

Watering Trees

During Winter Drought

Extension Solutions for Homes and Gardens

by Paul J. Pugliese

Lawns are replaceable. Annual and perennial flowers can be easily and cheaply replaced, but large trees killed by drought cannot be replaced; at least not within your lifetime. Trees are usually considered non-replaceable beyond 10" inches in diameter. When watering your landscape during a drought, even in a winter drought, priorities must be placed on high value, irreplaceable trees.

A La Niña watch has been issued by the Southeast Climate Consortium and the state climatologist of Georgia. La Niña conditions usually bring a warmer and drier cool season (October through March) throughout most of Georgia. With the arrival of La Niña, there is a good chance that drought conditions, currently ranging from exceptional across much of Alabama and Georgia will continue and possibly worsen throughout the winter and into next spring. This means that current watering restrictions will most likely continue throughout this winter.

When landscape watering is not allowed because of water-use restrictions, "gray water" could be used. Gray water is waste water from a household bathtub, shower, sink, dishwasher, and/or washing machines. Be sure to avoid harsh cleaning liquids such as bleach if you plan on reusing gray water. Also, water from houses with sodium-based water softener systems should not be applied to soils.

Dormant season watering during a winter drought is important, especially for evergreen trees and juvenile hardwood trees that have not lost their leaves. Because of lower temperatures and relative humidity, much less water is required in the dormant season, but water is still needed. Drought conditions can lead to tree decline, pest problems, and non-recoverable damage. Supplemental watering can greatly assist in maintaining tree health during droughts - both during the growing season or during the dormant season.

Trees should be watered once or twice a week if there is no rainfall. A few heavy waterings are much better than many light, shallow waterings. Light watering actually encourages shallow rooting and can lead to more severe drought damage to trees in the long term. Manually, the best ways to water trees are by soaker hose or trickle irrigation which you turn on and off. Even a garden hose set at a trickle, and moved often, can provide a good soil soaking. To determine how long to run a soaker hose, place the hose in a heavy duty garbage bag and run for one minute. Then, pour the water captured into a bucket to measure how many gallons per minute are released. Most trees need about 1" inch of rain per week to stay healthy.

Six gallons of water per 10 square feet soaks the soil about the same as 1" inch of rain. As an example, a tree canopy that covers 100 square feet (10'x 10') would need about 60 gallons of water. The best time to water is at night from 10pm to 8am. Trees relieve water deficits (refill) over the night time hours and less water is lost to evaporation. Do not water when the soil surface is less than 40°F, which is common for most of January in North Georgia.

Try not to concentrate water at the base of the trunk as this can lead to pest and disease problems. Lay-out water hoses or applicators out to the tree crown edge (drip-line). Try to water the soil areas directly beneath the foliage and shaded by the tree. Do not water beyond the drip-line and do not water closer than 3' feet to the trunk base on established trees. Be sure the water soaks in slowly and deeply. Do not spray tree foliage when applying water and try not to wet the trunk if possible. Water droplets on tree leaves can lead to pest problems.

Many plants in a small area can compete with trees for available water. This water competition can be severe to trees. Minimize excess plant competition and lawn grasses from around trees to decrease water stress. Use mulches such as pine straw or shredded wood to conserve water, protect tree roots from lawn mower/weed eater damage, and prevent weed competition. Remember, trees are investments that cannot be replaced and add significant monetary and aesthetic value to your property.

For more information on watering trees, please visit <http://www.caes.uga.edu/publications/>. Paul Pugliese is the Agriculture & Natural Resources Extension Agent for the Cherokee County Cooperative Extension Service, a partnership of The University of Georgia, The U.S. Department of Agriculture, and Cherokee County. (770) 479-0418 <http://cescherokee.org/>

