

TREE PLANTING



DEFINITION

Tree planting can be implemented for reducing runoff and erosion, increasing your home value, reducing your heating and cooling costs, providing habitat and aesthetics, and adding important psychological benefits for you and your community.

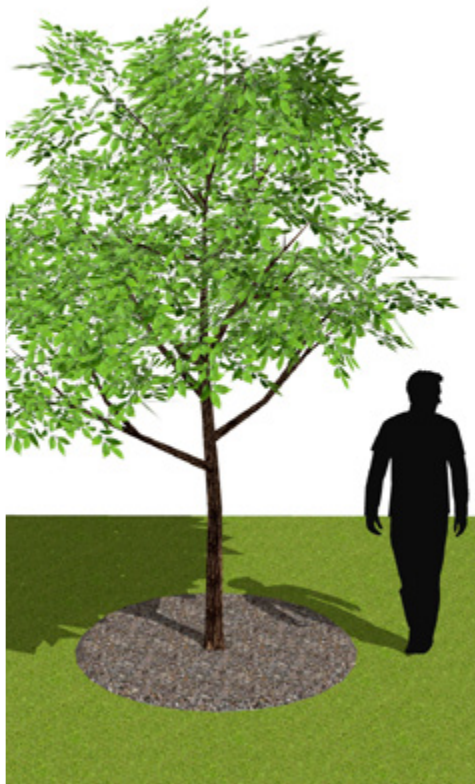
A tree's underground network of roots absorbs water and spans outward in all directions from the trunk. Roots can be found to reach **2-3** times beyond the circumference of the tree's canopy. The roots of a large mature tree with its network of roots is estimated to drink up **50 - 150** gallons of water in a day!

Think of the tree you purchase as a lifetime investment. The health of your tree depends on the type selected, location you pick for planting, the care you provide when the tree is planted, and follow-up care the tree receives after planting. This will ensure decades of benefits and enjoyment. A healthy tree can live to be of historic status or have multi-generational family value.

Below is a general depiction of how large a tree may be at **1** year of growth up to **20** years of growth depending on the type of tree and size when planted.



**1-2 YEARS
GROWTH**



**5-10 YEARS
GROWTH**



**10-20 YEARS
GROWTH**

BEFORE



NO PRIOR TREE

AFTER



NEWLY PLANTED TREE

EXAMPLES



The Willoughby Live Oak on Norfolk Naval Station has existed for at least **400** years. Volunteers cleared weeds from the tree on April **18, 2016**.
(Brock Vergakis)



American Elm at Elmwood Cemetery Norfolk

FINES & TRANSGRESSIONS



Transgressions

Topping, improper or unapproved pruning and/or other damage (graffiti, carving, root pruning, etc.) caused to any City tree as assessed by the City Forester is considered a transgression. If the tree needs to be removed because of these transgressions, the property owner shall be responsible for removing the tree(s).

For more info

<https://www.norfolk.gov/DocumentCenter/View/23107/Norfolk-tree-mitigation-standards-2015?bidId=>

Parks & Urban Forestry Operations

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Forms

If you have a request for work that involves trees within the Public ROW fill out the form found on the Parks & Forestry Page.

<https://www.norfolk.gov/1224/Parks-Urban-Forestry>



See the Considerations section on [page 15](#) for Public Right-of-Way definition and location.

Fines

Damage to plants can cost you **\$150.00 to \$500.00** per tree & shall be guilty of a class I misdemeanor.



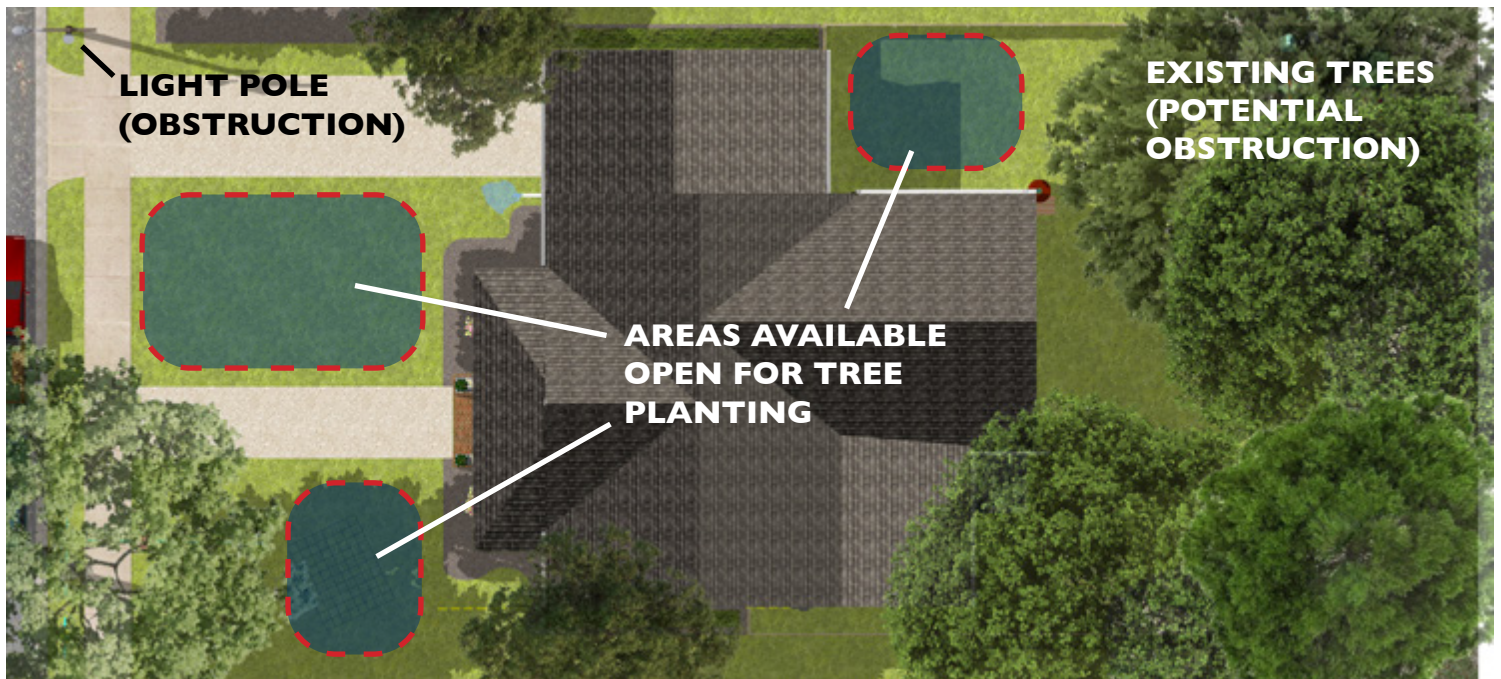
EXAMPLE OF TOPPING

CONSIDERATIONS

Poorly located trees are doomed from the beginning, no matter how carefully they are planted. Look for obstructions that the tree will be in conflict with as it grows tall and wide. This will avoid costly repairs or tree removal in the future. The following are common reasons to be mindful of location.

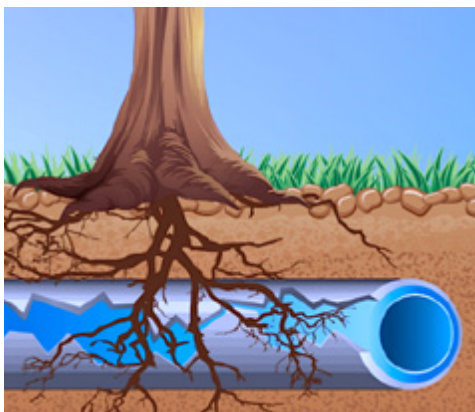


- Power lines
- Property line
- Foundations
- Roofs
- Sidewalks
- Utilities
- City Code
- Neighborhood Associations
- Local Watershed Regulations



Underground

Tree roots continually seek out water and nutrients as they grow. Underground sewer and stormwater pipes with cracks or holes can become clogged over time.



Ground-Level

Large species of trees can grow large trunks and large roots that can bulge sidewalks and crack house foundations.



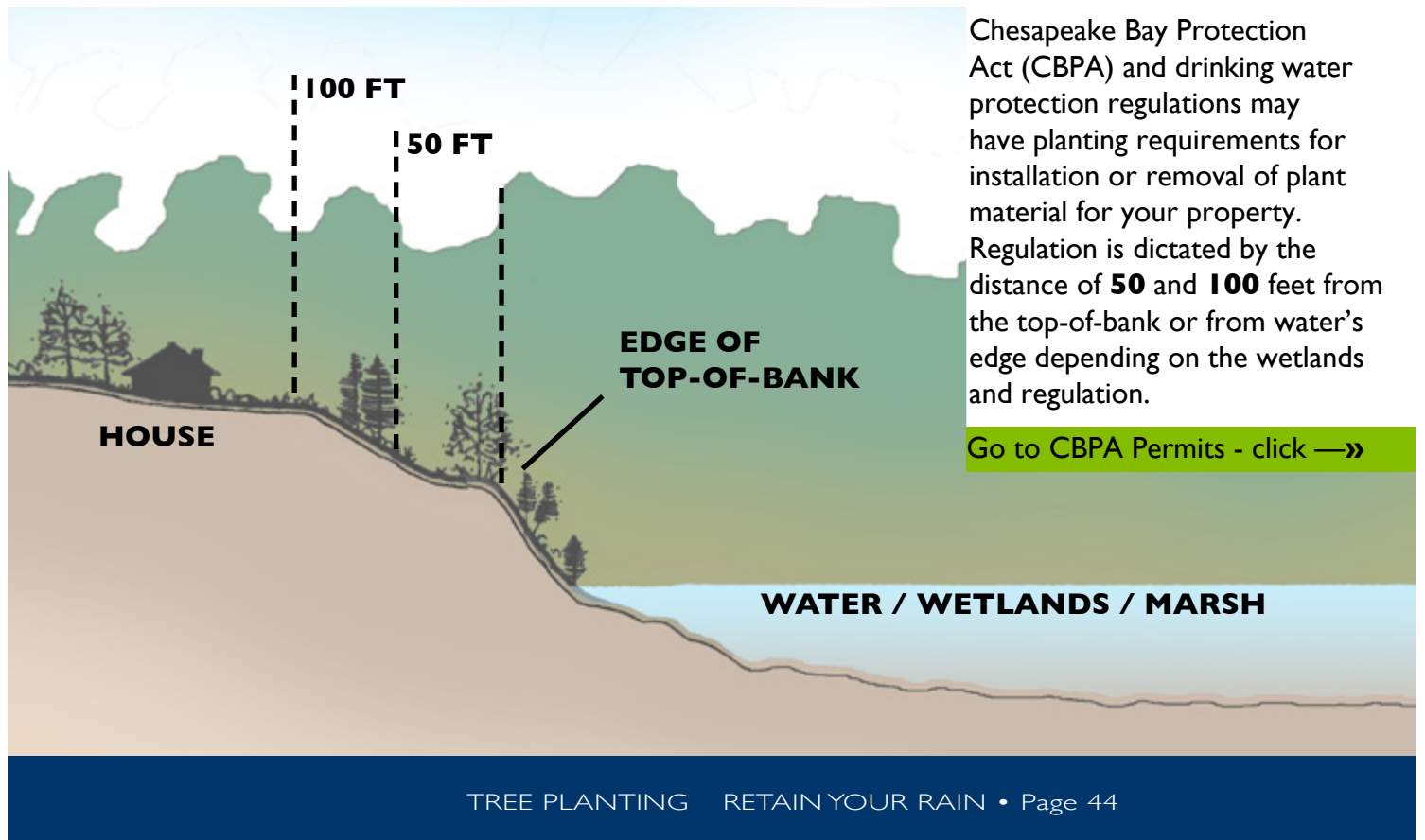
Overhead

If the tree selected grows tall into overhead structure or cables it will likely be subject to topping damage and weakened structure.



Proximity

Trees have a variety of canopy types from narrow to wide. How close to a house, structure, or utilities should be considered when selecting a tree's location. Select the right tree based on its estimated mature size to ensure there is space for it to live long and flourish.



GETTING STARTED

Trees are ideally planted during the dormant season, which is in the fall after leaf drop or in early spring before budding. Trees can be balled and burlapped or they can come in containers. Proper site preparation, handling, and follow-up care will help to promote health and growth from transplanting.



DO IT YOURSELF (DIY)

If you intend to perform this work yourself, see the lists for general tools and materials you may need to help you get started. Note that larger trees may require help and more time to plant.



Tools & Materials:

- Personal Protective Equipment (PPE)
- Paint for marking the ground
- Shovel
- Wooden or metal stakes
- Wire or tree ties
- Rubber tubing (protect tree from wire)

- **2 - 3** wooden stakes or metal fence post
- Rubber tubing (protect tree from wire)
- Wire cutter
- Hammer or mallet
- Mulch
- Tree(s)



HIRE OUT THE WORK

Contact a [CBLPro](#) licensed and bonded landscape or site contractor. Prices will vary on amount and size of the trees to be planted.



SPECIALTY ITEM

Special tree varieties can be ordered Online and usually come as wips or bare root saplings.



MAINTENANCE

Seasonly

- Remove grass and weeds from mulched area.
- Adjust stakes and wires to allow tree growth.

Yearly

- Before applying new mulch, stir up the existing compacted mulch with a rake or similar hand tool. This will ensure proper gas exchange and allow

moisture to access the root-ball.

- Mulch should be maintained at a **2-3** foot radius, **2-3** inches deep, and **2-3** inches from the trunk of each tree.
- Remove mulch in excess of **3** inches thick.
- Prune out dead, damaged, & diseased limbs.
- Prune limbs that hang into walkways or are brushing against structures.

- Remove stakes and wires **1** year after planting.



TREE SELECTION

Consider selecting a tree as a lifetime investment that will provide beauty, privacy, and value to your property. The growth of the tree, and investment, depends on the care you provide it. Following the tips and instructions provided will ensure years of enjoyment and value.

A tree can come in one of four forms:

- Bare-root (deciduous plants only)
- Balled & Bur-lapped (B&B)
- Container-grown (most common)
- Containerized

When to Plant

Tree planting can take place year-round if properly cared for and watered. The ideal season is during the dormant season in the fall after leaf drop or after the last frost in early spring before bud-break. Do avoid planting in the hottest days of



TREE FORMS

summer as heat stress and water demand is high in turn reducing chance of survival. Have a spot picked out beforehand as you will need to plant your newly purchased tree as soon as possible.

How Much Sun

The shade from deciduous trees planted on the east or west sides of a house can help to keep your house cooler and conserve energy in the summer. Because deciduous trees lose their leaves, they will let in the sun to warm your home in

the winter. Conifers can provide a wind screen in the winter. Tree selection may be noted for locations that are dryer or remain wet longer than other areas. Go to your site in the morning and then again in the afternoon on a sunny day to properly categorize it. These are the categories you can choose from to describe your site:

- Full sun: **6** hours or more a day
- Partial sun: **4** to **6** hours a day
- Shady: Fewer than **4** hours a day

See the Plant List - click —»



Area Needed For Planting

- Bare-root - **12** to **16** inch wide hole (or depending on root size)
- B&B and Container - **2** to **3** times the width of the root ball or container.



Deadly Combos

Planting the root-ball above ground level and then mounding mulch promotes shallow rooting into the surrounding soil. This results in:

- Stunted tree growth

- Increases chance of mechanical, pest, and fungus damage to roots.
- Creates a poorly anchored tree that may fall in maturity incurring addition financial cost and lost benefits.

HOW TO

Once you have selected a location and a tree from the list that will grow to a mature size and not be an obstruction in the future you are ready to proceed. Planting can be accomplished by the homeowner, volunteers, or a landscape contractor.



- Check local codes and permit requirements

Step 1: Assess & Mark

Once you have selected the type of tree and where you want to plant it, use with white paint to mark the location. Then call **811** before digging.

Step 2: Preparation

Dig a hole **2-3** times as wide as the root ball but not deeper than root ball.

- Take care NOT to break up root-ball.
- Tap lightly on sides and bottom to remove tree from container.
- If wire is present remove sections from top of burlap ball.

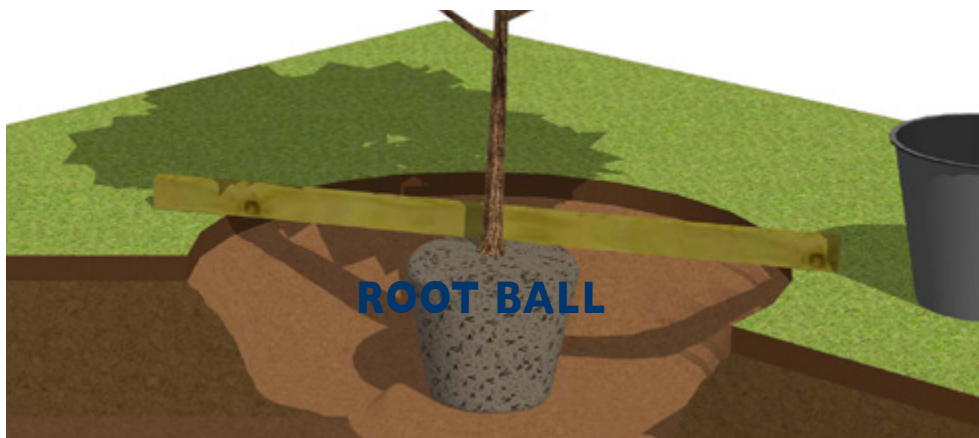
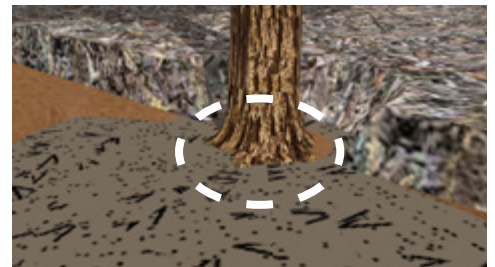
Pro Tip: If root-bound, cut an X across the bottom of the root ball and four vertical slices along the sides of the root ball with a sharp knife.



A ROOT-BOUND TREE



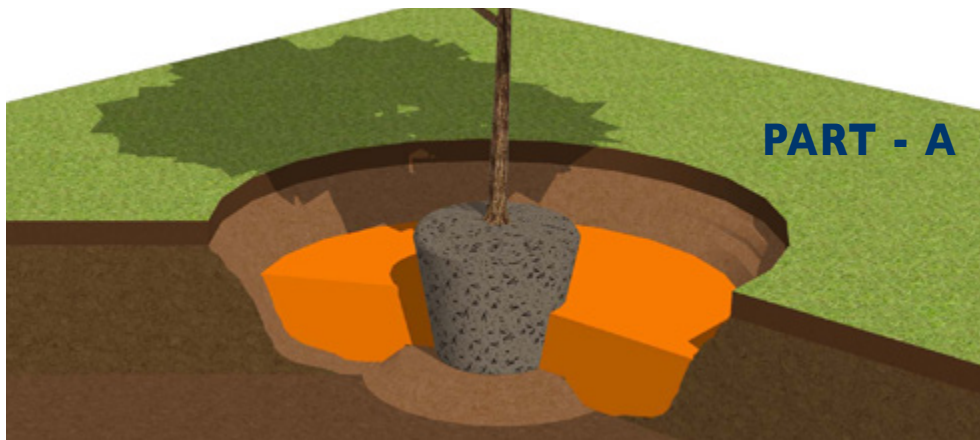
ROOT-FLARE OF A TREE



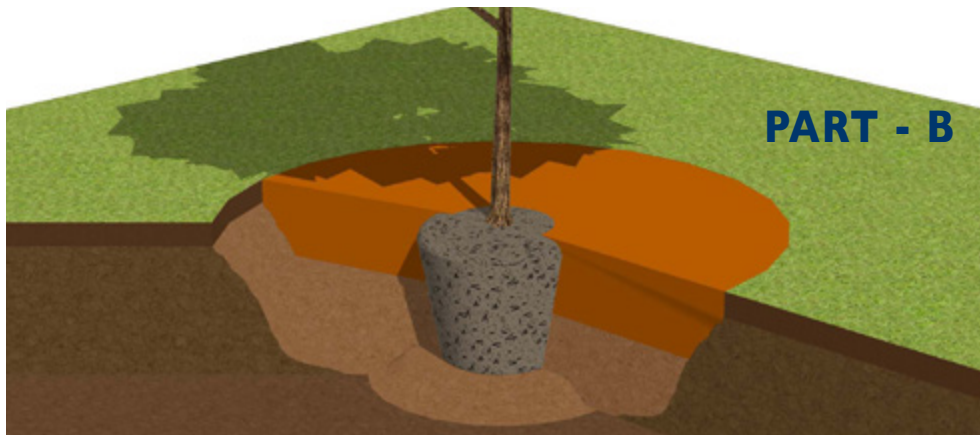
USE A BOARD TO LEVEL

Step 3: Placement

- Place tree in middle of hole.
- Fill bottom of hole to elevate root-ball.
- Use board to ensure root-flare is at ground level.



FILL HALF-WAY AND LIGHTLY PACK SOIL



FILL REMAINDER AND LIGHTLY PACK SOIL

Step 4: Fill

- Use original soil.
- Fill $\frac{1}{2}$ of hole and lightly pack
- Fill Rest of hole
- Cover root-ball with $\frac{1}{2}$ inch of soil and level remaining soil around tree.

Pro Tip: Remove strings, wire, or rope that is wrapped around the tree trunk. These will eventually strangle and kill your tree as it grows. This is called Girdling.

Step 5: Mulching

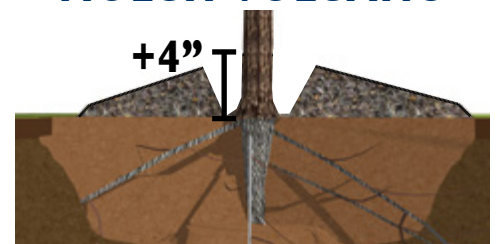
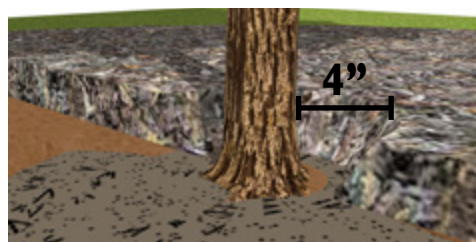
Use mulch to make a ring around the base of the tree **2-3** inches deep. (Takes about **2** bags of wood mulch)

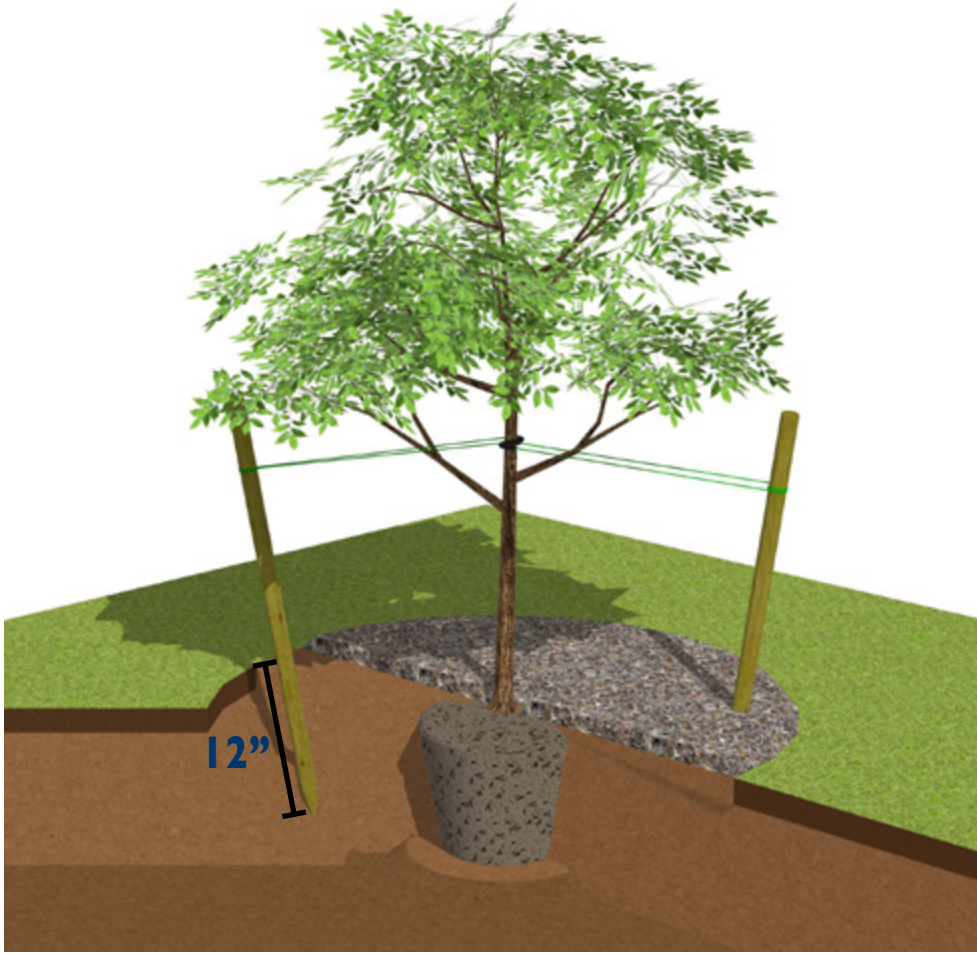
- Do not use plastic or fabric as a mulch.
- Use organic materials or natural colored rock.



MULCH VOLCANO

Pro Tip: Prevent mulch volcanoes (mulch piling up against the trunk) by keeping mulch **4** inches away from root flare to prevent disease and insect damage.





Step 6: Staking

NOT always necessary to stake - only use stakes if you find that the tree is in a highly trafficked or windy area - or if you find that it needs extra support and is leaning.

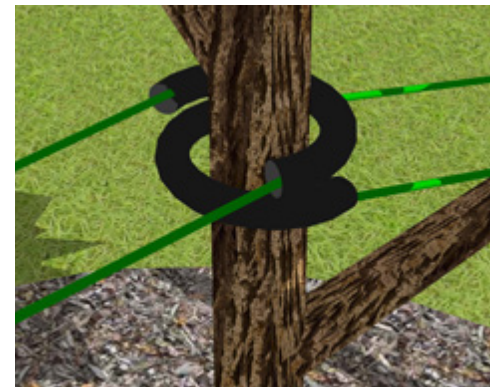
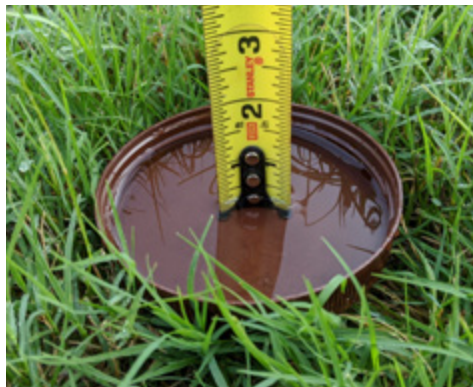
- Use **2** or **3** stakes that are at least **6** feet long
- Arrange stakes at locations **12 & 6** or **10, 2, & 6** in a triangular arrangement.
- Drive stakes at least **12** inches deep
- Tie nylon rope or wire from the stake to the mid-section of the tree (**do not over tighten** - some slack is needed for tree to sway and grow stabilization roots)
- Remove stakes after one year max

Pro Tip: Use old garden hose or other soft rubber tubing to protect the bark from the tree tie.

Step 7: Watering

When dry, apply **3-5** gallons of water **3** times a week for first month, twice a week for the next month, and once a week for the rest of the growing season.

- Reduce to **1-2** times a month for second growing season. If drought conditions are present, apply water once a month through the third growing season.



For more detailed information on trees see VCE Publications:



https://www.pubs.ext.vt.edu/tags.resource.html/pubs_ext_vt_edu:trees-shrubs-groundcovers

The following VCE articles are specific to this Home Project:

- How To Plant A Tree - HTML SPES-**226NP**
- Planting Trees - PDF Publication **426-702**
- Tree & Shrub Planting Guidelines - PDF Publication **430-295**

Project Completion!

To return to the Table of Contents - click —>>

