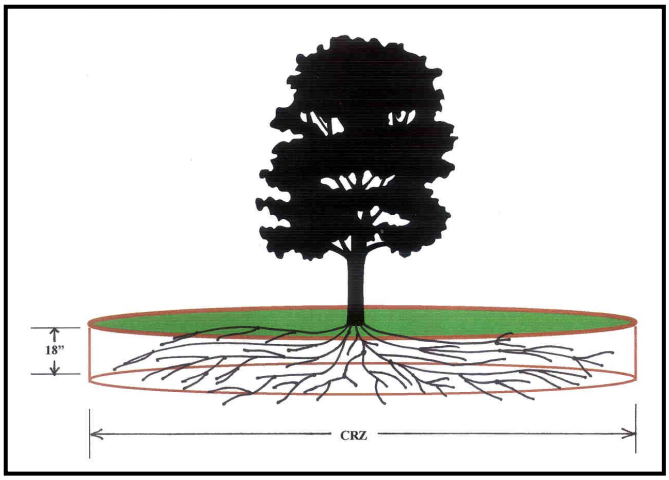
CITY OF THORNTON

Forestry

How to Efficiently Water Your Tree

Tree Roots

In order to better understand how to water a tree, we need to understand where tree roots reside in the soil. Ninety percent of tree roots, in Colorado, are in the top 24" of the soil. Of that number, a high percentage of roots are in the top 12". These roots include adventitious roots and structural roots. If we are going to water trees, we need to get water down as deep as we can.



The extent of tree roots is dependent on the size of the tree. For a newly planted tree, the root system is no larger than the root ball or container it came in. For a large tree, the root can extend a great distance. In general, for most trees, the height of the tree can be an indication of the root radius.

Critical root zone (CRZ) – this zone includes the structural and adventitious roots for a tree. This can also be used as a guideline for watering trees. For most trees, the CRR is expressed as the trunk diameter multiplied by 1.5 and expressed in feet. For an 8" Green ash the formula would be – 8" x 1.5 = 12' radius.

In Season Watering (April – October)

If the tree is planted in a lawn area, it will most likely survive based on the amount of water applied to the lawn. However, it is highly recommended that additional water be applied. For pines, spruce, fir, maples, oaks and ash tree species, add 5-8 gallons of water per 1 inch of diameter per week, especially during the months of June – August.

If the tree is planted in mulch or rock areas, apply water at a rate of 5-8 gallons per 1" of trunk diameter.

Off Season Watering (November – March)

Where ever the tree is planted, lawn area, planter bed or mulched area, apply water at a rate of 8-10 gallons per 1" of trunk diameter, once a month from October through April.

Note—the information above is provided as general recommendations and information. Since each tree species has different water needs, it is helpful to frequently watch the tree's response to supplemental water.

Tree Watering Devices*

***Before watering a tree, check the moisture content of the soil with a long screwdriver or similar probe. With some experience, you will begin to tell when there is a need to water a tree. Typically we are looking for moisture at 1' - 2' deep.

Root Feeders - the most common device used to water a tree is with a root feeder. The root feeder includes a handle connected to a perforated tube. It is attached to a garden hose. The feeder is inserted into the soil to the desired depth, then turned on. Water is forced through the tube perforations into the adjacent soil.

Hose End Sprinkler – an easy to use device commonly found in hardware stores. Attach it to the end of a garden hose and set it next to the tree. Before turning on the water, put the sprinkler in a 5 gallon bucket and time how long it takes (minute) to get 5 gallons. Move the sprinkler around to cover the root system.

Gator or similar device – these devices slowly emit water at the base of the tree.

Bucket method – another good way to water a tree. Get a 5 gallon bucket and poke 6, 1/8" holes in the bottom. Set the bucket around the tree root zone, fill it with water and let the water seep into the soil.