

How to water a tree
in drought.

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Step by Step watering



Watering metrics

The watering process is determined by 3 different factors.

SEASON - SIZE - HEALTH

- The Season effects how frequent you are going to water. (How many times a week)
- The Size effects how much water you are going to put down. (How long to leave hose running)
- The Health effects the duration of your watering. (How many months you are going to water)

In general, an unhealthy large tree may needs 1 and 1/2 years of watering. Watering provides nutrient uptake and allows for cooling of the leaves for proper photosynthesis and photosynthate production.

The conversion and respiration process takes time. An example... aggressive watering for a big tree in decline during hot months would be leaving a hose trickle by the tree overnight 3 to 4 times a week. The least aggressive for a small tree in winter would be leaving a hose tickle for 4 hours 1 time a week. Find your balance in between and base it on the 3 factors Season, Size and Health.

In time your tree will begin to show signs of vigor provided there are not other stressing factors involved. Do not expect response in 3 months, most times it will take a year.

Always remember to never water in high wind conditions.

As go the roots so go the shoots

A photograph of a forest floor. In the center, a tree trunk with rough, textured bark stands vertically. The ground is covered with a mix of green plants, small ferns, and fallen brown leaves. Sunlight filters through the trees, creating dappled light on the forest floor. The text "As go the roots so go the shoots" is overlaid in white, underlined font at the top left.

Soil stress in an Urban Environment

While Trees in a forest grow in a communal environment, urban trees do not share in the same benefits.

Urban trees have a higher likelihood of....

1. Poor root structure due to cultivation.
2. Increased spacing creating soil stress.
3. Unnatural selection reducing defenses.
4. Toxic pollution.
5. Mechanical damage.
6. Reduced canopies.
7. Decreased uptake due to hardscaping.

Drought conditions effect every tree, even an established tree is not exempt from the consequences. While short term effects may be microscopic to measure, long term or repeated droughts will be the undoing of a healthy, established, urban tree.

Does your tree need water?

Factoring your "season - size -health" metric is required to answer this. Every tree, while effected, may not need supplemental watering.

Over time learn your tree, just as parents learn children. Trees too have individual personalities. Looking at your tree often is the first step. Inspect visually for curling of leaves, burning of the tips and discoloration, these may be signs that your tree is in need of water. The second step is touching your foliage. Feel the the leaves for texture, hydration and flexibility. If a tree is shedding leaves from the interior it is most commonly drought stress.

How to water a tree

1. Watering a tree based on the season - size - health metric is always required. Once this is established you can use some simple techniques to distribute the water.
2. Hose trickling is the best method of penetrating the soil. A weight of water (100gallons) applied to a 1 square inch entry point, penetrates and permeates better than market driven accessories.
3. Water over night. Water in the soil becomes available to a tree after run off (penetration) in capillary spaces. Trees require pore space which has returned by morning allowing for maximum uptake as stomata open. Evaporation is also reduced during night watering. (2am ideal, a hose timer is a simple solution)
4. Water alternating locations close to the tree and forget the doctrine of "watering the drip line". The most condensed area of small fibrous roots is located in the root ball. As buttress roots extend, the apical meristem region also extends, causing the length of the root to provide less absorption. The drip line is not the stopping place for the outer ends of the roots and each tree has different root lengths based on micro climates and tree genome.



5. Do not water a tree forever or in high wind conditions. 2 negatives may effect your tree... root dependency and tipping over.
6. After determining the amount of water your tree requires measure a 15 minute trickle out of your hose in a measuring bucket. Multiply X4 to get hourly flow rate and then determine how many hours you need to water to reach your desired volume.
7. Mulch your tree. 6 inches of mulch is desirable and the larger your mulch Circumference the more you help your tree.