



Proper Tree Planting



**GA State
Wide Arbor
Day**

Feb 8th, 2023

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**Georgia
Forestry
Commission**



Why Do We Often Plant?

- **Beautification**
- **Aesthetics**
- **Because it “feels good”**
- **It’s “just what you do”**



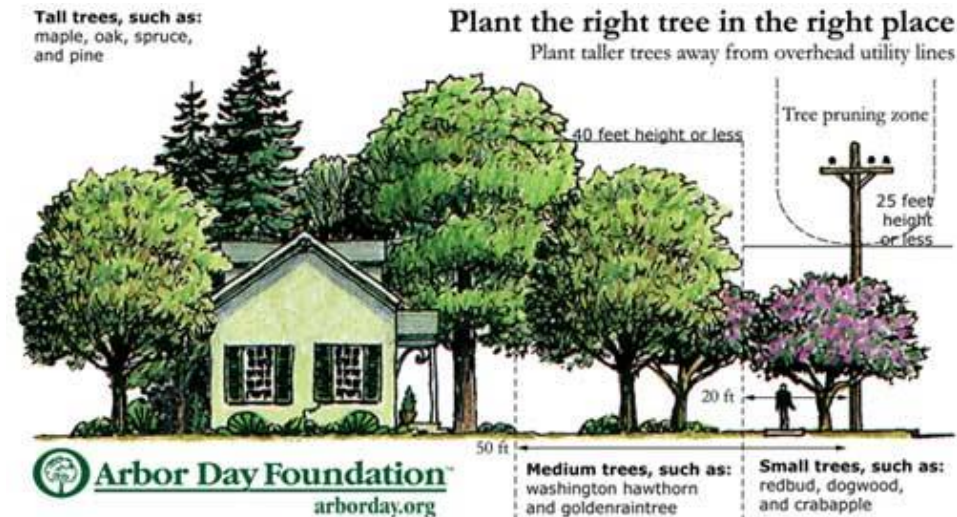
Why Should We Plant?

- Replacement of lost canopy
- Ecosystem services
- Mitigation of impervious surfaces issues
- Sociological and socioeconomic benefits
- **PLANT WITH A PURPOSE!!**



Tree Selection

- What comes first—species or site selection?
- Consider the following when selecting a species/site
 - Available space
 - Soil conditions including soil moisture
 - Light conditions
 - Future development plans





Available Space

- **Consider**
 - Presence of overhead and underground utilities
 - Presence of hardscape
 - Amount of soil volume/area available
 - 640 Sq Ft for Large, 400 for medium, 200 for small
 - Pedestrian traffic
 - Vehicular traffic
- **DO NOT PLANT ANYTHING BUT A SMALL MATURING TREE BENEATH OVERHEAD UTILITY LINES**



Plant Right Tree Right Place!



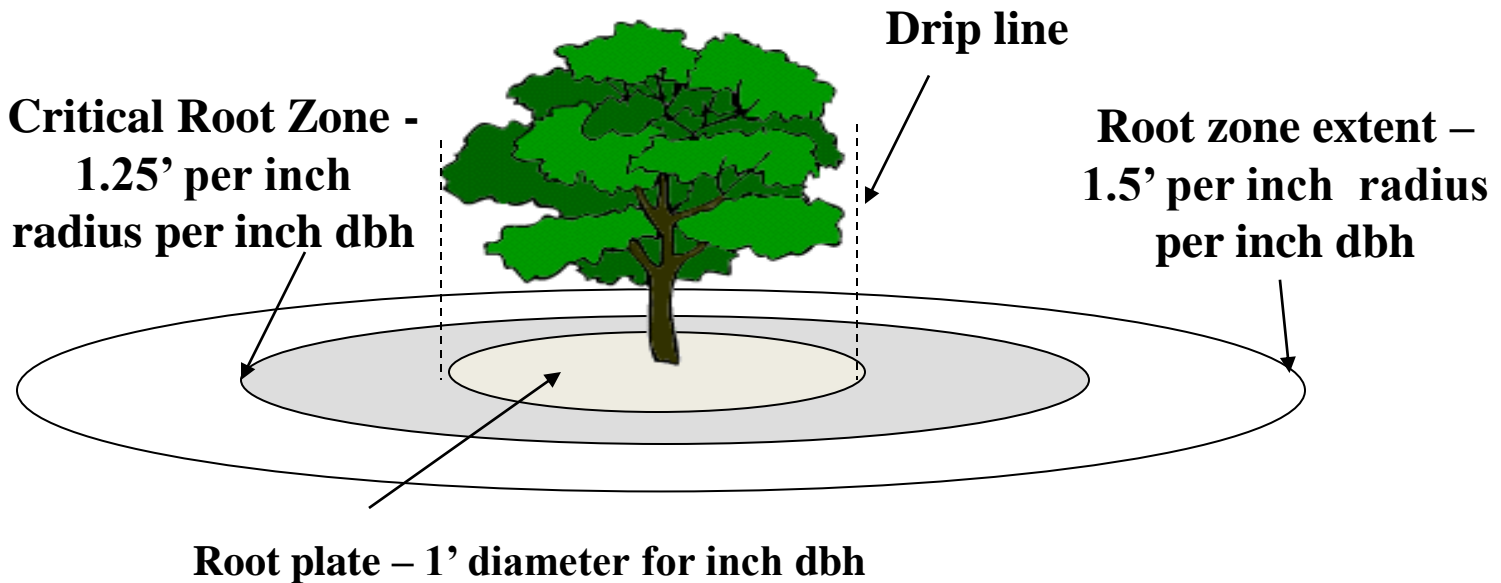


Available Space

- **What does it take to make a tree sustainable**
 - **Overstory tree: 960 cubic feet of soil volume with 640 sq.ft of open soil surface area per sq. ft. of basal area**
 - **Midstory tree: 600 cubic feet of soil volume with 400 sq.ft of open soil surface area per sq. ft. of basal area**
 - **Understory: 300 cubic feet of soil volume with 200 sq.ft of open soil surface area per sq. ft. of basal area.**

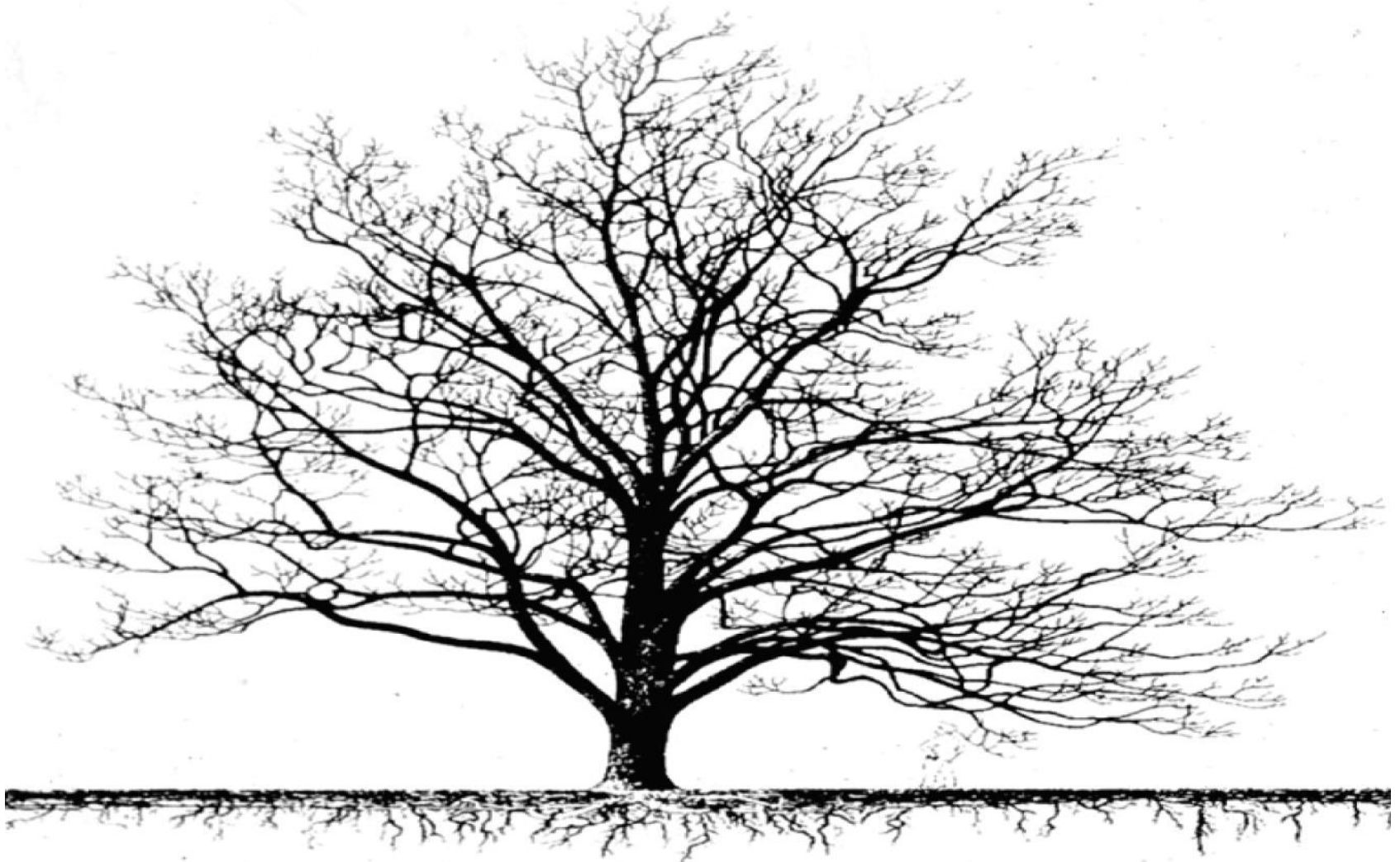
Available Space

- **Map out mature root zone areas**





Radial Root Growth





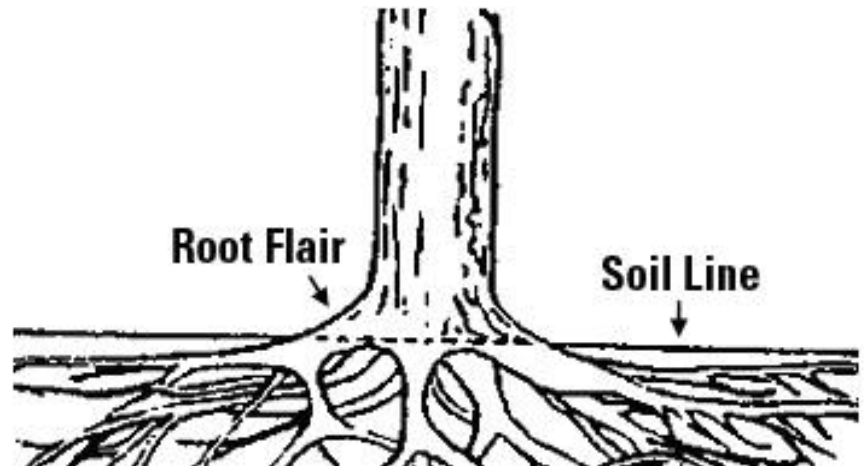
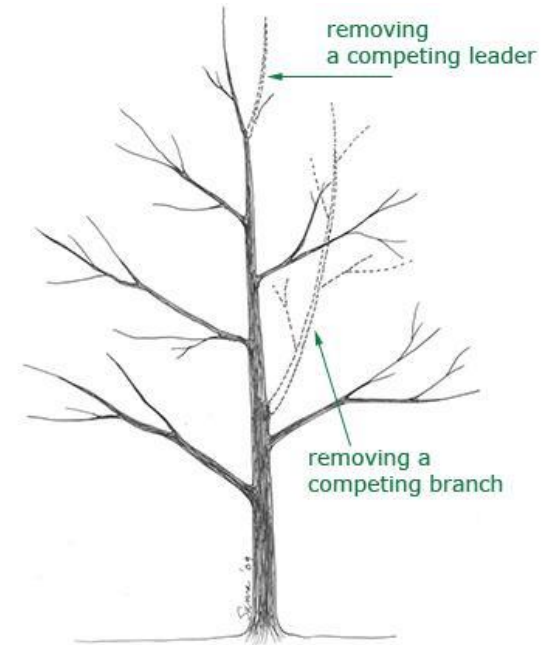
Species Selection

- **Sunlight and shade tolerance**
- **Drainage requirements**
 - While some trees can grow in inundated conditions, most prefer well-drained soils
- **Soil fertility**
 - Get a soil test, especially for large-scale plantings
 - Fertilization should be done carefully in intervals, fertilization usually not needed during early establishment period



Specimen Selection

- **ANSI Nursery Stock Standards**
- **Don't choose a tree with broken branches, diseased or discolored leaves or cracked bark**
- **Know your audience/volunteers and what they can handle**
- **Don't select a tree just because it is a bargain**
- **Don't expect a substandard tree to do well in the landscape!**



Site Preparation

- **Check out compaction level**
 - The more compact, the wider the planting hole
- **Do a basic “perc test”**
 - If soil is poorly drained, consider another location
- **Soil Test**
- **Call 811**
 - Ideally plant large trees >15 - 20 feet from underground utilities, small trees >10 feet





Unloading and Handling

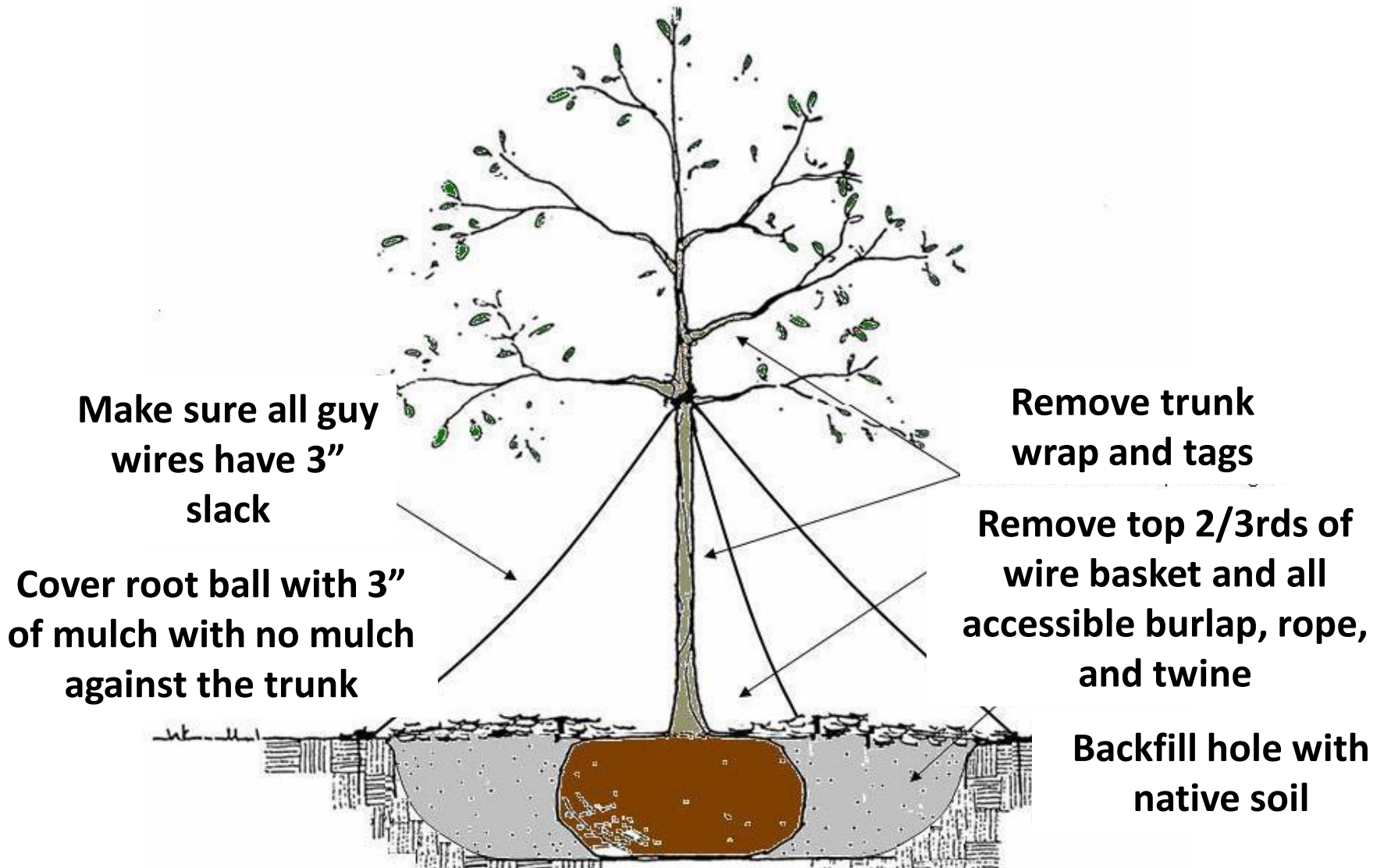


This is where a good relationship with the nursery is so important

Do not accept delivery of mishandled trees!



Planting B&B



Hole 3 times diameter of root ball, even wider in heavy clay soils



Avoidable Problems



2/3rd of wire baskets, strapping, twine, and burlap should be removed from root balls during planting.

Make sure root flare is exposed by removing excessive dirt around trunk

Planting Container

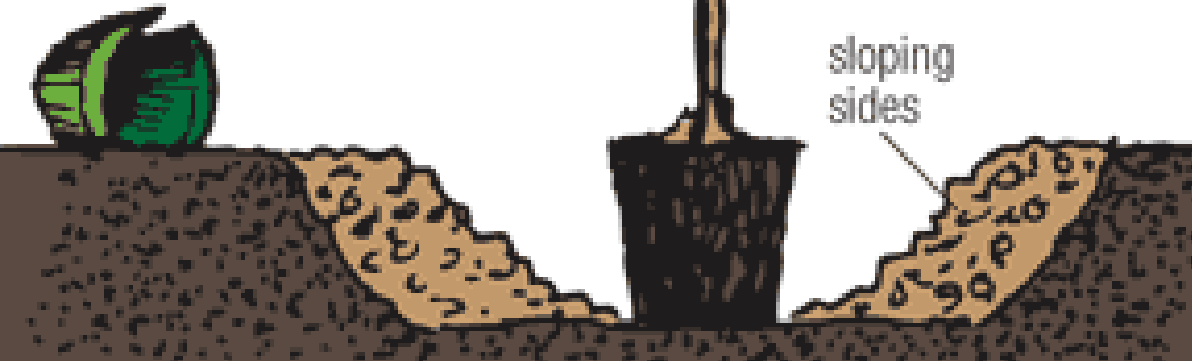


Cut an "X" across the bottom of the root ball and 4 vertical slices, if root-bound.



3 to 4 times wider than container

sloping sides



- Same principles as B&B, just extra focus on the root ball

Check for Girdling Roots



- **Cut girdling roots when they are small**

Check for Girdling Roots



- **Plant at proper level (not too deep) and do not over-mulch**



Check for Girdling Roots

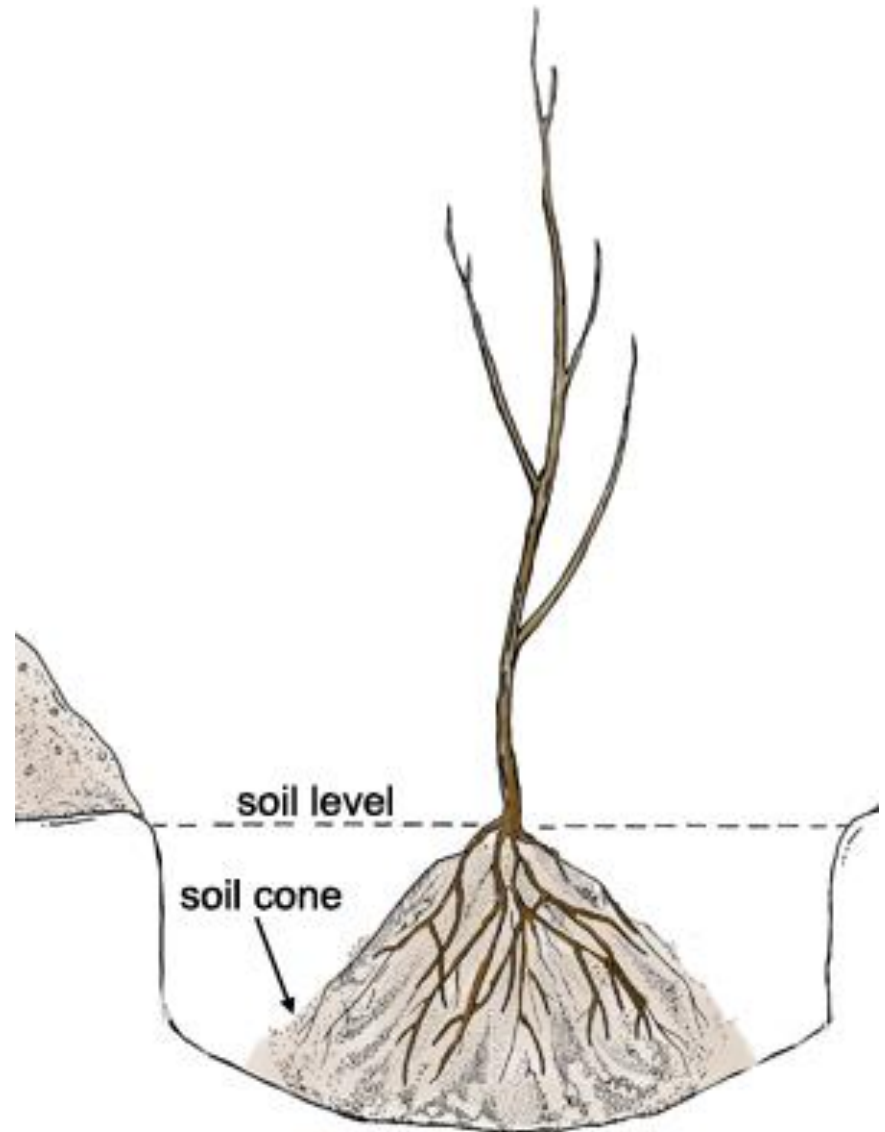


- **Girdling roots can result in tree decline, or worse...**



Planting Bare Root

- Typically smaller stock, but great root systems
- Great for volunteers, but sometimes fragile to urban stressors
- All the same principles apply, make sure root flare is at/above grade, hole is 2-3 times as wide as root system
 - REMOVE GRASS AROUND
- More commonly needs staking





Watering New Trees is Critical!

- **Determine how you will water**
- **Regular watering begins on the day of planting**
- **Continue watering throughout the growing season, until leaf fall (late October)**
- **Water weekly in the absence of sufficient rain**
-“sufficient” is relative to soil and grade
- **Water should penetrate to a depth of at least 8 inches**
- **Do not keep the soil saturated**

Watering Aids

Treegators, Ooze Tubes, Tree Diapers, or buckets with a small hole in the bottom can be used to water trees slowly without runoff.

Remove after the first growing season as feeder roots have grown outside of watering aid zone.





The Purpose of Mulch

- **Recreate natural growing conditions**
- **Retain moisture**
- **Suppress weeds**
- **Maintain cooler soil temperatures during the hot months**
- **Improve soil texture**
- **Increase soil fertility**
- **Reduce soil compaction over time**



Volcano Mulch

Encourages the formation of stem girdling roots which results in tree decline.

Can cause an “eruption” of issues...



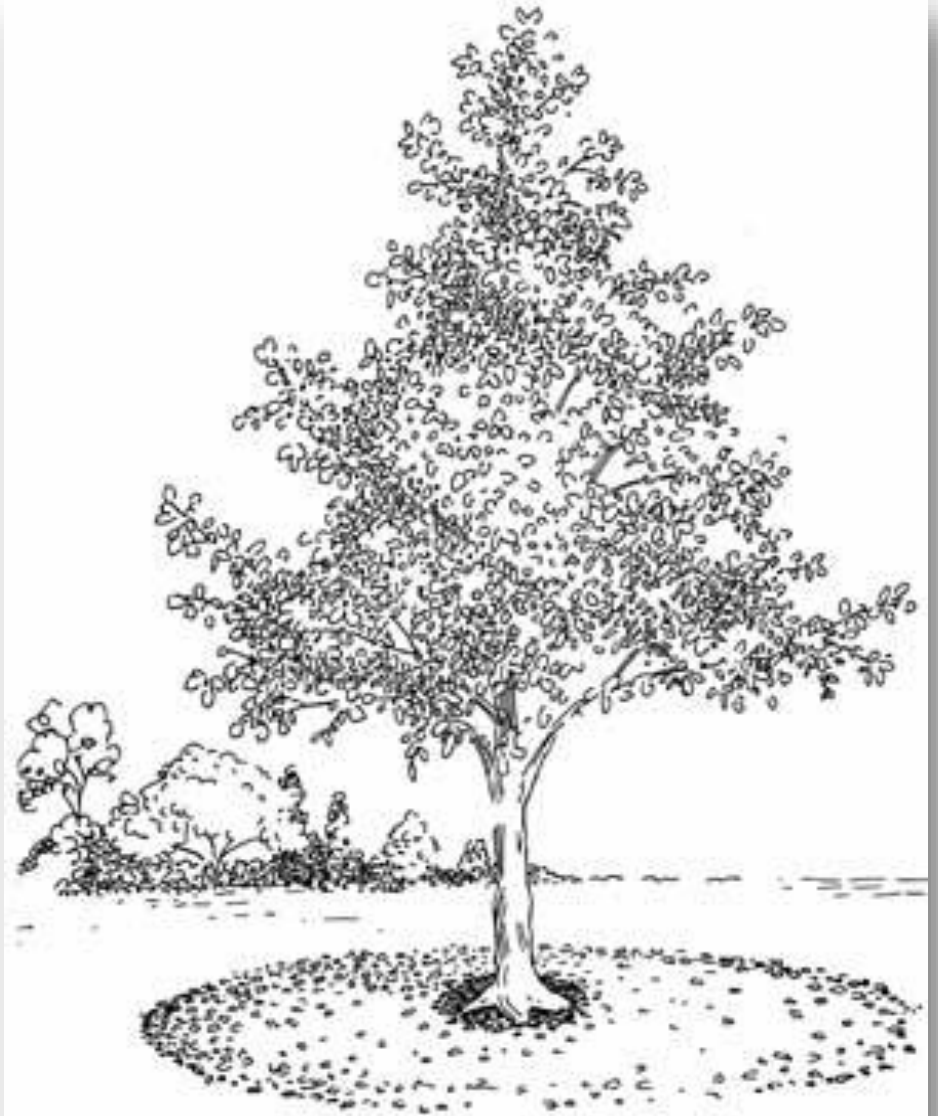


"Mulch volcanoes" cause many problems for trees.

NO



YES



Mulch wide—not deep.



Stake Trees Only When Necessary



**Remove stakes,
guy wires and
straps if trees
were staked.**

**All strapping
materials should
be removed
after the first
year.**



Avoidable Problems



- **Trunk wounding**
- **Mowing equipment**
- **Root damage**
- **Improper pruning**
- **Chemicals, fertilizers**



Long Term Survival

Caliper inches at planting = Years of establishment

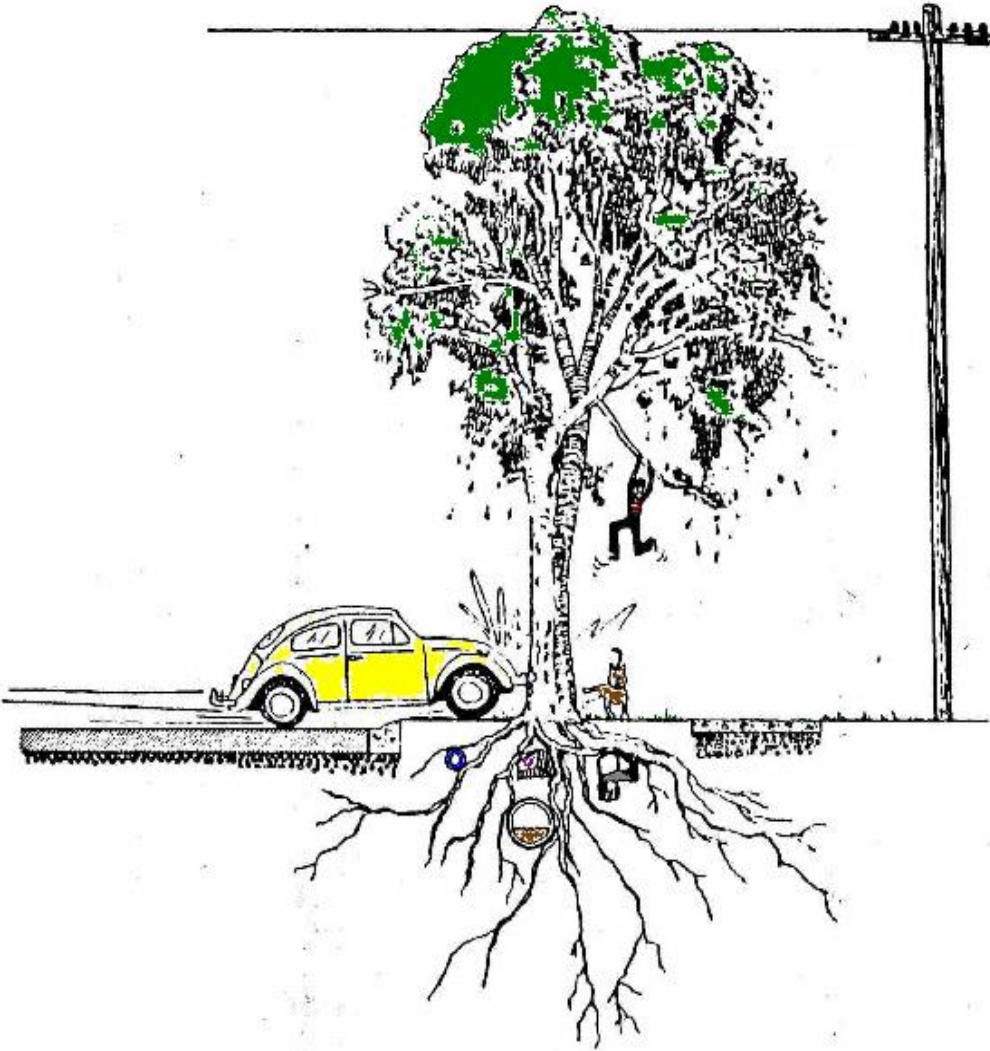
- Watering, structural pruning, root protection

Recreate Natural Growing Conditions!!

**Adapting tree selection and watering plans to
changing weather patterns**



Questions?



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Gatrees.org

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