye	61
Aesculus hippocastanum	Common horse chestnut	61
Aesculus hippocastanum 'Braumannii'	Braumannii horse chestnut	62
Aesculus x carnea 'Briotii'	Red horse chestnut	62
Alnus species	Alder	62
Alnus glutinosa	Black alder	62
Alnus tenuifolia	Mountain alder	62
Betula species	Birch	62
Betula populifolia 'Whitespire'	Whitespire birch	63
Betula occidentalis	Water birch	63
Betula nigra 'Cully' Heritage	Heritage river birch	63
Carpinus betulus	European hornbeam	63
Carpinus betulus 'Frans Fontaine' Frans	Fontaine hornbeam	63
Catalpa x erubescens 'Purpurea'	Purple leaf catalpa	63
Catalpa bignoniodes 'Nana'	Umbrella catalpa	64
Catalpa speciosa	Northern catalpa	64
Celtis occidentalis	Common hackberry	64
Celtis reticulata	Netleaf hackberry	64
Cercis canadensis varieties & cultivars	Eastern redbud	64
Cercocarpus montanus	Mountain mahogany	64
Cercocarpus ledifolius	Curl-leaf mountain mahogany	65
Cornus stolonifera	Pacific dogwood	65
Cornus kousa	Kousa dogwood	65
Cornus sericea	Red twig dogwood	65
Cornus florida varieties & cultivars	Florida flowering dogwood	65
Cotinus cogggria varieties & cultivars	Smoketree	65
Diospyros virginiana	American persimmon	66
Fagus species	Beech	66
Fagus sylvatica 'Asplenifolia'	Fernleaf beech	66
Fagus sylvatica 'Dawycyk purple'	Columnar purple European beech	66
Fagus sylvatica	European beech	66
Fraxinus species	Ash	66
Fraxinus americana	White ash	67
Fraxinus americana 'Autum purple'	Autumn purple ash	67
Fraxinus pennsylvanica 'Marshall'	Marshall green ash	67
Ginkgo biloba	Maidenhair tree	67
Ginkgo biloba 'Autum Gold'	Autum gold	67
Gleditsia triacanthos inermis	Thornless honey locust	67
Gleditsia triacanthos inermis 'Impcole'	Imperial honey locust	68
Gleditsia triacanthos inermis 'Rubylace'	Rubylace honey locust	68
Gleditsia triacanthos inermis 'Shademaster'	Shademaster honeylocust	68
Gleditsia triacanthos inermis 'Sunburst'	Sunburst honey locust	68
Gleditsia triacanthos inermis 'Skyline'	Skyline honey locust	68
Gymnocladus dioicus	Kentucky coffeetree	68
Gymnocladus dioicus 'Espresso'	Espresso Kentucky coffee tree	69
Juglans nigra	Black walnut	69
Juglans major	Arizona walnut	69
Koeleria paniculata	Goldenrain tree	69
Laburnum watereri	Goldenchain tree	69
Liquidambar styraciflua	American sweetgum	69
Liriodendron tulipifera	Tulip tree	70
Maackia amurensis	Maackia	70
Maclura pomifera 'White shield'	White shield Osage-orange	70
Malus floribunda	Japanese flowering crabapple	70
Morus alba	White mulberry	70
Phellodendron amurense	Amur corktree	70
Platanus acerifolia	London plane tree/sycamore	71
Populus species	Aspen/cottonwood/poplar	71
Populus tremuloides	Quaking aspen	71
Populus tremula 'Erecta'	Columnar swedish aspen	71
Quercus species	Oaks	71

INDEX

TREES

SCIENTIFIC NAME	COMMON NAME	
Quercus acutissima	Sawtooth oak	71
Quercus alba	White oak	72
Quercus bicolor	Swamp white oak	72
Quercus douglasii	Blue oak	72
Quercus gambelii	Gambel oak	72
Quercus garryana	Oregon White oak	72
Quercus lobata	Valley oak	72
Quercus macrocarpa	Bur oak	73
Quercus palustris	Pin oak	73
Quercus robur	English oak	73
Quercus robur 'Fastigiata'	Columnar English oak	73
Quercus rubra	Red oak	73
Rhamnus purshiana	Cascara	73
Robinia species	Locust	74
Robinia pseudoacacia 'Purple Robe'	Purple robe locust	74
Salix species	Willow	74
Salix alba	Golden willow	74
Salix amygdaloides	Peachleaf willow	74
Sophora japonica	Japanese pagoda tree	74
Sorbus alnifolia	Korean mountain ash	75
Sorbus aucuparia	European mountain ash	75
Sorbus sitchensis	Western mountain Ash	75
Tilia americana	American linden	75
Tilia cordata	Littleleaf linden	75
Tilia × euchlora	Caucasian linden	75



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, proper pruning, etc.

NOTES

