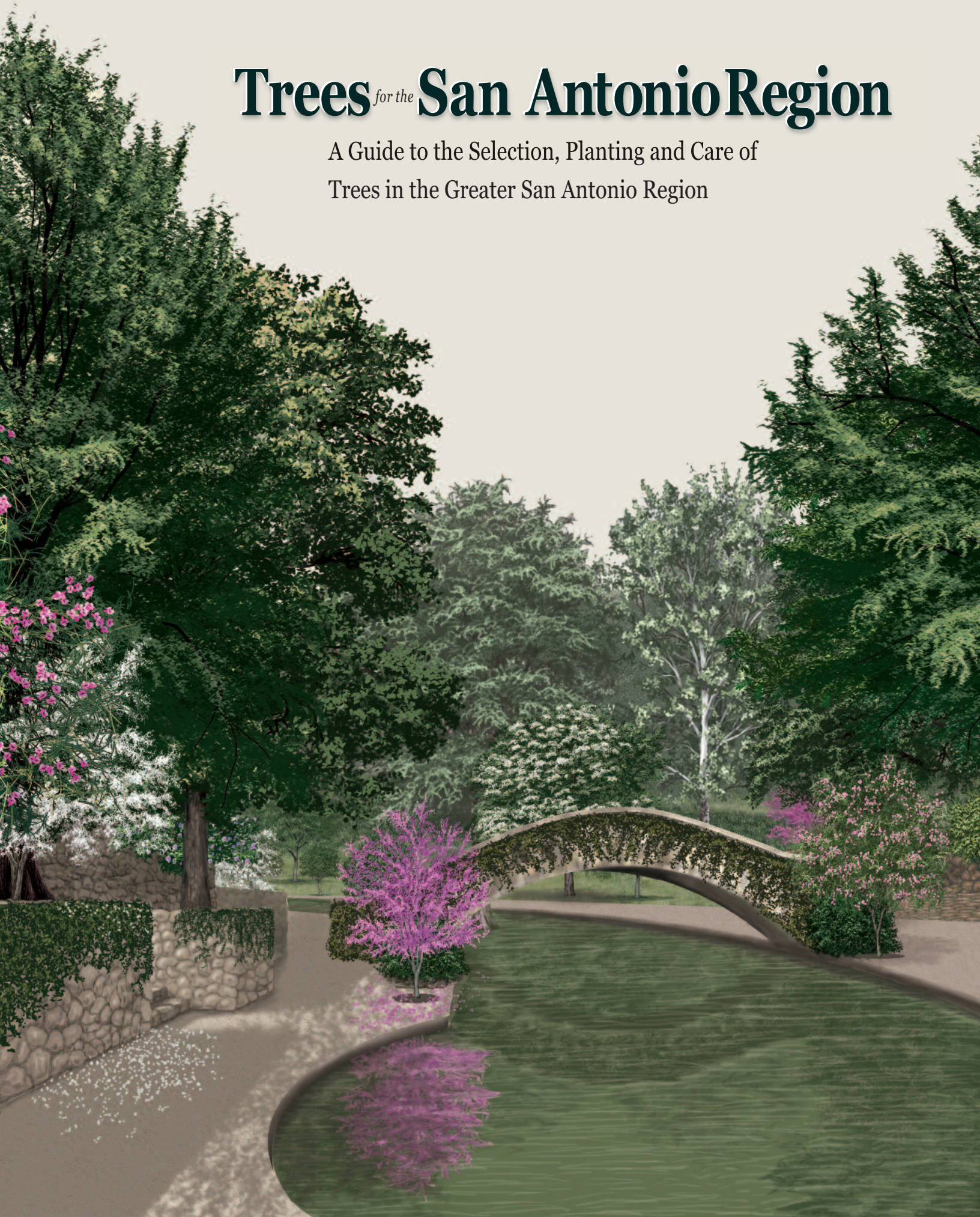
Trees *for the* San Antonio Region

A Guide to the Selection, Planting and Care of Trees in the Greater San Antonio Region



Trees provide our community with cleaner air, cooler temperatures, shadier summers, beautiful landscapes, healthier children, and bountiful wildlife. City Public Service encourages every citizen to increase our tree canopy and maximize its benefits by selecting recommended trees for the San Antonio region and planting them in the appropriate location. Use this guide to assist you in planning your landscape, planting your tree, and providing maintenance.

PLANNING YOUR LANDSCAPE

Specific

Why are you planting a tree? Do you want to beautify your landscape, shade your home for energy conservation, or honor an event? Knowing your specific goal will help you select where to plant and what species of tree to select. For example, if you want to conserve energy in the summer months, this requires a tree that will shade your roof and sides of your house from the summer sun.

Season

When can you plant a tree? For best results, plant your tree from November 1st through March 31st. This allows the tree's root system to get established before the extreme summer temperatures create considerable stress. Since we live in a semi-arid region, trees planted in the summer months require more attention and undergo more stress.

Site

Where can you plant the tree? Soil conditions will dictate how well or poorly your tree will grow. Shallow soil or rock (Edwards limestone soils) may limit the depth of the planting area you can dig. Compacted soils (Blackland clays) can limit proper drainage. Soils on a slope or sandy soils may drain more quickly and therefore may require a more drought-tolerant tree. In addition, the amount of sunlight needed, or tolerance to winter temperatures are other special requirements to consider.

Space

How much space does your tree need? How much space will your tree have to grow, both above the ground for canopy, as well as below the ground for root growth. Consider proximity to pools, patio areas, sidewalks, utility lines, transformers, and other special requirements, for example, leaves, flowers or fruit. Refer to the tree selection chart for information on mature height, spread, and setback from powerlines.

Selecting

What kind of tree should you select? Once you have determined your purpose, planting site and space requirements, use the tree selection chart to select a tree that meets your criteria. These canopy and utility-friendly trees have been selected by the local regional experts as appropriate for planting in the San Antonio region. It also contains information about foliage, flower, fruit, fall color and attracting wildlife.

If you are still having trouble choosing the appropriate tree to plant, consult with the local experts, such as the Texas Cooperative Extension, the Texas Forest Service, or a local arborist, landscape architect, nurseryman, or other qualified professional.

Structure & Standards

How do you know it's the best quality tree? A good quality tree has a straight and well tapered trunk, and should stand upright without stakes. Look for good branch structure where the branches are evenly distributed along the upper two thirds of the trunk. The most important standard is a rootball size relative to tree canopy. The American Standards for Nursery Stock manual suggests the minimum root ball diameter should equal or exceed a ratio of 12" for each inch of trunk caliper.

Things to avoid are trees with circling roots, significant wounds on the branches or trunk, signs of stress and insect damage.

When choosing a tree, consider that small young trees can tolerate a smaller planting area, normally suffer less planting/transplant stress and may begin vigorous growth quicker than larger trees.

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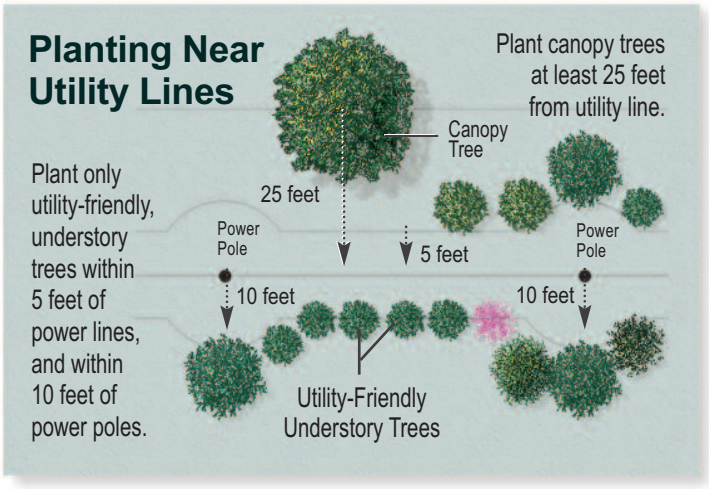
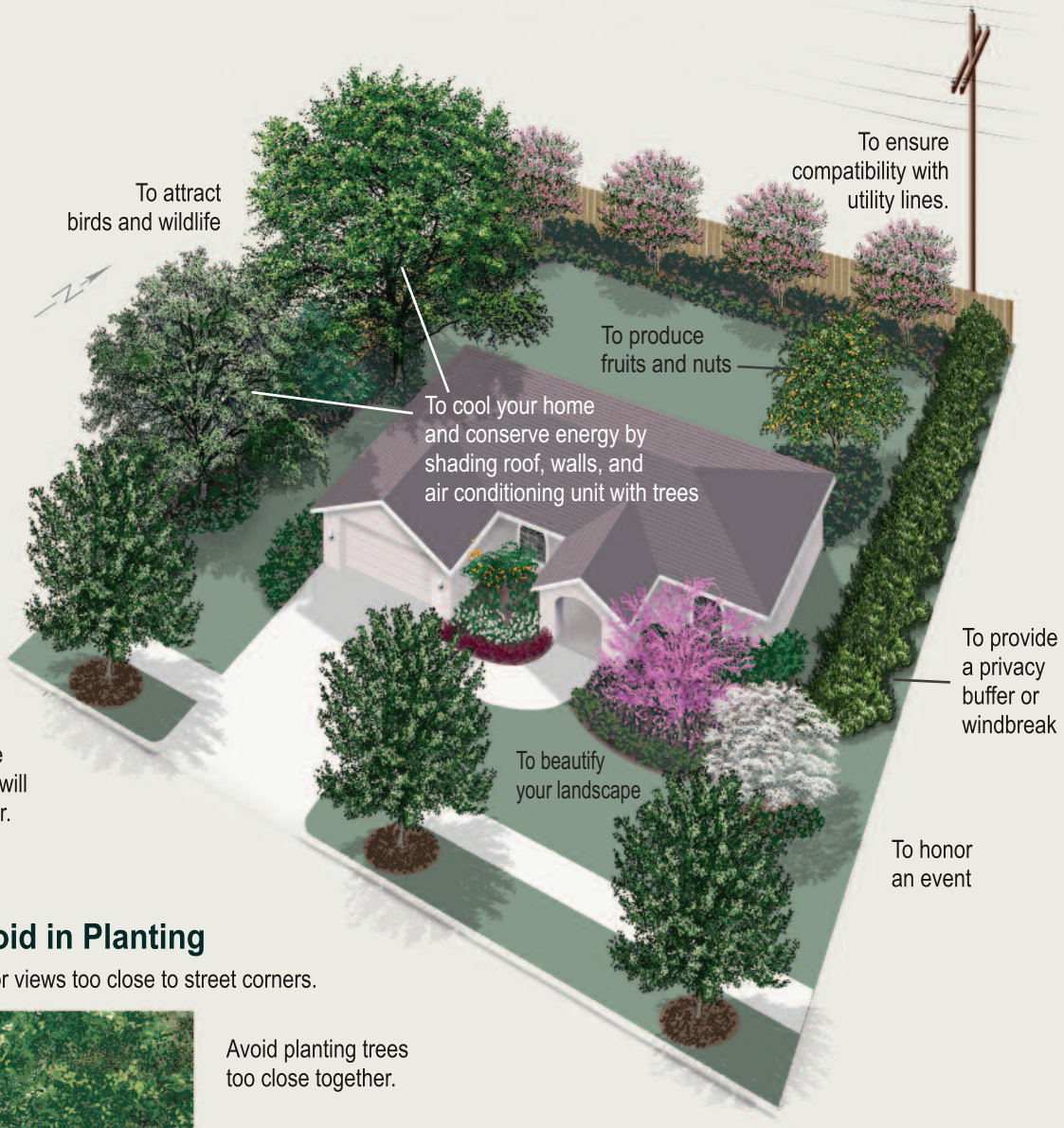


Know Your Purpose For Planting



Water Conservation

- Trees in the landscape can help conserve water.
- Large landscape beds around trees can reduce the amount of irrigated lawn area.
- Drought-tolerant plants or native plants that do not require irrigation after the root system is established will also help to conserve water.

Know What to Avoid in Planting

Avoid blocking traffic signs or views too close to street corners.

Avoid planting trees too close together.

Avoid planting trees or shrubs in front of transformer door. Allow 3 feet of clearance around the sides and back.

Avoid planting too close to sidewalks or pavement.

Proper Tree Spacing

Tree Size	Distance from Building
Small	10 feet
Medium	15 feet
Large	20 feet

Know What to Plant Where

Use canopy or understory trees that are appropriate for your planting site.

PROVIDING YEAR-ROUND CARE

FALL

Recommended planting season begins in November. Select a tree from the chart and follow the planting steps. For established trees, add additional organic mulch as required to ensure 2 inches of cover during September. Fertilize trees during October with a 3-1-1 ratio slow release or organic fertilizer at a rate of three pounds of nitrogen per 1000 sq. ft. of root zone.

WINTER

Recommended planting season continues. Prune all trees, except spring blooming species, December through January. If the fall fertilization period was missed, then fertilize during the second week of February. Water once a month if the season has been abnormally dry.

SPRING

Recommended planting season continues until March 31st. Horticultural oils or fungicides that are used to control pests or diseases must be applied just prior to bud break. Add additional organic mulch as required to ensure 2 inches of cover prior to summer.

Trees planted after March 31st will require more attention and undergo more stress. Use hand watering and drip irrigation to establish newly planted trees and don't forget to apply and maintain 3 to 4 inches of mulch on the surface over the root system.

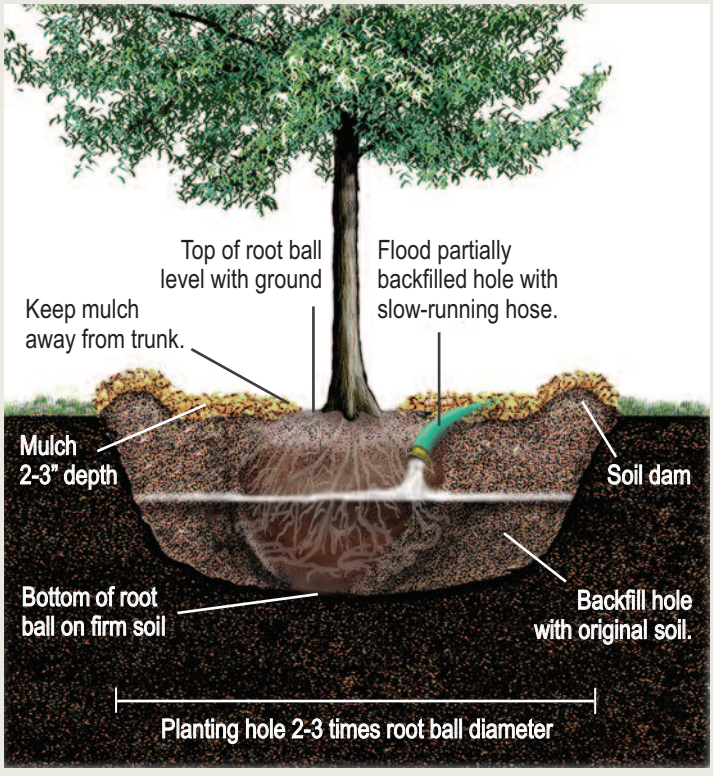
NOTE: DO NOT WOUND OAKS AT THIS TIME! In order to prevent oak wilt, a serious fungal disease; avoid pruning or wounding of any kind. If wounding occurs paint the wound dressing within 30 minutes.

Plant Your Tree Properly

1. Call before you dig!!! Call 811. Texas law requires calling for underground utility locations at least two working days before digging. This is a free service.

2. Loosen soil in your planting site 2-3 times wider than the root ball. In the center of the planting site, dig a hole to the depth of the root ball so that the root collar is at ground level. Do not dig center hole too deep! It is OK for the root ball to be 1 to 3 inches higher than the ground level with root collar visible above grade.

3. Remove the tree from its container or burlap carefully to avoid breaking the rootball. **For containerized trees:** if a tree is planted too deep in the pot, remove soil down to the root collar, where the first large side roots begin. You may lay the tree on its side and press the pot to free it from the container. If encircling roots (roots wrapped around the rootball) are present, gently separate and spread them or cut them if they are too large. **Burlap trees:** Cut all wires and rope securing the burlap around the root ball and remove the burlap or wire completely.



4. Place the tree in the center of the hole carefully to ensure it is positioned and stands straight.

5. Backfill the hole with same soil to the height just below the root collar. Add water to settle air pockets. Do not step or compact the soil around the rootball.

6. To ensure water does not run off the site too quickly, build a 3-4 inch soil dam around the tree, but outside the perimeter of the hole.

7. Apply 2 inches of wood chip mulch over the planting site. Keep mulch 3-4 inches away from the trunk to prevent fungal attack on the tree trunk.

8. **Staking is not recommended** except in situations where the tree will not be able to stand on its own. If staking is used, make sure the ties around the tree trunk are loose to prevent girdling or trunk damage and **remove in one year.**

9. **Watering Schedule:** A slow, root-saturating, one-hour trickle once a week is good rule of thumb for a new tree. Adjust watering schedule for rainy or very dry weather.

SUMMER

Spring flowering trees may be pruned at this time. Water only when needed. Newly planted trees may need watering once a week at a rate of two gallons per caliper inch (use hand watering and bubblers with a drip irrigation system). Established trees may need watering once a month during long drought periods. Use tree bubbler or drip irrigation to prevent over spray on tree foliage. Frequent irrigation of turf or beds beneath tree canopies may exacerbate leaf diseases. Irrigate according to proper times and follow the Seasonal Irrigation Program (SIP) recommendations from the San Antonio Water System (SAWS).

NOTE: Establishment varies by size and species. For example, a one inch live oak will become established faster than a four inch one, and a riparian species like sycamore will become established faster than an upland one like live oak. However, all species planted must be adapted to our region.

PRUNING YOUR TREE

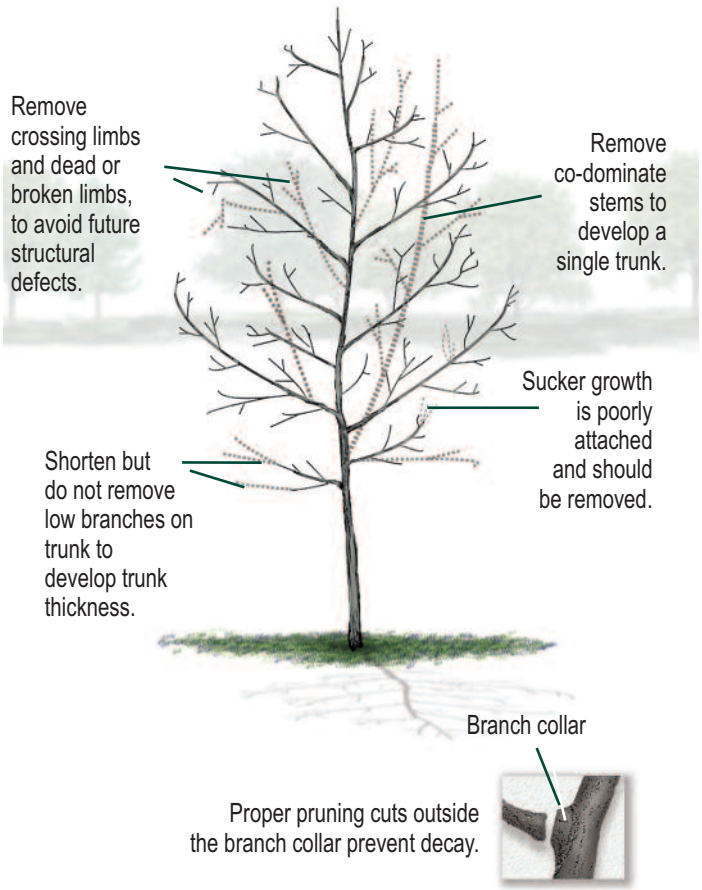
Pruning is not recommended until after your tree has overcome transplant stress and has a self-supporting root system. Before pruning any trees, it is recommended to consult with a certified arborist. For safety reasons, never prune any trees close to high voltage electric lines.

Although pruning removes the energy source for trees (leaves), it is important to do it for three basic reasons: safety, tree health, and appearance. Safety is the most important reason, and we prune to remove existing hazards like dead, diseased, or dying branches and to prevent future ones like narrow branch angles or rubbing branches. The recommended cycle for residential homes and street trees is once every four to six years.

Lower branch death and shedding is a normal and natural process resulting from age, injury, and overhead shading. Some species (pecans) shed at a higher rate than others, and in order to decrease risk and bother, large pecan trees may have to be pruned more frequently.

Young Tree Pruning

Remove branches shown with dotted lines.



The Ten Pruning Commandments

1. Always have a reason to prune — if in doubt, don't take it out.

2. All pruning is done at a bud or branch regardless of whether you are shortening a branch, removing seeds, or reducing tree height.

3. Prune to improve tree strength and safety. Reduce trunk and limb breakage by eliminating multiple trunks of equal size and narrow branch junctures that look like "V"s.

4. Prune to improve tree health by removing the dead, diseased, and dying branches and any branch where light or wind cannot penetrate.

5. Always maintain the upper two thirds of the tree in branches and foliage.

6. Never remove more than 25% of the canopy during one pruning cycle.

7. Never top a tree!

8. Never leave a stub or remove the branch collar by a flush cut.

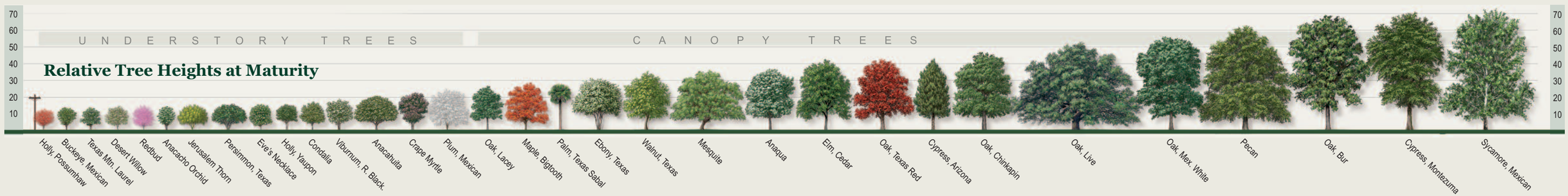
9. Always paint tree wounds on oaks within 30 minutes. This is not necessary for any other tree species.

10. Always disinfect pruning tools between trees to prevent the spread of disease.

Recommended Trees for the San Antonio Region

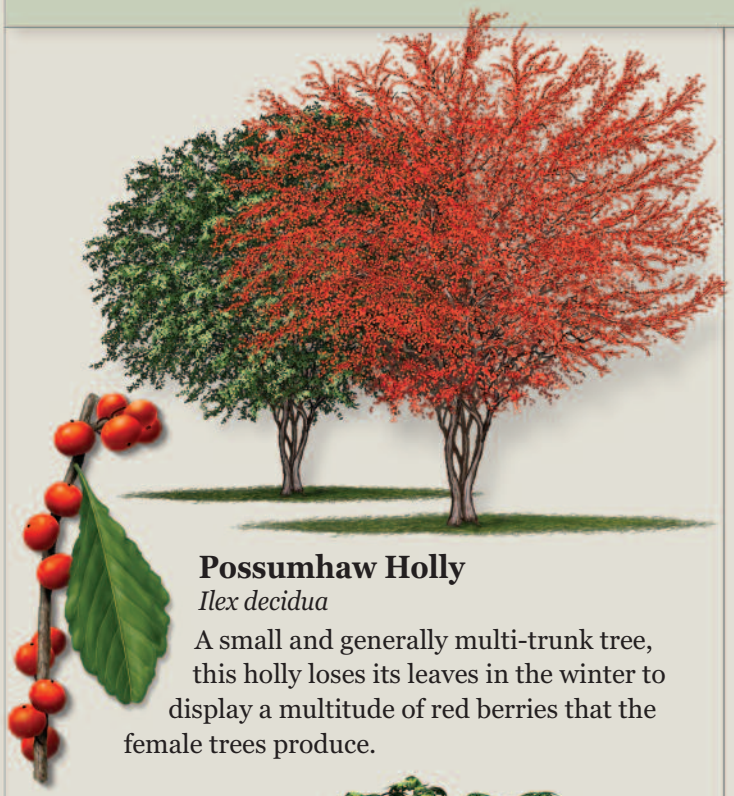
	Common Name	Scientific Name	Foliage	Mature Height*	Mature Spread	Setback from Powerline**	Comments
CANOPY TREES	Anaqua	Ehretia anacua	Semi-evergreen	Medium	35 feet +	20 feet	Prefers shade; moist soils; clusters of white flowers in spring and yellow-orange fruit in summer; attracts birds. Also know as Sandpaper Tree.
	Ebony, Texas	Pithecellobium flexicaule	Evergreen	Medium	35 feet +	20 feet	Moderate growing native; very drought tolerant. Showy, fragrant white flower; attractive seeds of fruit eaten by wildlife.
	Cypress, Arizona	Cupressus arizonica	Evergreen	Medium	15 feet +	15 feet	Fast growing; full sun, well drained soils; conical form; blue-gray foliage color; tolerant of dry conditions.
	Cypress, Montezuma	Taxodium mucronatum	Semi-evergreen	Large	40 feet +	25 feet	Fast growing; conical form as young; feathery foliage.
	Elm, Cedar	Ulmus crassifolia	Deciduous	Large	30 feet +	20 feet	Moderate growing; bright green new foliage in spring, yellow fall color; adaptable to a wide range of sites.
	Maple, Uvalde Bigtooth	Acer grandidentatum	Deciduous	Medium	30 feet +	20 feet	Moderate growing; fall color; requires well drained soils; protect from afternoon sun to reduce leaf scorch.
	Mesquite	Prosopis glandulosa	Deciduous	Medium	30 feet +	20 feet	Very drought resistant; filtered shade allows turf underneath; lacy spreading form; creamy yellow flower matures into a long tan pod in late summer.
	Oak, Bur	Quercus macrocarpa	Deciduous	Large	45 feet +	25 feet	Prefers deep and well-drained soil; golf ball sized acorns may be of concern.
	Oak, Chinkapin	Quercus muehlenbergi	Deciduous	Medium	45 feet +	25 feet	Prefers well drained soils; round-topped, with lance-shape foliage and attractive light-colored bark; wildlife food source; highly palatable acorns.
	Oak, Lacey	Quercus laceyi	Deciduous	Medium	30 feet	10-15 feet	Moderate growing, blue-gray foliage and usually yellow fall color. Rated as a "Texas SuperStar" by the Texas Cooperative Extension Service.
	Oak, Live	Quercus virginiana var. fusiformis	Semi-evergreen	Large	45 feet +	25 feet	Can be moderate growing with appropriate care; spreading canopy. Caution: Must always paint wounds to prevent Oak Wilt disease.
	Oak, Mexican White Live	Quercus polymorpha	Semi-evergreen	Large	35 feet +	25 feet	Fast growing with appropriate care, moderate acorn producer. Few, if any, pest problems.
	Oak, Texas Red	Quercus buckleyi	Deciduous	Large	35 feet +	25 feet	Fast growing; "oak leaf" characteristic; fall color; good shade tree; requires minimal pruning.
	Palm, Texas Sabal	Sabal texana	Evergreen	Medium	15 feet	15 feet	Only palm tree native to Texas; cold-tolerant; large blue-green, fan-shaped leaves.
	Pecan	Carya illinoensis	Deciduous	Large	45 feet +	25 feet	State Tree; requires plenty of room and deep soil; prone to limb breakage and pest infestations.
	Sycamore, Mexican	Platanus mexicana	Deciduous	Large	45 feet +	25 feet	Fast growing; resistant to insects; attractive foliage and minimal pruning.
	Walnut, Texas	Juglans microcarpa	Deciduous	Medium	30 feet	15 feet	Moderate growing, small version of Black Walnut.
UNDERSTORY TREES	Anacacho Orchid Tree	Bauhinia congesta	Deciduous	Small	10 feet	5 feet	Does best in full sun; fragrant white flower clusters in spring.
	Anacahuita/Wild Olive	Cordia boissieri	Evergreen	Small	10 feet	5 feet	Large white flowers most of summer; pale yellow fruit; cold sensitive but will re-sprout quickly. Also known as Mexican Olive
	Buckeye, Mexican	Ungnadia speciosa	Deciduous	Small	10 feet	5 feet	Understory or full sun; pink spring flowers; yellow fall foliage.
	Condalia, Bluewood	Condalia hookeri	Evergreen	Small	10 feet	5 feet	Very drought tolerant; sun-shade; fruit well-liked by wildlife.
	Crape/Crepe Myrtle	Lagerstroemia indica	Deciduous	Small	5-20 feet	5 feet	Non-native well adapted to our region; choice of flower colors from white to purple; some varieties can grow to medium height range.
	Desert Willow	Chilopsis linearis	Deciduous	Small	15 feet	5 feet	Fast growing; very drought tolerant; large white, pink or purple trumpet-shaped flowers; attract hummingbirds, butterflies and bumblebees.
	Eve's Necklace	Sophora affinis	Deciduous	Small	18 feet	5 feet	Deciduous cousin to Texas mountain-laurel; pink flower clusters (late spring) form chains of black beans (necklace appearance) in late summer and fall.
	Holly, Possumhaw	Ilex decidua	Deciduous	Small	10 feet	5 feet	Sun or shade; looses foliage in winter to expose red berries (females only).
	Holly, Yaupon	Ilex vomitoria	Evergreen	Small	10 feet	5 feet	Sun or shade; red berries (females only); evergreen foliage; provides food & shelter for birds.
	Jerusalem Thorn/Retama	Parkinsonia aculeata	Deciduous	Small	15 feet	10 feet	Fast growing; drought tolerant; drooping panicles of yellow flowers through summer; green twigs and branches.
	Persimmon, Texas	Diospyrus mexicana	Deciduous	Small	12 feet	5 feet	Slow growing; edible fruit matures to a dark black in late summer and fall; great wildlife food source but can be a problem.
	Plum, Mexican	Prunus mexicana	Deciduous	Small	25 feet	5 feet	Prefers well-drained soils; dappled sunlight; showy white flowers in early spring; tart and edible fruit; good for wildlife.
	Redbud, Mexican or Texas	Cercis canadensis var. mexicana or texensis	Deciduous	Small	12 feet	5 feet	Pink-red blossoms in early spring; yellow fall foliage; glossy and wavy leaves; more drought tolerant than Eastern species. Note: Do not select Eastern species.
	Texas Mountain Laurel	Sophora secundiflora	Evergreen	Small	18 feet	5 feet	Fragrant, purple clusters in early spring. Very drought tolerant. Caution: Fruit is poisonous when chewed.
	Viburnum, Rusty Blackhaw	Viburnum rufidulum	Deciduous	Small	18 feet	5 feet	Partial sun or shade; early spring bloomer with white flowers; red berries turn black in fall; good fall leaf color.

*Trees listed are native or well-adapted to the region. *Tree Sizes at Maturity: Small — 12 to 25 feet; Medium — 25 to 40 feet; Large — 40 feet and taller **In some cases, trees may be cut to allow for utility access (maintenance and emergencies).*



RECOMMENDED

Trees *for the* San Antonio Region



Possumhaw Holly

Ilex decidua

A small and generally multi-trunk tree, this holly loses its leaves in the winter to display a multitude of red berries that the female trees produce.

Texas Mountain Laurel

Sophora secundiflora

In the early spring, the showy purple flowers with their grape bubble-gum fragrance give this small, multi-trunk, evergreen native its distinctive character.

Mexican Buckeye

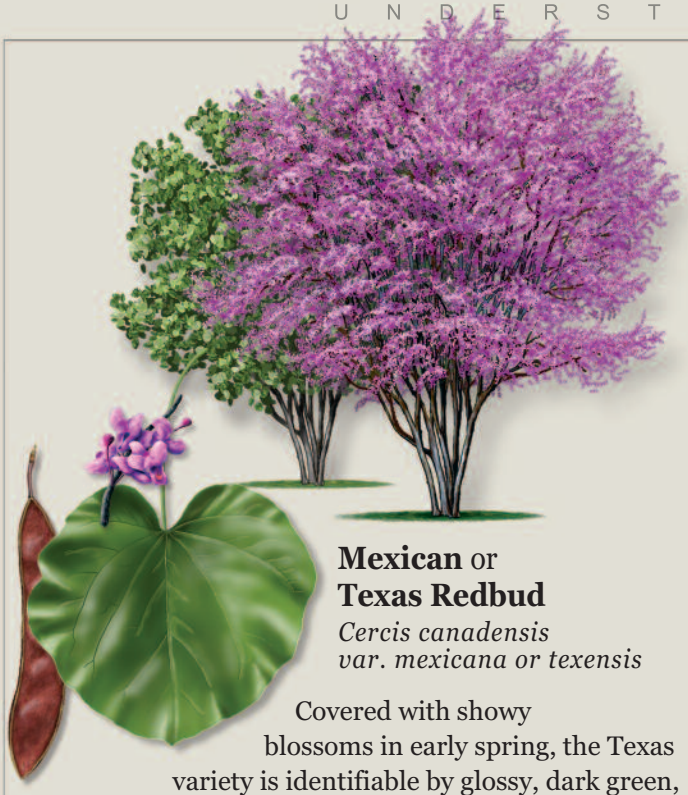
Ungnadia speciosa

This multi-trunk tree is noted for its clusters of pinkish, orchidlike flowers in the spring and yellow foliage in the fall.

Desert Willow

Chilopsis linearis

Adaptable to a variety of soils, this multi-trunk tree has showy, light pink or purple trumpet-shaped flowers that attract many hummingbirds and butterflies.



Mexican or
Texas Redbud
Cercis canadensis
var. mexicana or texensis

Covered with showy blossoms in early spring, the Texas variety is identifiable by glossy, dark green, smooth-edged leaves. The Mexican variety has a wavy-edged leaf.

Retama
Parkinsonia aculeata

Yellow flowers and green twigs and branches highlight this fast growing, drought tolerant Texas native. The unique leaves of this tree create a wonderful dappled shade that works well in our landscapes.

Anacacho Orchid Tree
Bauhinia congesta

Fragrant and showy white blooms appearing in the spring and occassionally blooms intermittanly in the fall.

Texas Persimmon
Diospyros texana

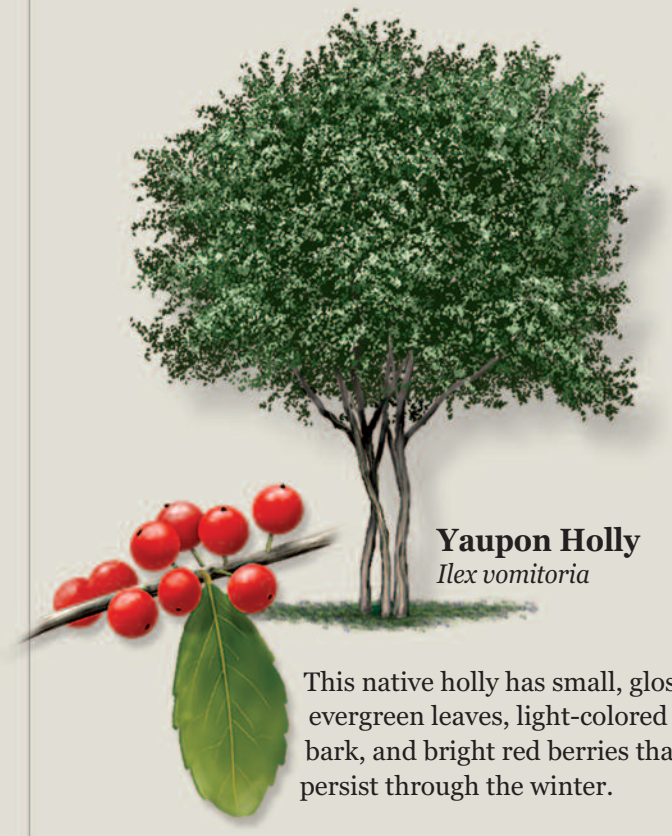
Easily identified by its smooth gray trunk, peeling bark, and its dark green deciduous leaves. Edible fruit matures to a dark black and is great wildlife food source.

Eve's Necklace
Sophora affinis

Drooping clusters of pinkish blossoms in the late spring form necklace-like chains of black beans in the late summer through fall.

Bluewood (Condalia)
Condalia hookeri

This spiny tree with lime green foliage can form a dense thicket. The dark black/blue fruit is sweet and edible, and is a great food source for wildlife.



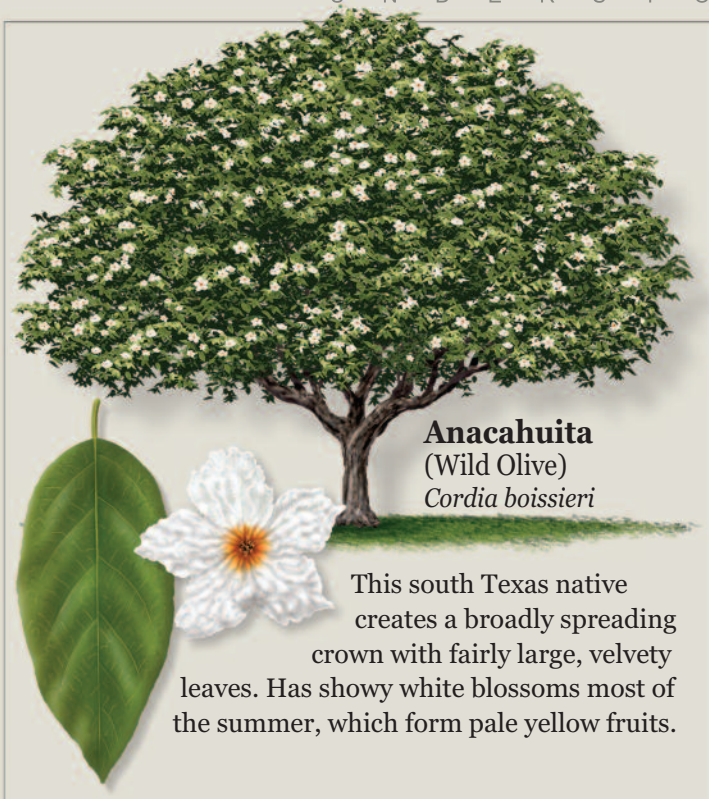
Yaupon Holly
Ilex vomitoria

This native holly has small, glossy evergreen leaves, light-colored bark, and bright red berries that persist through the winter.

Rusty Blackhaw Viburnum
Viburnum rufidulum

Great ornamental tree due to its lustrous green foliage, showy white flowers, and red berries.

UNDERSTORY TREES



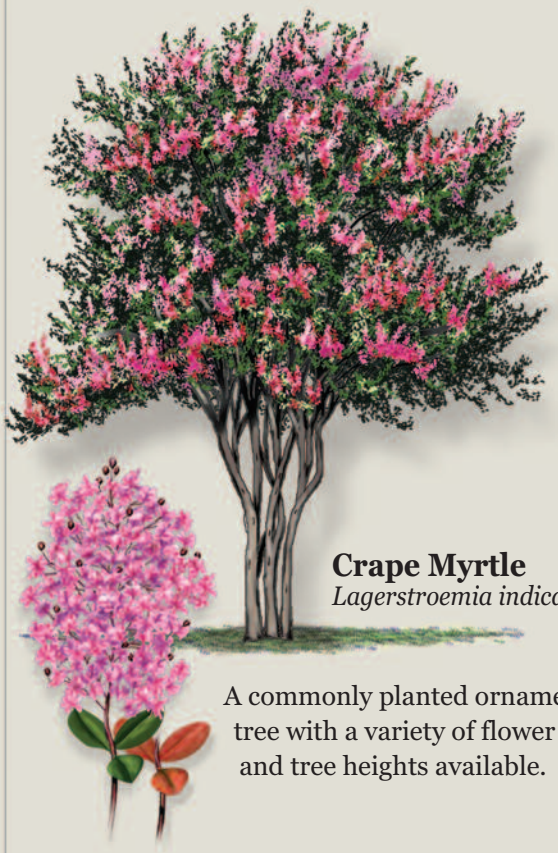
Anacahuita
(Wild Olive)
Cordia boissieri

This south Texas native creates a broadly spreading crown with fairly large, velvety leaves. Has showy white blossoms most of the summer, which form pale yellow fruits.

Mexican Plum
Prunus mexicana

Very showy white flowers in early spring and tart cherry-to-small-plum-sized fruit.

CANOPY TREES

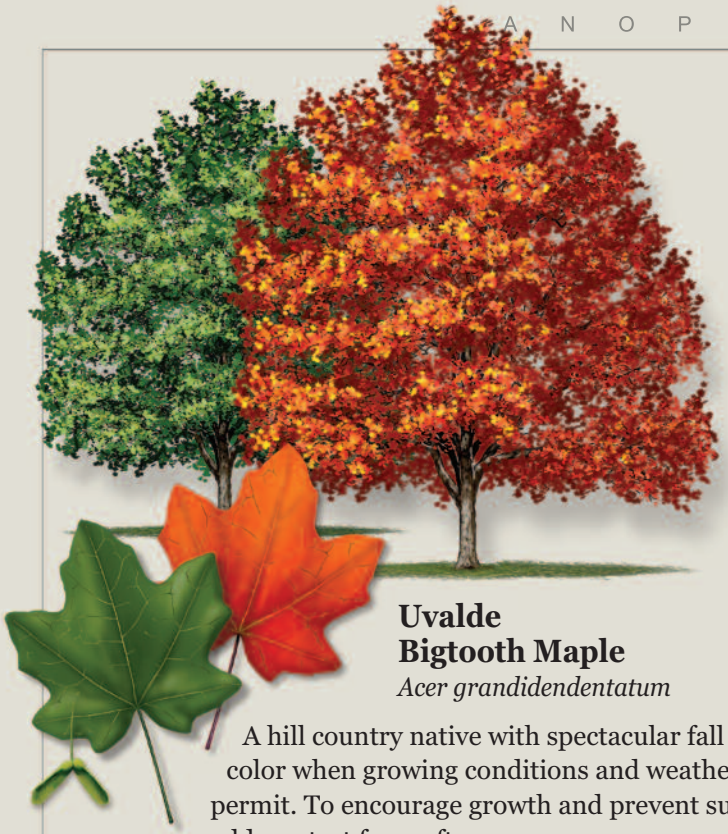


Crape Myrtle
Lagerstroemia indica

A commonly planted ornamental tree with a variety of flower colors and tree heights available.

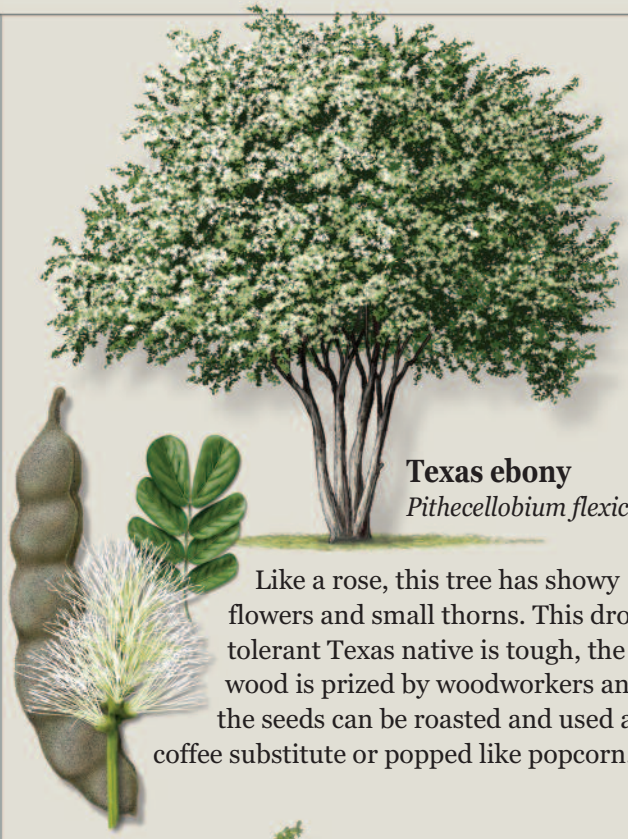
Lacey Oak
Quercus laceyi

An ideal tree for modern landscapes with its blue-gray foliage and compact, round canopy.



Uvalde Bigtooth Maple
Acer grandidendentatum

A hill country native with spectacular fall color when growing conditions and weather permit. To encourage growth and prevent sun scald, protect from afternoon sun.



Texas ebony
Pithecellobium flexicaule

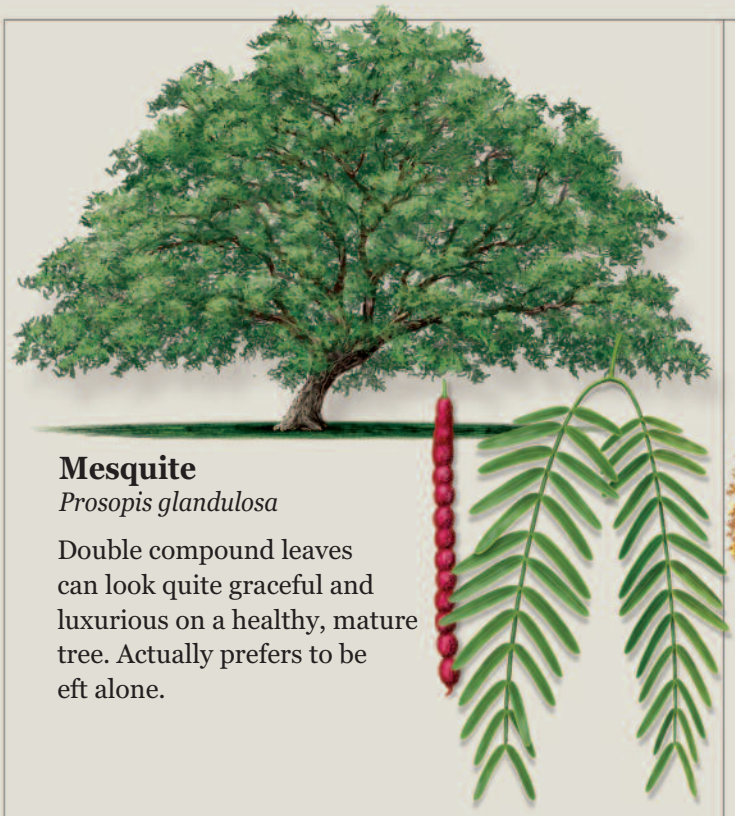
Like a rose, this tree has showy flowers and small thorns. This drought tolerant Texas native is tough, the wood is prized by woodworkers and the seeds can be roasted and used as a coffee substitute or popped like popcorn.

Texas sabal
Sabal texana

Lend a tropical feel to your landscape with the large blue-green, fan-shaped leaves that grace Texas' only native tree-form palm. This palm is very cold tolerant and quite at home in San Antonio.

Texas "little leaf" walnut
(Nogalito)
Juglans microcarpa

A medium size San Antonio native that has a wonderful fragrance to it's miniature fruit and sumac like leaves. The smaller stature, peppery aroma, and reliable fall color afford an opportunity for those with limited space to spice up their landscape.

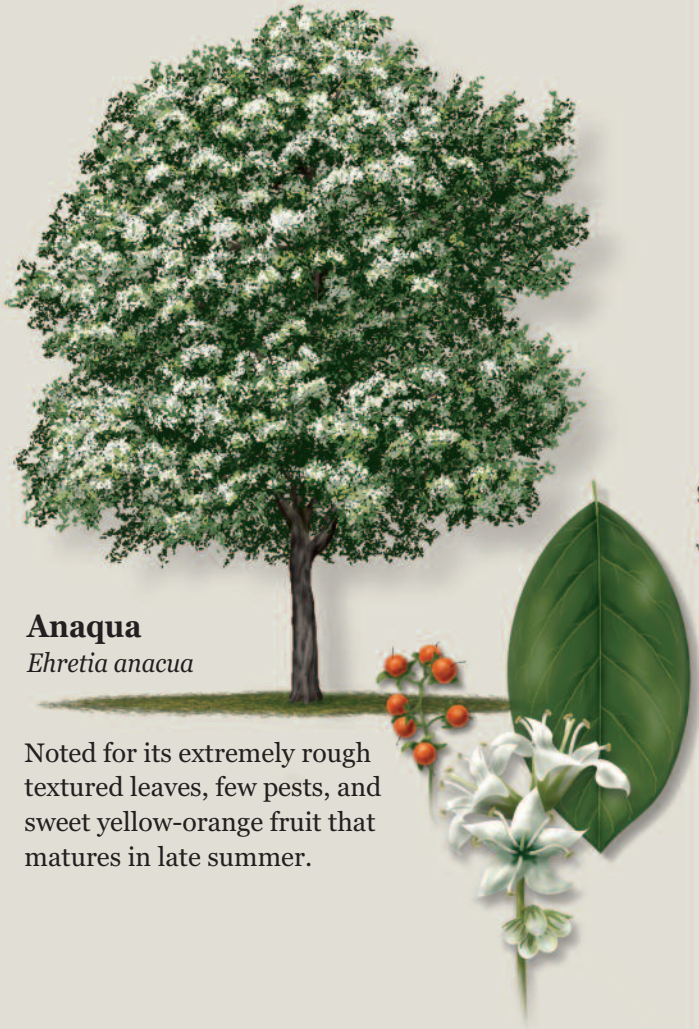


Mesquite
Prosopis glandulosa

Double compound leaves can look quite graceful and luxurious on a healthy, mature tree. Actually prefers to be eft alone.

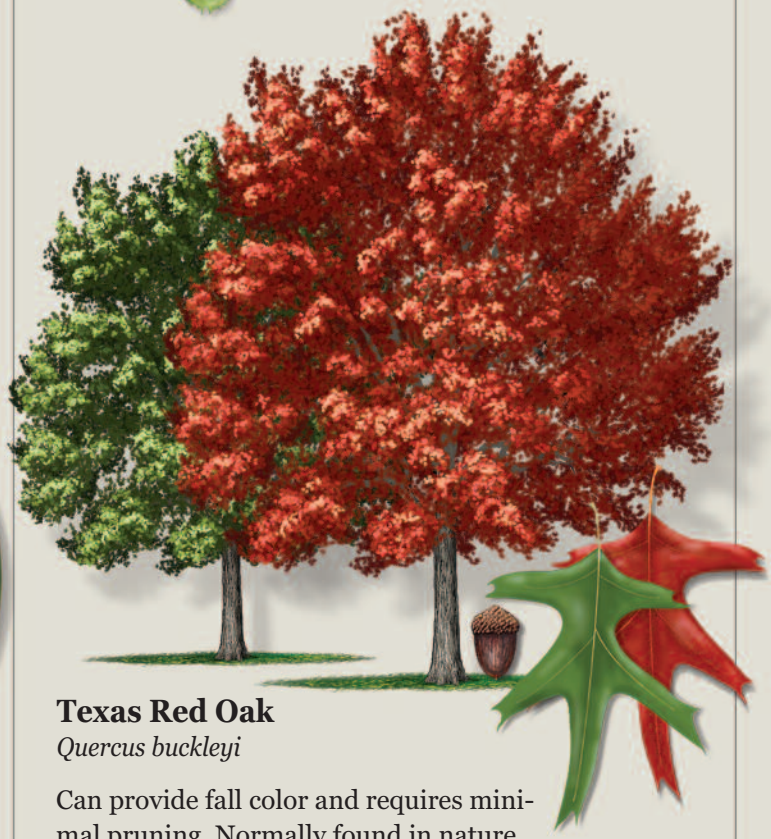
Cedar Elm
Ulmus crassifolia

A native shade tree with an oval shaped canopy and rough small oval shaped leaves. Very tolerant of urban conditions.



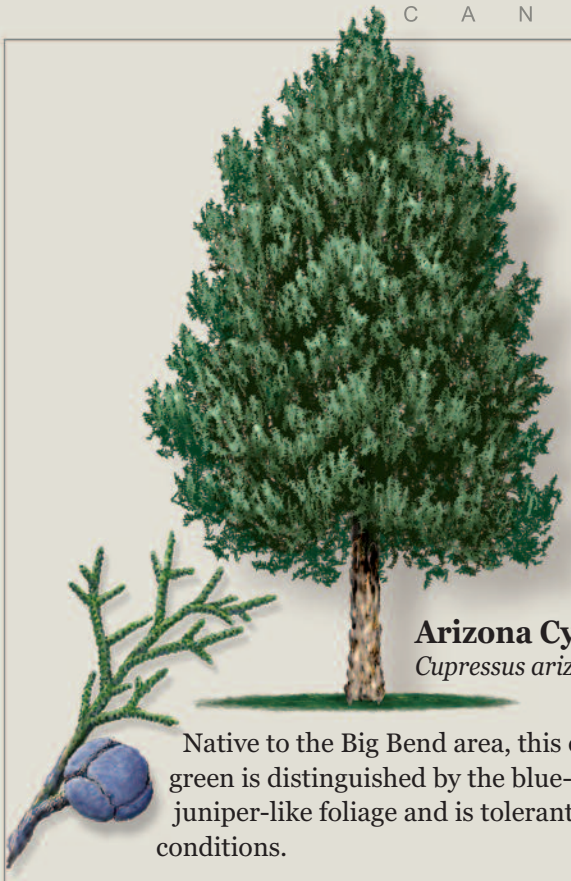
Anaqua
Ehretia anacua

Noted for its extremely rough textured leaves, few pests, and sweet yellow-orange fruit that matures in late summer.



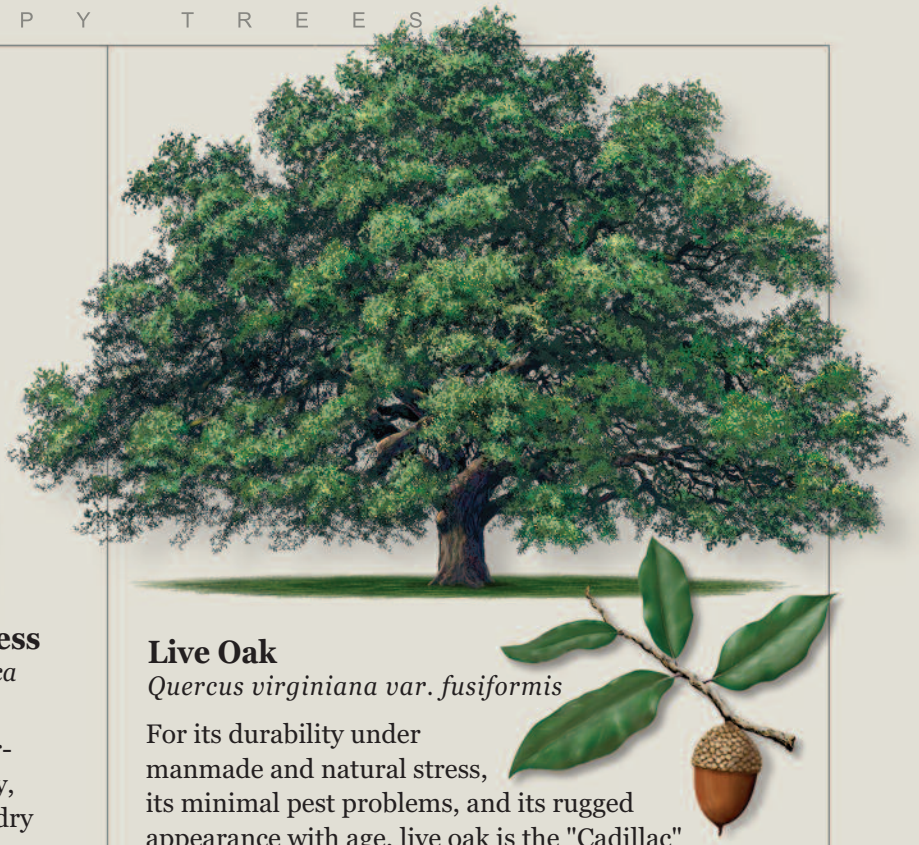
Texas Red Oak
Quercus buckleyi

Can provide fall color and requires minimal pruning. Normally found in nature as a medium height, multi-trunk tree, but can be grown commercially as a single trunk specimen.



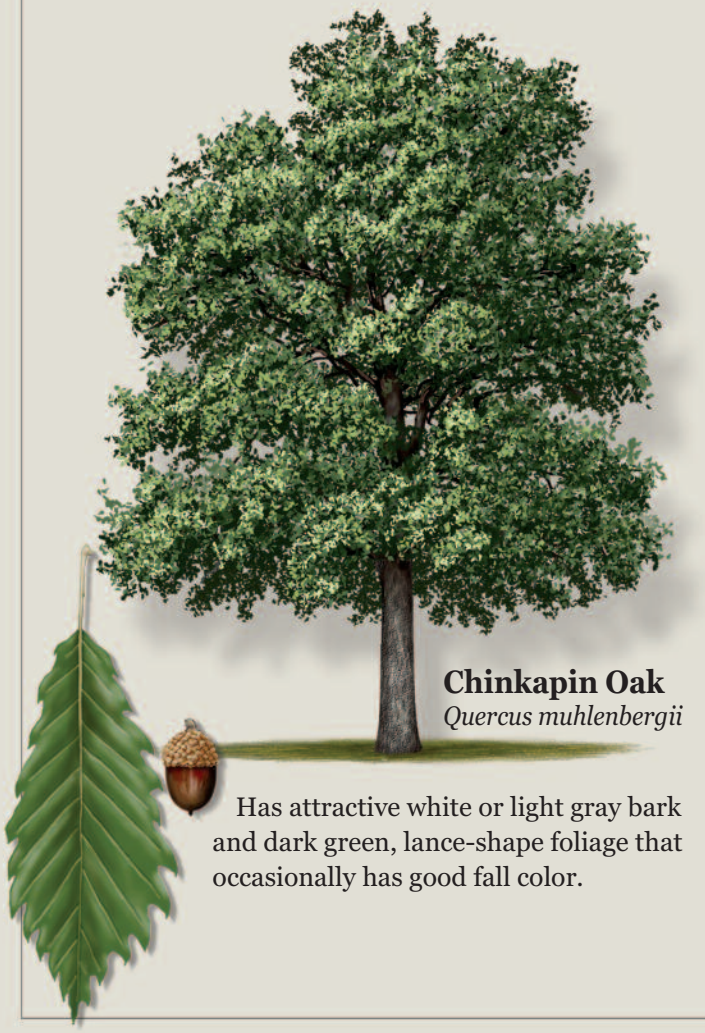
Arizona Cypress
Cupressus arizonica

Native to the Big Bend area, this evergreen is distinguished by the blue-gray, juniper-like foliage and is tolerant of dry conditions.



Live Oak
Quercus virginiana var. fusiformis

For its durability under manmade and natural stress, its minimal pest problems, and its rugged appearance with age, live oak is the "Cadillac" of trees for South Central Texas.



Chinkapin Oak
Quercus muhlenbergii

Has attractive white or light gray bark and dark green, lance-shape foliage that occasionally has good fall color.

Mexican White Live Oak
Quercus polymorpha

Native to Northern Mexico and Val Verde County, this fast growing oak has large dark green to blue-green foliage.

Pecan
Carya illinoensis

This State Tree of Texas is a superb shade and nut tree, but is an abysmally slow grower when located in dry or shallow soils. But when properly placed, this large tree can reach 65 feet or more at maturity.

Montezuma Cypress
Taxodium mucronatum

A relative of the Bald Cypress, with nearly evergreen foliage, spreading habit, and somewhat exfoliating bark.

Bur Oak
Quercus macrocarpa

This is one of the few large tree species that does well in the blackland prairies. Its large leaves, acorns, and rough bark add texture to the landscape.

Mexican Sycamore
Platanus mexicana

A fast-growing shade tree with a white pubescence covering the leaf underside. A "brown thumb" gardener's delight.

Safeguarding the air we breathe,
the water we drink, the land we share,
and the community we serve.

Why does your energy company care about trees?

Increasing urban tree canopy through the planting and preservation of appropriate tree species will provide benefits that can be measured in ecological, social, and economic terms.

- **For Energy Conservation:** Proper placement of trees can reduce home heating and cooling costs for the consumer and reduce the need to build new generation plants.
- **For Air Quality:** Trees release oxygen into the air while absorbing carbon dioxide.
- **Water Quality & Conservation:** Through their leaves and root systems, trees can filter water and reduce stormwater runoff.
- **For Native Birds & Wildlife:** Trees provide habitat, food, and shelter.
- **Heat Island Effect:** Trees reduce the surface and ambient temperatures in our community, especially in parking lots. This reduces the formation of ground level ozone.
- **For Our Community:** Attractive landscaping can add as much as 15% to the value of your property.
- **For Safety:** Appropriate selection and placement (Right Tree-Right Place) will help ensure you and your neighbors will have safe and reliable electric service.

GUIDE DEVELOPED WITH COOPERATION FROM:
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Regional Forester, Texas Forest Service
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Conservation Department, San Antonio Water System
Environmental Planning & Compliance, CPS Energy
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ADDITIONAL RESOURCES:
The Texas Cooperative Extension Service
The International Society of Arboriculture
Your Local Garden or Nursery Center

For more information contact:
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