



Drought Tolerant Woody Species

HOW TO USE THIS GUIDE

1. This guide is intended to provide an overview of drought tolerant species suitable for the environmental conditions of the Southern Rockies ecoregions (a - f).
2. Practice planting the right species in the right place. Please check the ecoregion map for more information about soils, altitude, and hydrology.
3. Elevation ranges do not account for urban stressors such as compacted soils, reflected heat, limited rooting volume, or reduced snow insulation.
4. The colored columns depict species suitability for specific site conditions within those ecoregions.

KEY

I = Intolerant
L = Low
M = Moderate

R = Rapid
S = Slow
T = Tolerant
U = Unknown

Acceptable in Right-of-Way	Colorado Native*	Evergreen	Hydrozone	Ignition Resistant**	Botanic Name	Common Name/s	Average Mature Height	Average Mature Spread	Shade Tolerance	Salt Tolerance	Growth Rate	Bloom Season	Inflorescence Color	Fruit & Seed	Wildlife Notes	Other Notes
			1		Abies concolor	<u>White Fir</u>	50'	30'	M	I	S	Late Spring	Red	Unimportant, brown	Deer, elk, bear, and mountain beaver habitat. Many bird species, including bald eagle, northern spotted owl, brown creeper, and redbreasted nuthatches are associated with white fir habitat types.	Specimen tree, exceptional foliage. Underutilized.
			2		Acer glabrum	<u>Rocky Mountain Maple</u>	20'	15'	M	I	R	Late Spring	green	Winged Samaras	Regular source of cover for wildlife.	Multistemmed, fragrant flowers, orange and red fall foliage. Longlived and shade tolerant. Can be very shrubby. Most suitable as an ornamental understory tree.
			2		Acer grandidentatum	<u>Bigtooth Maple</u>	35'	25'	M	L		Spring	white	Double Samaras	Food and cover for birds, and browsed by larger ungulates.	Shade tolerant, blazing autumn foliage, highly adaptable. Look for single stems.
			1		Acer negundo "sensation"	<u>Sensation Box Elder</u>	30 - 50'	25 - 40'	T	M	R	Summer	Yellow/Green	Winged Samaras	Seeds are winter forage for birds and small mammals, deer browse young plants.	Red expanding leaves in spring, brilliant orange and red color in the fall. Male selections do not attract box elder bugs. May produce many sprouts. Susceptible to sunscald and requires good structural pruning when young. Prune in regular intervals to maintain a healthy canopy.
			2		Acer tataricum "GarAnn"	<u>Hot Wings Maple</u>	25'	18'	M	L	R	Early Spring	white	Winged Samaras	Food and cover for birds	Showy yellow and orange-red fall foliage, with scarlet red samaras. Requires regular pruning to maintain healthy canopy.
			2		Aesculus glabra	<u>Ohio Buckeye</u>	30'	30'	T	I	M	Mid Spring	Green	Yes, brown	Forage for small mammals such as squirrels. Saponins are slightly toxic to most larger mammals and fruits are generally avoided.	Best suited for naturalized yard spaces are larger right of way areas due to falling fruit. Check for near-seedless cultivars such as "JN Select".
			2		Aesculus x carnea	<u>Horsechestnut</u>	50'	50'	I	M	R	Spring	Red/Pink	Chestnuts	Good for pollinators. Forage for small mammals such as squirrels. Alkaloids are toxic to most larger mammals and fruits are generally avoided.	Great shade tree with vibrant blossoms. Seedpods are prickly. Becomes more drought tolerant with age. Young trees require more water to get well established. For ROW's, check with your nursery for fruitless cultivars that are successful at high altitudes, such as 'Baumannii'.
			2		Amelanchier x grandiflora 'Autumn Brilliance'	<u>Autumn Brilliance Serviceberry</u>	25'	20'	M	M	S	Spring	white	Red	Food and cover for birds, berries profive forage for multiple species.	Clusters of white flowers in spring, nice orange fall color. Needs very little pruning, has strong structure.
			1		Celtis occidentalis	<u>Northern Hackberry</u>	65'	50'	T	L	R	Mid Spring	Green	Yes, Brown	Special value to honeybees.	Yellow fall foliage, fruit a purplyred, slow grower, long lived.
			2		Celtis reticulata	<u>Netleaf Hackberry or Western Hackberry</u>	50'	50'	T	L	R	Mid Spring	Green	Yes, Brown	Forage and cover for deer, small wildlife and birds.	Yellow fall foliage, fruit a purplyred, slow grower, long lived.

			1	Cercocarpus ledifolius	<u>Curl-leaf Mountain Mahogany</u>	10'-20"	8'-15'	M	I	M	Apr – May	Creamy Yellow	Insignificant	Forage and cover for deer, pronghorn, small wildlife and birds.	Large shrub or small upright tree, evergreen foliage, seeds with twisted, feathery tails; foothills native
			1	Crataegus ambigua	<u>Russian Hawthorn</u>	25'	20'	M	L		Apr – May	White	Red	Forage and cover for birds.	Thorns. Yellow foliage, peeling bark. Occasional thinning required in spring and every summer trim back any suckers that may occur at base.
			1	Crataegus crusgalli 'Inermis'	<u>Thornless Cockspur Hawthorn</u>	20'	20'	I	L	M	Apr – May	White	Red, Purple	Forage and cover.	Fragrant white flowers in spring, dark red fruits, golden foliage.
			2	Crataegus douglassii	<u>Douglas Hawthorn</u>	25'	25'	I	L	M	Apr – May	White	Black	Important forage for grouse, ungulates, and waterfowl.	Showy white flowers, orangered fall foliage. Large thorns.
			2	Crataegus phaenopyrum	<u>Washington Hawthorn</u>	20'-25'	20'	M	M-T	M	Early Summer	White	Red	Important for pollinators, good food source and shelter for birds.	Dense thorny branches and many clusters of small white flowers.
			1	Gymnocladus dioica	<u>Kentucky Coffeetree</u>	65'+	50'	I	M	F	Early Summer	Grreen, Yellow, White	Brown Pods	Cover for birds.	Excellent shade tree with good tolerance for drought and pollution. Large, bipinnate leaves, yellow color.
			1	Gymnocladus dioicus	<u>Kentucky Coffeetree (Seedless Varieties)</u>	65'+	50'	I	M	M	Early Summer	White	Brown Pods	More academic research needed on which parts of the seed pods are safe for wildlife forage. The seed pulp is reportedly toxic to cattle.	Excellent shade tree with good tolerance for drought and pollution. Large, bipinnate leaves, yellow color. Some varieties such as "decaf" are seedless, other have large seed pods.
			2	Juniperus chinensis	<u>Chinese Juniper</u>	15'	6'	I	M	S	Spring	White	Cones	Forage and cover value for birds and small mammals.	Ornamental upright juniper,topiary, fast grower. Male cones are catkin like, female cones look like berries. Susceptible to cedar-apple rust.
			1	Juniperus monosperma	<u>One Seed Juniper</u>	30'	12'	I	I	S	Inconspicuous	Inconspicuous	Cone	Forage and cover.	Upright or rounded habits, scalelike leaves, highly drought tolerant and high native habitat value. Cones look like berries.
			1	Juniperus osteosperma	<u>Utah Juniper</u>	20'	15'	I	L	S	Inconspicuous	Inconspicuous	Blue	Forage and cover.	Small tree, foliage & fruit important wildlife forage
			1	Juniperus scopulorum	<u>Rocky Mountain Juniper</u>	20'	15'	I	M	S	Inconspicuous	Inconspicuous	Blue	Forage and cover.	Pyramidal to upright, exfoliating bark, Tolerant habitat value
			1	Juniperus squamata	<u>Singleseed Juniper</u>	16'	3'	M			N/A		Berry-Like Cones		
			2	Picea glauca densata	<u>Black Hills Spruce</u>	25'	15'	M	T	S	N/A	Blue/Green	Cones	Shelter and food for birds.	Deer and rabbit resistant. Good for providing privacy. Not native to Colorado, but native to our region and may be a good adaptive specimen. Not tolerant to flooding. 1 - 2 inch Pedulous Cone

			1	Pinus aristata	<u>Rocky Mountain Bristlecone Pine</u>	30'	20'	I	I	S	Spring	Yellow	Cones	Valuable food source for small mammals.	One of the oldest pine species in North America. Rounded to pyramidal, needles dotted w/ white resin. Tolerates some toxic conditions and has been used to reforest retired mining sites.
			2	Pinus contorta var. latifolia	<u>Rocky Mountain Lodgepole Pine</u>	80'	50'	I	M	R	Inconspicuous	Inconspicuous	Cones	Provides food, cover & habitat for big game animals and smaller mammals.	Suceptible to bark beetles. Average lifespan is 150 - 200, but they can sometimes live up to 400 years old.
			1	Pinus edulis	<u>Pinyon Pine</u>	20'	20'	I	M	S	Inconspicuous	Inconspicuous	Cones	Forage and cover.	Broadly rounded, edible fruit/ nut
			1	Pinus flexilis	<u>Limber Pine</u>	40'	30'	I	I	S	None	None	Cones	Forage for birds and mammals.	Pyramidal and slightly unruly form with smooth greenish grey bark. Limbs withstand heavy snow very well. Not typically used for ornamental plantings, but excellent for forestscapes.
			1	Pinus monophylla	<u>Single Leaf Pinyon Pine</u>	30'	30'	I	M	S	Spring	Red, yellow	Cones	Pine nuts are high forage value for small mammals and birds.	Pyramidal and rounded, edible seed. Disease resistant, but still at risk for bark beetle infestations. Produces pine nuts.
			1	Pinus nigra	<u>Austrian Pine</u>	60'	40'	I	M	M	Late Spring	Green	Cones	Provides forage for mule deer and cover for birds.	Fast growing, adaptable. Highly tolerant of harsh urban conditions. Mottled bark is grey to yellow-brown. Less drought tolerant than the similar looking Ponderosa Pine.
			2	Pinus ponderosa	<u>Ponderosa Pine</u>	80'	40'	I	M	M	None	No	Cones	Food and cover for birds, and browsed by larger ulgulates.	Open form, pyramidal, showy plates bark with a slightly sweet smell. Trees can live 500+ years, and take 150+ years to develop mottled rusty-orange bark. Younger bark is nearly black.
			2	Pinus strobiformis	<u>Southwestern White Pine</u>	50'	30'	I	L	R	Mid Spring	Inconspicuous	Cones	Forage, nesting, roosting, and winter cover for many small mammals and birds.	Fine textured tree with ornamental bluegreen needles
			2	Pinus sylvestris	<u>Scots Pine, Scotch Pine</u>	40'	30'	I	M	R	Inconspicuous	Inconspicuous	Cones	Provides food and cover for many forms of wildlife.	Bright orange exfoliating bark, bluegreen needles
			1	Pinus sylvestris 'Repens'	<u>Creeping Scot's Pine</u>	50"	30"	I			N/A	N/A	Cones		
			1	Quercus gambelii	<u>Gambel Oak</u>	20'	12'	I	I	S	Inconspicuous	Inconspicuous	Acorns	Ecologically important for providing forage and cover for many animal and bird species.	Usually multistemmed, good wildlife forage. Typically grows in open spaces, and is recommended for larger areas that need dense forest coverage.
			1	Quercus macrocarpa	<u>Bur Oak and related cultivars/varieties</u>	60'	40'	M	L	S	Inconspicuous	Inconspicuous	Acorns	High forage value for ducks, turkeys, rabbits, and many other small mammals.	Stately and long-lived tree, golden fall color. One of the few large oaks to survive well in high mountain and great plains climates. Check for cultivars and varieties such as Cobblestone, Gila Monster, and Gambel x Bur.
			2	Syringa pubescense subsp. patula	Lilac 'Miss Kim'	10'	7'	L	U	R	Late Spring	Purple, lavender, white, or fushia	Brown/Copper	Important for pollinators.	Fine textured tree, fragrant large white flowers, exfoliating bark
			1	Syringa vulgaris	Common Lilac	12'	12'	M	U	R	Late Spring	Purple, lavender, white, or fushia	Brown/Copper	Important for pollinators.	Upright vaseshaped form, heartshaped bluegreen leaves. Check local nurseries for lilac varieties and cultivars that do well at higher altitudes.

	2	Tilia cordata	<u>Littleleaf Linden</u>	50'-60'	30'	M	I	M	Summer	Yellow	Green	Attracts hummingbirds and other pollinators. Provides shelter for birds, soft wood is good for nesting.	Fragrant flowers, dangling, rounded fruits, yellow foliage.
	2	Ulmus japonica x U. wilsoniana	<u>Accolade Elm</u>	50'	35'	M	M	R	Inconspicuous	Inconspicuous	Samaras	Cover for birds.	Dark green foliage, yellow color. Resistant to Dutch Elm Disease
	2	Ulmus pumila x U. japonica x U. wilsoniana	<u>Triumph Elm 'Morton Glossy'</u>	55'	45'	M	T	R	Inconspicuous	Inconspicuous	Samaras	Cover for birds.	Glossy green foliage. Resistant to Dutch Elm Disease

*Regarding "native" plants and trees: This indicates that the species is native to Colorado, but there are many species native to neighboring regions that are suitable for our area--and using adaptive species as climate conditions change improves ecological resiliency. Please keep in mind that an urban site may not always be the best environment for native species that thrive in natural conditions. Examine your landscape and surrounding conditions closely or ask an expert for guidance.

**Regarding "ignition resistance" or "flammability": Fire proof plants and trees do not exist. Species with high fire tolerance indicate that they may be able to recover more easily from surrounding fire and smoke damage. The flammability rating is related to factors such as moisture, sap, and oil content which may cause a species to more or less likely to catch fire. Please refer to the Colorado State Forest service website (complete URL below) to learn how to protect your home from wildfire.

***Regarding Drought Tolerant Species: Drought tolerant species need regular water during the first 2 years of growth in order to establish. As they begin to reach maturity, watering frequency can be reduced.

Resources:

Feature Trees. Colorado Tree Coalition. <https://www.coloradotrees.org/find>
Flowers and Plants. Colorado State University Extension. <https://extension.colostate.edu/topics/flowers-plants/>
Flora of North America, Flora of North America Association. A collaboration project between over 30 American and Canadian Institutions to organize species information. http://www.efloras.org/browse.aspx?flora_id=1
New Mexico State University, Cooperative Extension Service. Fire Wise Plant Materials. <https://www.emnrd.nm.gov/sfd/wp-content/uploads/sites/4/FireWisePlantMaterialsNMSU.pdf>
Native Grasses for Use in Colorado Landscapes. Colorado State University Extension Master Gardener. <chrome-extension://efaidnbmnnnibpcjpcglclefindmkaj/https://cmg.extension.colostate.edu/Gardennotes/581.pdf>
Plant Select. Smart plants inspired by the Rocky Mountain Region. A non-profit partnership between Colorado State University, Denver Botanic Gardens, and professional horticulturalists. <https://plantselect.org/>
PLANTS Database (Plant List of Attributes, Names, Taxonomy, and Symbols). USDA. Department of Natural Resources Conservation Service. <https://plants.usda.gov/>
Plant Finder. Missouri Botanical Garden. <https://www.missouribotanicalgarden.org/PlantFinder>
The Tree Guide. Arbor Day Foundation. <https://www.arborday.org/tree-guide>
Trees and Shrubs. Colorado State University Extension. <https://cmg.extension.colostate.edu/gardening-resources/online-garden-publications/trees-and-shrubs/>
Trees and Shrubs Online. International Dendrology Society. <https://www.treesandshrubsonline.org/>
Utah State University Extension. Range Plants of Utah. <https://extension.usu.edu/rangeplants/shrubs-and-trees>
Utah State University Extension. Maples in the Landscape. <https://extension.usu.edu/yardandgarden/research/maples-in-the-landscape/>
USDA 2023 Plant Hardiness Map. <https://planthardiness.ars.usda.gov/>
U.S. Forest Service, Northeastern Area State and Private Forestry Urban and Community Forestry, Fire and Aviation Management, and Cooperative Fire programs. <https://fire.sref.info/selector/plant-list>
University Extension Gardener Toolbox. North Carolina State University. <https://plants.ces.ncsu.edu/>
Water Wise Plants. Colorado Springs Utilities. <https://www.waterwiseplants.org/find-a-plant>
Wildflower Plant Database. Lady Bird Johnson Wildflower Center. [Wildflower.org](http://www.wildflower.org)
Wildfire Mitigation. Protect Your Home. Colorado State Forest Service. <https://csfs.colostate.edu/wildfire-mitigation/protect-your-home-property-from-wildfire/>