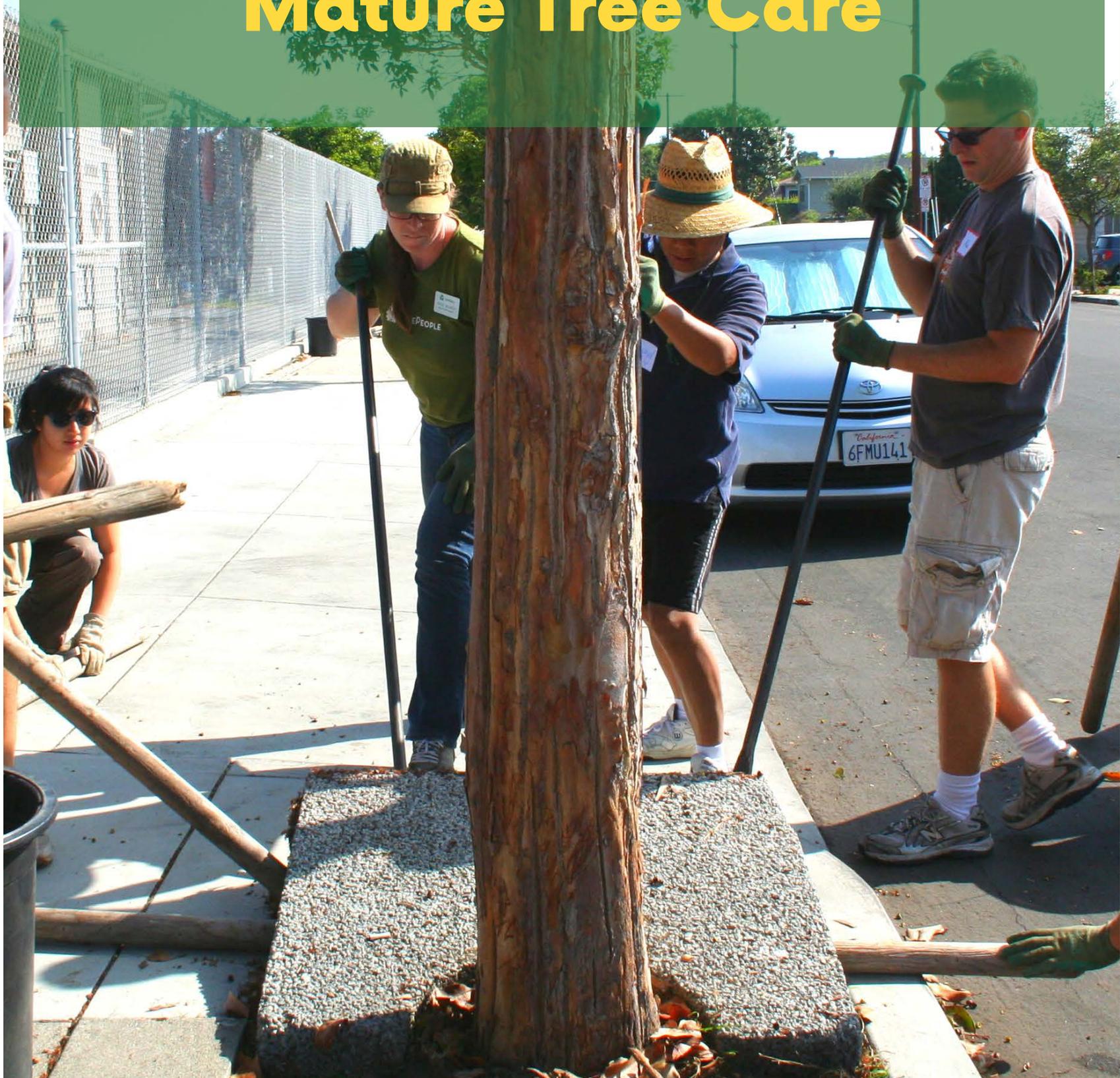


Chapter Eight: Mature Tree Care





Mature Tree Care

When thinking of mature trees, you may think of large trees that have reached their full height and width and full canopies. However, we can consider mature trees to be much broader than that. As a general rule of thumb, once you can no longer wrap your hand around a tree's trunk, it is considered a mature tree.

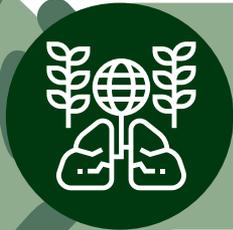
Once trees reach this size, they require less intensive, but still proactive, care. Understanding how care for young and mature trees differs will help us both grow and maintain our urban forests. This is especially important because of the benefits that mature trees bring to our ecosystems. In this chapter, we'll be covering watering, and tree assessment including when a tree is established, initial structural pruning and more...

As trees grow, so do their benefits!



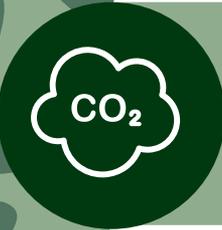
Wildlife Habitat

Mature trees, and especially mature native trees, are often better able to support a wide variety of birds and other wildlife.



Oxygen Production

"A mature tree can produce enough oxygen annually to meet the needs of a family of four for an entire year" (Urban Forestry Department)



Carbon Drawdown

Mature trees can often store more carbon in their trunks, making them better equipped to combat the effects of climate change.



Energy Conservation

Mature trees have greater tree canopies which means that they're better able to provide shade for and cool surfaces. This saves on energy costs.



Stormwater Runoff Reduction

Keeping rainwater from running off into storm drains helps restore our water cycle. Mature trees are better equipped to trap water.

Shared Model of Street Tree Care in Los Angeles

Los Angeles uses a shared ownership model for tree care and maintenance for trees in the public right of way or parkway. This means that some street tree maintenance steps require a permit from the city.

Street Trees

What requires a permit:

- Planting street trees
- Pruning street trees (can apply for a no-fee permit or call 3-1-1 to have the city arrange for pruning)
- Removing street trees
- Grinding street tree stumps

What doesn't require a permit:

- Removing stakes
- Watering street trees

Private Trees

Private property trees are any trees in your personal property line. You do not need a permit for any aspect of private tree care, though we recommend reaching out to an ISA certified arborist when necessary. Certain private property trees are protected from removal by the city's Protected Tree Ordinance.



Crash Course

A tree's species and growing condition will determine when it has reached maturity. In an urban setting, it is important that young trees receive 2 - 3 years of watering and care to help them become established, and on their way to maturity.

1 When is a tree established?

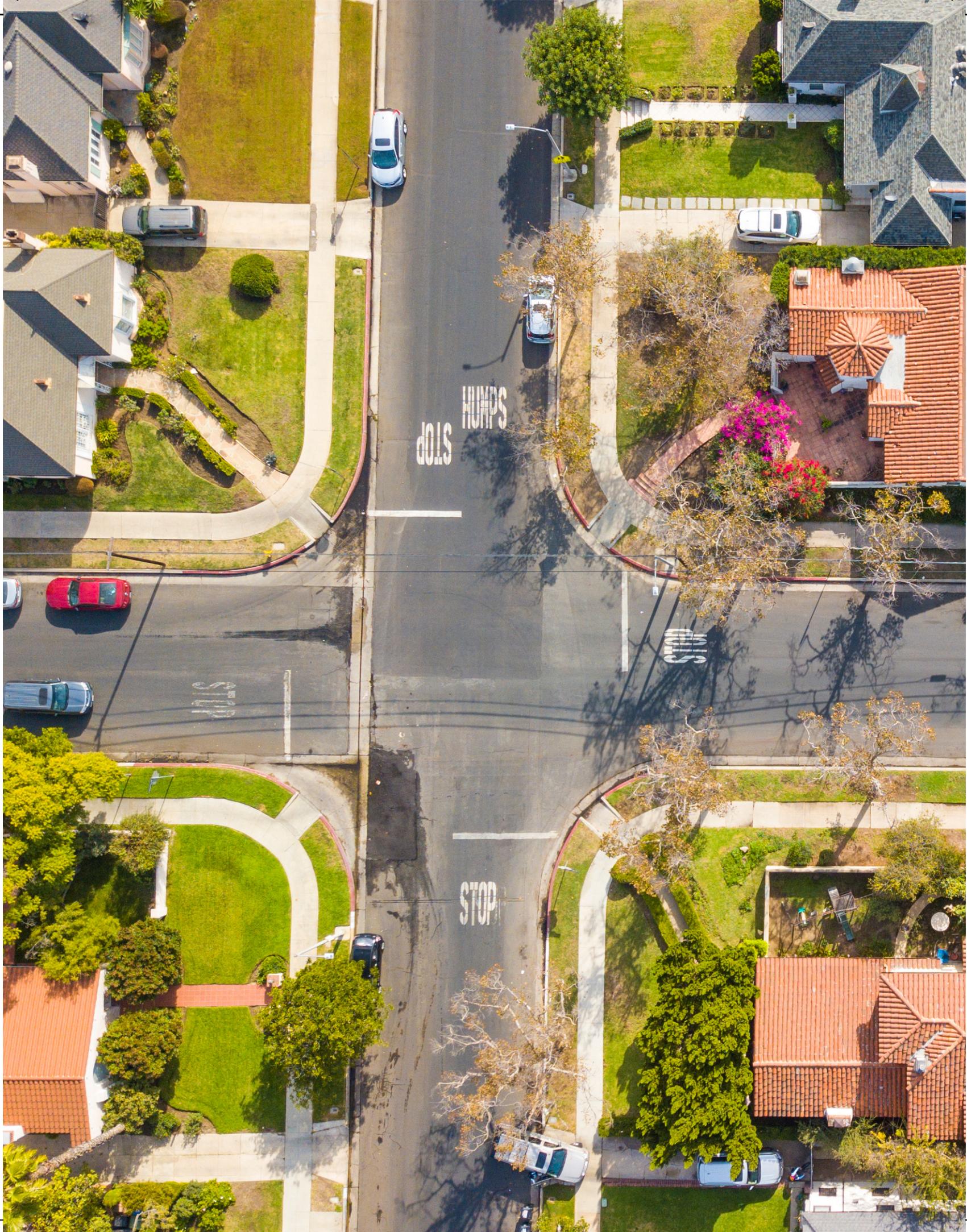
A tree is considered established when its roots are secure and the tree is stable enough that it no longer needs its stakes and ties. To check to see if a tree is established:

- Gently rock the tree back and forth.
- If the soil around the base of the tree is moving, the roots are not established.
- If the tree feels stable and the soil is not moving, the stakes and ties can be removed.

2 Remove stakes and ties

Stakes and ties that are not eventually removed can hinder development, and as the tree continues to grow, can press and rub against the bark causing damage to the trunk and branches. Remove stakes and ties once the tree is established.

- Carefully cut off ties.
- Remove stakes by gently moving them back and forth to loosen the soil enough to pull them out.
- Use dirt to fill in the hole left by the removed stakes.



STOP
SCHOOL

STOP

STOP

STOP

3

Structural pruning of young trees

The first 5 years of a tree's life are critical to set up a branch structure that benefits the tree's health and appearance into the far future. Structural pruning is a type of pruning that focuses on improving the architecture of the branches within the crown of a tree. The primary goal of structural pruning is to promote a strong, central leader with well-spaced, smaller diameter branches along this main trunk.

As mentioned in Chapter 4, Proper pruning removes dead and dying branches and stubs, allows room for new growth, deters pest and animal infestations, and promotes the plant's natural shape and healthy growth. But before you start pruning mature trees in your parkway, there are a couple things to keep in mind. First, you **need a no-fee permit from the Urban Forestry Division in order to prune your parkway trees.**¹ If it takes more than the use of a step-ladder you should leave it to a professional.

Vertical spacing

- Plan the vertical spacing of the main scaffold branches (primary limbs that form a tree's canopy) to structurally set up the tree. The scaffold branches should be about 3% of the mature height of the tree.
- Do not allow scaffold branches to be directly above each other. They should be spaced radially around the tree so that the weight is distributed evenly.

Lateral spacing

- Plan the lateral spacing of permanent branches that form the scaffold branches.
- Prune out lateral branches about 2' from the trunk on large trees.
- They should be smaller than the scaffold branch and the trunk.

¹.To obtain a no-fee tree prune permit, call the Bureau of Street Services' Service Request line at (800) 996-2489. The permit will be provided within five working days.

4

The healthiest pruning cut to use

A "removal cut" is the healthiest type of cut when pruning. The cut is made just outside of the branch collar and bark branch ridge.

— — Branch Bark Ridge

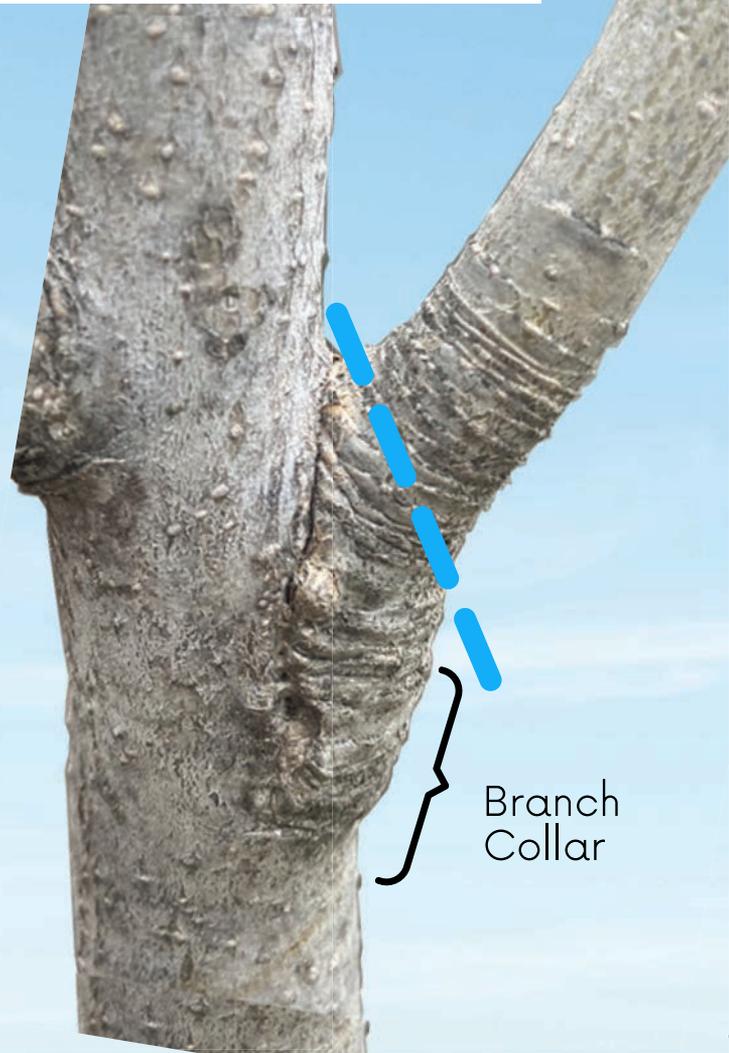
— — Cut Here

When the branch collar cannot be detected, draw an **imaginary line** parallel to the trunk downward from the top of the **branch bark ridge**. The angle formed by the imaginary line and the branch bark ridge is equal to the angle from the imaginary line to where the pruning cut should be made.



Imaginary Line

No Branch Collar



Branch Collar

5

Prune to train mature trees

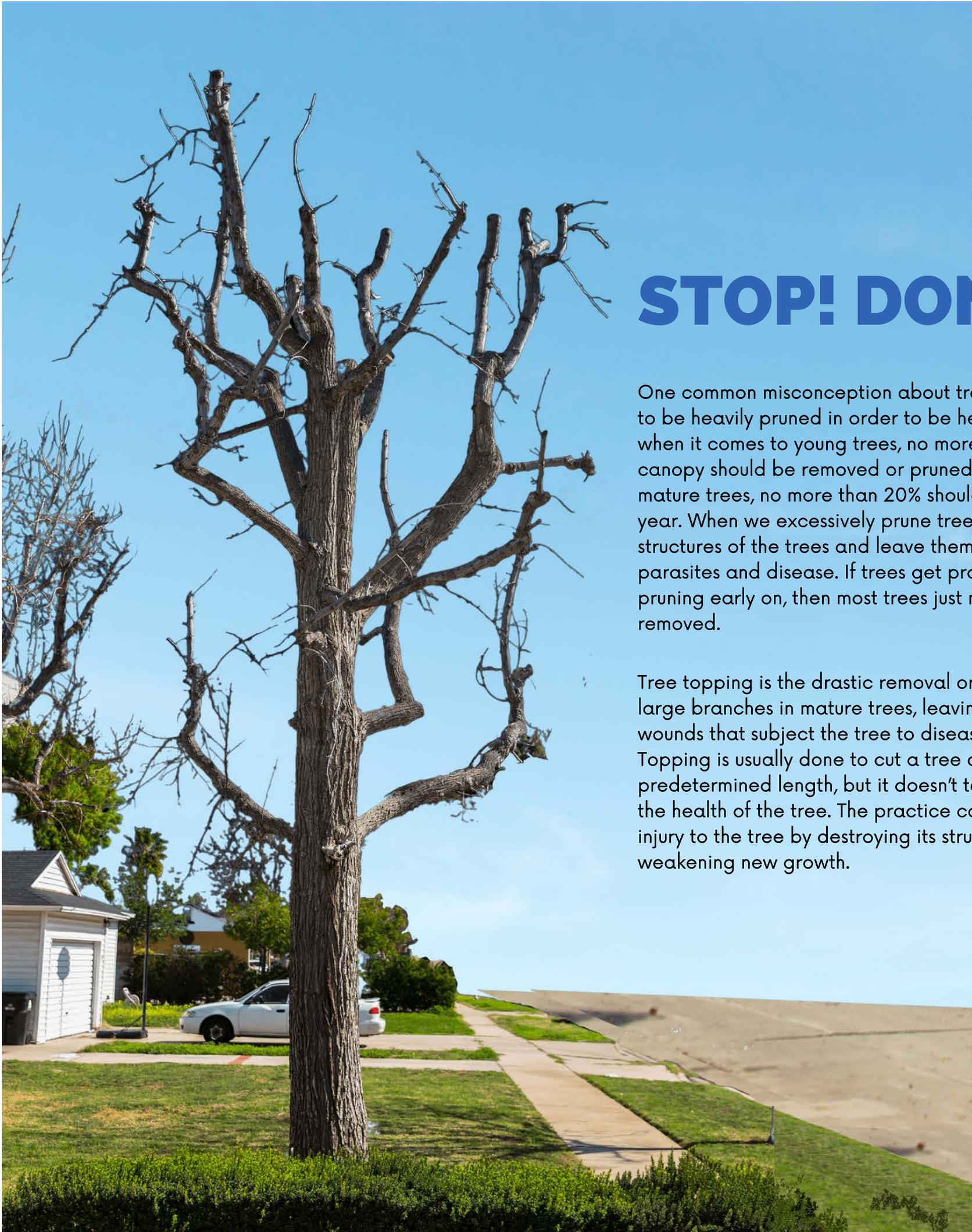
Early training of trees results in a mature tree with good form.

- Continue to prune out the 4 Ds (Damaged, Diseased, Dead, Deranged)
- Continue to analyze branches to keep and which to remove as the tree continues in height.
- Remove branches as needed when they are less than 3".
- Do not over thin the tree by cleaning out all smaller branches from the interior.

6

How much to prune?

- No more than 25% of a tree's live wood should be pruned in a year for young trees. 20% or less for mature trees.
- The leaves produce the food and energy of a tree. If you prune too much, you starve the tree and cause it to decline and go into survival mode.



STOP! DON'T

One common misconception about trees is that they need to be heavily pruned in order to be healthy. However, when it comes to young trees, no more than 25% of the canopy should be removed or pruned. For mature trees, no more than 20% should be removed per year. When we excessively prune trees, we destroy the natural structures of the trees and leave them vulnerable to parasites and disease. If trees get pruned too early on, then most trees just need to be removed.

Tree topping is the drastic removal of the top of a tree or large branches in mature trees, leaving large, jagged wounds that subject the tree to disease and decay. Topping is usually done to cut a tree to a predetermined length, but it doesn't benefit the health of the tree. The practice causes long-term injury to the tree by destroying its structure and weakening new growth.

DON'T TOP!

One of the biggest mistakes that arborists make when they top trees is that they need to be healthy. In reality, more than 25% of their trees are removed each year. For every tree that could be removed each year, we ruin the remaining trees, we ruin the remaining trees, we ruin the remaining trees. They are vulnerable to decay and disease. They need proper structural pruning and they need the 4 D's.

Topping or cutting back of trees causes decay and disease. It leaves large, open wounds that lead to decay and disease. It causes immediate structural instability and





Mature Tree Assessments

When it comes to caring for the trees, continually assess the trees to see how they are progressing. Are they growing and thriving? Or are there signs that they may be in decline?

Be sure to understand the type of trees you are assessing to better understand their typical growth patterns, whether they are deciduous or evergreen, and more. Are trees of the same species on the site with the same issue? Perhaps there is an insect or disease particular to that species that is infecting or infesting them.

For addressing some of the signs of decline, you can reach out to an International Society of Arborists (ISA) Certified Arborist for suggestions.

Signs of Growth



Buds

New growth is a good sign that a tree is doing well.

Depending on the season, you may either see small bumps along them or tiny buds and leaves emerging when you look towards a healthy tree's branches.



Leaves

If your new leaves are growing in full and lush, that's a great indicator that your tree is thriving.

However, if leaves have brown leaf tips, are brittle, wilting, curled or yellow, that could be a sign that your tree is lacking nutrients or receiving too much or too little water.

Signs of Growth



Branches

Look closely at the twigs on the tree —do you see bumps and lines and tiny holes?

The lines going around the twig represent the end of a tree's growth between years. By measuring the distance between these lines, you'll know how much a branch grew each year.

Is there healthy new growth of branches? Or are there dead branches or wounds that could attract insects and disease?

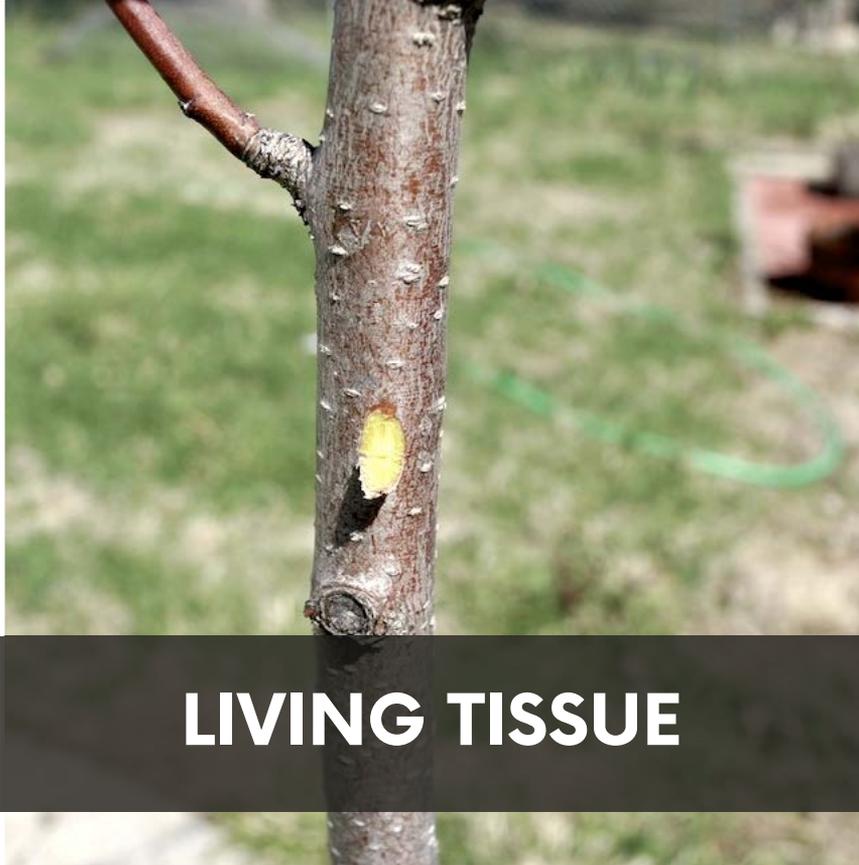


Canopy

Full canopies are an excellent sign that the tree is doing well!

Crown dieback is the gradual death of the upper part of a tree.

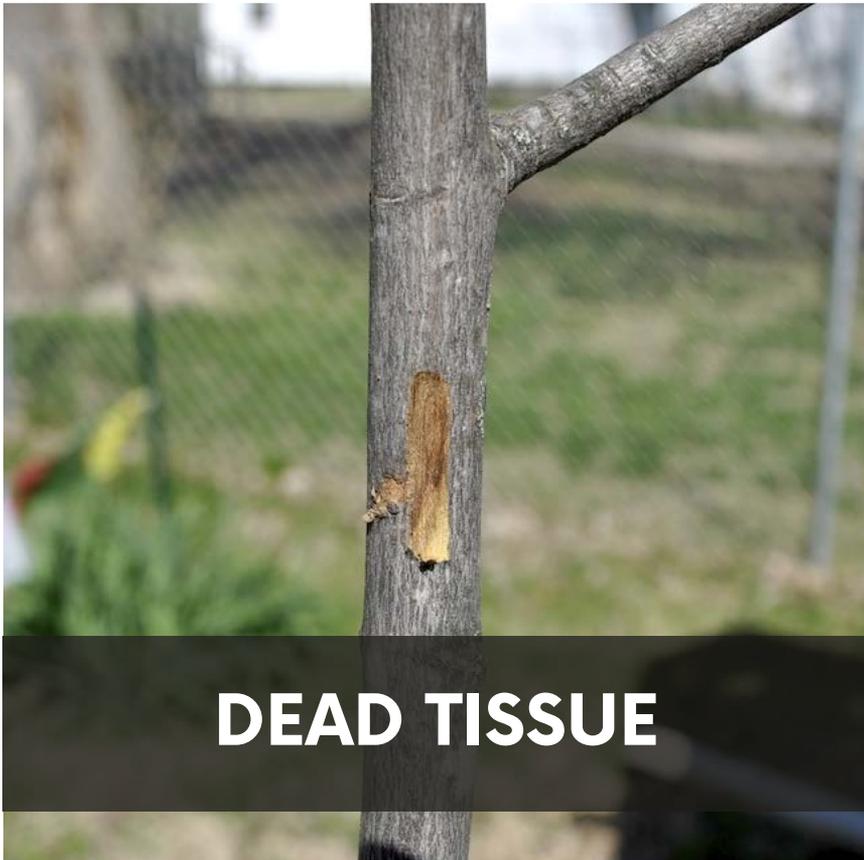
Signs of Decline



LIVING TISSUE

Calling an arborist

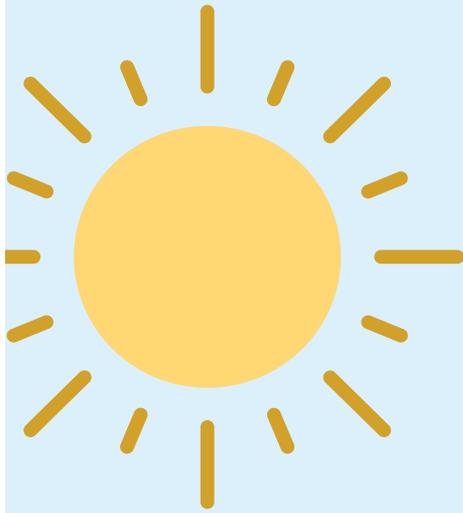
Trees in the early stages of decline can sometimes be stabilized through proper management. As a Tree Ambassador, it's important that you know some of the common signs of trees being in decline. For addressing signs of decline you can reach out to an ISA certified arborist for suggestions.



DEAD TISSUE

Tree Scratch Test

If a tree is in terrible condition and you're trying to determine whether or not it is alive, one way to test this is the scratch test. Using your thumbnail or a key, lightly scratch into the bark about halfway up the tree trunk. If the tissue you find under the bark is slightly green, that means the tree is still alive. On the other hand, if the under-layer is brown, dry, and brittle, that means the tree's no longer alive.



Watering Mature Trees

Effects of climate change

With rising temperatures and longer drought seasons, it's possible that trees will begin needing more water during the hotter months in order to survive.

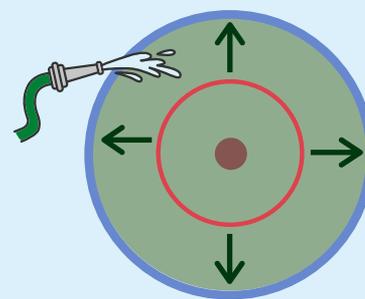
When

Depending on your tree species, you should be watering your mature tree 1x - 2x a month.

Where

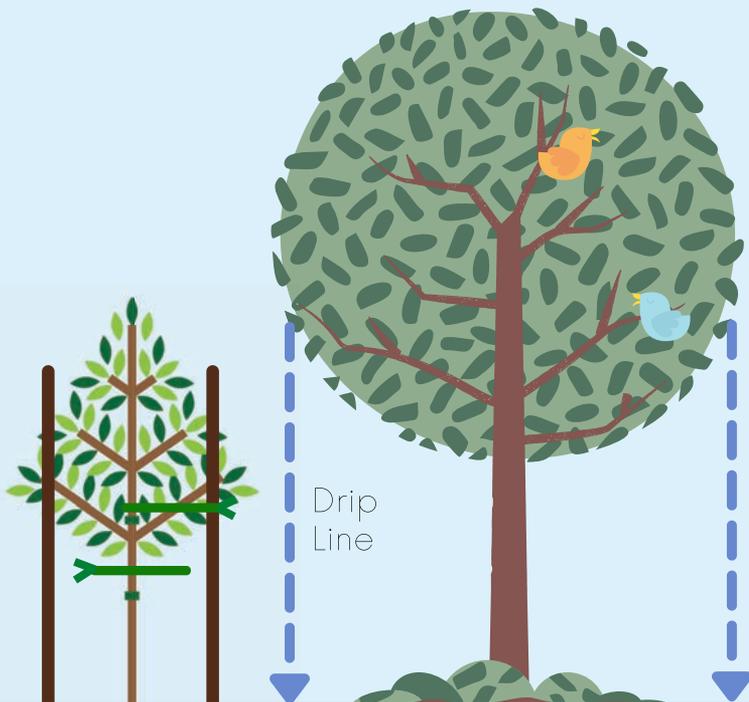
Estimate the halfway point between the center and the edge of the canopy and water outwards from that line. For parkway trees, water the available area.

Tree Canopy top view



Legend

- Tree center
- Halfway point line
- Drip Line



Drip Line

How

Slowly soak the area using a hose on slow-trickle for 15-20 minutes or, use an in-line emitter hose circled around the tree.

The water needs to soak down 12 - 18 inches. To see if the water is reaching far enough, shove a long-blade screwdriver into the soil to measure the moisture depth. When it won't go further, you've most likely hit the dry layer. Adjust the amount of watering time as needed.

As with many other aspects of tree care, when it comes to watering, mature trees are different from young trees. The roots of mature trees often grow beyond their canopies, and so if you continue watering a tree at the base, it's actually not getting hydrated! Above, we've included some general guidelines for how to water a mature tree. Once you've determined what the watering schedule for your tree should be, stick with it!



Source: TreeCareLA

Tree Removal

Though it's sad, there are situations where tree removals are necessary as a last resort. We recommend removal for trees in cases where trees have died and are hazardous, and when trees are growing in ways that are harmful to the surrounding environment in a way that cannot be repaired without removal.

You need a permit to remove a tree in the public right-of-way, and policies for tree removal differ depending on if the tree is a private property tree or a street tree. These policies will also differ depending on if the tree is a protected species of tree. For more information on tree removal permits, [click here](#).

Establishing Community Forest Teams

The City of Los Angeles has an estimated 10 million trees growing in its boundaries. Of those 10 million trees, approximately 2 million are publicly maintained (Bureau of Street Services). This means that the other 8 million are maintained by other groups, including nonprofits and community groups. This is why it's important that we establish community-based ways of maintaining our urban forests.

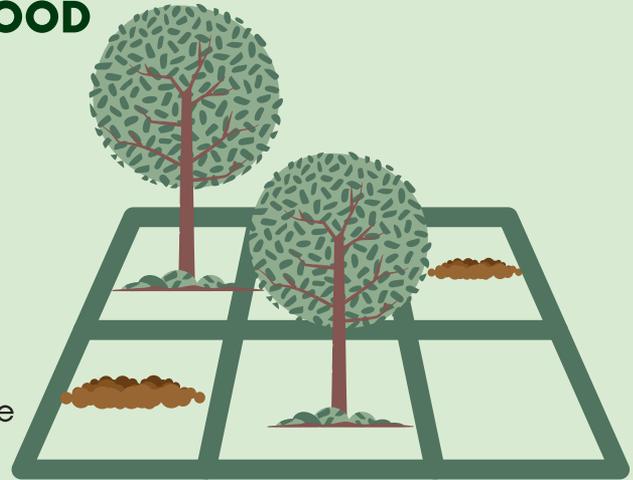
When getting commitment to water forms (CTWs) from people in your neighborhood, one way you can work to guarantee the health of the trees in your neighborhood is through establishing a community forestry team with community members. This way, you can work collaboratively to stay on track with your community care plans!

WALK & CHART YOUR NEIGHBORHOOD

Create a map of the site or each street. Make a simple map or use a Google map image.

Chart the following

- Young trees
- Mature Trees
- Empty Tree Wells — Empty cuts in the concrete that used to have trees. May provide sites for future tree planting.



FORM A TEAM

A team starts with you. Consider inviting family, friends, neighbors, businesses, student groups, civic groups, scouts, neighborhood groups, church groups or others.

Choose a name for your team.

MAKE A PLAN

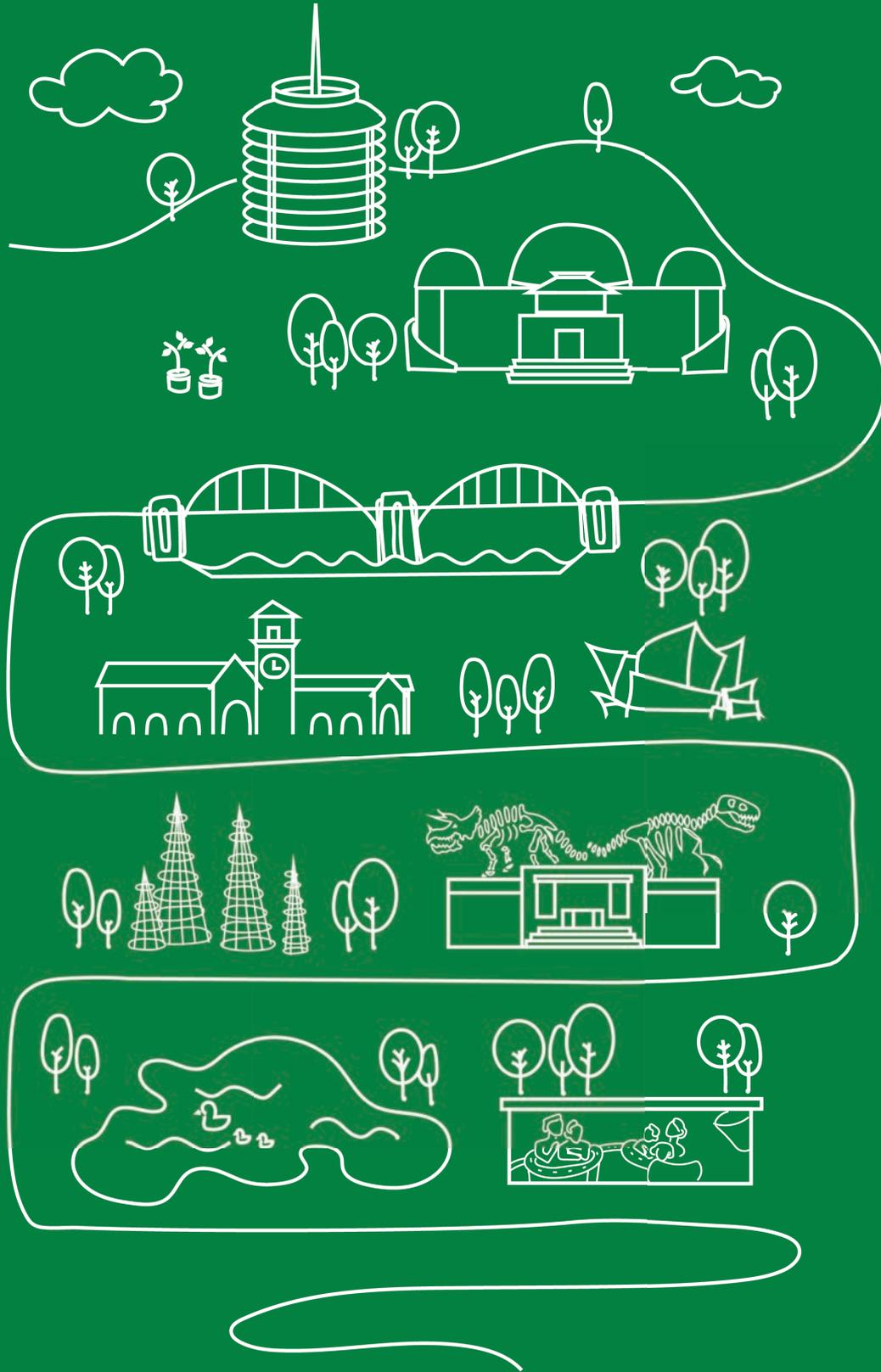
The most important task will be to ensure the trees receive deep watering.

- Choose a day/time each week to care for the trees you mapped.
- Create an invitation and let others know when you will be doing tree care and where to meet.

Consider what you will need

- Source of water and how you will transport it
- Gloves
- Supplies for watering
- Tools for weeding





**Your city. Your voice. Your urban forest.
Tu voz. Tu ciudad. Tu bosque urbano.**