

Tree Owner's Manual










for the Southeast



Prepared by the
North Carolina Urban Forest Council



IMPORTANT CONSIDERATIONS:

-  *CALL BEFORE YOU DIG! JUST DIAL 811 FOR FREE UTILITY MARKING.*
-  *NEVER PRUNE TREES/BRANCHES WITHIN 10 FEET OF UTILITY LINES (Call your local utility).*
-  *KEEP MACHINERY AWAY FROM TREES, PARTICULARLY AROUND TRUNK AND ROOTS.*
-  *DO NOT WRAP WIRE, STRING OR PET LEASHES AROUND TRUNK OR BRANCHES. DO NOT NAIL OR SCREW ANYTHING INTO TREE.*
-  *DO NOT TOP YOUR TREE.*
-  *HIRE A CERTIFIED ARBORIST FOR ALL YOUR TREE CARE. BE SURE THEY HAVE GENERAL LIABILITY INSURANCE AND ARE BONDED.*
-  *CHECK WITH YOUR CITY OR TOWN FOR ANY LAWS REGARDING PLANTING, PRUNING OR REMOVAL OF TREES (PARTICULARLY THOSE THAT MAY BE ON PUBLIC RIGHT-OF-WAY).*
-  *IF YOU MUST GET OFF THE GROUND TO TRIM A TREE, IT IS TIME TO HIRE A CERTIFIED ARBORIST TO DO THE PRUNING FOR YOU.*
-  *DO NOT LET CHILDREN CLIMB TREES WITHIN 25' OF POWER LINES.*

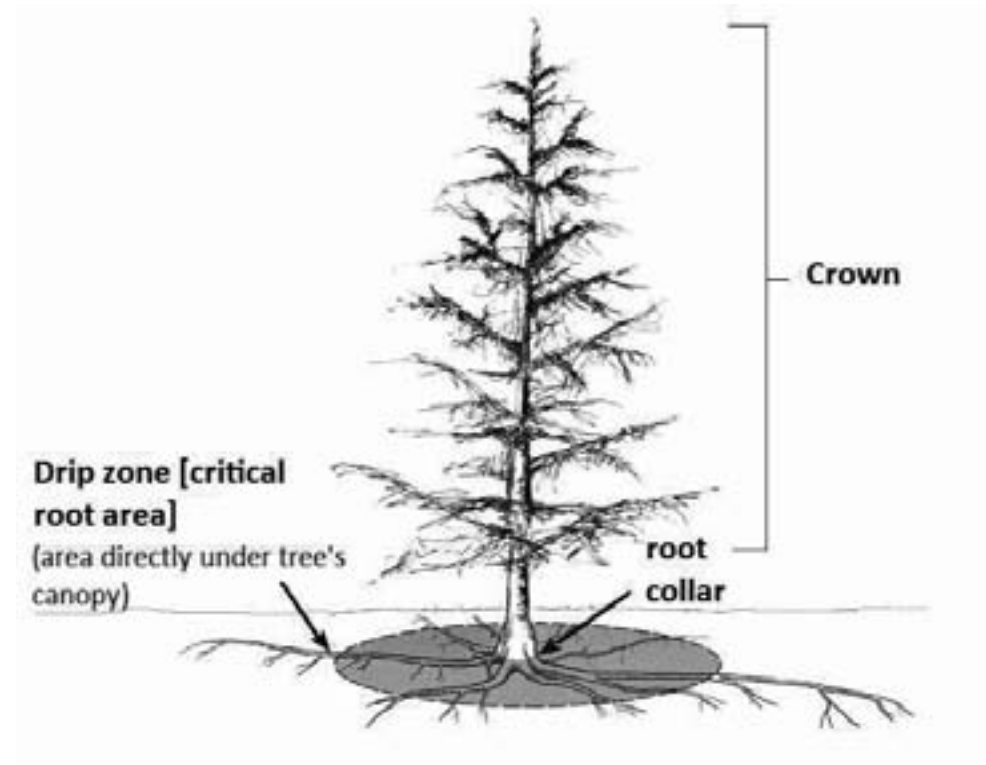
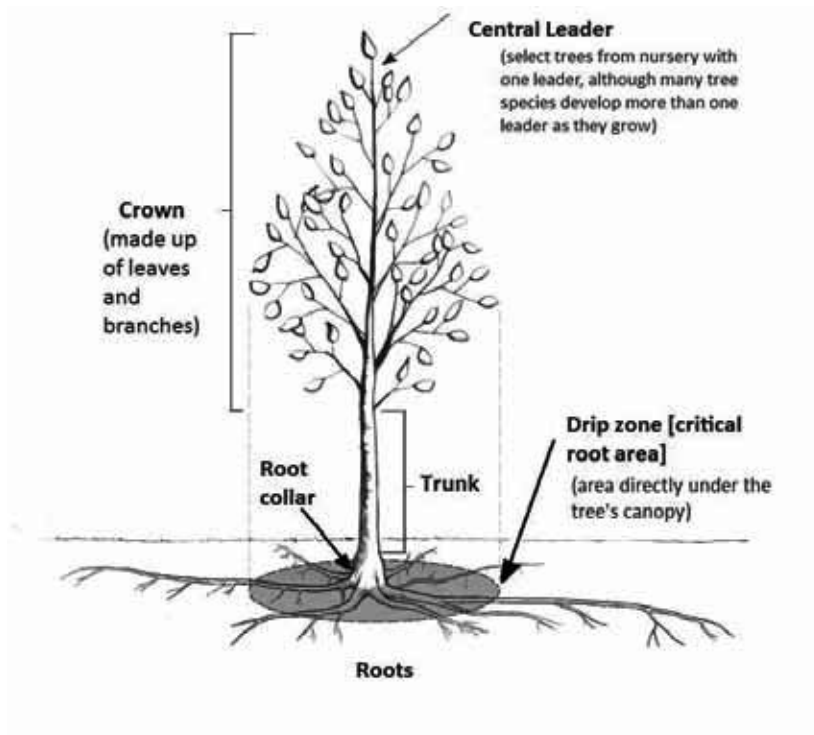
 *Look for this symbol for special tips or warnings!*



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Deciduous tree- loses leaves in autumn

Evergreen tree- retains leaves all year long



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Buying a Tree

What species should you plant?

Consider the following:

- ✓ Check with your community planning, public works or parks/recreation department for information regarding preferred tree species and related information.
- ✓ Seek advice from local professionals, including your county extension agent.
- ✓ Assess your site conditions.
 - Location: site appropriately with regards to structures and utilities
 - Cold hardiness: select tree suitable to your region, considering both cold and heat
 - Soil: get a soil test done to assess pH and nutrient content; assess drainage; and determine soil structure (compacted or loose?)
 - Exposure: amount of sun and wind
- ✓ What are you looking for in a tree?
 - Flowers/fruit
 - Fall color
 - Function: reduces energy costs, shade, screening, specimen, attracts wildlife

🔑 Mature size: remember trees grow, so be sure there is sufficient horizontal and vertical space to allow your tree to reach its genetic potential



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Selecting High Quality Stock

Nursery Packaging

Roots

Nurseries typically produce trees in one of the following ways:

ball & burlap



containerized

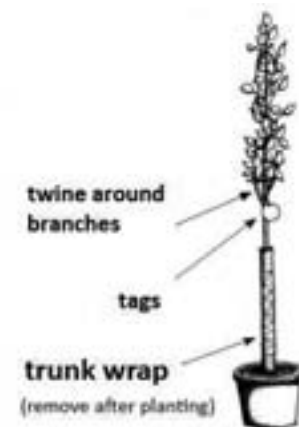


bare root



Trunk and branches

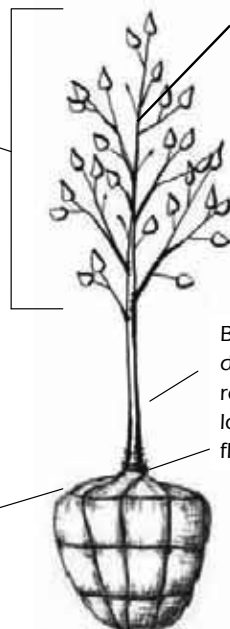
Tree may be bundled to protect it during shipment:



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Tree Quality

Crown height should be at least 60% of total tree height for deciduous stock and 75% for evergreen trees.



Look for one central leader; if there are two leaders, be sure you can remove it without leaving a large hole in crown.

Be sure the trunk is not damaged, is centered in root ball and is not loose. Look for trunk flare.

There should be no more than 2-3" inches of soil on top of roots, you may have to scrape soil away to find them. If you cannot find top most roots, select another tree.

Look for these qualities whether you are buying a ball and burlap tree or one grown in a container.

It is always a good idea to record the following information about your tree: where and when you purchased it, warranty period, species and any other key information about its care or features.



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Transporting Your Tree

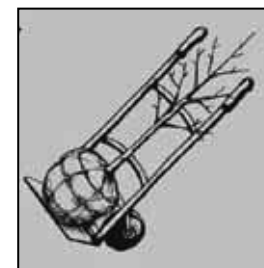
- ✓ It is easiest to move your tree with the branches tied, so ask the nursery to do this for you.
- ✓ Do not lift tree by the trunk, always lift by the root ball or container.
- ✓ Never carry any plants that are in full leaf in an open truck bed or car trunk without first wrapping them with a sheet, burlap or a tarp.



If you are transporting a big load of plants, a tarp is the easiest way to protect them from windburn and drying, until you get them home.



Once you get your tree home, you can tip a containerized tree on its bottom edge and roll it. Two people may be able to carry a ball and burlap tree with a sling (if it is not too heavy). A ball cart can get any big tree where you want it in the landscape very easily!



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- ✓ If you cannot plant your tree right away, store in a shady spot and keep ball watered.
 - Bare root trees need extra protection: pack wet newspaper, sawdust or mulch around the roots and wrap in a plastic bag. It is best to plant bare root trees within 2 days so the roots do not dry out.
 - Ball and burlap trees should be stored with mulch, plastic or a tarp around the root ball to prevent drying.

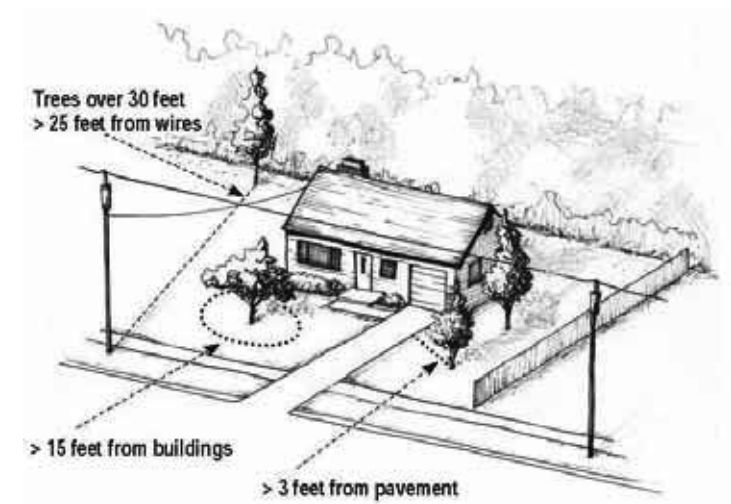


✎ Make sure not to damage the trunk of the tree, as any wound can cause permanent damage and potentially reduce life span!

Pre-Installation Steps (Planting Preparation)

Step #1: Check for any Aboveground Obstacles

- ✓ Do not plant your tree where it will interfere with buildings, overhead utility lines, pavement, or intersection sightlines as a young tree or as it matures.
- ✓ Plant your tree: 3' from pavement or fencing; 15' from buildings; and 25' from overhead utility wires, if the tree will reach a height above 30'.



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Step #2: Check below ground

- ✓ By law, you must call before you dig.
 - At least 72 hours prior to digging, call the underground utility locating service in your area. 1-888-258-0808
 - This is typically a free service.
- 💡 It takes less than a second to receive a deadly electric shock.

Step #3: Check your local ordinances.

- ✓ Many communities have ordinances that govern tree planting, care and removal.
- ✓ Check with your community public works or parks/recreation departments for information regarding preferred tree species and related information. Your community may even have a tree-planting program.
- ✓ Check at your local government offices to be sure you are complying with the local ordinances.

Step #4: make sure you have the tools you will need to plant your tree properly.

Gather the following:

1. Shovel, sharp knife (scissors), by-pass pruning shears and a soil knife (optional)

Will you plant your tree on public property?

Public trees are located on municipal property or within the right-of-way (ROW), regardless of who planted them.

The ROW typically follows along the street, alley or highway and may reach as far as 20 feet beyond the pavement. This includes the "tree lawn", the grassy area between the curb and sidewalk.

The municipality owns and controls the trees growing in this location, even if you mow the grass.

Within the public ROW, the municipality controls the type of trees planted, where they are located, and their maintenance. You must get permission to plant anything in the public ROW.



By-pass pruners

2. Water
3. Mulch (about 3-4 cubic feet, one or two bags)
4. Large-gauge wire cutters if planting a ball and burlap tree

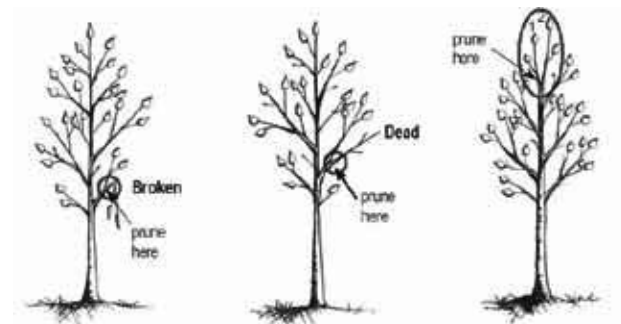
Planting Procedure

Step #1:

- ✓ Move tree to the planting location and remove trunk wrap if present.
- ✓ Remove twine from crown and any labels.

Step #2:

- ✓ Prune only broken or dead branches, or those that are rubbing. If there is more than one central leader, select the healthiest one and remove the other.
- 💡 Trees need leaves to produce carbohydrates (food) to help them recover from transplanting shock.



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Step #3:

- ✓ Determine how big the hole should be. Do this by measuring the ball. You can use a measuring tape, yardstick or the shovel handle for a good approximation.
- ✓ Dig the hole only as deep as the root ball and at least 2-3 times wider.

Bare root trees:

- ✓ Dig a shallow hole with a small mound in the middle. The hole should be only deep enough to accommodate the root system.
- ✓ Remove any protective covering from the roots.
- ✓ Place tree in the hole, setting the trunk on top of the mound, and spread the roots out into the hole. Make sure the tree's "best side" faces towards your visitors.
- ✓ Begin shoveling soil into the hole, holding the tree straight. Fill planting hole about half way, and then water-in. Finish adding soil to finished grade. Be sure there are no air pockets.
- ✓ DO NOT tamp soil into hole with feet or tamper. This compacts soil and makes it more difficult for roots to spread into surrounding soil.
- ✓ Make a small berm around the outside edge of the hole to help direct water toward roots.
- ✓ Bare root trees may need staked (seeing staking section)



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Containerized trees:

- ✓ Remove the container. Feather roots out from the ball (A soil knife is a great way to accomplish this!) and cut any girdling, kinked or circling roots.
- ✓ Place tree in the hole. Make sure the tree's "best side" faces towards your visitors. Fill planting hole about half way, and then water-in.



Feather out roots for better soil contact

Finish adding soil to finished grade. Be sure there are no air pockets.

- ✓ DO NOT tamp soil into hole with feet or tamper. This compacts soil and makes it more difficult for roots to spread into surrounding soil.
- ✓ Make a small berm around the outside edge of the hole to help direct water toward roots.

Ball and burlap trees:

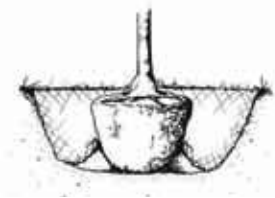
- ✓ Remove the pinning nails, burlap and twine from just the top of the root ball. If you cannot see the trunk flare (trunk appears to go straight down into root ball), use the soil knife to remove soil from top of the ball. Look for the main roots. Once found, do



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not remove any more soil. You should not have to remove more than 2-3" of soil.

- ✓ Place tree in hole, by gently rolling it in. Ball and burlap trees are typically very heavy! Make sure the tree's "best side" faces towards your visitors. Roots should be at the same level as surrounding soil (grade) or 2-3" above.

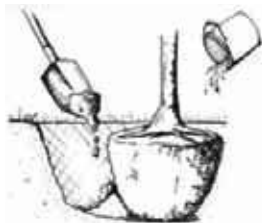


- ✓ Once complete, remove pinning nails, pull burlap from the top ½ of the root ball, and cut off the top half of the wire basket. The remainder of the basket will not cause the tree any problems and helps keep

the ball intact.

- ✓ Prune any kinked or girdling roots.
- ✓ Fill planting hole about half way, and then water-in. Finish adding soil to finished grade. Be sure there are no air pockets.
- ✓ DO NOT tamp soil into hole with feet or tamper. This compacts soil and makes it more difficult for roots to spread into surrounding soil.
- ✓ Make a small berm around the outside edge of the hole to help direct water toward roots.

Backfill and water



Step #4

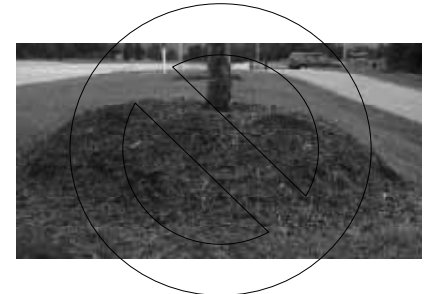
Water your tree very well and then every few days after planting. Water at least once per week, if there is no rain.



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Step #5

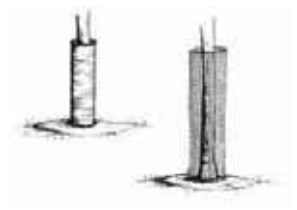
Put a 4" layer of mulch around the tree, making sure bark is not piled around trunk. Make a berm with the mulch at edge of planting hole to direct water towards tree roots. Never mound mulch up around the trunk. This may lead to animal or disease problems. There are many types of mulches available. Buy from a reputable seller, choosing the one that appeals to you. The best mulch is organic and breaks down quickly to add organic matter to the soil. Some of the preferred mulches are pine bark, pine straw, triple-shredded hardwood, and cypress. Colored mulches are fine, but many of these take a long time to break down.



- ✎ Mulch breaks down slowly, adding organic matter to the soil. There should never be more than 4" of mulch at any one time.

Step #6

Young trees often have thin bark that animals and equipment, such as mowers and string trimmers can damage. To prevent wounding and the long-term damage this causes, install a plastic tube or wrap,



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or hardware cloth around the lower 1-3' of the trunk. The wrap should be loose enough to allow the tree to grow. Push the tube or wire into the ground or mulch about ½". You can use trunk protection year round, but you should definitely use it during the winter months.

Watering



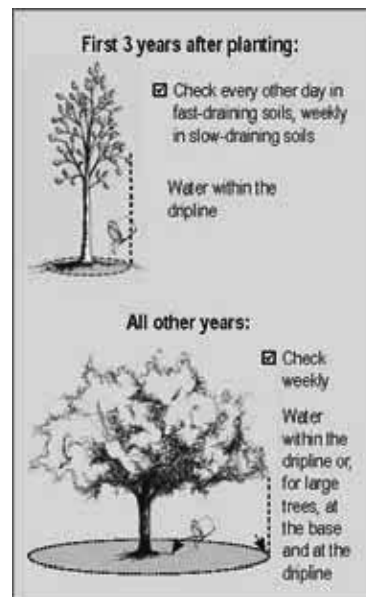
Proper watering is the single most important thing you can do to ensure a long life for your tree. The first 3 years of the tree's life is critical, as this is when the tree is establishing itself in its new home and may be more susceptible to stressors, such as drought,

insects and diseases.

How Often?

How often depends on soil drainage. Soils that drain quickly, such as sands, will require more frequent watering with less water than soils that drain more slowly, such as clays.

Apply about 5 gallons of water per caliper inch (diameter of trunk at 6" above the root ball), watering where the roots are- within the drip zone.



When?

Start checking soil moisture in spring and continue until the soil freezes.

Even mature trees can use some water during a prolonged drought. Apply water within the drip line with a soaker hose, allowing the water to infiltrate slowly over a long night.

Fertilization

Before applying any fertilizer, always obtain soil samples from the area where the tree is growing. This will show what nutrients are lacking. In general, applying ½ pound per 1,000 sq. ft. of a slow release fertilizer in the fall, then again in the spring is an acceptable practice, and promotes healthy tree growth.

Always make sure to follow the label instructions and avoid getting fertilizer on paved areas, as it can pollute water resources.

Properly planted and staked



To Stake or Not to Stake

It is often unnecessary to stake trees. Bare root trees, however, typically require staking because the root system is light when compared to the top portion of the tree, particularly when in leaf.

Stake your tree, if it seems loose or unstable. Stake your tree according to the picture at left. Use wide nylon strapping around the trunk and stake wire into the ground just inside the mulch ring, to avoid conflicts with mowing equipment.

There are special stakes called "duckbills" that you can use as tie downs, but small wooden stakes will also work.

Remove the stakes after the 1st year.



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NOTES

Tree Health

Check your tree yearly to assess its health. Look at the color, size and distribution of leaves. Are they appropriate for this species? Look for dead twigs or dieback. Look for any trunk damage. If anything seems amiss, contact a certified arborist to provide you with expert guidance.

Pruning

Pruning young trees is important to the development of good structure and health as the tree matures, and can help reduce maintenance costs.

You can begin pruning 2 years after the tree has established in its new home. Prune any time of year, but late winter is best, as the tree will soon begin growing and wound closure will occur quickly. Some species, such as maples, do exude a lot of sap when pruned at this time. It is unsightly, but does not harm the tree. You can prune every other year, as needed to shape and maintain health.

Remove dead or broken branches at anytime, also sprouts growing from base of trunk.

Contact your county extension agent if you want to learn how to prune.

🔧 Do not remove more than 20-30% of the tree's live branches at any one time.



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