Suggested

Plant Palette

For the Town of Camp Verde, Arizona

A Tree City USA Since 2014

First Edition

2016

Compiled by
The Camp Verde Tree Advisory Committee

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Introduction

The *Suggested Plant Palette for the Town of Camp Verde, First Edition*, produced in 2016 by the Camp Verde Tree Advisory Committee (TAC) in collaboration with Town staff and various community groups, presents a list of perennial flowers, grasses, shrubs and trees selected to thrive in our desert community.

Compiled primarily to provide hardy, place-sensitive landscape choices for Town-owned properties, a principal goal of this document is to establish a cohesive landscape palette for municipally maintained areas throughout Camp Verde. Town residents are also welcome and encouraged to utilize this curated plant list when landscaping their own properties.

The Palette emphasizes low-maintenance, water-wise species and includes many plants native to the Camp Verde region. Additional considerations for inclusion were: ability to thrive in harsh conditions, such as right-of-ways; drought tolerance; wildlife habitat; suitability to high-traffic areas; evergreen and deciduous selections; aesthetic interest.

Happy planting!

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Questions or comments regarding the Suggested Plant Palette for the Town of Camp Verde *may be directed to* *CampVerdeTrees@gmail.com*

The Right Plant in the Right Place

The foundation of a successful landscape is choosing the right plant for the right place.

- Select a plant that will thrive in the conditions present at your unique site. Note **sun, water needs, plant hardiness, special features, and mature size.**

- Choose a plant that fits the site. Can the plant reach its mature size without conflict from other plants, structures, and utilities?

- All plants—especially large shrubs and trees—should not impede street signage visibility, line-of-sight, or right-of-ways.

- Before beginning a planting project, it is important to have all utilities marked by the professionals at Arizona811 Blue Stake, Inc. Dial 811 or submit a request through www.arizona811.com

Tree Planting Instructions from the Arbor Day Foundation[1]

1. Dig a hole 3 to 4 times wider than the container. The hole should have sloping sides like a saucer to allow for proper root growth.

2. Carefully remove the tree from the container keeping the soil around the roots intact. It helps to tap the outside of the container to loosen the edge. Carefully slide the tree from the container.

4. Set the tree in the middle of the hole. Avoid planting the tree too deep. If the root collar sits below the top of the hole, compact some soil under the tree so that the root flare at the base of the trunk is slightly above ground level. Use soil to secure the tree in a straight position, then fill and firmly pack the hole with the original soil, making sure there are no air pockets. Keep backfilling until the soil is just below the root collar.

5. Create a water-holding basin around the hole and give the tree a good watering. After the water has soaked in, spread protective mulch 2 to 4 inches deep in a 3 foot diameter area around the base of the tree, but not touching the trunk.

6. The soil and mulch around your trees should be kept moist but not soggy. During dry weather, generously water the tree every 7 to 10 days during the first year.

* Remove any tags and labels from the tree as these will affect the tree as it grows.

* Do not use fertilizer, potting soil, or chemicals on newly planted trees. Such products can kill trees.

* It is rarely necessary to stake trees and, in fact, staking can cause serious harm to a tree if not used correctly. If staking is required, make sure to remove stakes and materials after 1 or 2 seasons.

Additional tree placement, planting, and care information may be found in the Camp Verde Municipal Tree Plan

[1] Arbor Day Foundation, "How to Plant Containerized Trees," www.arborday.org/trees/planting/containerized.cfm.

Flowers

- Angelita Daisy *(Tetraneuris acaulis)*
- Desert Marigold *(Baileya multiradiata)*
- Firewheel *(Gaillardia pulchella)*
- Gooding Verbena *(Glandularia gooddingii)*
- Mexican Evening Primrose *(Oenothera speciosa)*
- Firecracker Penstemon *(Penstemon eatonii)*
- Palmer's Pentemon *(Penstemon palmeri)*
- Parry's Penstemon *(Penstemon parryi)*
- Rosemary *(Rosmarinus officinalis 'Prostratus')*
- Showy Milkweed *(Asclepias spp.)*

Angelita Daisy

Tetraneuris acaulis

Photo by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
10 to 14 inches tall, 12 to 18 inches wide

Water:
Low to moderate

Sun:
Full sun; can tolerate light shade

Hardiness: Native
Tolerates heat, poor soils

Special Features:

- Cheerful yellow daisy-like flowers that begin in late spring and continue through fall
- Erect grass-like leaves form attractive mounds

Suggestions for Use:

- Great border plant
- Sidewalk plantings, roadway medians
- Wildflower, pollinator, and perennial gardens

Maintenance Considerations:

- Regular deadheading keeps plants tidy and promotes continuous blooming
- Spreads by seed
- Can thrive without supplemental water once established

Desert Marigold

Baileya multiradiata

Photo by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
Rounded 12 to 18 inches

Water:
Low; drought tolerant

Sun:
Full sun to part shade

Hardiness: Native
Tolerates heat, poor soils

Special Features:

- Long-lasting, golden yellow daisy-like flowers on tall stalks
- Wooly and deeply lobed grayish-green leaves
- Blooms from mid-summer into fall

Suggestions for Use:

- Native flower gardens
- Roadsides
- Borders
- Pollinator and perennial gardens

Maintenance Considerations:

- Well-behaved plant that does well in a variety of poor soil conditions, extreme heat, and limited water
- Tends to form large, dense patches in areas with favorable conditions
- Thrives without supplemental water once established

Additional Comments:

- Biennial or short-lived perennial
- Pollinator-friendly flower

Photo courtesy of DanielCD, hosted by Wikimedia Commons

Firewheel

Gaillardia pulchella

Mature Size:
2 feet tall, 1 foot wide

Water:
Dry to medium; Drought tolerant

Sun:
Full sun

Hardiness: Native
Heat tolerant, drought

Special Features:
- Showy flower heads up to 3 inches wide
- Pollinator-friendly plant

Suggestions for Use:
- Roadsides
- Wildflower gardens
- Naturalized areas
- Mixed perennial gardens

Maintenance Considerations:
- Spreads well by seed, but generally well-behaved plant
- Requires well-drained soils

Additional Comments:
- Usually an annual in Arizona, but may overwinter

Goodding verbena

Glandularia gooddingii

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
8 inches tall, clumping habit up to 3 feet wide

Water:
Dry; drought tolerant but extended flowering dependent on moisture

Sun:
Full

Hardiness: Native
Tolerates hot temperatures and poor soils

Special Features:

- Cheerful light purple or pink flowers held above deeply divided, lobed wooly leaves
- Long blooming season, beginning in late spring and continuing through early fall

Suggestions for Use:

- Naturalized areas
- Pollinator gardens
- Borders
- Right-of-ways

Maintenance Considerations:

- Requires well-drained soils
- Short-lived perennial, but can reseed in good conditions
- Flowering season is dependent on moisture

Mexican Evening Primrose

Oenothera speciosa

Photo courtesy of KENPEI, hosted by Wikimedia

Mature Size:
Up to 2 feet tall, 1 to 1.5 feet wide but may spread via rhizomes into large clumps

Water:
Low to medium; drought tolerant

Sun:
Full, can tolerate very light shade

Hardiness: Introduced
Tolerates poor soil, heat, drought

Special Features:
- Large, 2 to 3 inch light-pink flowers that bloom May through July
- Easily grown and established
- Pollinator-friendly plant

Suggestions for Use:
- Informal naturalized areas
- Roadsides and right-of-ways

Maintenance Considerations:
- Requires well-drained soils
- Can spread aggressively by seed and rhizomes, forming large colonies. Site plants carefully so that they do not intrude other plants.

Firecracker Penstemon

Penstemon eatonii

Photo by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
2 to 4 feet high; 1 to 3 feet wide

Water:
Low water use

Sun:
Full sun to part shade

Hardiness: Native
Tolerates heat, dry soils

Special Features:
- Fast growing, drought tolerant perennial
- Early spring blooms of dark pink, tubular flowers
- Attracts hummingbirds

Suggestions for Use:
- Desert style gardens, borders and rock gardens

Maintenance Considerations:
- Requires well drained sandy soil
- Remove old flower stalks in fall

Additional Comments:
- Seeds can be surface sown in fall; Plants can be divided

Palmer's Penstemon

Penstemon palmeri

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
4 to 5 feet tall and 2 feet wide

Water:
Low water use

Sun:
Full sun

Hardiness: Native
Tolerates heat, dry soils

Special Features:
- Thrives in xeriscape gardens and is heat tolerant
- Attracts hummingbirds
- Drought tolerant/ drought resistant
- Blooms in early summer with tall spikes of fragrant, light pink flowers
- Distinctive grey foliage

Suggestions for Use:
- Informal wildflower garden

Maintenance Considerations:
- Re-seeds readily
- Requires pruning in fall
- Requires well drained soil, avoid or amend clay soils

Parry's Penstemon

Penstemon parryi

Photos by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
Leave rosettes up to 10 inches tall; flower stalks up to 4 feet tall. Plant can reach up to 2 feet wide at maturity.

Water:
Low water use; thrives on rainfall. Supplemental irrigation in summer will increase next year's bloom

Sun:
Full, tolerates light filtered shade

Hardiness: Native
Native to Arizona's low deserts. Tolerates multiple soil types but requires good drainage.

Special Features:
- Dark grey-green leaves up to 4 inches long
- Early spring bloomer
- Distinctive showy flowers on long upright stalks in shades of pink and red that bloom

Suggestions for Use:
- Pollinator gardens; attracts hummingbirds
- Native landscaping
- Perennial gardens
- Roadsides
- Xeriscape

Maintenance Considerations:
- Short-lived perennial with a lifespan of 3 to 5 years
- Removal of flower stalks just as seeds are forming will promote blooming and prolong the life of the plant

Additional Comments:
- Also known as Desert Penstemon
- Easily propagated by seed

Rosemary

Rosmarinus officinalis 'Prostratus'

Photo courtesy of Petar43, hosted by Wikimedia Commons

Mature Size:
1 to 2 feet tall, 4 to 6 feet wide

Water:
Low to medium water use; Drought tolerant.

Sun:
Full sun, Light Shade

Hardiness: Introduced
Tolerates intense sun

Special Features:
- Low maintenance
- Plants grow best is well-drained, infertile soil.
- Pollinator friendly
- Fragrant, leathery everygreen leaves with small blue flowers

Suggestions for Use:
- Low-growing prostrate forms are excellent when used in rock gardens planted at the top of masonry walls
- Use for informal edging

Maintenance Considerations:
- Though drought tolerant, the Univeristy of Arizona Extension office recommends giving plants frequent water (every 3 to 5 days) during the first growing season, and then decrease irrigation frequency once the root system has established and expanded.
- Excessively irrigated plants become very woody.
- Rosemary planted in native soil needs no fertilizer.
- Occasional pruning is needed to refine shape and promote blooming. Pruning is best done with hand clippers immediately after flowering in late spring. Do not shear.

Additional Comments:
- *Rosmarinus officinalis* is a taller variety (3 to 6 feet tall) that makes an excellent hedge.

Showy Milkweed

Asclepias speciosa

Photo by J.D. Ripley, courtesy of Smithsonian Institution, Department

Mature Size:
Up to 2.5 feet tall and 2 feet wide

Water:
Moderate to high water use

Sun:
Full

Hardiness: Native
Tolerates dry soils but requires fertile soil

Special Features:
- Monarch butterfly food and habitat plant
- Attractive flowers

Suggestions for Use:
- Pollinator gardens
- Native landscaping

Maintenance Considerations:
- It is particularly well adapted to dry gardens.
- To control the plant's tendency to naturalize in parts of the yard where you don't want to grow it, simply snip off the seedpods before they ripen and pop open.

Additional Comments:
- Backyard gardeners can help preserve the Monarch Betterfly by growing plants, such as Showy Milkweed, which keep the Monarch migration alive and feed other species of butterflies as well.
- Other milkweed species to consider are *Asclepius nyctaginifolia* and *Asclepius viridian*.

Grasses

- Beargrass *(Nolina microcarpa)*
- Blue Grama Grass (*Bouteloua gracilis*)
- Buffalograss (*Bouteloua dactyloides)*
- Deer Grass *(Muhlenbergia rigens)*
- Little Bluestem *(Schizachyrium scoparium)*
- Plains Switchgrass *(Panicum virgatum)*
- Purple Three Awn Grass *(Aristida purpurea)*

Beargrass

Nolina microcarpa

Photo by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
Leaves up to 4 feet high and 4 to 6 feet wide; flower scape up to 6 feet high.

Water:
Low water use; drought tolerant

Sun:
Full sun

Hardiness: Native
Thrives with little water; tolerates clay and sandy soils.

Special Features:
- Evergreen
- Rigid, grass-like leaves with dry, loose fibers at leaf tips
- Produces creamy white, plume-like flowers in May through June; flower clusters may reach 3 feet long

Suggestions for Use:
- Xeriscape gardens
- Roadside medians
- Substitute for ornamental grass in hot, dry sites

Maintenance Considerations:
- Moderate litter
- No thorns or spines
- Do **NOT** shear- clip individual leaves down to the base of the plant
- Old plants may develop a dead zone in the plant center; these plants should be replaced if unsightly

Additional Comments:
- Not a true grass; a member of the asparagus family
- Not a fire-wise plant

Blue Grama Grass

Bouteloua gracilis

Photo by Robert Soreng. courtesy of Institution, Department of Botany

Mature Size:
Foliage no more than 6 inches high; seed heads typically 1 to 2 feet

Water:
Low/medium; Drought tolerant

Sun:
Part to full sun

Hardiness: Native
Fair salinity and moderate alkalinity tolerances; intolerant to dense shade, flooding, and acid soils.

Special Features:
- Interesting seed head shape
- Food source for seed-eating birds
- Foliage turns golden-brown in autumn. Inflorescences of purplish-tinged flowers appear on arching stems above the foliage in early-to-midsummer.

Suggestions for Use:
- Habitat restoration; native plantings
- Accent in perennial gardens
- Perennial sod former; used as turf

Maintenance Considerations:
- Spreads by rhizome and seed

Additional Comments:
- In low-water conditions, blue grama will grow in clumps similar to a bunch grass. In areas where it receives adequate water, it tends to form a solid mat by rhizomes.

Buffalograss

Bouteloua dactyloides

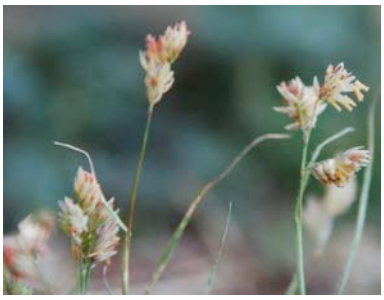
Photos by John Kava, hosted by the Yavapai County Arizona Cooperative Extension *Yavapai County Native & Naturalized Plants*

Mature Size:
8 to 10 inches tall when not mown

Water:
Low/medium; drought tolerant

Sun:
Full

Hardiness: Native to areas of Arizona
Can tolerate prolonged drought and extreme heat



Special Features:
- Water-wise, dense sod-forming grass; excellent alternative to thirsty lawn varieties
- Warm-season, low growing
- Well-adapted and spreads vigorously by stolons (above-ground runners)

Suggestions for Use:
- Perennial sod former; used as turf
- Low-traffic areas
- Erosion control

Maintenance Considerations:
- Spreads by stolons and seed; more easily controlled than Bermuda grass
- Will be dormant (brown color) from November to early May
- Can go into drought-induced dormancy (yellowing) in summer; supplemental irrigation can prevent this
- Mow to 2.5 to 3.5 inches with a rotary mower
- Seed at 1.5 to 2.0 lbs. of seed per 1000 square feet in June or early July
- Apply nitrogen at low rates, not to exceed 1.0 lb. of nitrogen per 1000 square feet in one year. Apply 0.5 lb. in June and 0.5 lb. in July.

Additional Comments:
- Several cultivars available
- Do **not** overseed with rye grass for winter cover
- Uses less water than Kentucky blue grass in the summer
- Buffalograss is dioecious; plants are either male or female
- Female spikelets in bony burs nestled among leaves

Deer Grass

Muhlenbergia rigens

Photo by Sally and Andy Wasowski. Courtesy of Lady Bird Johnson Wildflower Center.

Mature Size:
Typically 3 to 4 feet tall with narrow flower spikes rising another 2 feet; up to 6 feet across.

Water:
Low; Drought tolerant
Seasonally wet to dry soils

Sun:
Full

Hardiness: Native
Can withstand periodic flooding but cannot tolerate poorly-drained soils; shade intolerant.

Special Features:

- Seeds are a food source for birds and small mammals
- Finely textured leaves and erect flower spikes
- Large, airy form softens landscaping
- Color ranges from light silver green to bright green to purple
- Fast growing yet will not overwhelm landscaping

Pink Muhly *(Muhlenbergia capillaris)*, Photo courtesy of Stickpen, hosted by Wikimedia

Suggestions for Use:

- Erosion control and soil stabilizer
- Habitat restoration; native plantings
- Group plantings

Maintenance Considerations:

- Clear away dead material by mowing, cutting, or burning every few years. Periodically raking out dead foliage with a fan rake will keep the plants neat and healthy.

Additional Comments:

- Consider Pink Muhly *(Muhlenbergia capillaris)*, see photo at left, for extra ornamental value

Little Bluestem

Schizachyrium scoparium

Photo by David McDermott , courtesy of Lady Bird Johnson Wildflower Center

Mature Size:
1 to 3 feet tall; 1 to 3 feet wide

Water:
Low, drought tolerant

Sun:
Full, part shade

Hardiness: Native to Midwest
Tolerant of a wide range of soils; intolerant of wetlands or subirrigation

Special Features:
- Very ornamental bunchgrass
- Finely textured, blue-grey leaves
- Leaves and stems become mahogany-purple and tan in fall, retains color through winter
- Wildlife food source

Suggestions for Use:
- Mass plantings
- Wildflower gardens
- Rights-of-way

Photo by Max Licher, courtesy of SEINet Arizona Chapter.

Maintenance Considerations:
- Readily reseeds; not recommended for manicured beds
- Not a fire-wise plant

Additional Comments:
- Attracts birds and butterflies
- Evolved in prairie ecosystem where fire plays an important part; not a fire-wise plant

Plains Switchgrass

Panicum virgatum

Photos by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
3 to 5 feet tall by 2 to 3 feet wide

Water:
Medium-low water use; tolerant of drought and standing water

Sun:
Full

Hardiness: Native to Midwest
Tolerates moderate soil salinity; does poorly in heavy soils

Special Features:

- Upright landscape grass
- Blue-green foliage; some cultivars have distinctive red tips
- Turns yellow in the fall
- Wheat colored flowers in late summer that remain well into fall
- Great wildlife plant

Suggestions for Use:

- Wildflower gardens
- Mass plantings

Maintenance Considerations:

- Clear away dead material by mowing, cutting, or burning every few years.
- Periodically raking out dead foliage with a fan rake will keep the plants neat and healthy

Additional Comments:

- Many cultivars available
- Evolved in prairie ecosystem where fire plays an important part; not a fire-wise plant

Purple Three Awn

Aristida purpurea

Photo by Tony Frates courtesy of SEINet Arizona Chapter.

Mature Size:
The culms (stems) and leaf blades typically reach 12 to 20 inches tall.

Water:
Low water use; Drought tolerant

Sun:
Full

Hardiness: Native
Drought tolerant, establishes quickly on disturbed sites. Can tolerate sandy soils, slopes.

Special Features:

- Perennial bunchgrass
- Reddish-purple nodding, narrow panicles (flowers) appear spring through summer, turning gold and lasting for months.
- Food source for seed-eating birds
- Roots provide good matrix for many wildflower species

Suggestions for Use:

- Erosion control
- Habitat restoration; native plantings
- **Not** suggested for high-traffic areas or groomed landscaping

Maintenance Considerations:

- Can aggressively self-sow by seed
- Awns are sharp and can stick to clothing and animal fur

Additional Comments:

- Colorful, lax seed heads and leaves catch the breeze and soften landscaping

Shrubs

- Autumn Sage (*Salvia greggii*)
- Bush Dalea (*Dalea pulchra*)
- Chihuahua Sage (*Leucophyllum laevigatum*)
- Cinquefoil/Potentilla (*Potentilla fruticosa*)
- Desert Ceanothus (*Ceanothus greggii*)
- Desert Honeysuckle (*Anisacanthus thurberi*)
- Feather Dalea (*Dalea formosa*)
- Lady Banks Rose (*Rosa banksiae*)
- Murphy's Agave (*Agave murpheyi*)
- Parry's Agave (*Agave parryi*)
- Photinia (*Photinia fraseri*)
- Pink Fairy Duster (*Calliandra eriophylla*)
- Purple Smoke Bush (*Cotinus coggygria*)
- Red Yucca (*Hesperaloe parviflora*)
- Sugar Sumac (*Rhus ovata*)
- Texas Mountain Laurel (*Dermatophyllum secundiflorum*)
- Three Leaf Sumac (*Rhus trilobata*)
- Trailing Indigo Bush (*Dalea greggio*)
- Turpentine Bush (*Ericameria laricifolia*)
- Winterfat (*Ceratoides lanata*)

Autumn Sage

Salvia greggii

Photo by G.A. Cooper, courtesy of Smithsonian Institution, Department of Botany

Mature Size:
Erect, bushy, up to 4 feet high and 2 feet wide

Water:
Low water requirements once established. Do not overwater.

Sun:
Full to partial shade

Hardiness:
Tolerates heat and rocky, alkaline soil

Special Features:

- Native to southwestern Texas and the Chihuahuan desert of Mexico
- Flowers in many colors, yellow to red to purple in the late spring and summer and fall
- Flowers attract hummingbirds, butterflies, and other pollinators
- Medium green, aromatic leaves
- Herbaceous, evergreen perennial that grows well in rocky alkaline soils

Suggestions for Use:

- Xeriscape
- Pollinator gardens; Garden edging
- Roadway medians and roadside plantings
- Sidewalk/walkway friendly

Maintenance Considerations:

- Prune two times per year to control shape and encourage blooms: Cut back to 6 inches in late winter; cut back in August to promote fall blooms

Additional Comments:

- Highly variable plant with numerous named cultivars
  Other common names include cherry sage, Gregg's sage and Texas sage

Bush Dalea/Indigo Bush

Dalea pulchra

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
4 feet high and 5 feet wide

Water:
Low water use

Sun:
Full sun

Hardiness: Native
Thrives in reflected heat and intense sun

Special Features:
- Evergreen, silver-green foliage with fine texture
- Violet flower clusters winter to spring
- Winter color
- Rounded, airy growth form
- Moderate to fast growth rate

Suggestions for Use:
- Xeriscape gardens

Maintenance Considerations:
- Moderate litter
- No thorns
- Shear in early summer to improve shape and flowering
- Short-lived if overwatered

Additional Comments:
- Attracts bees and butterflies
- Do not overwater

Chihuahuan Sage

Leucophyllum laevigatum

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
4 to 5 feet high; 5 to 6 feet wide

Water: Very low water requirements once established

Sun:
Full sun

Hardiness:
Tolerates alkaline soils, heat and wind.

Special Features:

- Perennial native to Chihuahuan desert of Mexico
- Slow to moderate growth rate with a rounded, dense shape
- Evergreen foliage is bright olive-green and finely textured
- Fragrant blue-lavender flowers from summer to fall

Suggestions for Use:

- Informal hedges
- Roadway medians and roadside plantings
- Xeriscape
- Mass plantings

Maintenance Considerations:

- Low litter and no thorns
- Needs space to sprawl
- Head back annually to encourage dense growth habit; do not shear
- Feed in spring to encourage blooms

Cinquefoil/ Potentilla

Potentilla fruticosa

Photo by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
3 feet tall by 3 feet wide

Water:
Low to medium water use

Sun:
Full sun; tolerates part shade

Hardiness: Introduced
Tolerates poor soils, heat and drought.

Special Features:
- Densely branched shrub with silver-green leaves
- Cream to yellow flowers from June to September
- Pollinator friendly

Suggestions for Use:
- Informal hedges
- Roadway medians and roadside plantings
- Mass plantings

Maintenance Considerations:
- Low litter and no thorns
- Very low maintenance

Additional Comments:
- Deer and rabbit resistant
- Multiple varieties available

Desert Ceanothus

Ceanothus greggii A. Gray

Photo courtesy of Max Licher, hosted by the SEINet Arizona Chapter.

Mature Size:
3 to 6.5 feet high and 3 to 6 feet wide

Water:
Very low water requirements; drought tolerant

Sun:
Full Sun

Hardiness: Native
Very drought tolerant; tolerates poor soil.

Special Features:
- Semi-evergreen perennial
- Native to pinon-juniper woodlands
- Finely textured, leathery, grey-green leaves and bears crowded clusters of white flowers
- Blooms in late spring providing good bee forage

Suggestions for Use:
- Xeriscape gardens

Maintenance Considerations:
- Can be trimmed to ground annually to improve shape and increase bloom
- Avoid overwatering, especially during the first year

Additional Comments:
- Could be difficult to locate commercially
- Other common names are wild lilac, mountain lilac, cupleaf ceanothus and Mojave buckbrush

Desert Honeysuckle

Anisacanthus thurberi

Photo courtesy of Max Licher, hosted by the SEINet Arizona

Mature Size:
4 to 6 feet tall, 3 to 5 feet wide

Water:
Low to moderate water use

Sun:
Full sun to part shade; blooms best in full sun

Hardiness: Native
Tolerates reflected heat and intense sun

Special Features:

- Native to northern Mexico and southwestern U.S. at elevations between 2500-5500ft.
- Delicate yellow to red tubular blooms that attract hummingbirds and butterflies
- Dormant in winter

Suggestions for Use:

- Plant among evergreen shrubs for spots of color

Maintenance Considerations:

- Can be vigorously pruned in winter to control shape and size and to promote more blooms

Additional Comments:

- Also known as Chuparosa

Lady Banks' Rose

Rosa banksiae

Photo courtesy of Cillas, hosted by Wikimedia Commons

Mature Size:
20 feet high and 15 feet wide, sprawling vine

Water: Moderate water use

Sun: Full

Hardiness: Introduced
Tolerates heat

Special Features:
- Fast growing semi-evergreen vine
- Leaves small and medium green
- White or pale yellow flowers in spring/early summer
- Thornless
- Evergreen

Suggestions for Use:
- Arbors
- Specimen plants
- Informal hedges

Maintenance Considerations:
- Low litter
- Require little maintenance besides something strong to climb on; can be grown as a large, mounded plant

Additional Comments:
- Plant only where there is adequate room

Feather Dalea

Dalea formosa

Photo by Patrick Alexander, courtesy of SEINet Arizona Chapter.

Mature Size:
3 feet high to 4 feet wide

Water:
Very low water requirements. Overwatering will produce leggy, weak growth.

Sun:
Full sun

Hardiness: Native
Tolerates dry, rocky soils

Special Features:

- Easily established, semi-evergreen, compact, woody shrub
- Delicate feathery leaves with tiny, fuzzy purple and yellow flowers
- Blooms spring to fall

Suggestions for Use:

- Xeriscape gardens
- Low borders
- Roadway medians and roadside plantings

Maintenance Considerations:

- Light spring pruning will control shape

Murphys Agave

Agave murpheyi

Photo courtesy of Digigalos, hosted by Wikimedia Commons

Mature Size:
3 feet high and 3 feet wide

Water:
Very low water once established;
Drought tolerant

Sun:
Full sun

Hardiness: Native
Tolerates reflected heat and drought

Special Features:

- Bold, perennial succulent with a dense rosette of spined green leaves
- Flowers are waxy, creamy green color on 10 to 13 foot high stalks

Suggestions for Use:

- Xeriscape and desert gardens,
- Wide road medians and roadside plantings

Maintenance Considerations:

- No pruning required, but plants sucker readily and can form large stands if not controlled

Additional Comments:

- Plant dies after flowering
- Spines and terminal leaf ends can be dangerous
- Available in variegated forms

Parry's Agave

Agave parryi

Pictures from Longwood Gardens taken by Raul654 hosted by Wikimedia Commons

Mature Size:
Up to 3 feet high and 3 feet wide

Water:
Very low water once established; Drought tolerant

Sun:
Full sun

Hardiness: Native
Tolerates extreme heat

Special Features:

- A slow growing, evergreen succulent native to Arizona and the Chihuahuan desert
- Dense rosette of spined, grey-green leaves
- After 10 to 30 years, the plant sends up a 20 foot high flower stalk with multiple red buds that are yellow when opened

Suggestions for Use:

- Xeriscape and desert gardens
- Wide road medians and roadside plantings

Maintenance Considerations:

- The plant dies after flowering but usually produces multiple vegetative off-shoots to replace itself

Additional Comments:

- Spines and terminal leaf ends can be sharp and dangerous

Photinia

Photinia fraseri

Photo courtesy of Wouter Hagens, hosted by Wikimedia Commons

Mature Size:
10 to 15 feet high with equal width

Water:
Low to moderate; Drought tolerant

Sun:
Full sun to part shade

Hardiness: Introduced
Heat resistant, Adaptive to urban environments: compacted soils, poor drainage, alkaline clay soils and air pollution.

Special Features:

- Heat-resistant, evergreen shrub or small tree with a moderate growth rate
- Glossy dark green leaves with new leaf growth a bright bronze red
- White flower clusters in spring
- Drought tolerant once established

Suggestions for Use:

- Garden backdrop or hedge, espalier, or can be trimmed to small tree and good for residential street use.
- Also good by pools, sidewalks or patios, even tree cut-outs.

Maintenance Considerations:

- Prone to aphids. Prune for good airflow and plant in full sun to prevent leaf spot fungal disease. Prune to preferred size and shape.

Additional Comments:

- *Photinia serrulata* is an alternate choice. Coppery colored new growth, resistance to leaf spot, but prone to powdery mildew.

Pink Fairy Duster

Calliandra eriophylla

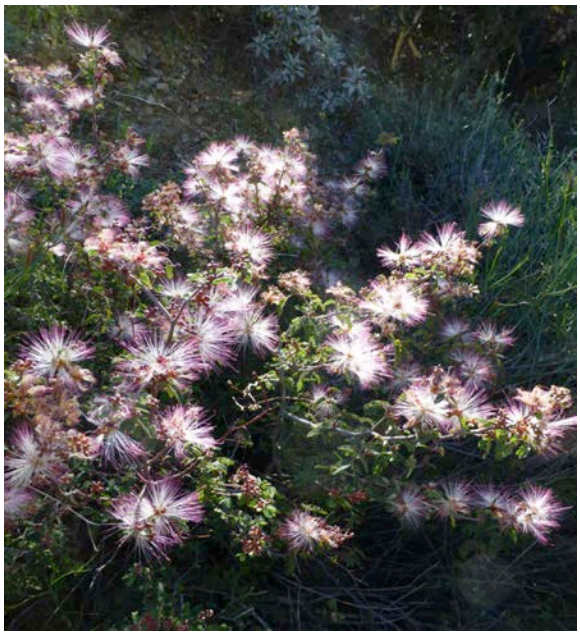


Photo courtesy of Max Licher, hosted by the SEINet Arizona Chapter

Mature Size:
3 feet high and 4 feet wide

Water:
Very low water use

Sun:
Full sun

Hardiness: Native
Tolerates rocky, alkaline soils and is very drought tolerant.

Special Features:

- Upright, airy semi-evergreen shrub, native to Arizona deserts
- Leaves are medium green and finely textured.
- Flowers are pink powderpuffs that bloom from spring to fall
- The plant produces low litter and is thornless
- Attracts butterflies and hummingbirds

Suggestions for Use:

- Informal hedges
- Xeriscape gardens
- Roadway medians and roadside plantings

Maintenance Considerations:

- Minimal to none

Purple Smoke Bush

Cotinus coggygria

Photo courtesy of Magnus Manske hosted by Wikimedia Commons

Mature Size:
15 feet high 12 to 15 feet wide

Water:
Medium water use

Sun:
Full sun to part shade

Hardiness: Introduced

Special Features:
- Deciduous shrub or small tree
- Reddish-purple foliage followed by long lasting, pinkish purple, smoke-like, airy seed clusters
- Blooms in spring
- Leaves turn scarlet in autumn.

Suggestions for Use:
- Trim to a specimen tree or use as hedge accent
- Can be used in large parking lot islands
- Residential street tree

Maintenance Considerations:
- Can be left un-pruned as a large shrub, or pruned to a small shrub or tree

Additional Comments:
- Foliage colors brighten with full sun exposures

Red Yucca

Hesperaloe parviflora

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
3 feet high and 5 feet wide

Water:
Very low water use

Sun:
Full sun

Hardiness: Introduced
Drought tolerant; adaptable to a variety of soils

Special Features:

- Not a yucca, evergreen perennial in the agave family
- The plant has 2 to 3 foot long narrow leaves from a woody base
- Produces 5 foot high flower stalks that produce showy, persistent, coral-red flowers from spring to summer
- Attracts hummingbirds

Suggestions for Use:

- Xeriscape gardens
- Rock gardens
- Roadway medians and roadside plantings

Maintenance Considerations:

- Minimal, can be divided every few years

Additional Comments:

- Yellow blooming cultivar also available

Sugar Sumac

Rhus Ovata

Photos by Max Licher, courtesy of SEINet Arizona Chapter.

Mature Size:
6 to 15 feet tall; 8 to 10 feet wide

Water:
Low, extremely drought tolerant

Sun:
Full sun, part shade

Hardiness: Native
Tolerates dry, rocky soils.

Special Features:

- Wildlife food source
- Evergreen
- Aromatic
- Large, leathery, shiny bright-green leaves with distinctive whitish flowers and sticky reddish-pink fruit

Suggestions for Use:

- Excellent native evergreen alternative to conifers
- Hedges and screening
- Mass plantings
- Erosion control

Maintenance Considerations:

- Forms single-sexed colonies originating from a suckering parent
- May be shorn or pruned to desired shape; Can be pruned into a small tree

Additional Comments:

- Somewhat fire-proof if watered monthly in the summer
- Only female plants produce flowers and berries.
- Edible, thin-skinned sweet fruit; the large seeds are inedible

Texas Mountain Laurel

Dermatophyllum secundiflorum

Photo courtesy of Miwasatoshi, hosted by Wikimedia Commons

Mature Size:
Up to 15 feet high and 10 feet wide crown diameter

Water:
Low water use once established

Sun:
Full sun

Hardiness: Introduced
The plant is adaptive to arid habitats and rocky, alkaline soils.

Special Features:

- Attractive evergreen shrub native to the southwestern US and Mexico
- Waxy leaves with very fragrant, large clusters of purple flowers that have a distinctive grape soda smell

Suggestions for Use:

- Privacy hedge
- Windbreak
- Background border plant or espalier

Maintenance Considerations:

- May require southern exposures and mulching in order to flower, but worth the effort.

Additional Comments:

- Avoid overwatering and poor drainage

Three Leaf Sumac

Rhus trilobata

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
3 to 6 feet high and 3 to 6 feet wide

Water:
Low to medium water

Sun:
Full sun with afternoon shade

Hardiness: Native
Tolerates a wide range of growing conditions

Special Features:

- A tidy, tough deciduous shrub
- It has showy, yellow flowers followed by attractive red berries and yellow-red fall color
- Bee friendly plant

Suggestions for Use:

- Informal low hedge
- Xeriscape gardens
- Foundation plantings

Maintenance Considerations:

- Can be pruned to remain compact. Plant in fall, can be hard to establish in heat.

Additional Comments:

- Very heat tolerant, crushed leaves impart a smell, unpleasant to some people

Trailing Indigo Bush

Dalea greggii

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
1 to 2 feet high and 2 to 8 feet wide

Water:
Low water use once established; Drought tolerant

Sun: Full sun

Hardiness: **Native**
Tolerates heat and desert soils; drought tolerant, unpalatable to rabbits

Special Features:

- Fast growing, mounding evergreen shrub
- Clusters of tiny, purple flowers in spring and early summer
- Native to the Southwestern United States and Mexico

Suggestions for Use:

- Wall hanger
- Borders
- Groundcover under trees
- Roadway medians and roadside plantings

Maintenance Considerations:

- Minimal, not attractive when edged or sheared

Turpentine Bush

Ericameria laricifolia

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
2 feet high and 3 feet wide

Water:
Low water use

Sun:
Full sun

Hardiness: Native
Very heat tolerant and adapted to limestone soils

Special Features:
- Moderate growth rate
- Bright green, finely textured, fragrant leaves
- Yellow clusters of flowers in the fall
- Native to southwestern US and Mexico
- Attractive to bees and butterflies

Suggestions for Use:
- Knee-high groundcover in xeriscape and desert gardens
- Low hedge
- Rock gardens
- Roadway medians and roadside plantings

Maintenance Considerations:
- May grow out of control if over-watered or after rainy season
- Can be easily brought under control by pruning
- Tolerates severe pruning

Additional Comments:
- May also be sold as *Happlopappus laricifolius*
- Also consider the slightly smaller Dwarf Blue Rabbitbrush *Chrysothamnus nauseosus var nauseosus*

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Winterfat

Krascheninnikovia lanata

Mature Size:
1 to 3 feet high, 1 to 3 feet wide

Water:
Very low water use; Drought tolerant

Sun:
Full Sun

Hardiness: Native
Drought tolerant; tolerant to poor soils and excessive salts

Special Features:
- Perennial evergreen shrub with silver-grey foliage
- Inconspicuous flowers April through September with ornamental, wooly, white seed heads in the fall
- Tolerates sandy and clay alkaline soils
- Bee friendly

Suggestions for Use:
- Use in hot, xerixcape and desert gardens with poor soils

Maintenance Considerations:
- Can tolerate pruning of up to 50% in the winter to control size and shape

Additional Comments:
- May be propagated by sowing seeds in fall or early spring, also available in pots
- May be found as *Eurotia lanata* or *Krascheninnikovia lanata*

Small Trees

(Up to 25')

- Chaste Tree (*Vitex agnus-castus*)
- Crepe Myrtle (*Lagerstroemia indica*)
- Desert Willow (*Chilopsis linearis*)
- Little Leaf Ash (*Fraxinus greggii*)
- Velvet Mesquite (*Prosopis velutina*)

Chaste Tree

Vitex agnus-castus

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
15 to 20 feet high

Water:
Medium water use

Sun:
Full sun

Hardiness: Introduced

Special Features:

- Vase shaped deciduous shrub that develops into a single-trunk tree with time and training
- Showy, fragrant, violet-blue spikes of blossoms on new growth
- Fragrant leaves
- Flowers in July and August
- Attractive butterfly and hummingbird plant

Suggestions for Use:

- Shrub border if maintained with pruning
- Single-trunk form suitable for small spaces
- Ornamental focal point
- Pollinator garden

Maintenance Considerations:

- Will develop a classic tree shape with time; take this into consideration when planting

Additional Comments:

- Some litter, plant away from sidewalks or patios
- Plant leafs out late in the spring

Crepe Myrtle

Lagerstroemia indica

Photo by R.A. Seelig, courtesy of Smithsonian Institution, Department of Botany

Mature Size:
Cultivar dependent; 2 to 25 feet height

Water:
Moderate water use until established

Sun:
Full sun

Hardiness: Introduced
Adaptable, but grows best in moist well-drained soils. Plant is drought tolerant when established.

Special Features:
- Evergreen shrub or tree
- Lustrous green leaves
- Smooth, exfoliating bark
- Showy flowers ranging from white through pink, purple and red
- Blooms from June-September

Suggestions for Use:
- Specimen plant
- Pair with ground covers and grasses
- Smaller varieties can be planted in groups or hedges; larger ones can be pruned to small trees.

Maintenance Considerations:
- Prone to aphids and some fungal infections, but can be mitigated by planting in full sun and adequate pruning to promote good air circulation through plant canopy
- Prune to control size and shape

Additional Comments:
- Over-fertilization and over-watering decrease flowering

Desert Willow

Chilopsis linearis

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
20 to 25 feet high

Water:
Drought tolerant; Low water use

Sun:
Full Sun

Hardiness: Native
Tolerates alkaline clay or sand and seasonal flooding.

Special Features:

- Native to the southwestern US and Mexico
- Fast growing, deciduous small tree
- Medium green leaves with clusters of flowers spring to fall ranging from white and pink to purple
- Flowers attract hummingbirds
- Leafless in winter, but with prominent 4 to 9 inch pods that cling persistently to branches

Suggestions for Use:

- Xeriscape garden
- Specimen tree where space is limited

Maintenance Considerations:

- Seasonal litter; loses leaves in autumn; flowers in spring
- No thorns
- Multi stemmed, but can be trained to a single trunk

Additional Comments:

- Faster growing with supplemental water, but water deeply and infrequently
- Not a true willow
- Not recommended for planting next to water features or pools due to significant seasonal litter

Little Leaf Ash

Fraxinus greggii

Photos courtesy Steve Ayers

Mature Size:
15 feet high and 10 feet wide

Water:
Low water use

Sun:
Full sun

Hardiness: Native
Tolerates confined spaces such as sidewalk plantings and large containers.

Special Features:

- Multi-stemmed evergreen shrub, that can be pruned to a single stem small tree
- Native to Southeastern U.S. and Mexico
- Bright green leaves and smooth gray bark.

Suggestions for Use:

- Very low litter
- Use around patios, pools or sidewalks
- May be used in large containers or planters

Maintenance Considerations:

- Prune and train to desired form
- Susceptible to trunk sunscald
- **Susceptible to Emerald Ash Borer-** maintain good tree diversity throughout the community to reduce landscape devastation if the beetle reaches Arizona.

Additional Comments:

- One of only a few low-litter, small-scale trees that thrive in the Southwest!
- Look for Arizona rosewood *(Vauquelinia californica)* as an alternative

Velvet Mesquite

Prosopis velutina

Hosted by Wikimedia Commons

Mature Size:
25 feet high with 25 feet wide canopy

Water:
Very low water use

Sun:
Full sun

Hardiness: Native
Tolerates poor soils, heat, and drought

Special Features:
- Deciduous, small tree with yellow flowers in spring
- 3 to 9 inch seed pods
- Native to the Sonoran and Chihuahuan deserts
- Excellent bee friendly tree
- Can tolerate extreme heat and cold

Suggestions for Use:
- Good in commercial and residential xeriscape gardens due to compact size

Maintenance Considerations:
- Seasonal litter; deciduous (loses leaves in autumn)
- Thorns
- Prune to shape when young
- Keep away from patios, pools and sidewalks due to litter

Additional Comments:
- Pollen is a moderate allergen
- Beans are edible
- Wood is excellent for aromatic firewood.

Medium Trees

(30' – 50')

- Arizona Ash *(Fraxinus velutina)*
- Arizona Rosewood *(Vauquelinia californica)*
- Chinese Pistache *(Pistacia chinensis)*
- Goodding's Willow *(Salix gooddingii)*
- Thornless Honeylocust *(Gleditsia triacanthos inermis)*

Arizona Ash

Fraxinus velutina

Photo courtesy of Max Licher, hosted by the SEINet Arizona

Mature Size:
35 to 40 feet tall with equal spread

Water:
Regular water is best, heat and drought tolerant

Sun:
Full sun

Hardiness: Native
Heat tolerant

Special Features:
- Dense canopy
- Yellow fall color if temperatures cool down slowly
- Grey trunk
- Fast-growing shade tree

Suggestions for Use:
- Best ash for residential landscapes
- Park areas and gathering spots

Maintenance Considerations:
- Low maintenance
- Seasonal litter; deciduous (loses leaves in autumn)
- Requires good drainage
- Susceptible to trunk sunscald
- **Susceptible to Emerald Ash Borer**- maintain good tree diversity throughout the community to reduce landscape devastation if the beetle reaches Arizona.

Arizona Rosewood

Vauquelinia californica

Photo courtesy of the Master Gardeners of the University of Arizona Pima County Cooperative Extension

Mature Size:
10 to 25 feet tall, 5 to 10 feet wide

Water: Low
Drought tolerant

Sun:
Full sun

Hardiness: Native
Drought tolerant; thrives in well-drained rocky soil; can experience heat stress and is not suitable for areas with high reflected heat.

Special Features:
- Evergreen
- Dense clusters of white flowers at branch tips in spring
- Shiny, dark green leaves with red leaf stems

Photo by Leslie Landrum, courtesy of SEINet Arizona Chapter.

Suggestions for Use:
- Small patio tree
- Privacy hedge
- Pollinator gardens

Maintenance Considerations:
- Slow growing; more expensive than other common shrubs
- Usually begins as busy, vase-shaped shrub; may be trained into a multi-stemmed or single-stemmed tree
- Do not over water, excessively prune, or fertilize native shrubs; prune lightly only to shape
- Susceptible to Texas root rot

Additional Comments:
- Member of the rose family
- Important pollinator plant; host for the Two-Tailed Swallowtail butterfly
- Sometimes mistaken for oleander or photinia when in flower; Arizona Rosewood is more cold hardy and drought tolerant.

Chinese Pistache

Pistacia chinensis

Fall color
Photo courtesy of the Agricultural Research Service of the United States Department of Agriculture

Mature Size:
30 to 35 feet tall, 25 to 35 feet wide, larger growth possible

Water:
Regular deep water one to two times monthly in hottest season

Sun:
Full sun

Hardiness: Introduced
Tolerates heat, drought, variety of soils

Special Features:
- Yellow to red leaf color in late fall
- Fruit on female trees loved by birds; fruit turns from red to blue-purple
- Umbrella canopy
- Lovely trunk bark

Suggestions for Use:
- Specimen tree
- Dense shade tree

Maintenance Considerations:
- Seed litter on female trees
- Deciduous (loses leaves in autumn)

Additional Comments:
- Heat and drought tolerant

Goodding's Willow

Salix gooddingii

Photo courtesy of Stan Shebs, hosted by Wikimedia Commons

Mature Size:
20 to 45 feet tall

Water:
High water use until roots find water table

Sun:
Full to part sun

Hardiness: Native
Tolerates flooding, damp soil

Special Features:
- Tolerates alkaline, desert soils
- Deciduous, with yellow flowers in early spring
- Native to Arizona and southwestern riparian areas

Suggestions for Use:
- Tolerates flooding, good for stream bank or ditch bank stabilization
- Riparian landscapes in association with sycamore, mesquite and desert willow

Maintenance Considerations:
- Avoid planting around septic or underground pipes or lines. Roots depths of up to 7 feet.
- Moderate flower and leaf litter; Deciduous (loses leaves in autumn)

Additional Comments:
- Flowers attract bees
- Small branches used for basket weaving
- **Only appropriate for use in riparian areas**

Thornless Honey Locust

Gleditsia triacanthos

Photo courtesy of Bostonian13, hosted by Wikimedia Commons

Mature Size:
25 to 40 feet high with equal spread; up to 70 feet elsewhere, but does not reach maximum size in Verde Valley.

Water:
Moderate irrigation requirements

Sun:
Full sun to part shade

Hardiness: Introduced
Tolerates dry soil, air pollution

Special Features:
- Showy yellow color in fall
- Yields large brown seed pods resembling twisted leather strap
- Seed pods attractive to animals
- Attractive lime-green foliage in spring

Suggestions for Use:
- Can be used on hillsides to control erosion
- Street tree
- Parks and public areas
- Parking lot periphery

Maintenance Considerations:
- Tolerates wet and dry sites
- Tolerates salty and alkaline soils
- Tolerates pollution and most urban stresses
- Deciduous (loses leaves in autumn)

Additional Comments:
- Most attractive with dark green backdrop

Large Trees

(50' +)

- Afghan Pine *(Pinus elderica)*
- Arizona Cypress *(Cupressus arizonica)*
- Arizona Sycamore *(Platanus wrightii)*
- Canyon Hackberry *(Celtis reticulate)*
- Fruitless White Mulberry *(Morus Alba)*
- Southern Live Oak *(Quercus virginiana)*
- Texas Red Oak *(Quercus buckleyi)*

Afghan Pine

Pinus eldarica

Photos by Max Licher courtesy of SEINet Arizona

Mature Size:
30 to 50 feet tall, spreading with age dependent on watering

Water:
Moderate, best with infrequent, deep watering

Sun:
Full sun

Hardiness: Introduced
Tolerates heat, drought, and wind

Special Features:

- Symmetrical tree, casts light to moderate shade
- Stately form- true central trunk

Suggestions for Use:

- Specimen Tree
- Wind break
- Attractive in groups

Maintenance Considerations:

- Elevating canopy base may result in trunk sun-scald
- Needle litter in fall
- Naturally maintains a 'Christmas tree' shape with little pruning

Additional Comments:

- Although these trees can be very attractive in groups, they will require thinning out to maintain tree health and vigor as they grow. It is recommended that plant spacing be taken into consideration when these trees are used in landscapes and along rights-of-way corridors.

Arizona Cypress

Cupressus arizonica

Photo by Jeff Schalau, hosted by the Yavapai County Arizona Cooperative Extension *Yavapai County Native & Naturalized Plants* Database

Mature Size:
30 to 50 feet tall, possibly taller; 10 to 20 feet wide

Water:
Low; drought tolerant

Sun:
Full sun

Hardiness: Native
High heat tolerance; withstands dry, sterile, rocky soils

Special Features:

- Conical crown
- Smooth. Reddish bark
- Blue-green foliage

Suggestions for Use:

- Privacy Screen
- Windbreak
- Erosion control

Maintenance Considerations:

- Low maintenance

Additional Comments:

- Only cypress native to the Southwest

Arizona Sycamore

Platanus wrightii

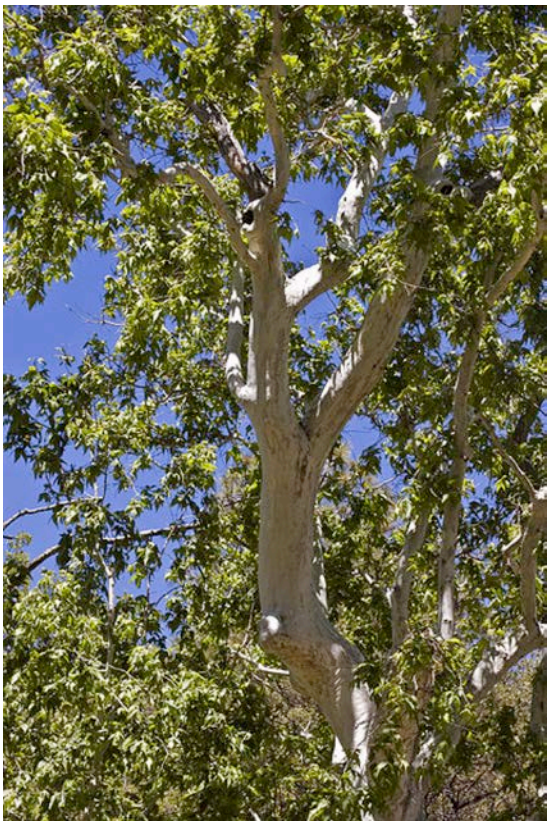


Photo courtesy Kretyen at Flick, hosted by Wikimedia Commons

Mature Size:
50 feet tall, less than 50 feet wide

Water:
Regular, supplemental irrigation

Sun:
Full sun

Hardiness: Native
Tolerates variety of soils, heat, air pollution

Special Features:
- Golden brown foliage in fall
- Exposed grey-white trunk and branches in winter
- Rugged, upright, stiff tree

Suggestions for Use:
- Shade tree
- Stately specimen tree
- Striking in winter
- Not appropriate for dry sites

Maintenance Considerations:
- Do not prune for several years
- Elevate canopy base slowly over time to desired height
- Seasonal litter; Deciduous (loses leaves in autumn)

Additional Comments:
- Consider mature size when planting in residential setting
- Best when planted in riparian areas

Canyon Hackberry

Celtis reticulata

Photo by Sue Smith, hosted by the Yavapai County Arizona Cooperative Extension *Yavapai County Native & Naturalized Plants* Database

Mature Size:
30 to 60 feet tall, near equal spread

Water:
Give infrequent, but deep regular irrigation during summer

Sun:
Full sun

Hardiness: Native
Very heat tolerant, low soil fertility, drought

Special Features:
- Tiny, orange berries attractive to birds
- Distinctive trunk
- Medium green leaves with coarse texture

Suggestions for Use:
- Transitional shade tree
- Use in expansive desert landscape

Maintenance Considerations:
- Seasonal litter; Deciduous (loses leaves in autumn)
- No thorns
- Allergenic

Additional Comments:
- This is a tough tree, tolerant of many soil types including alkaline soils
- Important wildlife food source

Fruitless White Mulberry

Morus alba

Photo by Anne Barber, courtesy of SEINet Arizona Chapter.

Mature Size:
30 to 50 feet high with equal spread

Water:
Apply infrequent to regular water during summer

Sun:
Full Sun

Hardiness: Introduced
Tolerates high temperatures

Special Features:
- Fast growing
- Heat and Drought Tolerant
- Trunk bark smooth when young, turns gray and deeply fissured with age

Suggestions for Use:
- Excellent shade tree
- Picnic areas; community parks

Maintenance Considerations:
- Relatively short-lived
- Spreading roots may damage sidewalks, patios and sewer lines
- Leaf litter in fall, easy to clean up and excellent cattle food

Additional Comments:
- Highly allergenic
- Notable nursery varieties include:
  - "Kingman"- large, dark green leaves are heart-shaped
  - "Stribling"- deeply cut leaves

Southern Live Oak

Quercus virginiana

Photo courtesy of Ayacop, hosted by Wikimedia Commons

Mature Size:
40 to 60 feet high and with equal spread

Water:
Supplemental water: deep watering once a month or every few weeks

Sun:
Full sun

Hardiness: Introduced
Tolerates alkaline and compacted soils, air pollution; wind resistant

Special Features:

- Strong, rugged, stately character
- Irregular trunk, alligator-skin look when mature
- Small acorns

Suggestions for Use:

- Pleasing in desert or oasis landscapes
- Consider large adult size

Maintenance Considerations:

- Evergreen, but may drop leaves in cold years
- May occasionally produce basal suckers

Texas Red Oak

Quercus buckleyi

Mature Size:
20 to 50 feet tall, 20-50 feet wide

Water:
Regular, deep and infrequent watering before monsoon season

Sun:
Full sun

Hardiness: Introduced
Tolerates alkaline, neutral and slightly acidic soil; cold and heat tolerant

Photos courtesy Steve Ayers

Special Features:
- Consistent orange to dark red fall color
- Upright, open and stiff form

Suggestions for Use:
- Attractive in desert and oasis landscapes
- Accent tree

Maintenance Considerations:
- Best left un-pruned
- Produces acorns in the second year
- Deciduous (loses leaves in autumn)

Additional Comments:
- Prefers a somewhat alkaline soil

Invasive Plants

To avoid

- Arundo (*Arundo donax*)
- Pampas Grass (*Cortaderia selloana*)
- Russian Olive (*Elaeagnus angustifolia*)
- Tamarisk (*Tamarix*)
- Tree of Heaven (*Ailanthus altissima*)

Arundo

Arundo donax

Photo courtesy of Shizhao, hosted by Wikimedia Commons

Mature Size:
Can grow over 20 feet in height and can exceed 33 feet in width

Water:
Low to medium

Sun:
Sun to part shade

Environmental Concerns:

- Listed as noxious weed in Texas and exotic plant pest in California
- Crowds out native plants species
- Reduces wildlife habitat
- Contributes to higher fire frequency and intensity
- Modifies river hydrology and overtakes sensitive riparian ecosystems

Removal Techniques:

- Careful use of systemic pesticides and glyphosate by a trained herbicide applicator
- Several biological controls (Arundo wasp, *Tetramesa romana*, and Arundo fly, *Cryptonevra*) may be available

Additional Comments:

- Also known as Giant Reed, Colorado River Reed, and Giant Cane
- Spreads via rhizomes and not readily by seed
- Foliage ignites easily and can create intense fires.
- Root and stem fragments can float downstream and may take root and initiate new infestations

Pampas Grass

Cortaderia selloana

Photo by T.R. Soderstrom, courtesy of Smithsonian Institution, Department of Botany

Mature Size:
8 to 12 foot high with 4 to 6 foot width

Water:
Low to medium

Sun:
Full sun to light shade

Environmental Concerns:

- Invasive in California
- Spreads along ditch banks
- No serious disease or pest problems
- Competes with native plants
- Left un-pruned, excessive build-up of dry leaves and flower stalks create a fire hazard

Removal Techniques:

- No known biological control
- Pulling or hand grabbing small plants
- For larger plants remove top growth with a chainsaw or weed-eater and use a mattock or shovel to remove plant crown
- Fall applications of a glyphosate herbicide by a trained herbicide applicator
- Repeat for 1 to 2 years

Russian Olive

Elaeagnus angustifolia

Photo by W.L. Wagner, courtesy of Smithsonian Institution, Department of Botany

Mature Size:
Up to 35 feet high

Water:
Moderate to high

Sun:
Full; seedlings are tolerant of shade

Environmental Concerns:
- Spreads primarily by seed
- Disrupts riparian habitats
- Forms dense stands that outcompete native species
- Taxes underground and surface water resources

Removal Techniques:
- Mow down saplings and established hedges, then promptly remove cut material
- Herbicide treatment conducted by a trained herbicide applicator

Additional Comments:
- Often found in conjunction with *tamarix ramosissima*
- Thorny shrub or small tree with lance-shaped leaves. Leaves are covered in silvery or rusty scales.
- Begins fruiting at 3 years of age
- Fruits are plentiful and are a food source for native birds

Tamarisk

Tamarix ramosissima

Photo by R.A. Howard, courtesy of Smithsonian Institution, Department of Botany

Mature Size:
12 to 15 feet high, forms dense thickets
15 feet wide

Water:
Medium to high; long tap roots make it drought tolerant

Sun:
Part to full

Environmental Concerns:

- Disrupts structure and stability of native riparian communities
- Outcompetes nutrient-rich native vegetation
- Flowers and foliage provide little food value to wildlife
- Foliage can add salt deposits to the soil, inhibiting growth of other species
- Long tap intercept deep water tables and interfere with natural water systems
- Narrows and channelizes streams and rivers
- Increases fire risk in sensitive riparian areas
- Spreads via roots or submerged stems, and sexually by seed

Removal Techniques:

- Cut trunks two inches above grade; have a trained herbicide applicator treat stumps immediately
- Use of saltcedar leaf beetle, *Diorhabda elongate*, as a biological control

Additional Comments:

- Also known as salt cedar
- Sapling bark is purplish or reddish-brown
- Leaves are scale-like, alternate, with salt-secreting glands.
- Seeds are dispersed by wind, water, and animals.

Tree of Heaven

Ailanthus altissima

Photo courtesy of Kardelis, hosted by Wikimedia Commons

Mature Size:
80 feet high with 60 foot crown width

Water:
Drought tolerant, but prefers shady, riparian areas

Sun:
Can tolerate full sun and almost total shade

Environmental Concerns:

- Spreads invasively by aggressive root suckering and self-seeding
- Can damage sidewalks and parking lots
- Forms dense thickets that choke out native plants
- Branches are very brittle, especially in high winds

Removal Techniques:

- Cutting and girdling of large trees during the growing season, followed by a systemic herbicide (Glyphosate or Trilopyr) treatment of stump by a trained herbicide applicator
- Early detection and hand-pulling of small seedlings, removing as much root as possible
- Repeat as needed for 3 to 5 years

Additional Comments:

- Don't plant on your property! Especially if you live along the river or an irrigation ditch.
- Leaves and flowers "stink to high heaven"
- Similar leaf structure to walnut or pecan trees, but the leaves of *Ailanthus* are much larger (typically 1 to 3 feet in length)

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