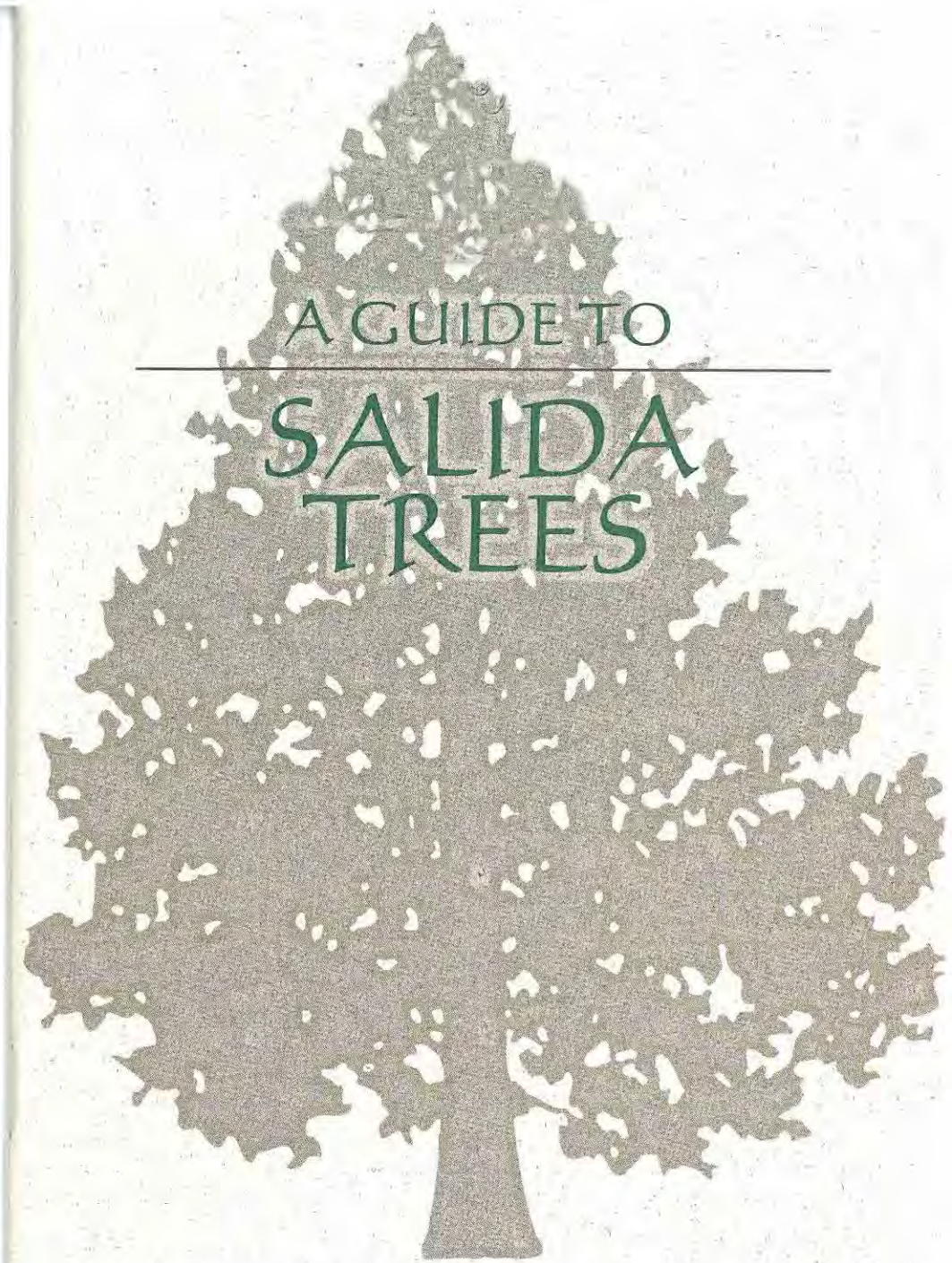

A GUIDE TO SALIDA TREES

Published By The Salida Tree Board
with funding from Colorado Tree Coalition

Walk around Salida and you'll see an abundance of trees, from silver maples and American elms casting leafy shade over city streets to tall spruces in parks, and crabapples in yards blooming in clouds of pink blossoms in spring. Yet Salida wasn't always a tree-shaded place. Historic photos show trees only along the Arkansas River and larger streams. Salida's urban forest was planted and nurtured by the people who settled here beginning in the late 1800s. Their choices of trees reflect those species that could survive the dry, windy climate. Today, thanks to the buffering effect of the existing forest and to new tree varieties, our choice of species is larger.

Salida Tree Board

A volunteer board representing the City of Salida, which oversees the portion of the urban forest planted on city property, including trees in parks and "street trees," those trees planted in the space between sidewalks and city streets. According to Salida city code, property owners are responsible for minor maintenance of street trees, including watering, fertilizing, and mulching; the city has the primary responsibility for planting, trimming, spraying, removing, and replacing these trees. Before planting, serious trimming, or removing a street tree, property owners must obtain permission from the City.

Salida Tree Board Members:

Tom Jacobson, president
Susan J. Tweit, vice-president
Laura Cummins, treasurer
Janice Iiams, secretary
Jim Elmore, member-at-large
Charles De Marco, member-at-large
Karl Hinther, member-at-large
Kathryn Hardgrave, Colorado State Forest Service (ex-officio)
Terry Fister, Public works (ex-officio)

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Support: City of Salida
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Photos: Tom Jacobson and Charles De Marco
Design: Lauren Giusti, Giusti Design

Table of Contents

About This Guide . . .

This guide to Salida's trees will help you select and care for the proper tree for your planting site. The main section of the guide lists tree species appropriate to Salida, with tree characteristics, including average size in Salida, flowers, and fruit; environmental requirements, including soil conditions, watering requirements, disease and pest problems; comments; and recommendations on each species' suitability for street trees. Photographs show specimen trees from around Salida. (Water requirements listed are for maintenance after establishment, all trees need regular watering to become established.) First come deciduous trees, followed by evergreens. Within those categories, trees are grouped by size: small, medium, and large. Definitions used are those from the Salida city code (section 7-2-3): a small tree is one that reaches 25 feet at maturity (in Salida); a medium tree, one that reaches 25-40 feet; a large tree is one that reaches more than 40 feet tall at maturity. To search for tree species by growth rates or watering needs, turn to the tables following the tree descriptions. For planting, spacing, and care instructions, see the guide at the end of the booklet.

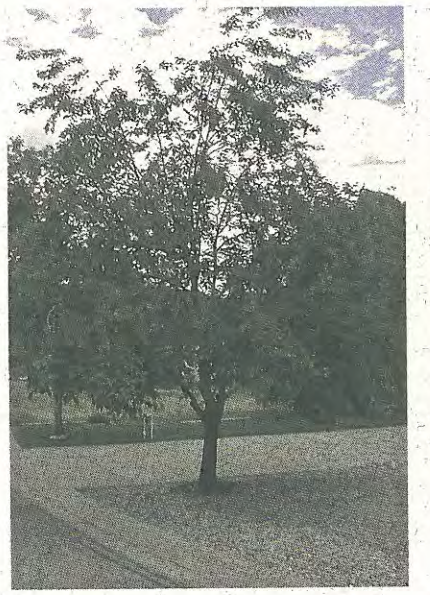
Deciduous Trees

Trees that shed their leaves in the fall

SMALL

CANADA RED CHERRY

Prunus virginiana cultivar:
Schubert



This ornamental small tree, a cultivated relative of the wild chokecherry that grows along streams and rivers throughout the Upper Arkansas Valley, has leaves that sprout green, then turn dark red or almost purple as they mature. The fruit of wild chokecherry is used for jelly, syrup, and wine.

Height: 15' **Crown Spread:** 20'

Growth Rate: fast

Flowers: Small, white, in drooping clusters

Foliage: Leaves sprout green and turn purple

Fruit: small (1/3in. diameter), red or purple fruit bitter but edible, sought out by birds

Soil: avoid poorly drained soils, tolerates alkalinity

Water: medium

Sun: tolerates shade, needs sun to fruit

Problems: tends to sucker

Comments: Mayday Tree (*Prunus padus*) and Amur Chokecherry (*Prunus maakii*) are closely-related and very similar.

Street Tree: recommended

Deciduous Trees

SMALL

MAPLE

Amur Acer tartaricum ssp. ginnala

This ornamental tree is native to northern China and Japan and prized here for its tolerance to cold and the spectacular red color of its leaves in fall. Like all maples, it needs deep watering in summer to keep its canopy from browning at the edges due to drought, and watering during dry spells in winter to avoid branch dieback.

Height: 15' **Crown Spread:** 10'

Growth Rate: slow

Flowers: Fragrant and pale yellow, but visually unremarkable

Foliage: three-lobed leaves turn yellow to deep red in fall

Fruit: samaras (winged fruit) which turn bright red

Soil: tolerates most well-drained soils but is subject to chlorosis (yellowing from lack of iron) in highly alkaline soil (ph above 7.5)

Water: medium

Sun: better fall colors w/full sun

Problems: sapsuckers, leaf spot, heavy seeder, needs pruning to develop into a single-stemmed tree

Comments: Can take heavy pruning, makes a good screen if thickly planted.

Street Tree: Suitable if pruned to single stem

Deciduous Trees

DOMESTIC FRUIT TREES

Several kinds of domestic fruit trees and ornamental flowering varieties grow well in Salida. Because they are closely related and thrive under similar environmental conditions, they are presented together here. All prefer full sun, well-drained soil, and thrive best with regular watering, especially during fruit set. Given these conditions, they are hardy and will thrive for a long time, hence the lovely examples of large, old apples, cherry trees, flowering crabapples, and the smaller flowering plums, visible in yards around town. Apricot trees prefer richer soil and are less cold-hardy. They are best planted in sheltered locations.

Apple

Malus domesticus (many varieties)

Height: 20' (standard trees)

Crown Spread: 25'

Growth Rate: moderate

Flowers: white to pinkish

Fruit: varies from red to yellow to green, most varieties require cross pollination to set fruit

Problems: coddling moth, leaf rollers, fireblight, canker, borers, scale, cedar apple rust

Street Tree: not recommended because of fruit drop

SMALL

Plum, Flowering

Prunus cerasifera

Height: 15' **Crown Spread:** 15' **Growth Rate:** moderate **Flowers:** white or pink, very fragrant **Foliage:** dark green or purple **Fruit:** purplish or red fruit, fruitless varieties available **Problems:** pests include saw fly, aphids, borers, scale, tent caterpillars; trees are short-lived; spring frost can kill flowers; not suited to dry, windy locations. **Comments:** Prunus Americana, wild plum, is a shrubby native relative that also produces edible fruit. **Street Tree:** suitable, if non-fruiting variety

Flowering branch of a Crabapple

Apricot

Prunus armeniaca

Height: 15' **Crown Spread:** 20' **Growth Rate:** moderate **Flowers:** white or pink **Foliage:** green turning yellow in fall **Fruit:** edible, up to three inches in diameter **Problems:** twig borer, thirps, peach crown borer, aphids **Comments:** Depending on the variety, requires cross pollination. Apricots flower early; late frosts may kill fruit. **Street Tree:** not recommended because of fruit drop

Crabapple

Malus (many varieties)

Height: 20' **Crown Spread:** 20' **Growth Rate:** moderate **Flowers:** white, pink or red, depending on variety **Foliage:** ranges from green to purple **Fruit:** small, persistent, can be used for jelly, attractive to birds; fruitless varieties available **Problems:** fireblight (resistant varieties available), canker, borers, scale, aphids **Comments:** Fruitless varieties are more appropriate for street trees. **Street Tree:** fruitless recommended

MEDIUM

ASPEN
Populus tremuloides

This tree is native to the mountains of much of western North America, where it grows in "clones," groves of genetically identical trunks sprouting from a single spreading root system. Aspen make beautiful ornamental yard and park trees, and are especially valued for their white or olive-barked trunks and the spectacular colors of their fall foliage.

Height: 35' **Crown Spread:** 15'

Growth Rate: fast

Flowers: not showy, in dangling catkins

Foliage: green, turning gold to orange in fall

Fruit: in catkins

Soil: can tolerate well drained soil with supplemental water, tolerates slight alkalinity

Water: high

Sun: full

Problems: suckers and sprouts freely, scale, canker, short-lived, deer will browse bark and branches

Comments: Eurasian aspen are a different species and do not thrive in Salida's climate.

Street Tree: not permitted

MEDIUM

EUROPEAN MOUNTAIN ASH
Sorbus aucuparia

European Mountain Ash forms a distinctive oval-shaped crown and is often planted as a street tree, especially in urban areas, since it tolerates air pollution and difficult soils.

Height: 30' **Crown Spread:** 15'

Growth Rate: moderate

Flowers: clusters of white flowers

Foliage: compound leaves with toothed leaflets which turn tawny yellow to reddish in fall

Fruit: clusters of quarter-inch red or orange berrylike fruit sought after by birds after hard frosts

Soil: tolerates well drained soil, prefers neutral to acidic ph

Water: medium to high

Fertilizer: high

Sun: full

Problems: cankers a problem in stressed trees, also fireblight and sunscald

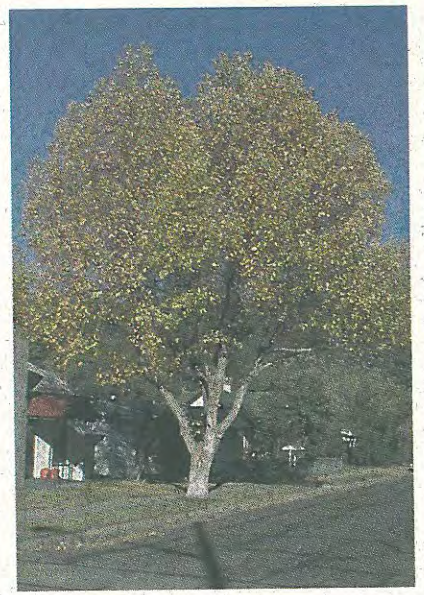
Comments: Summer heat may stress trees (increase watering to compensate); berries can cause stomach cramps if eaten raw.

Street Tree: recommended

LARGE

ASH, GREEN

Fraxinus pennsylvanica



Green Ash is native to the eastern United States, but tolerates cold and dry conditions well enough to thrive in the Salida area. These trees grow a rounded crown of limbs, but do not cast dense shade. They are valued for their lemon-yellow fall foliage.

Height: 45' **Crown Spread:** 30'

Growth Rate: moderate

Flowers: very small green or purple

Foliage: compound leaves on a central stalk, leaflets turn lemon-yellow to gold in fall

Fruit: two-inch-long samara (one-winged fruit)

Soil: well-drained, tolerates high ph, salt and low fertility

Water: moderate

Fertilizer: moderate

Sun: full

Problems: aphids, borers, tent caterpillars; foliage burns in hot, dry winds

Comments: "Summit" and "Patmore" are the best varieties for Salida. Tolerates cold and drought. Male and female flowers are on separate trees

Street Tree: recommended

LARGE

EUROPEAN WHITE BIRCH

Betula pendula

A slender tree with a lacy appearance due to upright main branches and weeping side branches, and small leaves. Native to Eurasia but widely planted in the western United States.

Height: 45' **Crown Spread:** 20'

Growth Rate: moderate

Foliage: turns bronze or a light yellow in fall

Fruit: dangling catkins

Soil: prefers deep moist loam

Water: high

Sun: partial

Problems: borers (requires prompt attention), aphids, top dies back in cold environments

Comments: Poor choice for dry or windy locations, requires more fertilizers than most lawns.

Street Tree: questionable

LARGE

BOX ELDER
Acer negundo

Height: 45' **Crown Spread:** 30'

Growth Rate: fast

Flowers: small, green

Foliage: light green leaves turn yellow in fall

Fruit: samaras (winged seeds in a pair)

Soil: tolerant of most conditions

Water: medium

Sun: shade-tolerant

Problems: box elder bugs, especially near street lights; limb breakage due to weak brittle wood; drips sap; very sensitive to 2, 4-D herbicide

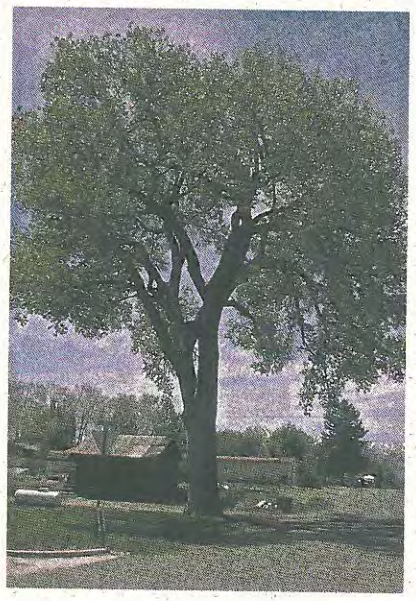
Comments: Crown is sometimes ragged due to limb drop, but the tree adapts to difficult growing conditions. "Sensation," an improved variety, offers promise for parks and yards.

Street Tree: not permitted

Box elder is a fast-growing native maple which has been historically planted in Salida because it adapts very well to dry and cold environments. At maturity, it grows a fat trunk and a widely-spreading crown, but sheds limbs readily in wind and snowstorms and provides habitat for box elder bugs, which are harmless but considered a nuisance.

LARGE

COTTONWOOD, NARROWLEAF & PLAINS
Populus angustifolia & Populus deltoides



Height: 50' **Crown Spread:** 40'

Growth Rate: fast

Flowers: pendulous catkins, often purple in Plains cottonwood; male and female flowers on separate trees

Foliage: shiny green foliage which turns bright yellow in fall

Fruit: female trees release cottony seeds in mid-summer

Soil: moist, well drained

Water: high

Sun: full

Problems: oystershell or armored scale, canker, sheds limbs in wind and snowstorms, roots may lift sidewalks and penetrate seeping sewer lines

Comments: Seedless varieties available.

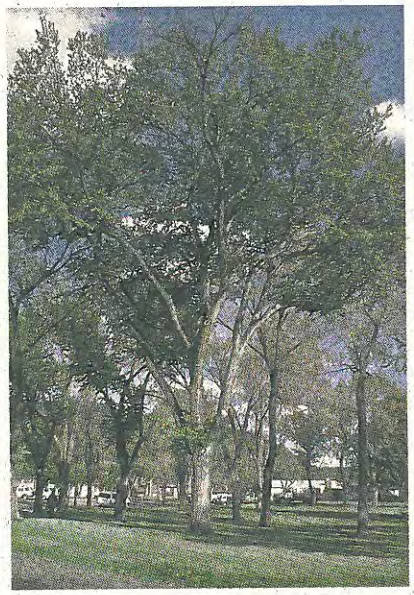
Street Tree: not recommended

Plains and Narrowleaf cottonwood are the large shade trees native to rivers and streams throughout the Rocky Mountains. Narrowleaf is the mountain species, growing from Salida upstream; Plains is the prairie species, growing from Salida downstream. Narrowleaf is a shorter tree with a narrower canopy and lance-shaped leaves. Plains cottonwood can grow over 100 feet tall at lower elevations, with a girth of up to 36 ft. Its leaves are heart-shaped.

LARGE

ELM, AMERICAN

Ulmus americana



Height: 50' **Crown Spread:** 40'

Growth Rate: moderate to fast

Foliage: medium green turning to yellow in fall

Fruit: small winged seeds

Soil: deep soils, with neutral ph

Water: medium

Sun: full

Problems: leaf beetles, elm scale, Dutch elm disease (not yet found in Salida)

Comments: Good for parks or large lots, may damage sidewalks when confined; tolerates wind.

Street Tree: recommended

The majestic, arching shade tree planted along countless streets across the United States until Dutch Elm disease decimated elm populations beginning in the 1950s. American elms are native to eastern North America and grow a distinctive vase-shaped canopy on a tall trunk with ridged bark.

LARGE

HONEYLOCUST

Gleditsia triacanthus variety inermis

Height: 45' **Crown Spread:** 20'

Growth Rate: fast

Flowers: small, greenish-yellow, fragrant

Foliage: numerous small leaflets provide light shade

Fruit: 7- to 18-inch-long seed pods

Soil: best in rich loams, requires good drainage

Water: medium

Sun: full

Problems: frost damage due to early leafing out, canker, spider mites, honeylocust borer damages limbs

Comments: This tree was often substituted for American elm after Dutch elm disease. Variety "shade-master" may be best for parkways.

Street Tree: recommended

This fast-growing tree, native to central and eastern North America, has an upright form, a lacy canopy and strongly horizontal branches. The species has formidable thorns; "inermis" is a thornless variety.

LARGE

LINDEN OR AMERICAN BASSWOOD

Tilia americana

A dense shade tree with heart-shaped leaves and clusters of small, intensely fragrant flowers, American Linden is native to the eastern United States.

Height: 45' **Crown Spread:** 20'

Growth Rate: moderate

Flowers: yellowish-white clusters, fragrant

Foliage: dark green turning yellow in fall

Fruit: small and nutlike

Soil: moist, well drained, neutral ph, avoid compaction

Water: medium

Sun: shade to full

Problems: aphids, sensitive to drought; leaves may scald in dry, hot weather

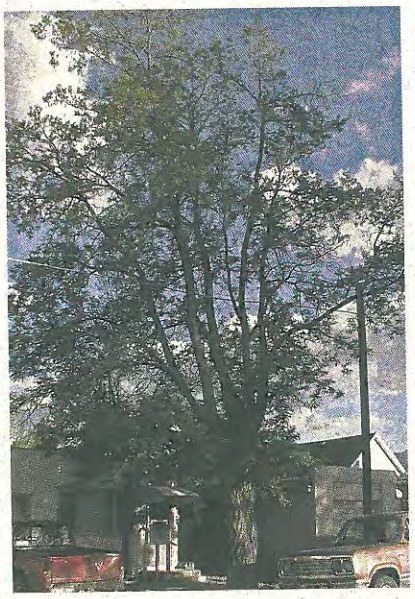
Comments: Challenging to grow, protected site recommended. Tilia cordata or Littleleaf is a medium-sized relative with smaller leaves and a denser crown.

Street Tree: recommended

LARGE

LOCUST, BLACK

Robinia pseudoacacia



Black locust is native to eastern and central North America, but is most widely planted in the western United States. Because locusts have their own source of nitrogen from cyanobacteria in their root nodules, they thrive even in the poorest soils.

Height: 50' **Crown Spread:** 20'

Growth Rate: fast

Flowers: 6- to 8-inch-long clusters of fragrant white flowers

Foliage: dark blue-green, compound leaves

Fruit: 4-inch-long, bean-like pods

Soil: avoid compaction and poor drainage

Water: low to medium

Sun: partial to full

Problems: thorns, locust borers, suckers, sensitive to night lighting from street lights

Comments: Good for windy locations, drought tolerant. Variety "umbraculifera" is a smaller and thornless tree.

Street Tree: suitable

LARGE

MAPLE, NORWAY
Acer platanoides

Tall, broad-crowned, densely-foliaged trees native to Europe and western Asia. Norway maples grow into stately trees that cast dense shade.

Height: 50' **Crown Spread:** 30'

Growth Rate: moderate

Flowers: showy clusters of bright greenish-yellow flowers

Foliage: dark green leaves that remain green well into fall and then turn yellow

Fruit: samara, two-winged fruit

Soil: tolerates a wide variety of soils, but does best with the addition of manure or other organic matter, avoid compacted soil

Water: medium

Sun: full

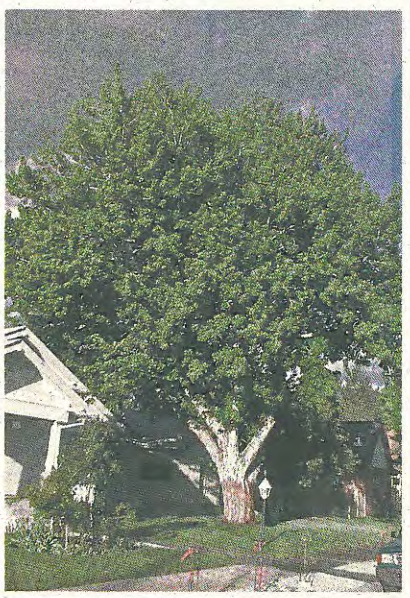
Problems: subject to sunscald when young

Comments: Avoid purple-leafed varieties as they are sensitive to Salida's alkaline soils. These trees need plenty of room.

Street Tree: suitable

LARGE

MAPLE, SILVER
Acer saccharinum



Tall, fast-growing trees with widely-spreading branches. Silver maples were widely planted as shade trees in the late 1800s because they could survive Salida's windy, dry climate. However, because they are native to swampy soils, they grow all their roots at the soil surface, where they heave sidewalks and driveways.

Height: 50' **Crown Spread:** 40'

Growth Rate: fast

Flowers: small yellowish to red flowers

Foliage: leaves are silvery on the underside, in early fall leaves turn yellow, orange or red

Fruit: samara (two-winged seed)

Soil: tolerates most soil conditions, but suffers from chlorosis in alkaline soils

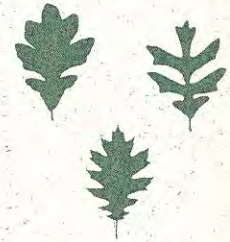
Water: medium

Sun: partial to full

Problems: brittle, weak wood; aphids, cottony scale, surface roots

Street Tree: not permitted

LARGE



OAK; BUR, RED, AND SWAMP WHITE

Quercus macrocarpa, rubra, and bicolor

These three oak species are all native to eastern North America. They are slow-growing, but very long-lived, and provide dense shade and beautiful colors when the foliage turns in fall. All grow straight trunks with heavy, upright limbs, and classically oak-shaped leaves with indented margins. The details of bark texture and leaf shape vary among the species.

Height: 45' **Crown Spread:** 30'

Growth Rate: slow to moderate (Red Oak is the fastest)

Flowers: inconspicuous

Foliage: glossy green, turns orange, rust or red in fall

Fruit: acorns

Soil: tolerate poor soils, but chlorosis may be a problem in alkaline soils

Water: varies with species, see "Comments"

Sun: full

Problem: canker, susceptible to oak wilt (avoid pruning April to July), not great for dry, windy locations

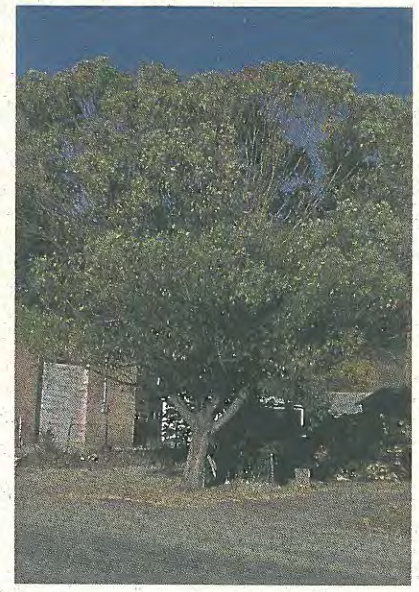
Comments: Swamp White Oak tolerates wet, heavy soils, also grows in well-drained soils. Red needs fertile soil and plenty of moisture. Bur is more tolerant of alkaline soils and drought than Swamp White Oak.

Street Tree: suitable, but requires care to establish

LARGE

WILLOW

Salix species



Willows range from thicket-forming shrubs such as the streambank willow growing along streams around Salida to stately, fat-trunked trees like the native peach-leaved willows that grow in Riverside Park. The species hybridize easily, making horticultural varieties confusing.

Height: varies, up to 45'

Crown Spread: varies, up to 30'

Growth Rate: fast

Flowers: catkins

Foliage: leaves generally lance-shaped or linear, green above and more or less silvery underneath

Soil: moist to poorly drained

Water: high

Sun: full

Problems: aphids, spider mites, fast growth equals brittle wood and a short life span, invasive roots, water consumer

Comments: Peach-leaved Willow and Globe Willow are probably the best for yards, but are large trees. Weeping Willows lose limbs in wind and snowstorms.

Street Tree: not recommended

Evergreen Trees

SMALL

Trees that retain their leaves (or needles) year 'round

JUNIPER, ROCKY MOUNTAIN

Juniperus scopulorum

Rocky Mountain Juniper is the native "cedar" that along with Piñon Pine dots dry foothills and lower mountain slopes throughout the Rocky Mountains, including the Upper Arkansas Valley. Its evergreen leaves are small overlapping scales, rather than needles.

Height: 20' **Crown Spread:** 10'

Growth Rate: slow

Flowers: like all conifers (cone-bearing plants), flowers are in small cone-shaped structures; in junipers, male and female flowers occur on separate trees

Foliage: small blue-green to yellow-green scales year round

Fruit: waxy, green to blue green berry-like cones eaten by bluebirds, robins, and cedar waxwings in winter

Soil: if well-drained, can tolerate a wide variety of soil conditions

Water: low

Sun: full

Problems: dwarf mistletoe and spider mites, juniper blight causes twigs and small branches to die back

Comments: Drought tolerant once established, but can be killed by overwatering or poor soil drainage.

Street Tree: limited use because of bushy shape

All the evergreens listed in this section are wind-pollinated, producing copious quantities of fine pollen in late winter and spring. Those who suffer of respiratory allergies may not want to plant these trees.

Evergreen Trees

SMALL

PINE, PIÑON

Pinus edulis

The bushy, spreading small trees native to the foothills of the southern and central Rocky Mountains, including the dry hillsides above the upper Arkansas Valley. Grows in "woodlands" with open understories, usually with junipers. Great for rock gardens.

Height: 25' **Crown Spread:** 15'

Growth Rate: slow

Foliage: stiff, dark green needles are one to two inches long in bundles of two

Fruit: light brown cones are two inches long and contain seeds much valued for cooking (pine nuts) and eaten by birds, especially piñon jays

Soil: well-drained, tolerates slightly alkaline soils, but does not tolerate overwatering

Water: low

Fertilizer: low

Sun: sun

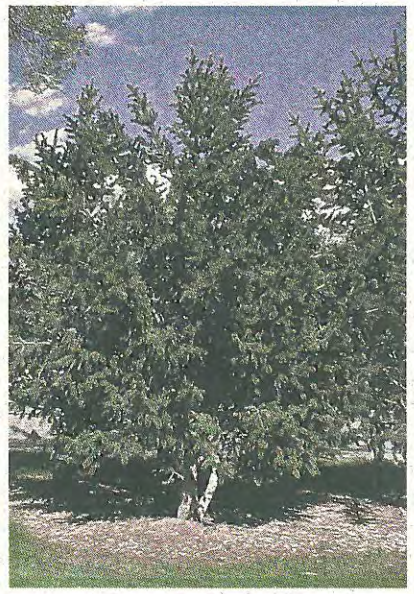
Problems: bark beetles, piñon needle scale, needle miner

Street Tree: not recommended

MEDIUM

PINE, BRISTLECONE

Pinus aristata



Height: 30' **Crown Spread:** 15'

Growth Rate: slow

Foliage: dark green, one- to one-half-inch-long needles in bundles of 5, needles remain on tree for many years

Fruit: purplish-brown cones three-and-one-half inches long

Soil: requires well-drained soils and can tolerate infertile and highly acid soils

Water: low

Sun: full

Problems: scale

Comments: Transplant when small (less than 3 feet tall). Bristlecone pine will grow faster with additional water but will die in poorly-drained soils. Tolerates windy locations, can be pruned to encourage denser branching.

Street Tree: limited use because of bushy shape and low branches

Native to the high elevations of the southern Rockies, Bristlecone Pine is a long-lived tree, surviving upwards of a thousand years. (Great Basin Bristlecone Pines, a related species, are the oldest trees known, surviving more than 4,600 years.) Densely-clustered needles at the ends of the branches give this tree its other common name, Foxtail Pine. A good tree for rock gardens, bonsai, and container gardens.

MEDIUM

PINE, LIMBER

Pinus flexilis

Height: 30' **Crown Spread:** 25'

Growth Rate: moderate

Foliage: needles up to three inches long, slightly twisted and in bundles of five

Fruit: cones oval, three to five inches long

Soil: coarse, well drained soils, intolerant of flooding

Water: low

Sun: full

Problems: May acquire white pine blister rust (a fungus), which requires currant shrubs in the other part of its life cycle.

Comments: Tolerates windy conditions, also heavy snow loads.

Street Tree: limited use due to bushy shape

Limber Pine forms the lower timberline of mountain forests along much of the eastern slopes of the Rockies, and also in the mountains in parts of the Southwest. At maturity, it is a thick-trunked tree with a broad, rounded crown and long, spreading limbs.

MEDIUM

PINE, SCOTCH

Pinus sylvestris

The native pine of the once-abundant Caledonian pine forests of Scotland and northern England. Scotch Pine is a popular Christmas tree for its natural pyramidal shape when young.

Height: 30' **Crown Spread:** 25'

Growth Rate: fast at first, then moderate

Foliage: Needles are two to three inches long, in bundles of two, turning yellowish green in winter

Fruit: gray, egg-shaped cones to two inches long

Soil: well drained, sandy, soil, does best in acidic conditions

Water: medium

Sun: full

Problems: pine sawfly, winter browning, stressed by hot and dry summers

Comments: Variety "French Blue" keeps blue color of needles in winter, other varieties include weeping and dwarf forms; foliage sparse at maturity.

Street Tree: limited use

LARGE

DOUGLAS-FIR

Pseudotsuga menziesii subspecies glauca

Douglas-fir is native to western mountain forests from the Rockies to the West Coast. Inland trees (subspecies *glauca*) have blue-green foliage and are shorter and slower-growing than the giants of the coastal forests.

Height: 50' **Crown Spread:** 20'

Growth Rate: moderate

Foliage: soft, one-and-a-half-inch long, bluish-green needles

Fruit: reddish-brown, oval-shaped cones about three inches long with distinctive three-tipped bracts on each cone scale

Soil: well-drained, intolerant of flooding

Water: medium

Sun: partial shade to full

Problems: Spruce budworm, scale, aphids; dies back in hot, dry, windy conditions

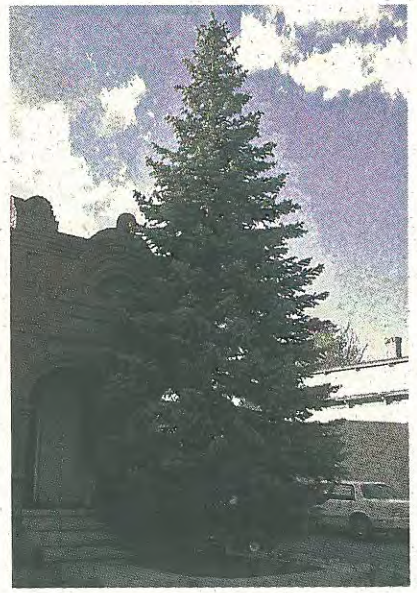
Comments: distinctive pyramidal shape when young

Street Tree: limited to spaces appropriate to large trees

LARGE

FIR, WHITE

Abies concolor



Height: 45' **Crown Spread:** 15'

Growth Rate: moderate

Foliage: one- to two-inch-long, soft bluish-green needles

Fruit: cones purplish, three to six inches long, upright on branch

Soil: prefers rich, moist, and well drained conditions, avoid clay, compacted soils, or highly acid soils

Water: medium

Sun: shade to full

Problems: spruce budworm, aphid damage on new growth

Comments: Cannot tolerate hot sun, windy conditions, or drought when young.

Street Tree: limited to spaces appropriate to large trees

White Fir grows in mountain forests from the southern Rockies west to the Sierra Nevada. In wetter climates than Salida's, this tall, symmetrical tree reaches heights of 120 feet.

LARGE

PINE, AUSTRIAN BLACK

Pinus nigra

Height: 45' **Crown Spread:** 20'

Growth Rate: moderate

Foliage: dark green, stiff needles, five to six inches long in bundles of two

Fruit: cones oval, two to three inches long

Soil: well drained, successful in a wide range of ph, acid to alkaline

Water: medium

Sun: full

Problems: tip blight (a fungus), needle blight, pine wood nematode (which can kill a tree in a single season), winter browning

Comments: very hardy

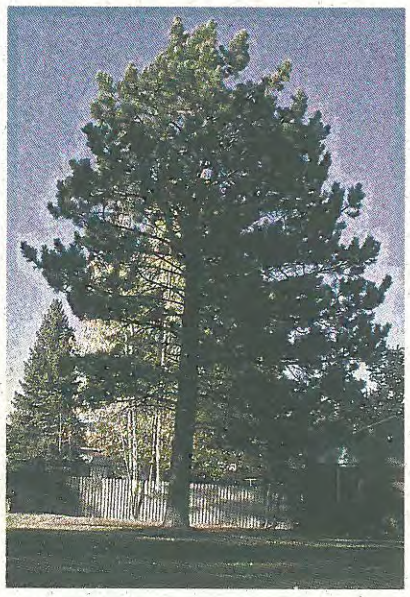
Street Tree: limited to spaces appropriate to large trees

Austrian Black Pine is native to Europe and western Asia. Its branches grow in regular whorls; in old age, these trees are broad and flat-topped.

LARGE

PINE, PONDEROSA

Pinus ponderosa



Ponderosa Pine is also called Western Yellow Pine for the orange, platey bark of mature trees. These stately pines with straight trunks and open crowns may reach 200 feet tall in the wild. They are native to mountains and mesas throughout the western half of North America, from Oklahoma to British Columbia.

Height: 50' **Crown Spread:** 25'

Growth Rate: moderate

Foliage: dark green needles four to six inches long in bundles of three

Fruit: red-brown cones are three to five inches long with recurving prickle at the end of each scale

Soil: tolerant of almost all conditions, except flooded or compacted soils

Water: low

Sun: full

Problems: dwarf mistletoe and bark beetles (if stressed by crowding or drought)

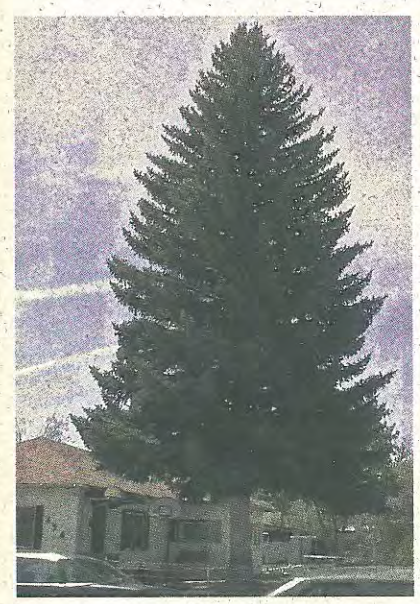
Comments: Ponderosa pines are large trees that need lots of room and have deep tap roots. In mature trees, the bark smells like vanilla.

Street Tree: limited use due to large size at maturity

LARGE

SPRUCE, COLORADO BLUE

Picea pungens



Colorado's state tree, Colorado Blue Spruce is native to the Rocky Mountain region, thriving in moist mountain forests. Like all spruces, it grows in a symmetrical, pyramidal form with branches in layers. Unlike firs, which have a similar growth form, spruce cones hang down, and their needles are stiff, with sharply pointed ends.

Height: 50' **Crown Spread:** 25'

Growth Rate: moderate

Foliage: blue-green or steel-blue needles, one to one and a half inches long

Fruit: two to four inch-long cones with papery scales

Soil: grows best in moist, well drained, fertile soils, dislikes compacted soils

Water: medium to high

Sun: full to part, needles lose blue color in shade

Problems: adelgids form harmless galls; but when stressed by heat and/or drought, subject to tip die-back due to aphids, spider mites, and needle cast

Comments: Lack of deep roots mean Colorado Blue Spruce can topple in high winds.

Street Tree: not recommended due to large size and tendency to wind throw

Evergreen Trees

LARGE

SPRUCE, ENGELMANN

Picea engelmannii

Height: 50' **Crown Spread:** 25'

Growth Rate: slow

Foliage: needles greener and softer than Colorado Blue Spruce

Fruit: cones light-brown to two inches long

Soil: grows best in moist soils that stay cool in summer

Water: medium to high

Sun: full sun to shade

Problems: aphids, needle scale, spider mites

Comments: Engelmann Spruce are large trees at maturity, and popular in yards and parks.

Street Tree: not recommended due to large size and tendency to topple in high winds

Engelmann Spruce is the tall, fat-trunked, somewhat scaly-barked tree that grows along streams and rivers in mountain forests throughout western North America. Like Colorado Blue Spruce, Engelmann has a shallow root system, making it sensitive to drought and easily toppled by strong winds.

Unusual Species

Trees that may grow in Salida, but which require a green thumb and extra attention to get started. Specific growing requirements are unknown.

BUCKEYE, OHIO

Aesculus glabra

A deciduous tree with a rounded crown, palmately compound leaves that turn spectacular shades of orangish-red in fall, and unusual greenish flower spikes in spring. Ohio Buckeyes are native to the moister climates of eastern North America; in Salida's hot and dry summers, they are susceptible to leaf scorch. The glossy seeds may be poisonous. One grows south of Hwy. 50 at the Wal-Mart intersection.

HAWTHORN

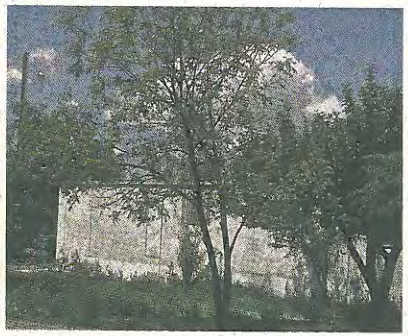
Crategus species

Small trees native to Europe, Asia, and North America. Most of the species can grow as either a multi-trunked tall shrub or a single-trunked tree. All sprout clusters of white or pink flowers in spring, succeeded by fruit shaped like tiny apples ("haws" in England). The "thorn" part of their name honors the truly formidable thorns that cover their branches and twigs. One grows on Maxwell Street in Salida.

MULBERRY, WHITE

Morus alba

White Mulberry is native to China and widely planted in the desert southwest because it tolerates heat and alkaline soils. Grows into a thick-trunked tree with heart-shaped leaves. Fruit on female trees is attractive to birds. The tree growing in front of High Country Bank on Hwy 50 in Salida is a White Mulberry.



Black Walnut

WALNUT, BLACK

Juglans nigra

In eastern North America, where Black Walnut is native, these trees can reach 100 feet in height with broad crowns 70 feet across. In Salida's dry climate and poor soils, that a Black Walnut can grow at all is surprising, but one does grow here, on First Street. Not only are Black Walnuts difficult to grow in Salida, they secrete a growth inhibitor which makes it difficult to grow vegetable gardens near these trees (lawn grasses aren't affected).

Not Recommended For Salida

These trees should not be planted in Salida. Four species; Siberian Elm, Lombardy Poplar, White Poplar and Russian-Olive, are on the nuisance tree list. Planting these trees is not allowed on City property, including parkways.

ASH, WHITE *Fraxinus americana*

A large tree native to the Eastern United States and sometimes planted in the Rocky Mountains. It is not recommended for hot, dry climates, and does not thrive in Salida.

ELM, SIBERIAN *Ulmus pumila*

Siberian elms are native to Eurasia and thrive in Salida, as evinced by the weedy volunteers throughout the area. However, they are short-lived trees that shed limbs easily in snow or wind storms, are very susceptible to elm leaf beetle, and are prolific seeders.

POPLAR, LOMBARDY *Populus nigra*

These distinctive column-shaped trees, native to southern Europe, are short-lived and very susceptible to canker infections, which kill the tree above the site of infection.

POPLAR, WHITE *Populus alba*

Another European import which has been planted in Salida. A fast-growing shade tree subject to all the problems associated with fast growth: weak, easily shed limbs; heart rot; free suckering.

RUSSIAN-OLIVE *Elaeagnus angustifolia*

Widely planted as a windbreak shrub or tree, but it has been classified as a weed in some areas because it out-competes native streamside vegetation. It is also considered a "messy" tree because it drops copious quantities of litter, including leaves, branchlets, and fruit.

Russian-Olive

Lombardy Poplar

Water Requirements & Growth Rates

Low: In an average precipitation year, supplemental watering is not necessary. These trees work well in xeriscape plantings, especially if weed barrier fabric and mulch protect the soil from drying.

Medium: These trees require supplemental water, and will do best on the amount of water necessary to keep a bluegrass lawn healthy (about an inch of water a week in summer). Can withstand short periods of drought.

High: Supplemental water is crucial for these trees. They decline rapidly without regular watering during hot, dry conditions, both in summer and in winter.

Trees by Water Requirements

LOW:
Bristlecone Pine
Limber Pine
Piñon Pine
Ponderosa Pine
Rocky Mountain Juniper

MEDIUM:
American Elm
Amur Maple
Austrian Black Pine
Black Locust
Boxelder
Bur Oak
Canada Red Cherry
Domestic Fruit Trees (all)
Douglas-fir
Green Ash
Honeylocust
Linden
Norway Maple
Red Oak
Scotch Pine
Silver Maple
White Fir

HIGH:
Aspen
Colorado Blue Spruce
Englemann Spruce
European Mountain Ash
European White Birch
Narrowleaf Cottonwood
Plains Cottonwood
Swamp White Oak
Willows (all)

Trees by Growth Rate

SLOW:
Amur Maple
Bristlecone Pine
Bur Oak
Engelmann Spruce
Piñon Pine
Rocky Mountain Juniper
Swamp White Oak

MODERATE:
American Elm
Apple
Apricot
Austrian Black Pine
Colorado Blue Spruce
Crabapple
European Mountain Ash
European White Birch
Flowering Plum
Green Ash
Limber Pine
Linden
Norway Maple
Ponderosa Pine
Red Oak
Scotch Pine
White Fir

FAST:
Aspen
Black Locust
Boxelder
Canada Red Cherry
Honeylocust
Narrowleaf Cottonwood
Plains Cottonwood
Willows (all)

Planting

Proper planting will help ensure the health and survival of your new tree.

Where to Plant

When determining your planting location, consider location of overhead and underground utility lines, size and shape the tree will be at maturity, size of planting space, and purpose of planting. For trees in parkways (the city right-of-way between the sidewalk and the street), Salida's city codes lay out spacing for tree planting (small trees should be 20 feet apart, medium trees 30 feet, and large trees 40 feet apart), as well as distance from curbs, corners, fire hydrants, and utility wires. See section 7-2-3, or call the City Clerk's Office for specifics.

When to Plant

Early spring, after the frost leaves the ground is the best time for tree planting. In Salida, this is usually by April 15th. Trees can be planted throughout the summer. Autumn plantings are acceptable if accomplished at least six weeks before the ground freezes.

Buying a Tree

Choose a tree with good form. The tree should have one main stem. Branches should come off the trunk at a 45-90 degree angle. Branches should be well spaced around the tree and not rubbing against each other. Avoid trees with crushed or circling roots, trees with wounds, or incorrect pruning.

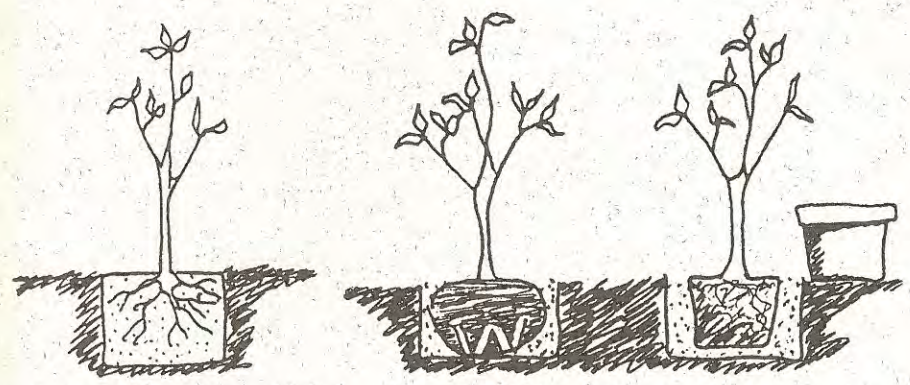
How to Plant

Dig a shallow, broad planting hole. The hole can be three times the diameter of the root ball, but no deeper than the root ball. The wide planting hole gives you more room to work in, and allows the new roots to establish more quickly. The majority of roots on a newly planted tree will develop in the top 12-inches of soil.

When necessary, amend the soil in which the tree will be planted by mixing in organic material such as coarse peat, compost, or aged manure (but not fresh manure). The organic material should not exceed 20% of the soil volume. Leave all but the very large rocks (softball size), since rock is part of the natural soil composition. The root collar of the tree, a slight bulge above the roots, should be level with the ground surface when the tree is placed in the planting hole.

Balled and burlapped tree: The key to success is keeping the soil intact. The root ball should be moist when planting. To avoid loosening the soil around the roots and jeopardizing the survival of the tree, handle the tree by the basket, not the tree trunk. Do not lean on the root ball while removing twine, or burlap, and keep the water stream off the root ball.

Position the tree in the hole using the basket to handle the tree rather than the tree trunk. Once in the hole, shim with soil where needed to make sure the trunk is



Balled and Burlapped (B&B) *Container Stock*

straight and root collar level with the ground. Once in place, cut the twine at the base of the tree trunk. With wire cutters, cut the top two-thirds of rungs on the wire basket on opposite sides of the ball. Fill the hole half way with prepared soil. With the soil supporting the root ball, slowly work the two cut halves of the wire basket off the tree. Water slowly to settle the soil in the planting hole. Keep the water stream off the root ball, and stop applying the water when it begins to pool to avoid a moat. If the root ball is firm, loosen and remove the burlap to the settled soil level being careful to keep the planter's weight off the root ball and wet soil. Add additional soil to the hole until it is level with the top of the root ball. If the root ball soil is crumbly, add additional soil first, then only remove the burlap around the tree trunk and top of root ball. Do not tamp wet soil.

Build a watering basin the width of the hole around the tree utilizing leftover soil and rock. Fill the watering basin with water twice. Fill depressions from soil settlement with additional soil. Spread mulch over the bare soil, but not against the tree trunk.

Containerized tree (not field potted): Carefully cut the container away from the tree. If roots are circling the soil, make vertical cuts on four sides just deep enough to cut the net of roots. Cris-cross cut the bottom about one-fourth the depth of the soil.

Follow the planting directions above for a balled and burlapped tree using water to settle the soil at the halfway point, and after completing the planting.

Staking and Guying

The purpose of staking and guying is to hold the root ball in place while the roots become established in the new soil. It is okay for the tree trunk to bend with the breeze so that the tree adapts to the wind. Stake and guy if the tree is tall and skinny or exposed to strong winds. Position two or three stakes outside the planting hole. Use grommeted fabric straps around the trunk of the tree, and wire or rope to attach the straps to the stakes. Place the straps around the lower portion of the trunk and leave enough slack that the tree's top can still move in the wind. Remove the straps and staking within two growing seasons.

Mulching

Mulch includes bark chips, wood chips, and gravel. You may use a weed-barrier fabric under the mulch, but do not use plastic because it will not allow the soil to breathe (tree roots need oxygen). Keep the mulch out of contact with the tree trunk to avoid moist bark conditions and prevent decay. A layer 2-4 inches, depending on the mulch material is sufficient. Periodically refresh the mulch if it decomposes. Mulching the area from the trunk out to the branch tips can significantly enhance growing conditions. Benefits include: retention of soil moisture, weed and grass control, protection of trunk from lawn mower injuries, prevention of soil compaction, improved appearance, enhanced soil fertility.

Watering

Summertime: Deep, less frequent watering is better than shallow frequent watering. Encourage the roots to reach out beyond the root ball by watering beyond the branches. Frequency of watering will depend upon mulching, temperature, and wind. The tree should be watered when the top three to four inches of soil are dry.
Other seasons: Trees need moisture all year round. Autumn is a critical watering period to ensure the tree goes into dormancy with enough water. During warm dry periods in the winter, test the soil for frost depth. If a screwdriver is easily inserted into the ground four to five inches, water during late morning.

Avoiding Injuries

- Remove all plastic nursery tags.
- Do not tie an animal to the trunk.
- Keep grass away from trunk to avoid injury from mower blades and weed eaters.
- Park cars and heavy equipment away from trees to prevent soil compaction.
- If a tree is injured, use a sharp knife to cut away the splintered material and loose bark. New growth from the tree will cover smooth areas faster than rough areas.
- Do NOT apply wound dressing. It will not stop rot or help a tree recover. A tree has its own repair mechanism: sap.

Pruning

A properly pruned tree maintains its natural form, is less prone to insect and disease problems, and lives longer than an improperly pruned tree. Topping trees is the single most destructive thing that can be done to a tree. Do NOT top your tree. Always have a purpose in mind before a cut is made. Proper technique is essential to benefit the tree rather than harm it. Pruning cuts are made just outside the branch collar. The branch collar is a slight swelling at the branch junction.

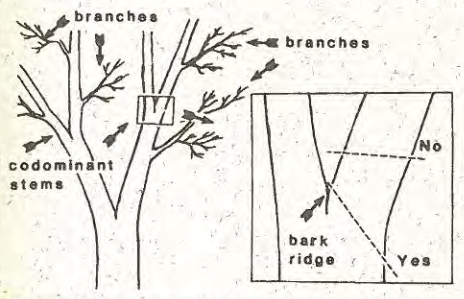


Figure 1: *Trees have both branches and stems that look like branches called codominant stems. If a codominant stem must be removed, cut at an angle outside of the bark ridge as shown in the insert at right. Avoid leaving any stub.*

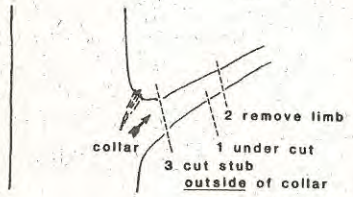


Figure 2: *When removing heavy limbs, first make an undercut several inches outside of the collar. Then remove limb by a second cut an inch or so outside of first cut. Remove stub with a third cut just outside of collar.*

The collar contains the plant cells to cover the wound. Remove dead and dying branches and rubbing branches. Remove weaker branches. The narrower the angle between branches, the weaker the connection. Limit the tree to one main stem. Use a 3-step method to remove branches. First, make an undercut about half way through the branch. Outside of the undercut, make a second cut from the topside of the branch. These two cuts remove the weight of the branch and lessen the chance of stripping the bark below the cut. The third step is to make the proper pruning cut just outside of the branch collar. The cut will be closer to a 45-degree angle from the trunk rather than flush with the trunk when done properly.
If reducing the tree height or spread, follow the one-third rule. The remaining branch must be at least one-third the diameter of the branch removed. Do not remove more than one-third of the tree branches in a single year. Do not prune when the tree first leafs out in spring, or in the fall just before the leaves drop. In the spring, the tree needs the new leaves to manufacture food after living off stored energy during the winter. In the fall, it is critical to get the energy from the leaves into the root system. Limit pruning on trees planted 1-3 years ago to dead and rubbing branches. Address a double-stem top by reducing the height of the stem to be removed in a later year. Branches chosen as part of the permanent tree structure should be well-spaced vertically along the trunk, and around the trunk.

For More Information

☎	City of Salida Public Works	539-6257
☎	Colorado State Forest Service	539-2579
☎	Colorado State University Agricultural Extension	539-6447

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