



Commerce City Community Development
7887 East 60th Avenue
Commerce City, Colorado 80022
Phone (303) 289-3683 / Fax (303) 289-3731
<http://www.c3gov.com>

IMPORTANT UPDATE

DATE: FEBRUARY 16, 2010

RE: ASH BORER INFESTATION OF ASH TREES

Please be advised that Ash Borer (*Podospesia syringae* Harris) infestation concerns have been raised by the U.S. Forest Service and by Colorado State University for Ash trees along the Front Range and within Commerce City. Therefore, effectively immediately, Commerce City's Planning and Parks Planning Divisions have issued a temporary, but indefinite, restriction on the use of Ash trees for developments within the city. The city will limit the use of Ash trees associated with plans and development projects as follows:

- 1. Ash trees will not be accepted for use in:**
 - a. Any street-tree or other right-of-way planting plans that are associated with Site Plans, Development Plans, or Improvements Plans.**
 - b. Any public park within the city.**
- 2. Ash trees will be limited for use in:**

Any private development, lot, park, or site. This limitation will apply to the species listed below. This limit places a maximum of 20% on the cumulative Ash species for any development. In cases where an applicant has proposed more than a 20% cumulative total for Ash trees, the applicant will be directed to use any of the substitution approved species in-lieu of Ash Trees. These can be found within the Approved Plant List guide for the city. This limitation should save expensive replacement costs and maintenance for Ash Trees.

The species included within this ban are as follows:

- Marshall Seedless Ash (*Fraxinus pennsylvanica* "Marshall Seedless")**
- Patmore Green Ash (*Fraxinus pennsylvanica* "Patmore")**
- Green Ash (*Fraxinus pennsylvanica*)**
- Autumn Purple Ash (*Fraxinus Americana* "Autumn Purple")**

Notes about the Ash Borer:

An exotic insect from Asia has been found feeding on Ash trees in the area. This insect, called the Ash Borer, feeds on all Ash species and can kill trees in one to three years.

What you can do:

1. Check your Ash trees for signs/symptoms of the Ash Borer.
2. Check the CSU Extension website for images showing symptoms of the Ash Borer, the insect, and feeding damage.
3. If you capture an insect, compare it to photos of the Ash Borer and look-alike insects to determine if you might have a tree infestation.
4. Water your Ash tree during dry periods - the Borer prefers to attack stressed trees.
5. Insecticide treatments for valuable landscape trees-experts are not recommending insecticide treatment of Ash, unless there is a confirmed infestation within a close proximity of the tree.
6. Contact a forester or landscape specialist to look at your trees.
7. Plant a variety of tree species and do not plant more Ash trees.
8. There is no need to remove healthy Ash trees at this time.
9. Do not move bark-intact Ash wood from your area, and use local sources of wood when camping.

For additional questions, please contact the city planning division at 303-289-3683, or the parks planning division at 303-289-8788.



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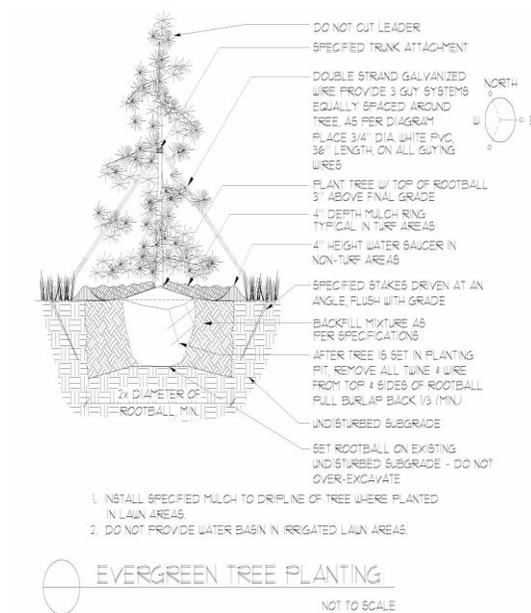
COMMERCE CITY APPROVED PLANT AND TREE LIST

The Approved Tree and Plant List has been compiled by highly-qualified experts in the field of horticulture and High Plains native plants, and it includes hundreds of species of plants and trees that are suited to the City's environment. The list is to be used by property owners, developers, and the City as a standard for selecting native and adapted plant species to minimize maintenance costs, conserve water, and improve longevity.

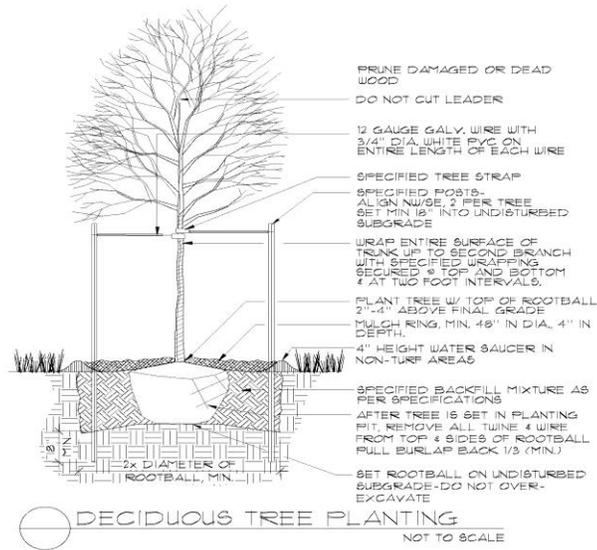
The following pages contain planting details, City-approved species, xeric species, prohibited species, and other important planting specifications. This information should be used when preparing or updating a landscape plan.

If you have any specific questions about this document, please contact the Community Planning and Development Services Department at 303-289-3683.

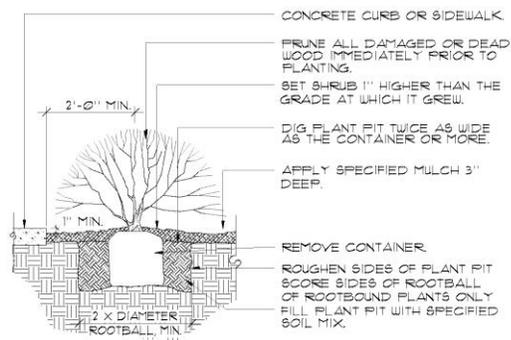
PLANTING SPECIFICATIONS – EVERGREEN TREES



PLANTING SPECIFICATIONS – DECIDUOUS TREES



PLANTING SPECIFICATIONS – SHRUBS



NOTE: ANY BROKEN OR CRUMBLING ROOTBALL WILL BE REJECTED. REMOVING THE CONTAINERS WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALLS.

NOTE: HOLD GRADE 1" BELOW EDGE OF WALK OR CURB



SHRUB PLANTING

NOT TO SCALE

INVASIVE PLANTS AND ALTERNATIVES

<i>Please do not plant these invasive non-native species:</i>	<i>Instead, try a visually similar <u>native</u> plant:</i>
<p>Purple Loosestrife (Lythrum salicaria)</p>	<p>Fireweed (Chamerion (Epilobium) daniesii), Spotted Gayfeather (Liatris punctata) Beebalm (Monarda fistulosa), Lewis Flax (Linum perenne var. lewisii)</p>
<p>Myrtle Spurge or Mercer's Spurge (Euphorbia myrsinites)</p>	<p>Sulfur flower (Eriogonum umbellatum), Bearberry or Kinnikinnick (Artocostaphylos uva-ursi)</p>
<p>Russian Olive (Elaeagnus angustifolia)</p>	<p>Peachleaf Willow (Salix amygdaloides)</p>
<p>Tamarisk (Tamarix spp.)</p>	<p>Rabbitbush (Chrysothamnus spp.), Leadplant (Armorpha canescens), Thimbleberry (Rubus deliciosus), Wax Currant (Ribes cereum)</p>
<p>Bouncing Bet or Soapwort (Saponaria officinalis)</p>	<p>Native Penstemon (Penstemon spp.), Native White Yarrow (Achillea Lanulosa) Rocky Mountain Beeplant (Cleome serrulata)</p>
<p>Dame's Rocket or Sweet Rocket (Hesperis matronalis)</p>	<p>Native Blue Columbine (Aquilegia caerulea) Harebell (Campanula rotundifolia)</p>
<p>Perennial Sweet Pea (Lathyrus latifolius)</p>	<p>Western Virgin's Bower (Clematis ligusticifolia)</p>
<p>Dalmatian Toadflax, Butter & Eggs or Yellow Toadflax (Linaria genistifolia ssp. Dalmatica L. vulgari)</p>	<p>Golden Banner (Thermopsis spp.), Wallflower (Erysimum asperum), Scarlet Gilia (Gilia aggregata)</p>
<p>Mediterranean Sage (Salvia aethiopsis)</p>	<p>Pussy Toes (Antennaria spp.), Native Sage (Artemisia spp.)</p>
<p>Ox-Eye Daisy (Leucanthemum vulgare, chrysanthemum)</p>	<p>Native Daisies (Erigeron spp.), Black-Eyed Susan (Rudbeckia hirta).</p>

leitcanthemum)	Blanket Flower (<i>Gaillardia aristata</i>)
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PROHIBITED TREES IN COMMERCE CITY

(Species Not Recommended Due to Undesirable Characteristic)

Boxelder (*Acer negundo*)
Silver Maple (*Acer saccharinum*)
Tree-of-Heaven (*Ailanthus altissima*)
Birch (*Betula species*)
Russian Olive (*Elaeagnus angustifolia*)
Ash, American or Green cvs. (*Fraxinus species*)
Honey Locust, Thorny (*Gleditsia triacanthos*)
Crabapple, Hopa (*Malus 'Hopa'*)
Crabapple, Bechtel (*Malus ioensis 'Plena'*)
White Poplar (*Populus alba*)
Cottonwood (*Populus sargentii*)
Cottonwood, cottonless (*Populus species*)
Aspen (*Populus tremuloides*)
European Mountainash (*Sorbus aucuparia*)
Willow, including Austrees (*Salix species*)
Tamarisk (*Tamarix species*)
Siberian (Chinese) Elm (*Ulmus pumila*)

APPROVED STREET TREE LIST

The City of Commerce City, Department of Community Planning and Development Services, has identified specific deciduous tree species for planting within tree lawns. These species have been chosen for their drought tolerant or low- to moderate-water usage and rooting characteristics. Several species should be incorporated into the landscape plan for tree lawn areas.

DECIDIOUS SHADE TREES (Drought Tolerant)

The trees contained in this list are identified as drought tolerant, but will require low to moderate watering frequency to grow and flourish.

Columnar Norway Maple (*Acer platanoides* "Columnar")
Prairie Pride Hackberry (*Celtis occidentalis* "Prairie Pride")
Marshall Seedless Ash (*Fraxinus pennsylvanica* "Marshall Seedless")
Patmore Green Ash (*Fraxinus pennsylvanica* "Patmore")
Green Ash (*Fraxinus pennsylvanica*)
Shademaster Honeylocust (*Gleditsia triacanthos* "PNI 2835")
Skyline Honeylocust (*Gleditsia triacanthos* "Skycole")
Kentucky Coffee Tree (*Gymnocladus dioicus*)
Swamp White Oak (*Quercus bicolor*)
English Oak (*Quercus robur*)
Pagoda Tree or Scholartree (*Sophora japonica*)

DECIDIOUS SHADE TREES (Additional)

The tree species included in this list are suitable for street trees but are not identified as drought tolerant. These species will require a moderate watering frequency to grow and flourish.

Bur Oak (*Quercus macrocarpa*)
Red Oak (*Quercus rubra*)
Glenleven Linden (*Tilia cordata* "Glenleven")
Greenspire Linden (*Tilia cordata* "PNI 6025")
Turkish Filbert (*Corylus colurna* Tree Form)
Autumn Purple Ash (*Fraxinus americana* "Autumn Purple")
Red Maple (*Acer rubrum*)

ORNAMENTAL TREES

Tatarian Maple (*Acer tataricum*- Tree Form)

- Spring Snow Crabapple** (*Malus "Spring Snow" - Tree Form*)
- Golden Rain Tree** (*Koelreuteria paniculata*)
- Chanticleer Pear** (*Pyrus calleryana "Chanticleer"*)
- Japanese Tree Lilac** (*Syringa reticulata*)
- Thornless Cockspur Hawthorn** (*Crataegus crus-galli inermis Tree Form*)

LARGE DECIDUOUS TREES

Considerations for Selecting Large Deciduous Trees

1. **Available space.** The location you chose for each tree should have enough space to allow for growth without severe pruning. Check for obstructions of buildings, overhead utility lines, and tall fences. If lateral space is limited, select a tree that has a narrow, upright growth habit. Refer to height, branch spread, and shape in the tree list show in Table 1. If overhead lines are near, you may want to choose small trees.
2. **Soil conditions.** Most trees perform best in well-drained soil. If you have compacted soil that is hard to work, loosen the soil and mix in organic material to at least 12 inches depth before planting your tree.
3. **Irrigation lines.** If you have an underground irrigation system, plant trees to allow for the tree trunk and basal root flare to expand without encroaching an irrigation pipe. If not, tree roots may eventually compress the pipe and shut off the irrigation line.
4. **Growth rates vs. brittleness.** As a general rule, fast growing trees tend to be brittle and can be damaged by limb-breakage in storms. Plant these trees away from buildings, sidewalks, driveways, and utility lines.
5. **Water requirements.** Trees vary in water requirements. Do not plant trees that have low water needs in heavily irrigated lawn areas or at the bottom of slopes. Plant trees with high water requirements in locations where supplemental watering is possible and desired.

Table 1: Large trees for shade.

Key: Growth Rate: f = fast m = moderate s = slow						
Soil moisture: L = low-water needs. Can withstand drought. M = moderate-water needs. Normal lawn watering H = heavy-water needs. More than normal lawn watering						
Plant Name	Height (ft)	Branch Spread (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints
Ash, American <i>Fraxinus americana</i>	60	50	elliptical	m	M	Yellow fall color. Street tree.
'Autumn Purple'	50	50	round	m	M	Reddish purple fall color. Seedless.

Table 1: Large trees for shade.

Key:		Growth Rate:		Soil moisture:		L = low-water needs. Can withstand drought. M = moderate-water needs. Normal lawn watering H = heavy-water needs. More than normal lawn watering	
		f = fast					
		m = moderate					
		s = slow					
Plant Name	Height (ft)	Branch Spread (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints	
Ash, Green	50	30	round	m	M	Yellow fall color. Adapts to wide range of soils.	
<i>Fraxinus pennsylvanica</i>							
‘Marshalls’ Seedless’	50	30	elliptical	m	M	Yellow fall color. Street tree. Seedless.	
‘Summit’	50	20	conical	m	M	Female will produce seed. Yellow fall color.	
‘Patmore’	50	30	elliptical	m	M	One of the hardiest. Seedless.	
Buckeye, Ohio	35	20	broad,	m	M	Reddish-orange fall color. Light yellow flowers in terminal clusters in late spring. Nut-like fruit.	
<i>Aesculus glabra</i>			columnar				
Catalpa, Northern	50	25	narrow,	s	M	Showy, white orchid-like flowers in early summer. Bean-like pods often remain on trees all winter.	
<i>Catalpa speciosa</i>			columnar				
Hackberry, Common	65	50	broad,	s-m	L	Adapts to most soils. Yellow fall color. Corky bark. Street tree.	
<i>Celtis occidentalis</i>			spreading				
Honeylocust, Thornless	65	40	variable	m	M	Seeding selection. Not always thornless.	
<i>Gleditsia triacanthos inermis</i>							
‘Imperial’	40	40	rounded	m	M	Foliage is fern-like and bright green. Thornless. May produce pods.	
‘Shademaster’	70	50	broad,	m	M	Dark green ferny foliage. Podless and thornless. Street tree.	
			spreading				
‘Skyline’	45	40	broad,	m	M	Compact, dark green foliage. Street tree.	
			conical				
‘Sunburst’	35	45	variable	m	M	Yellow-tipped foliage. May be more prone to diseases.	

Table 1: Large trees for shade.

Key:		Growth Rate:	f = fast m = moderate s = slow	Soil moisture:	L = low-water needs. Can withstand drought. M = moderate-water needs. Normal lawn watering H = heavy-water needs. More than normal lawn watering	
Plant Name	Height (ft)	Branch Spread (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints
Hornbeam, columnar <i>Carpinus betulus</i> 'Fastigiata'	35	15	narrow, columnar	s	H	Dark green, glossy foliage much like elm. Plant where soil stays cool. Avoid south or west exposures.
Horsechestnut <i>Aesculus hippocastanum</i>	60	45	broad, conical	s	M	Large clusters of white flowers in late spring. Best used in large open lawn areas.
Japanese Pagodatree <i>Sophora japonica</i>	50	40	rounded	m	M	Creamy flowers in mid-summer. Bead like pods in late fall. Street tree.
Kentucky Coffeetree <i>Gymnocladus dioica</i>	45	25	variable	s	L	May be male or female. Female has leathery pods, interesting winter form.
Linden, American <i>Tilia americana</i>	60	50	broad, conical to columnar	m	M	Heart-shaped leaves. Fragrant flowers in early summer.
Linden, Littleleaf <i>Tilia cordata</i> 'Greenspire'	45 45	30 25	conical conical	m m	M M	Dense foliage. May sucker near base. Street tree. Near formal appearance. Glossy, dark green leaves. Street tree.
Linden, Redmond <i>Tilia x euchlora</i> 'Redmond'	45	40	broad, conical	m-f	M	Striking reddish bark/twigs. Narrow crotch branch habit may result in storm breakage.
Maple, Norway <i>Acer plantanoides</i> 'Columnar'	50 50	40 20	rounded narrow	m m-f	M M	Dark green, dense foliage. Yellow fall color. Good for tight, narrow locations. Street tree.
'Emerald Queen'	50	40	rounded	m	M	Dark green foliage with dense branching habit.
'Jade Glen'	50	40	rounded	m	M	Good yellow fall color.
'Royal Red'	40	30	rounded	m	M	Dark, glossy red foliage all summer. Similar to Crimson King, but more cold hardy.
'Schwedler'	50	40	rounded columnar	m	M	Red foliage in spring changing to bronze and dark green in summer. Street tree.
Maple, Red <i>Acer rubrum</i> 'Armstrong'	45 50	40 30	conical narrow, columnar	f m	H M	Red flowers in early spring. Red fall color. Avoid very alkaline soils. Red fall color. Street tree. Avoid very alkaline soils.
'Red Sunset'	45	40	broad,	f	H	Red flowers in early spring. Red

Table 1: Large trees for shade.

Key:		Growth Rate:	Soil moisture:			
		f = fast m = moderate s = slow	L = low-water needs. Can withstand drought. M = moderate-water needs. Normal lawn watering H = heavy-water needs. More than normal lawn watering			
Plant Name	Height (ft)	Branch Spread (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints
			conical			fall color. Avoid very alkaline soils.
Oak, Bur <i>Quercus macrocarpa</i>	60	50	broad, spreading	s	L	Tolerates alkaline soils and drought.
Oak, English <i>Quercus robur</i>	50	50	rounded	m	M	Broad, stout spreading branches. Glossy dark green, thick-textured leaves. Street tree.
Oak, Red <i>Quercus rubra</i>	40	50	broad, spreading	m	M	Often broader than tall. Fall color usually red. Avoid very alkaline soils. Street tree.
Oak, Swamp White <i>Quercus bicolor</i>	50	45	upright, spreading	m-f	M	Adapts best of all oaks to clay soils and irrigated lawns. Fall color usually yellow. Street tree.

SMALL DECIDUOUS TREES

Considerations for Selecting Small Deciduous Trees

1. **Soil.** It is important to prepare soil before planting. Loosen the soil several feet in all directions from the spot you wish to plant. If the soil is a heavy, clay texture and hard to work, add aged manure or compost and work into the soil at least 12 inches deep.
2. **Color and texture.** For landscape variety, plant several different kinds of trees if space allows. Through careful selection, you can have flowers, colorful and interesting fruits, varied foliage texture and fall colors.
3. **Water.** Table 2 indicates the general soil moisture needs of each small tree. Try to match the plant with the moisture conditions of the site. Trees tend to grow too rank if they are low-moisture trees planted in an irrigated lawn. On the other hand, trees that require moderate to heavy moisture will do poorly if placed in an area where little or no supplemental irrigation can be applied.

Table 2: Small deciduous trees for privacy and color.

Plant Name	Height (ft)	Branch Spread (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints
Cherry, Canadian Red Prunus virginiana 'Shubert'	30	20	upright, clump	f	M	Leaves both red and green on same plant. Tends to root sucker like aspen.
Cherry, European Bird Prunus padus	30	15	upright, spreading	m	M	Fragrant chains of white flowers in spring. Fruit good for jellies.
Chokeberry, Amur Prunus maackii	25	20	upright, vase	m	M	Striking, shiny orange-red bark. White flowers.
Crabapple Malus spp.	Sizes and shapes vary as indicated below:			m-f	M	many varieties available. below are listed some for various aesthetic uses.
'Bechtel'	25	20	rounded			Double pink flowers. Usually no fruit.
'Red Splendor'	25	15	upright			Single rose-red flowers. Purple fruit.
'Radiant'	25	15	upright			Single pink or rosy red flowers; red to purple fruit.
'Royalty'	15	15	rounded			Dark red flowers. Purple foliage.
'Snowdrift'	15	15	upright			White flowers; red fruit.
'Spring Snow'	20	15	spreading			Usually fruitless. Dense foliage.
'Dolgo'	30	25	upright			White flowers. Fruit good for jelly.
'Centurion, Red Baron'	20	10	upright			Rosy-red flowers. Red fruit. Street tree.
Hawthorn, Cockspur Crataegus crus-galli	20	15	stiffly upright	m	L	Snowy white flowers and red fruit. Glossy.

Table 2: Small deciduous trees for privacy and color.

Key: Growth Rate: f = fast m = moderate s = slow							Soil moisture: L = low-water needs. Can withstand drought. M = moderate-water needs. Normal lawn watering H = heavy-water needs. More than normal lawn watering
Plant Name	Height (ft)	Branch Spread (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints	
Hawthorn, Downy <i>Crataegus mollis</i>	25	20	broad globe	m	M	Snowy white flowers in spring. Red fruit late summer. Bronze fall color.	
Hawthorn, Toba <i>Crataegus x mordenensis</i> 'Toba'	15	15	rounded	m	M	Fragrant, double, white flowers. Red fruit.	
Hawthorn, Russian <i>Crataegus ambigua</i>	20	15	upright spreading	m	L	Finely cut glossy leaves. White flowers, persistent red fruit.	
Hawthorn, Washington <i>Crataegus phaenopyrum</i>	20	15	upright spreading	m	M	White flowers; showy orange-red fruit. Red-orange fall color. Prominent thorns.	
Lilac, Japanese tree <i>Syringa reticulata</i>	20	20	stiffly upright	m	M	Creamy panicles of flowers in late spring.	
Maple, Amur <i>Acer ginnala</i>	25	15	broad, spreading	m	H	Sometimes shrubby. Scarlet fall color. Avoid in alkaline soils.	
Maple, Wasatch <i>Acer grandidentatum</i>	25	15	broad, spreading	m	L	Survives in very dry sites once established. Orange-red fall color. Forms groves by creeping root stocks. Often more shrubby than tree-like. Needs acid, well-drained soils to do well.	
Oak, Gambel's <i>Quercus gambelii</i>							
Pear, Callery <i>Pyrus calleryana</i> 'Aristocrat'	25	20	upright, open broad, oval	m	M	White flowers in early spring. Red to bronze fall color.	
'Bradford'	25	15	narrow	m	M	Subject to freeze injury some years.	
'Redspire'	25	10	upright	m	M	Tight, conical tree for accent and possibly subject to freeze injury in some years.	
Plum, Double-Flowering <i>Prunus triloba multiplex</i>	15	10	upright	m	M	Often shrubby. Double, deep pink flowers in spring. Moist soils best.	
Plum, Newport <i>Prunus cerasifera</i> 'Newport'	25	15	upright, vase	m-f	M	Pinkish-white flowers followed by maroon-red foliage. Avoid wet sites.	
Redbud, Eastern <i>Cercis canadensis</i>	30	20	upright, vase	m	M	Pink flowers along twig before foliage. Plant in part shade.	
Serviceberry, Shadblow <i>Amelanchier canadensis</i>	25	15	upright	m	L	Snowy white flowers in spring. Crabapple-like red fruits make good jelly.	
Sumac, Staghorn <i>Rhus typhina</i>	2	20	broad, spreading	f	L	Showy orange to red fall color. Spreads by suckers. Cut –leaf form, Laciniata, has fernlike foliage.	

EVERGREEN TREES

Considerations When Selecting Evergreen Trees

1. **Placement.** Examine the intended planting space for good soil drainage, adequate sunlight and sufficient space to accommodate the desired evergreen tree at its mature size. Allow for clear access to driveways, sidewalks and entryways. Determine whether the tree's growth will affect any overhead utility lines. In smaller sites, consider smaller trees or shrubs.
2. **Planting.** Prepare soil before planting by adding organic materials (such as sphagnum peat moss, aged manure, shredded leaves or compost) in a 1 to 3-inch thick layer over the planting area. Extend the planting area for several feet in all directions from the actual planting spot. Spade or rototill the organic materials into the soil and mix well before planting, 10 to 12 inches deep. If there is sufficient space, use several kinds of evergreens to add variety to the landscape.
3. **Watering and Maintenance.** The following list indicates the relative moisture needs of evergreens. Plant species with similar water needs in the same general area; do not mix trees with widely different water needs. Evergreens that need less moisture may work well on slopes. All evergreens usable in Colorado prefer well-drained soils; therefore, avoid planting them in swales or poorly drained, soggy areas. Evergreens that need less moisture do not do well in lawn areas because of the amount of water needed to sustain the lawn. Even for those trees that need more moisture and are compatible with lawn watering, leave the planting area free of sod (lawn) to allow for good root development. Sod roots will compete with tree roots for soil air, nutrients and water. An organic mulch is recommended over the entire planting area.

Most evergreens growing in Colorado landscapes, whether recently transplanted or well established, will benefit from supplemental water given during winter dry spells. Often such spells are characterized by drying winds or unseasonably warm temperatures, further emphasizing the need for watering.

Table 3: Evergreen Trees.

Key:	Growth Rate:	f = fast m = moderate s = slow	Soil moisture:	L = low-water needs. Can withstand drought. M = moderate-water needs. Normal lawn watering H = heavy-water needs. More than normal lawn watering		
Plant Name		Approx. Mature Size (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints
Fir, White* <i>Abies concolor</i>		60'x20'	conical	m	H	Flat blue-green needles, may winterburn in windy sites. May perform poorly in clay soils.
Fir, Subalpine or Rocky Mountain <i>Abies lasiocarpa</i>		60'x15'	conical	m	H	Very spire-like, best above 7000', shorter, blue-green needles.
Douglas, Fir <i>Pseudotsuga menziesli glauca</i>		60'x20'	conical	m-f	M	Unique cones with "mouse-tail" bracts. More wind tolerant and soil

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*Native to Colorado						
Plant Name	Approx. Mature Size (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints	
					adaptable than true firs.	
Juniper, Chinese						
<i>Juniperus chinensis</i>						
'Hentzi Columnaris'	10'x5'	columnar	m	L	Bright green needles, abundant blue-green fruit producer.	
'Keteleeri'	15'x10'	broadly columnar	m	L	Abundant fruit, good screening plant.	
'Robusta Green' columnar	12'x12'	broadly	m	L	Abundant fruit, can be irregular.	
'Spartan'	12'x5'	conical	m-f	L	Dense green foliage.	
Juniper, Rocky Mountain						
<i>Juniperus scopulorum</i>						
	variable	broadly columnar	s-m	L	Foliage color varies from green to blue-green.	
'Blue Heaven'	12'x6'	columnar	s-m	L	Dense, blue foliage.	
'Cologreen'	12'x10'	broadly columnar	s-m	L	Dense, medium to dark green foliage, abundant fruit.	
'Grey Gleam'	12'x6'	conical	s	L	No fruit; dense gray foliage.	
'Moonglow'	15'x10'	broadly columnar	s-m	L	Dense silver-blue foliage.	
'Pathfinder'	12'x6'	conical	s-m	L	Sparse fruit, blue-green foliage.	
'Skyrocket'	12'x3'	narrowly columnar	s-m	L	Very narrow & spruce-like, subject to snow damage, formerly listed a <i>J. virginiana</i> .	
'Sutherland'	12'x3'	broadly columnar	s-m	L	Dense, blue-green foliage, abundant fruit.	
'Welchli'	8'x6'	broadly columnar	s-m	L	Blue-green to medium green foliage.	
'Wichita Blue'	12'x8'	broadly columnar	s-m	L	Good blue foliage color.	
Juniper, Eastern Redcedar						
<i>Juniperus virginiana</i>						
'Canaertii'	20'x10'	conical	s-m	L	Open horizontal branching, foliage brownish in winter.	
'Hillspire' Cupressifolia	15'x6'	conical	s-m	L	Abundant whitish blue fruit contrasts with green foliage. Columnar, with bright green foliage.	
'Manhattan Blue'	20'x15'	broadly columnar	s-m	L	Foliage blue-green becoming med. green in winter, open growth habit.	
Pine, Austrian						
<i>Pinus Nigra</i>						
	50'x25'	broadly columnar	m	M	3-5", dark green needles, tolerates many soil types and urban pollution.	
Pine, Bristlecone						
<i>Pinus aristata</i>						
	20+'x10+'	irregular	s	L-M	Shorter dark green needles, with white resin dots, specimen plant.	
Pine, Eastern white						
	50'x20'	broadly	m-f	M	Horizontal branching; fine-textured	

Table 3: Evergreen Trees.

Key:	Growth Rate:	f = fast	Soil moisture:	L = low-water needs. Can withstand drought.		
		m = moderate		M = moderate-water needs. Normal lawn watering		
<i>*Native to Colorado</i>		s = slow		H = heavy-water needs. More than normal lawn watering		
Plant Name	Approx. Mature Size (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints	
<i>Pinus strobus</i>					blue-green needles, best in protected sites.	
Pine, Limber* <i>Pinus flexilis</i>	40'x20'	broadly	M	L-M	Wind-tolerant and adaptable to dry soils, very flexible branches, needles about 3"	
Pine, Southwestern white* <i>Pinus flexilis reflexa</i>	40'x20'	broadly	m-f	L-M	Blue-green needles, very similar to Limber Pine, not readily available, should be used more.	
Pine, Lodgepole* <i>Pinus contorta latifolia</i>	50'x20'	conical	m	L-M	Shorter, yellowish-green needles. Best above 7000'.	
Pine, Mugo <i>Pinus mugo</i>	variable	irregular	m	L-M	Extremely variable growth habit. Some tree-like to shrubby; dwarf forms sold commonly.	
Pine, Pinyon* <i>Pinus Edulis</i>	20'x10'	broadly columnar	s-m	L	Not suited for frequently watered lawn areas, edible seeds may not develop dependably in urban landscapes.	
Pine, Ponderosa* <i>Pinus Ponderosa</i>	60'x25'	broadly columnar	m	L	Longer yellow-green needles. Older trees develop cinnamon brown bark.	
Pine, Scotch <i>Pinus sylvestris</i>	40'x25'	broadly columnar	m	M	Sharp, blue-green twisted needles. Mature bark is orange-brown.	
Spruce, Colorado <i>Picea pungens</i>	60'x25'	broadly columnar	m	H	Needles short, sharp, green to blue-green. Colorado State Tree.	
Spruce, Colorado Blue* <i>Picea pungens glauca</i>	60'x'25'	broadly columnar	m	H	Needles short, sharp, blue. Several varieties selected for blue-color needles.	
'Hoopsli'	45'x15'	broadly columnar	m	H	Intense silver-blue needles.	
'Koster'	45'x'15'	broadly columnar	m	H	Silver-blue needles, less dense.	
'Moorheim'	35'x15'	broadly columnar	m	H	More compact, with blue needles.	
Spruce, Engelmann* <i>Picea engelmanni</i>	50'x20'	broadly	m	M-H	Needles blue-green, shorter and not as sharp as <i>P. pungens</i> , best above 7000'	
Spruce, Norway <i>Picea abies</i>	50'x'25'	broadly columnar	m-f	M-H	Needles green, short; branches droop with age.	
Spruce, White <i>Picea glauca</i>	40'x15'	broadly columnar	m	M	Short greenish-white needles, tree is adaptable.	
Spruce, Black Hills <i>Picea glauca densata</i>	30'x15'	conical	s	M	Dense shorter foliage.	
Dwarf Alberta Spruce <i>Picea glauca 'Conica'</i>	10'x4'	conical	s	H	Subject to winterburn in windy sites; maintains dense, formal	

Table 3: Evergreen Trees.

Key:	Growth Rate:	f = fast m = moderate s = slow	Soil moisture:	L = low-water needs. Can withstand drought. M = moderate-water needs. Normal lawn watering H = heavy-water needs. More than normal lawn watering		
*Native to Colorado						
Plant Name	Approx. Mature Size (ft)	Shape	Growth Rate	Soil Moisture	Aesthetic Value/Cultural Hints	
Arborvitae, Eastern or American	20'x10'	conical	s	H	growth habit, best in protected sites.	
<i>Thuja occidentalis</i>						
'Pyramidalis'	15'x5'	columnar	s	H	Prefers higher humidity; subject to winterburn and snow damage.	
'Smaragd' (Emerald)	12'x4'	columnar	s	H	More formal appearance: subject to winterburn and snow damage.	
'Techny'	12'x8'	broadly columnar	s	H	Dense, medium green foliage; subject to winterburn and snow damage.	
					Better cold tolerance, dark green foliage; subject to winterburn and snow damage.	

PROHIBITED TREES IN COMMERCE CITY

(Species Not Recommended Due to Undesirable Characteristic)

Boxelder (*Acer negundo*)
Silver Maple (*Acer saccharinum*)
Tree-of-Heaven (*Ailanthus altissima*)
Birch (*Betula species*)
Russian Olive (*Elaeagnus angustifolia*)
Ash, American or Green cvs. (*Fraxinus species*)
Honey Locust, Thorny (*Gleditsia triacanthos*)
Crabapple, Hopa (*Malus 'Hopa'*)
Crabapple, Bechtel (*Malus ioensis 'Plena'*)
White Poplar (*Populus alba*)
Cottonwood (*Populus sargentii*)
Cottonwood, cottonless (*Populus species*)
Aspen (*Populus tremuloides*)
European Mountainash (*Sorbus aucuparia*)
Willow, including Austrees (*Salix species*)
Tamarisk (*Tamarix species*)
Siberian (Chinese) Elm (*Ulmus pumila*)

XERISCAPING

Xeriscaping (Zer-i-skaping) is a word coined originally by a special task force of the Denver Water Department, Associated Landscape Contractors of Colorado and Colorado State University to describe landscaping with water conservation as a major objective. The derivation of the word is from the Greek “xeros” meaning dry, combined with landscaping, thus, xeriscaping.

Unfortunately, many homeowners have cut back on turfgrass areas by substituting vast “seas of gravel and plastic” as their answer to water conservation. This practice is not only self-defeating as far as water conservation is concerned, but also produces damaging effects to trees and shrubs. It is not xeriscaping.

Colorado landscapes are characterized by plants that adapt to a drier climate than many cultivated landscape plants. Xeriscaping offers an opportunity to select plants that are more compatible with local conditions and able to thrive when other landscape plants cannot. In recognition of our local environment, it often is more practical to select plants with an ability to tolerate or resist drought and to enjoy the advantages of a landscape that reflects its surroundings better than the New England landscapes we too often try to establish and maintain at great effort. Many people consider it a challenge to use locally adapted plants to develop a creative landscape that represents a unique Colorado style.

Regardless of how drought-enduring a plant may be, relatively frequent watering is needed until the plant is established. Most woody plants take at least two growing seasons to establish, depending much on how well the soil has been prepared. Once established, gradually reduce watering. Avoid frequent, shallow watering because this tends to encourage shallow roots and thus defeats the goal of xeriscaping.

While not a complete list, the following are trees, shrubs and groundcovers that are suited to a xeriscape and available at several nurseries. A few are listed that may be uncommon in many nurseries, but available from wholesale suppliers. These can be ordered through your local nursery.

Table 4: Trees for Xeriscapes.

Plant Name	Height/spread (in feet)	Comments
Bigtooth maple (Wasatch maple) <i>Acer grandidentatum</i>	25-30 20-25	Slow growth rate; red-yellow fall color.
Bristlecone pine <i>Pinus longaeva (formerly P. aristata)</i>	15-40 15-25	Dark green, dense foliage; must have good drainage.
Burr oak <i>Quercus macrocarpa</i>	70-80 50-80	Stately, long-lived; adapts to alkaline soil.
Gambel oak <i>Quercus gambeli</i>	5-15 10-15	Spreads by root sprouts; often shrubby.
Goldenrain tree <i>Koelreuteria paniculata</i>	20-35 10-25	Yellow flowers in July; lantern-like pods in late summer; salt tolerant. (May not be hardy north of Fort Collins.)
Green ash	40-45	Glossy, dark-green leaves.
Common hackberry <i>Celtis occidentalis</i>	25-45 30-40	Normally an upright, vase-shaped tree; attractive corky bark.

Table 4: Trees for Xeriscapes.

Plant Name	Height/spread (in feet)	Comments
Japanese pagoda tree <i>Sophora japonica</i>	40-60 45-70	Does well in alkaline, saline soils; cream-colored flowers in early summer.
Kentucky coffeetree <i>Gymnocladus dioicus</i>	50-70 35-50	Slow growth; thick pods on female tree; flowers of male are fragrant.
New Mexican locust <i>Robinia neomexicana</i>	10-20 10-20	Fragrant pink flowers in June; often shrubby and spread from root sprouts.
Oneseed juniper <i>Junipers monosperma</i>	20-25 15-20	Among the most drought-enduring evergreens.
Pinyon pine <i>Pinus cembroides edulis</i>	15-25 15-20	Must have good drainage.
Ponderosa pine <i>Pinus ponderosa</i>	45-50 35-40	Must have good drainage.
Rocky Mountain juniper <i>Juniperus scopulorum</i>	25-30 15-20	Numerous varieties available
Thornless honeylocust <i>Gleditsia triacanthos inermis</i>	30-60 25-50	Several varieties available; avoid "sunburst" variety in non-irrigated sites.
Western catalpa <i>Catalpa speciosa</i>	40-50 20-30	Showy white flowers in early summer, cigar-like pods into fall.

Table 5: Shrubs for Xeriscapes.

Plant Name	Height/spread (in feet)	Comments
Apache plume	3-5	Graceful arching stems; large showy flowers; plummy seed heads.
<i>Fallugia paradoxa</i>	5-6	
Barberry (Japanese)	3-6	Purple-leaved and dwarf forms available; shade tolerant.
<i>Berberis thunbergii</i>	3-5	
Bladder-senna	4-6	Yellow sweet pea-like flowers in early summer; bladdery pods into fall and winter.
<i>Colutea arborescens</i>	4-6	
Buffaloberry (silver)	10-15	Silvery leaves; scarlet fruit.
<i>Shepherdia argentea</i>	8-10	
Ceanothus (fendler)	1-2	Gray-green foliage; spiny, low-growing; well drained soils only.
<i>Ceanothus fendleri</i>	3-5	
Cinquefoil (Potentilla)	1-4	Showy white to yellow flowers in summer. Needs full sun for best flowers.
<i>Potentilla fruticosa</i>		
Cliff fendlerbush	5-6	White to rose-pink flowers; arching shrub.
<i>Fendlera rupicola</i>	5-6	
Cliff rose	10-15	Stiffly upright shrub or small tree; fragrant white flowers; semi-evergreen; well-drained soils only.
<i>Cowania mexicana</i>	5-10	
Cotoneaster	0.5-10	A highly variable group; most have shiny, small leaves; berries are red or black; <i>C. acutifolia</i> is common.
<i>Cotoneaster</i> sp.		
Juniper	0.5-10	Available in various heights, foliage colors and foliage textures. Requires good drainage. Pfitzers, "Tammy" and Buffalo varieties are commonly used.
<i>Juniperus</i> sp.		
Leadplant	2-3	Silvery-gray foliage; purple flowers in summer;
<i>A. Amorpha canescens</i>	3-4	<i>fruticosa</i> has greener foliage and up to 10 feet tall.
Mountain-mahogany	10-1	Two types – <i>C. montanus</i> is deciduous; <i>C. ledifolius</i> is evergreen; both are stiffly upright shrubs.
<i>Cercocarpus</i> sp.	8-20	
New Mexican privet	10-15	Male shrub has showy yellow flowers in spring.
Peashrub	3-15	Several forms available; dwarf – <i>C. microphyllus</i> and <i>C. pygmaea</i> ; tall – <i>C. arborescens</i> .
<i>Caragana</i> sp.	5-10	
Rabbitbrush	2-5	Greenish to white stems; yellow flowers in summer; tolerates salty soils.
<i>Chrysothamnus</i> sp.	3-4	
Rock spirea	3-8	Graceful arching shrub; creamy white flowers; well-drained soils only.
<i>Holodiscus dumosus</i>	8-10	
Saltbrush	2-6	Gray-green leaves; doubtfully hardy in N.E. Colorado; tolerates very high salts.
<i>Atriplex canescens</i>	4-5	
Sand cherry	3-4	Fragrant, white flowers; edible black fruit; well-drained soils only.
<i>Prunus besseyi</i>	4-5	
Sage	variable	Many hardy forms; gray-green to silvery foliage; some are evergreen.
<i>Artemisia</i> sp.		
Sea buckthorn	3-5	Grayish foliage; female plants have attractive red-orange fruit.
<i>Hippophae rhamnoides</i>	6-8	
Sumac (smooth)	4-6	Spreads by root suckers; red velvety fruit; scarlet fall color.
<i>Rhus glabra cismontane</i>		
Sumac (threeleaf)	3-6	Glossy dark green leaves; showy red velvety fruit.
<i>Rhus trilobata</i>	8-10	
Yucca	0.5-3	Sword-like foliage; showy spikes of creamy-white tinged pink flowers. <i>Y. baccata</i> has large broad, green leaves.
<i>Yucca</i> sp.	1-3	

Table 6: Ground Cover Plants for Use in Shade (Beneath Trees and Shrubs or Along North Walls).

Plant Name	Height (inches)	Remarks
Bishop's weed <i>Aegopodium podagraria</i> 'variegatum'	10-12	Variegated green and white foliage; aggressive.
Carpathian harebell <i>Campanula carpatica</i>	6-14	Can be aggressive; has blue or white flowers.
Hall's honeysuckle <i>Lonicera japonica</i> 'Halliana'	6-12	Will also grow in full sun, but forms denser mats in the shade.
Kinnikinnick <i>Arctostaphylos uvaursi</i>	4-6	Evergreen; red edible berries; use beneath established evergreens in acid soils.
Lily-of-the-valley <i>Convallaria majalis</i>	6-10	Fragrant white flowers in May-June; red berries (not edible); aggressive.
Mahonia (creeping grape holly) <i>Mahonia repens</i>	6-12	Evergreen; yellow flowers in spring; holly-like foliage.
Periwinkle <i>Vinca minor</i>	4-6	Semi-evergreen; flowers white or purple in spring.
Penstemon (creeping) <i>Penstemon caespitosus</i>	1-2	Very prostrate mat of tiny narrow leaves; flowers in May-June; purplish.
Penstemon (Rocky Mountain) <i>P. Strictus</i>	1-2	Blue flowers in June and July.
Sweet woodruff <i>Galium odorata</i>	5-8	Very aggressive; one

Table 7: Ground Cover Plants for Use in Full Sun.

Plant Name	Height (inches)	Remarks
Border jewel (Himalayan) <i>Polygonum affine</i>	12-18	Red showy flowers late in season; excellent ground cover for dry areas.
Creeping broom <i>Cytisus decumbens</i>	4-8	Green stems with tiny leaves; yellow pea-like flowers in May.
Creeping buttercup <i>Ranunculus repens</i>	1-2	Showy yellow flowers on creeping runners up to 2 feet long.
Cushion spurge <i>Euphorbia epithymoides</i>	12-18	Mounds of foliage that change from reddish to green in spring, then scarlet in fall.
Fescue (blue) <i>Festuca ovina glauca</i>	6-8	Tufts of grayish, grassy foliage.
Ham and chicks <i>Sempervivum sp.</i>	2-4	Forms dense, evergreen mats; grows in very poor soils.
Ice plant (hardy) <i>Delosperma nubigenum</i>	1-2	Succulent light-green foliage; yellow flowers.
Juniper (creeping) <i>Juniperus horizontalis</i>	4-10	Perhaps the best year-round cover; many clones and foliage hues available.
Some common clones include:		
Bar Harbor	10	Blue-green; purplish winter color.
Blue Chip	10	Bluish foliage year-round.
Hughes	10	Silvery-blue; distinct radial branching.
Webberi	4	Very low mat; fine texture.
Wiltoni (Blue Rug)	4	Very low silver-blue; purplish tinge in winter.
Lavender-cotton <i>Santolina chamaecyparissus</i>	10-12	Blue-gray persistent foliage in dense mats.
Mat saltbush <i>Atriplex corrugata</i>	4-6	Evergreen; foliage greenish-white; for salty soils.
Mock Strawberry <i>Duchesnea indica</i>	4-6	Aggressive creeper looking much like strawberry; flowers yellow; non-edible red fruit.
Mountain bluet (perennial bachelor button) <i>Centaurea Montana</i>	15-18	Grayish foliage; blue flowers/
Penstemon (red) <i>Penstemon pinifolius</i>	6-10	Has needle-like leaves and orange-red flowers. Takes heat well.
Phlox (creeping) <i>Phlox subulata</i>	6-8	Reddish, white or lavender-flowers; moss-like foliage.
Potentilla (creeping) <i>Potentilla verna</i>	½-1	Very low mat with showy yellow flowers; aggressive.
Pussytoes <i>Antennaria sp.</i>	1-2	Persistent gray-green foliage in dense mats; excellent for rocky slopes.
Sage <i>Artemisia sp.</i>	10-15	Silvery foliage; <i>A. schmidtiana</i> (silver mound sage) most common.

Table 7: Ground Cover Plants for Use in Full Sun.

Plant Name	Height (inches)	Remarks
Snow-in-summer <i>Cerastium tomentosum</i>	6	Gray foliage; white flowers; very aggressive.
Snow-on-the-mountain <i>Euphorbia marginata</i>	4-8	Green and white foliage; very aggressive.
Stonecrop (sedum) <i>Sedum spp.</i>	1-15	Many forms available; not usually competitive with weeds.
Sulpher flower <i>Enogonum umbellatum</i>	3-6	Showy flower stalk to 8 inches tall; foliage in low mat.
Thyme <i>Thymus serpyllum</i>	3-6	Low, mat-forming herb with tiny leaves. Flowers are purple. A related species, woolly thyme, as gray-green foliage.
Veronica (creeping) <i>Veronica rupestris</i>	1-2	Dark green foliage; flowers deep blue in short spikes.
Yarrow (wooly) <i>Achillea tomentosa</i>	2-4	Grayish foliage in low mats.

EVERGREEN SHRUBS FOR HOME GROUNDS

Broadleaved evergreens do best if located on an east or north exposure. As a general rule, broadleaved evergreens require constant soil moisture. The general soil moisture conditions for good plant performance are shown in Table 1.

Consider mature growth and proper spacing before planting. If evergreens are planted too close together or too close to a structure, the natural shape and beauty of the plants can be ruined. To determine spacing between plants or distance from structures, divide by one-half the height given in Tables 1 and 2.

DRAINAGE AND SOIL CONDITIONS

In all cases, good drainage and soil aeration are essential for optimum growth. Where soils tend to be heavy clay, amend them with a coarse organic material, such as compost, peat or aged barnyard manure to a minimum depth of 9 inches. It takes about 3 cubic yards of organic material for 1,000 square feet to improve a heavy soil. Thoroughly mix the organic material and soil to avoid layering.

If soil tends to be too sandy, improve its water-holding capacity by adding the amounts of an organic amendment mentioned above.

Evergreens – Narrow leaved

Plant Name	Height* (in feet)	Soil Moisture	Exposure	Remarks
Arbor-vitae, Globe	3-4	M	E	Protect from winter sun and wind.
Thuja occidentalis globosa				
Juniper, Armstrong Globe	3-4	D	S	Popular globe form for formal effect.
Juniperus chinensis 'Armstrong'				
Juniper, Pfitzer	8-10	DT,D	S	Available in blue and gold-tipped foliage varieties.
J. chinensis pfitzeriana				
Juniper, Sabin	12-15			Upright, vase-shape. Green foliage.
Juniperus Sabina		D		
Varieties:			S	"Feathery," green foliage
Broadmoor	2			Foliage bluish-green.
Buffalo	1-1/2	M		
Tamarix	3-1/2			
Pine, Mugo	3-8	D	S	Quite variable in size. Dwarf forms available.
Pinus mugo				
Spruce, Maxwell	2-3	M	E	Slow-growing. Forms mound twice as broad as high.
Picea abies 'Maxwell'				
Yew, Hick	8-10	M	S	Soil must be well drained. Protect from winter sun and wind.
Taxus media 'Hicks'				
Yew, Japanese Spreading	4-5	M		Other varieties may be available.
Taxus cuspidate densiformis				

Key: S = full sun (open, south or west exposure) DT = exceptionally drought-enduring once established (no more than natural rainfall)
Sh = shade (north exposure) D = dry, well-drained soils (2 or 3 waterings per year)
E = east exposure M = moist, well-drained soils (4 to 6 waterings per year)

Evergreens – Broad leaved

Plant Name	Height*	Soil		Remarks
		Moisture	Exposure	
* *Barberry, Mentor <i>Berberis mentorensis</i>	6 – 7	M	E	Spiny. Dark red fruit in fall.
Barberry, Wintergreen <i>B. julianae</i>	5 – 6	M	E	Yellow flowers in May. Bluish fruit in fall.
Barberry, Warty <i>B. verruculosa</i>	3 – 4	M	E	Yellow flowers in May. Makes a good ground cover.
Boxwood, Korean <i>Buxus koreana</i>	3 – 4	M	E, Sh	Protect from winter sun and wind.
* *Cotoneaster, Cranberry <i>Cotoneaster apiculata</i>	2 – 3	M	E	Large showy red fruit hold on through winter.
* *Cotoneaster, Rock Spray <i>C. horizontalis</i>	3 – 4	M	E	Showy red fruit. Attractive “herringbone” branch pattern.
Cotoneaster, Small-leaved <i>C. microphylla cochleata</i>	2 – 3	M	E	Showy white flowers in May. Red fruit in fall. Tiny foliage.
Euonymus, Manhattan <i>Euonymus kiautschovica (patens)</i>	4 – 5	M	E, Sh	Needs extra protection from sun and wind in winter.
Euonymus, Sarcocoe <i>E. fortunei ‘Sarcocoe’</i>	5 – 6	M	E, Sh	Needs extra protection from sun and wind in winter.
Oregon grape <i>Mahonia aquifolium</i>	6	M	E	Yellow flowers in May. Bluish, grape-like fruit in late summer. Foliage, holly-like.
Oregon grape, Compact <i>M. aquifolium ‘Compacta’</i>	3	M	E	Yellow flowers in May. Bluish, grape-like fruit in late summer. Foliage, holly-like.
* *Pyracantha (Firethorn) <i>Pyracantha coccinea ‘Wyatt’</i>	5 – 6	M	E	Orange-red fruit in fall.

KEY: S = full sun (open, south or west exposure)
 Sh = shade (north exposure)
 E = east exposure
 DT = exceptionally drought-enduring once established (no more than natural rainfall)
 D = dry, well-drained soils (2 or 3 waterings per year)
 M = moist, well-drained soils (4 to 6 waterings per year)

* To convert to metrics, use the following conversion: 1 foot = 30 centimeters or .3 meters.

** Semi evergreen. Leaves may drop off some winters.

Table 1: Deciduous shrubs for home grounds

Key to symbols:

☀ = Full sun (open. south or west exposure)

● = Shade (north exposure)

◐ = East Exposure

▣ = Exceptionally drought-enduring once established (no more than natural rainfall)

Φ = Dry, well-drained soils (2 to 3 waterings per year)

◆ = Moist but well-drained soils (4 to 6 waterings per year)

☂ = Tolerates wet, poorly-drained sites

Plant Name	Height (in feet)	Soil moisture	Exposure	Flower/Color/ Month	Remarks
Althea (Rose-of-Sharon) <i>Hibiscus syriacus</i>	10	◆	●☉	White, red, purple August	Large, showy, hollyhock-like flowers.
Apache Plume <i>Fallugia paradoxa</i>	6	Φ	☀	White May-June	Plummy seed heads in late summer.
Barberry, Japanese <i>Berberis thunbergii</i>	4	Φ	●☉	Not showy	Red-leaf varieties available.
Barbery, Crimson <i>Pygma</i> <i>B. thunbergii</i> 'Crimson Pygmy'	1 ½	Φ	●☉	Not showy	Compact, reddish-purple foliage.
Beautybush <i>Kolkwitzia amabilis</i>	9 – 10	◆	●☀	Lavender-pink May-June	Graceful, arching plant
Buckthorn, Columnar <i>Rhamnus frangula</i> 'Tallhedge'	12 – 15	◆	●☀	Not showy	Useful as a screen planting.
Buffaloberry <i>Shepherdia argentea</i>	15 – 18	◆	☀	Not showy	Silvery foliage, scarlet fruit on female only.
Butterflybush, Orangeeye <i>Buddleia davidi</i>	10 – 12	Φ	☀	White, pink, purple; August	Lilac-like flowers in late summer.
Caragana, Pygmy <i>Caragana pygmaea</i>	3	Φ	☀	Yellow May	Useful as a low hedge.
Caragana, Siberian <i>Caragana arborescens</i>	15 – 18	Φ	☀	Yellow May	Makes a good screen or windbreak
Caryopteris (Blue mist) <i>Caryopteris clandonensis</i>	4	◆	☀	Blue July-August	Contrasting grayish foliage.
Coralberry, Indian Currant <i>Symphoricarpos orbiculatus</i>	4	◆	●☀	Not showy	Hancock variety has shown purplish-red fruit
Cotoneaster, Cranberry <i>Cotoneaster apiculata</i>	3	◆	☀☉	Pink, May	Large, red persistent fruit.
Cotoneaster, Peking <i>C. acutifolia</i>	6 – 7	Φ	☀	Pink May	Black fruit in fall.
Cotoneaster, Small-leaved <i>C. microphylla</i>	2	◆	●	White June	Tiny leaves, red fruit.
Cotoneaster, Spreading <i>C. divaricata</i>	5 – 6	◆	☀	Pink May	Red fruit.
Currant, Alpine <i>Ribes alpinum</i>	5	◆	●☀	Not showy	Edible red fruit.
Currant, Golden <i>R. aureum</i>	6	◆	☀	Yellow May	Edible purple fruit.
Dogwood, Redstem <i>Cornus sericea</i>	6 – 8	◆	●☀	White June	Bluish fruit in summer. Showy red stems in winter. Var. 'Kelsey's

Plant Name	Height (in feet)	Soil moisture	Exposure	Flower/Color/ Month	Remarks
Elder, American <i>Sambucus canadensis</i>	12 – 15	◆	●●	White June	Dwarf is a compact form to 3'. Var. flaviramea has yellow twigs. Edible black fruit. Var. aurea has yellow foliage.
Euonymus, European <i>Euonymus europaeus</i>	12 – 15	◆	●	Yellow May	Red fall color, red fruit.
Euonymus, Winged <i>E. alatus</i>	6 – 8	◆	●	Yellow May	Twigs with corky ridges. Scarlet fall color. Var. compacta to 5'
Forsythia <i>Forsythia intermedia</i>	6 – 8	◆	☀●	Yellow April	Vars. 'Farrand' and 'Lynwood Gold' are most showy.
Heavenly Bamboo <i>Nandina domestica</i>	4 – 5	◆	●●	Not showy	Brilliant red fall color.
Honeysuckle, Blueleaf <i>Lonicera korolkowii</i> 'Zabels'	8 – 10	◆	●☀	Rose, Pink May	"Twin" red berries in summer.
Lilac, Common <i>Syringa vulgaris</i>	10 – 12	Φ	☀	White, lilac, purple May	Many varieties available.
Lilac, MacFarlane <i>Syringa reflexa</i>	8 – 10	Φ	☀	Pink Late May	Blooms later than common lilac.
Lilac, Persian <i>Syringa persica</i>	6 – 8	Φ	☀	Lilac May	Flowers in long panicles.
Mockorange <i>Philadelphus sp.</i>	6 – 8	◆	☀●	White May-July	Fragrant white flowers.
Mountain Mahogany <i>Cercocarpus montanus</i>	6 – 8	Φ □	☀	Not showy	Silky seed heads in fall.
Nanking Cherry <i>Prunus tomentosa</i>	6 – 8	◆	☀●	White May	Edible fruit.
Ninebark <i>Physocarpus opulifolius</i>	4 – 6	◆	☀	White May-June	Avoid highly alkaline soils.
Plum, Cistena <i>Prunus cistena</i>	10	◆	●●	Pink May	Leaves reddish-purple.
Potentilla (Cinquefoil) <i>Potentilla fruticosa</i>	3	◆□	☀	Yellow June-frost	Several showy varieties available.
Privet, Regel <i>Ligustrum regelianum</i>	6	◆	●☀	Not showy	Black fruit. Other types available for hedges
Quince, Flowering <i>Chaenomeles lagenaria</i>	4 – 6	◆	☀	Red, red orange June	Flowers before leaves.
Rabbitbrush <i>Chrysothamnus sp.</i>	Variable (3-15)	Φ □	☀	Yellow	Dwarf and blue-foliaged types available.
Rose, Austrian Copper <i>Rosa foetida bicolor</i>	6	Φ	☀	Coppery orange/yellow June	Tends to be rambling, vine like.
Rose, Harrison's Yellow <i>Rosa harrisoni</i>	4	Φ	☀	Yellow May-June	Profuse flowers.
Rose, Persian Yellow <i>Rosa foetida persica</i>	3 – 4	Φ	☀	Yellow May-June	Graceful arching shrub. Double-flowered.
Sage <i>Artemisia sp.</i>	Variable (1-4)	Φ □	☀	Not showy	Dwarf-to-tall varieties available. Striking silvery foliage.
Snowberry <i>Symphoricarpos albus</i>	4 – 5	◆	●☀	Pink June-July	Showy, white fruit.
Spirea, Bridal Wreath <i>Spiraea prunifolia plena</i>	4 – 6	◆	●☀	White May-	Flowers are double and profuse.
Spirea, Froebel	3 – 4	◆	☀	Lavender	Avoid highly-alkaline soils.

Plant Name	Height (in feet)	Soil moisture	Exposure	Flower/Color/ Month	Remarks
<i>S. bumalda</i> 'Froebel'				June	
Spirea, Snowmound	3 – 4	◆	●☉	White	Graceful, arching. Profusely-flowered.
<i>S. nipponica</i>				May	
Spirea, Vanhoutte	6 – 7	◆	●☉	White	An old-fashioned favorite. Arching.
<i>S. vanhouttei</i>				May	
Sumac, Dwarf Smooth	3	Φ☉	☉	Greenish	Brilliant scarlet fall color. Red cone-like fruit.
<i>Rhus cismontane</i>				May	
Sumac, Threelobed	3 – 4	Φ☉	☉	Yellow	Particularly useful for steep slopes.
<i>R. trilobata</i>				May	
Sumac, Staghorn (Cutleaf)	8 – 10	◆	☉	Greenish	Fermy foliage. Velvety stems. Scarlet fall color.
<i>R. typhina laciniata</i>				May	
Viburnum, Burkwood	5 – 6	◆	●	Pinkish to white	Shiny foliage.
<i>Viburnum burkwood</i>				May	
Viburnum, Cranberrybush	10 –	◆	●☉	White	Sterile form is the common
<i>V. opulus</i>	12			May	Snowball bush.
Viburnum, Korean-spice	5	◆	●	Pinkish-white	Spicy, fragrant flowers.
<i>V. carlesii</i>				May	
Viburnum, Wayfaring	15	Φ	☉	White	Foliage with grayish cast.
<i>V. lantana</i>				May	
Willow, Bluestem	10 –	☂	●☉	Not showy	Stems, grayish, showy in winter.
<i>Salix irrorata</i>	12				
Willow, Purpleosier	6 – 8	☂	●☉	Not showy	Stems purplish in winter. Dwarf form available.
<i>S. purpurea</i>					