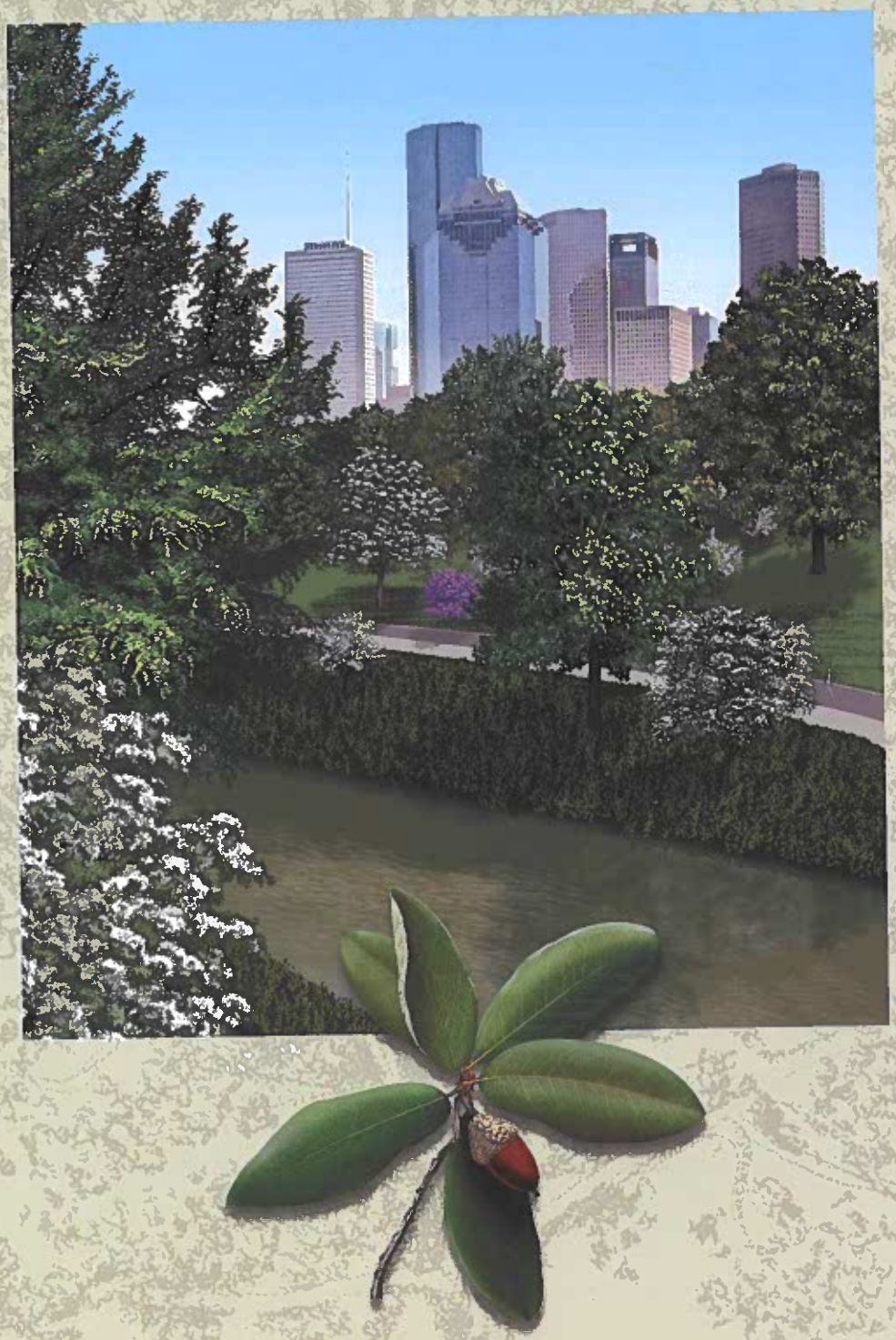
Tree Planting Guide *for* Houston



HOUSTON AREA URBAN FORESTRY COUNCIL

THIS TREE PLANTING GUIDE was created to answer some of the most commonly asked questions about tree planting and care in the Houston area. It suggests native trees for our region and describes how to grow them successfully. If it helps convince you of the need to plant and/or helps you with actual tree planting, it will have served its purpose. Please pass along or recycle the guide when you have finished with it.

Why Plant Trees?

Energy Conservation

Trees planted strategically on the west, south and east sides of your home can reduce cooling costs. Deciduous trees shade your home during the hot summer months, while allowing sunlight to warm your home during the winter. Planting evergreen trees and shrubs on the north side of your home will slow winter winds, which can reduce heating costs.

Increased Property Value

Trees enhance the economic vitality of a community and can increase property values by as much as 20 percent.

Wildlife Habitat

Trees provide food and shelter for birds and other wildlife in our urban environment.

Health Benefits

Trees beautify our urban environment by making our communities more livable, and helping to restore our mental health and well being. Studies have shown that views of trees and green space improve work productivity, decrease length of hospital stays and reduce stress.

Improved Air Quality

Trees act as filters by trapping dust and absorbing air pollutants while releasing vital oxygen and helping to reduce the "heat island effect."

Storm Water Reduction

Trees help reduce storm water runoff and soil erosion while improving water quality.

Plan before you Plant

To create a planting scheme, you must first determine the desired benefits and match the appropriate tree to the site conditions.

Each tree has specific needs that must be met in order for it to develop in a healthy and vigorous manner. Is the soil well drained (sandy) or does it retain water (clay)? Is the soil acidic or alkaline? Is direct sunlight of six or more hours each day available or is the location mostly shade? Are there any overhead utilities or nearby structures to consider? These and other site factors must be considered when selecting a tree.

An ideal way to determine the site conditions is to have a soil analysis performed. This can be done at any *Texas AgriLife* location for a small fee. Instructions for collecting a soil sample and the location of the nearest extension office can be found on the website: **http://soiltesting.tamu.edu/**. The test results will reveal the available nutrients within the soil and its pH level, all very important factors in selecting and maintaining your tree.

Once you have determined what species are appropriate, you must decide which of those you prefer. Do you want a shade tree or do you prefer fruit as well? Would you favor a flowering tree or one with attractive fall color? If you are planting near your home for energy savings, consider a deciduous tree. These trees provide shade in the summer while allowing the sun's warming rays to penetrate through bare branches during the winter.

Your list of candidate trees should be shorter now that you have identified your needs and wishes. What tree species are presently growing in your yard and neighborhood? Providing diversity in your landscape is a good way to minimize the potential impact of disease and insect damage. Tree diversity also benefits your landscape by providing a variety of aesthetic features and wildlife habitats.

Where to Plant a Tree

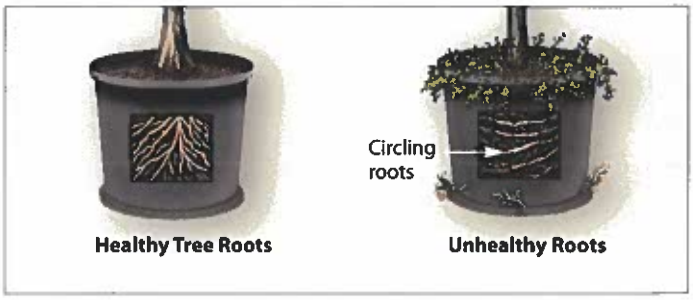
Space is a major factor when deciding where to plant a tree. Trees that are given ample space to grow to their mature size are healthier and require less maintenance. Common problems associated with improperly placed trees include power outages, buckled sidewalks and driveways, torn roofing shingles and obstructed views of traffic.

Power outages can occur when branches come close to utility power lines. Trees and power lines can coexist and potential conflicts can be avoided by selecting and planting trees with size and growth characteristics appropriate to their location.

Mature Tree Height	Minimum Distance from Structure
Up to 16'	Safe near distribution power lines
16' to 40'	15' minimum distance from structure
Over 40'	25' minimum distance from structure

Selecting your Tree

When selecting trees at your nursery, remember: bigger is not always better. The largest trees in a group may have outgrown their containers. Generally, the smaller a tree is when planted, the healthier it will be as it develops and matures. Circling roots can girdle your tree causing stunted growth and poor anchoring. Trees should be free of insects, disease and physical damage. They also should have straight trunks and balanced branching. If a tree appears dormant, scratch a twig to be assured it is green and moist inside. Always check for circling or girdling roots before you purchase your tree!



Six Steps to Follow When Planting a Tree

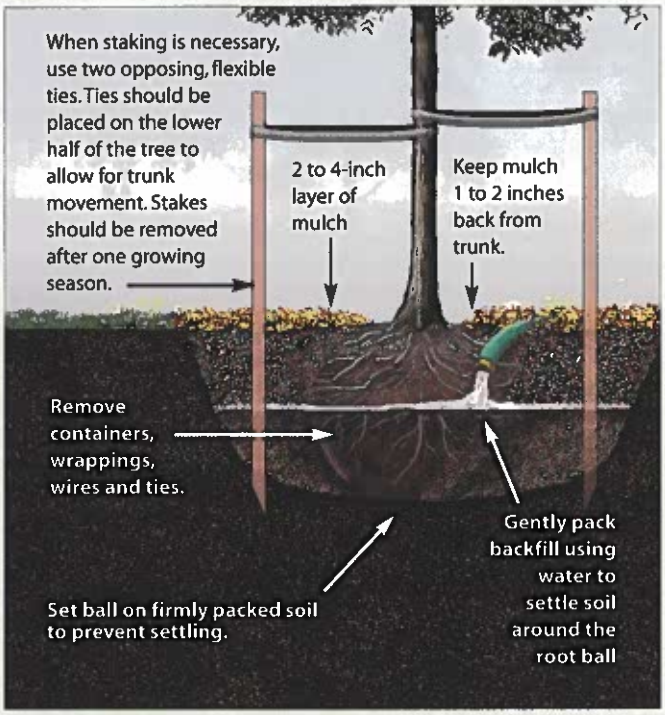
Follow these basic guidelines when planting a tree. Don't hesitate to consult with a certified arborist.

When to Plant a Tree

Generally, mid-November to late February is the best time to plant trees in the Houston area. Planting in late fall or winter will allow roots to become established before moisture-demanding summer sets in.

1. Planting a Container-Grown Tree

Do not remove your tree from its container until you're ready to place into planting hole. Fine roots dry out rapidly when exposed to air.



2. Hole Size

Dig a hole two to three times wider than the root ball and slightly shallower. When the hole is ready, gently remove the tree while lightly pressing against sides of container. If necessary, cut container vertically to dislodge root ball.

3. Placing the Tree in the Hole

Set the tree gently into your hole, lifting by the root ball. Your tree should be centered and plumb and the top of the root ball should be about two inches above the original soil level. Cut any circling or girdling roots along the outer edge of the root ball with pruning shears. Hold the tree while backfilling around root ball and tamp soil lightly to eliminate air pockets. Large clods should be broken apart before backfilling.

4. Mulching

Remove any grass or weeds within a three-foot minimum diameter circle around the tree and create a watering saucer. Cover with no more than two inches of mulch composed of bark, woodchips, compost, pine needles, etc. Mulch should be kept away from the trunk. Do not use fresh grass clippings.

5. Watering

Adequate water is essential at planting time. Place a water hose at the base of your tree and allow water to slowly trickle until soil is saturated.

The following watering schedule may be utilized, with adjustments made during prolonged periods of rain or drought. (For tips on watering during drought, please visit **www.haufc.org**.)

Initial watering after planting:
Root zones should be slow-soaked every five to seven days for four weeks.
November through February:
Root zones should be slow-soaked every three weeks.
October, March and April:
Root zones should be slow-soaked every two weeks.
May through September:
Root zones should be slow-soaked once a week

6. Care of Newly Planted Trees

After watering, add mulch to compensate for any settling. If necessary, stake the tree to keep it upright. Prune dead, diseased and damaged branches. Research has proven that pruning the crown to "compensate for root loss" actually impedes root regeneration and slows establishment. Structural pruning should be delayed until the second year of growth.

Tree Planting Tips

- Loosen the soil far beyond the drip line of the tree.
- Stake the tree only if it will not remain upright in a moderate wind.
- Stake with broad, belt-like materials that won't injure the bark, and remove after one growing season.
- Cover root ball with mulch, but keep trunk exposed.
- Keep soil moist, but not water-logged.
- Remove dead, diseased and damaged branches.
- Wait one year to begin structural pruning and fertilizing.
- Prune circling and girdling roots.

Mistakes to Avoid

- Planting too deeply
- Using trunk wraps
- Amending the soil, unless the soil is very poor
- Staking so tightly that the tree cannot sway
- Leaving staking material on for more than one growing season
- Disturbing root ball (unless pruning circling and girdling roots)
- Removing branches to balance crown with roots

Plant only small trees under power lines.

Plant shade trees to shade your roof, walls, windows and air conditioner.

(Shading the west and south sides of your house is best for lowering utility bills.)

Plant fruit trees for edible fruit and to attract wildlife.

Plant recommended street trees to help improve your neighborhood.

Plant to screen undesirable views.

Plant to shade your air conditioning unit to save energy costs.

Plant flowering trees for accent and beauty.

Plant trees and shrubs well away from ground-level equipment to allow utility workers direct access.

Tall Tree Zone
Trees 40 feet and taller

Medium Tree Zone
Trees 40 feet or less

Small Tree Zone
Trees 16 feet or less

Electric Utility Tree Pruning Zone

50 ft.

20 ft.

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Safe Planting Distances for Trees near Residential Power Lines

For safety and security reasons, trees should never be planted in a high voltage corridor. Trees and shrubs that will grow taller than 10 feet at maturity may be removed from within the right-of-way by the utility.

Transmission Right-of-Way
No trees

Border Zone
Only small trees 10-25 feet

Outer Zone
Tall trees

Planting near High Voltage Corridors

When to Prune

After the first growing season, light pruning and removal of dead branches can be done at any time. Winter is usually the best time to prune. It is not recommended to remove more than 20 percent of live foliage or growth in any given year unless absolutely necessary.

Prune spring flowering trees, like redbuds and fruit trees, after the bloom. Note that pruning fruit trees after blooming will inhibit fruit production.

The best time to prune live oaks and red oaks is in late June through September and January through early February. Pruning these oaks during the rest of the year could make them more susceptible to oak wilt disease.

Always use clean and sharp pruning equipment. Never prune trees near a power line. Contact CenterPoint Energy at 713-207-2222 for assistance.

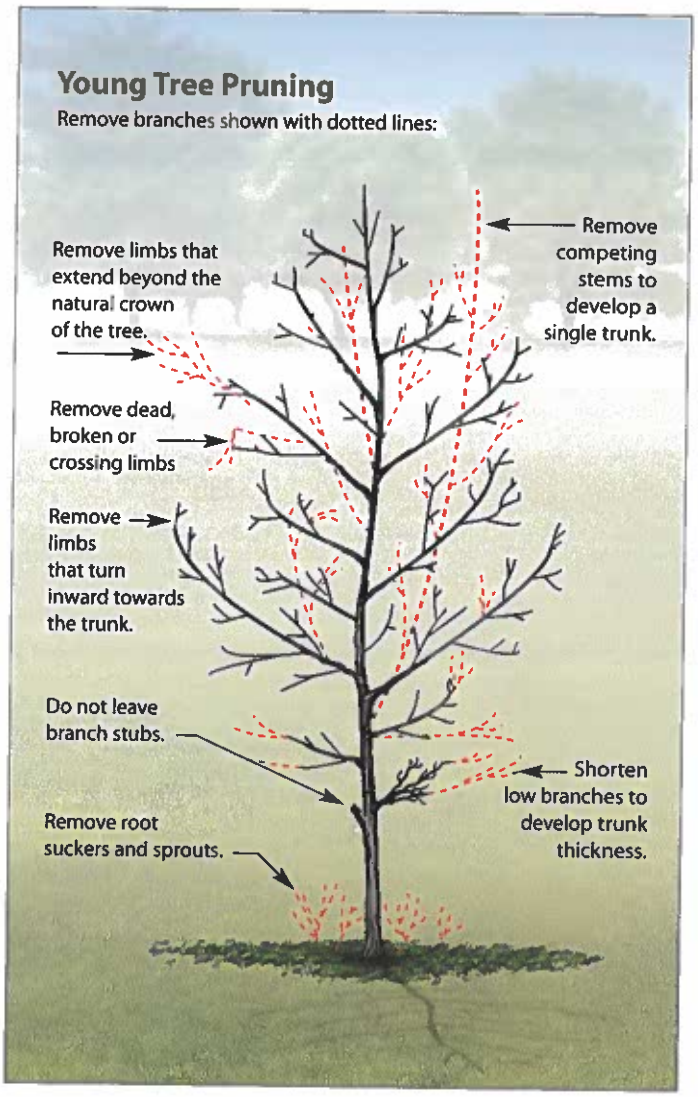
How to Prune

Inspect the tree first to determine what needs to be pruned. Some examples of limbs that should be removed include the following: crowded, rubbing and narrow branch angles, double leaders, root suckers and water sprouts.

When removing these branches, always prune back to the main trunk or the next largest branch, being careful not to prune into the branch collar or bark branch ridge, nor leave a pronounced stub. The branch collar is the swollen area near the base of the limb.

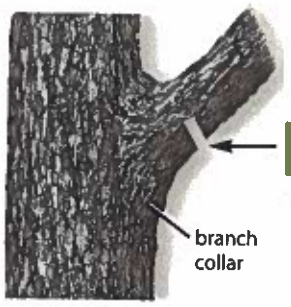
Always make a clean cut to accelerate wound closure. Wound dressings (paint) have been proven to inhibit wound closure. Lopping shears should be used on branches smaller than ¾" in diameter. To avoid peeling bark, remove larger branches with a saw utilizing the three-cut method. Incorrect pruning methods can cause costly problems. Discuss the maintenance of your trees with a certified arborist: **www.isa-arbor.com/faca/findArborist.aspx**.

When hiring a tree care company, seek out professionals who can provide references and proof of insurance.

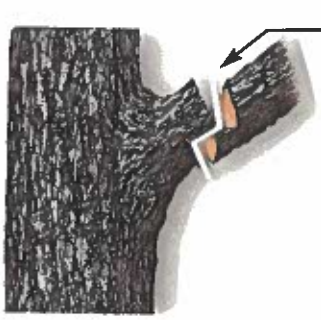


Three-Cut Pruning Method

Important Note: To prevent the spread of oak wilt disease, minimize the pruning of live oaks and red oaks between February 1st and June 1st, and apply pruning paint immediately on fresh wounds.



1 Undercut 12" to 24" up from the branch collar. (This stops the bark from peeling.)



2 Make the second cut from the top all the way through the branch, 2" to 3" above the first cut.

3 The final cut should be just beyond the branch collar. Support the stub so that it does not tear the bark.