



The City Arborist Program

Tree Preservation and Replenishment



Tree Watering for Distressed Trees

The exceptional drought central Texas has experienced this year is taking its toll on Austin's trees. Many trees are showing signs of drought-related stress such as branches dying and leaves wilting, turning brown, or dropping early. Generally, healthy trees can successfully tolerate drought conditions, however newly planted trees, trees impacted by development, or trees experiencing problems with pests or disease have higher risk of decline. Supplemental watering of these trees is encouraged until the rain begins to fall more regularly.

Following are some tips on watering trees. Along with these tips it is important to keep in mind the water conservation guidelines that the City may have during various stages of drought. Please see the City of Austin Water Conservation website for more information: <http://www.ci.austin.tx.us/water/conservation/> .

Tree Watering Tips

How often to water? Distressed trees should be watered at least once every two weeks after the last significant rainfall.

When to water? If you water the tree with a hand held water hose, you can water any time on any day. You can water before 10am on your watering day with an irrigation system, and using a hose end sprinkler you can water after 7pm on your watering day.

How much water? This general guideline can be used to determine how much water your tree needs.

- For each inch of trunk diameter (width across) measured at knee height, the tree will need about 5 gallons. A 12" tree, then, would need about $5 \times 12 = 60$ gal of water.

Time: When you hand water using a hose at medium pressure, it will take approximately 2.5 minutes to produce 5 gallons of water. For example, a 10" diameter tree should have a total watering time of $10" \times 2.5 \text{ minutes} = 25 \text{ minutes}$.

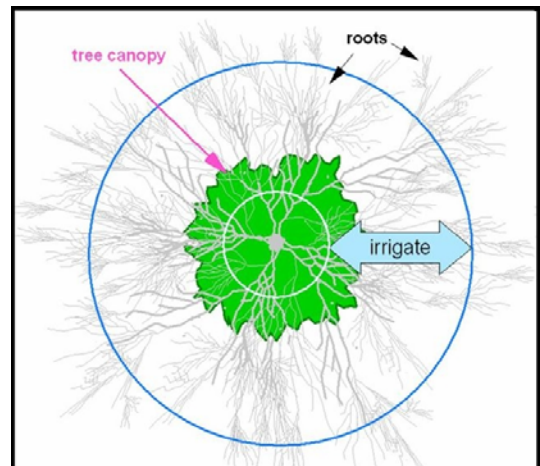
Adjust the watering time according to the method of application. Using a drip or soaker hose will take significantly more time to release 5 gallons of water than an open hose at medium pressure. Consider performing your own experiment at home to determine your application rate! Feel free to email us with your results.

Methods of watering: Slower application rates are always recommended. This can be accomplished by any of the following methods.

- Use a slow drip out of an open ended hose or spray nozzle
- Use a soaker hose
- Use 5-gallon buckets or water bottles with a few ¼” holes drilled into the bottom. Fill these with water and place the over the roots of the tree.
- Deep watering, well below the soil surface is recommended. Use mulch or small berms on slopes, heavy soils (clays), and compacted soils to assure water is soaking in and not running off onto paved surfaces. Do not let water pool up. Be sure to establish a personal reminder (i.e. tie a string around your finger or use a timer) so that you do not forget that you are watering your tree.

Where do trees need water? Try to water the soil area that is directly beneath the foliage and shaded by the tree (under the drip-line).

- Young trees that have been in the ground less than two years have under-developed root systems, so concentrate water near the planting area.
- Old, large trees should be watered within the root zone shown in the diagram.
- Avoid Water Run Off- The ground may be hard, so you might need to modify your watering approach to allow water to soak in towards the roots. Water run off does not help your trees, wastes precious water resources and costs you money.



How else can trees be protected from drought?

Mulching trees with a three to four inch layer of hardwood mulch conserves water and decreases the amount of water that evaporates from the soil, aids in water and air penetration, and cools the soil. Keep mulch six inches away from the trunk, because mulch mounded around the trunk can lead to trunk health issues. Fertilization is not recommended during a drought.

Regular maintenance that is designed to promote tree health and vigor ensures that their health and value will continue to provide benefits for decades to come. For more information about tree care visit: www.cityofaustin.org/trees.