

Supplemental Watering

The amount of water a tree needs depends on many factors, including the age, health, species, time of year, weather, and soil type. But during extended periods of [drought](#) and/or in certain compromised states, supplemental watering is imperative.

The goal is to provide just enough supplemental irrigation to maximize growth on young trees and to keep older, established trees healthy. Excessive watering can make a tree dependent on irrigation rather than resilient enough to survive on what nature normally provides. Thus, we don't want to water so much or so often that we encourage more canopy growth than the soil, climate, and tree species can support during normal rainfall years.



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Watering Newly Planted Trees

For the first several months after planting, most of a tree's roots are still within the original root ball, with some roots beginning to grow beyond this area. The root ball and the surrounding soil should be kept evenly moist to encourage healthy root growth. After a few months, expand the watering zone to cover the entire area under the canopy. **It can take two or more growing seasons for a tree to become established — for roots to venture into the soil well beyond the planting hole. It's vital to provide supplemental moisture in those early years, if nature doesn't provide regular soaking rains.** During hot, dry weather, new trees may require water as often as three times per week to ensure that the root ball doesn't dry out.



Once a tree is established, apply water in a wide band around the outer reaches of the tree's canopy, called the dripline.

Watering Established Trees

It's a common misconception that a tree's roots are a mirror image of the aboveground canopy. In reality, an established tree's roots usually extend well beyond the edge of the canopy, or drip line. Although some anchor roots may reach deep into the soil, most of the fine absorptive roots are concentrated in the upper 3-12" of soil. **When watering established trees, provide a deep, soaking irrigation to the entire area beneath the tree canopy and extending to the drip line. Ideally, you should moisten the soil to a depth of 8" or so each time you water.** To prevent rot, don't apply water to the area directly around the trunk.

Know When to Water

A simple way to check soil moisture is to take a long (10"+) screwdriver and poke it into the soil. It will pass easily into moist soil, but be difficult to push into dry soil. **If you can't poke it in at least 4", it's time to water.** However, this technique has its limitations, and works best in clay and loam soils. A [soil tensiometer](#), on the other hand, allows for highly accurate irrigation through the monitoring and management of soil water tension.

How to Apply Water

Overhead sprinklers are the easiest way to cover large expanses, but they're inefficient, losing up to half the water to evaporation. **Trees are better served by watering methods that apply water slowly, right at soil level. It may take several hours to properly water a single mature tree.**



A soaker hose applies water slowly so it soaks in rather than running off.

Soaker hoses are an efficient way to water trees because they're porous and release water slowly. Encircle a tree with a spiral of soaker hose and run it for as long as it takes for water to penetrate 8" or so, using the screwdriver test. **If possible, avoid watering during the hottest part of the day — 10 AM to 6 PM — to conserve water.** Appropriate [mulching practices](#) also aid in watering efficiency.

How much water does my tree need?

The amount of water a tree needs depends on many factors, including the age, health, species, time of year, weather, and soil type. As a rule, newly planted and young trees require more frequent watering than older, well-established trees. Apply enough water at one time to fully moisten the soil to a depth of 8" or so. Then, be sure to let the soil dry out to a fair extent before watering again. **A common mistake is to apply frequent shallow waterings that don't soak deeply enough into the soil.**

For some compromised states, maintaining proper soil moisture is critical. But without the aid of a moisture-measuring instrument, determining soil moisture is difficult and often inaccurate. In those instances, a [soil tensiometer](#) allows for highly accurate irrigation through the monitoring and management of soil water tension.

My irrigation system waters my lawn regularly. Isn't that enough for my trees?

Probably not. Most irrigation systems are programmed to apply frequent, shallow waterings. **Trees do better with less frequent but deeper soakings — a heavy soaking once a week is much better than a shallow watering every few days.** That's because shallow waterings encourage tree roots to remain near the soil surface where they're prone to drying out. Watering deeply, on the other hand, encourages deep, drought-tolerant roots.

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