

HELP YOUR TREES SURVIVE THE DROUGHT



BE WATER-WISE. IT'S EASY. HERE'S HOW.

Trees and water are both precious resources. Trees make our houses feel like home—they also improve property values, clean our water & air, and even make our streets safer & quieter. When we water wisely and maintain our trees carefully, we enjoy a wide range of benefits at a low cost and with little effort.

YOUNG TREES

The roots of younger trees are less established & need easier access to water to establish deep root systems.

MATURE TREES

Mature trees require MORE water when growing near heat traps such as driveways & foundations.

EXPOSED TREES

Water loss is greater where trees are exposed to hot afternoon sun & strong or constant wind.

DECIDUOUS TREES

The critical time for water is during later winter/early spring when new buds and leaves are forming.



THE RIGHT AMOUNT

Water young trees twice per week (about 5 gallons) & mature trees once per week in several places (the equivalent of 1 to 1.5 inches of rain).

IN THE RIGHT PLACE

Water the “drip zone,” area directly beneath the foliage & shaded by the tree. Also, add mulch to lower soil temperatures & reduce water evaporation.

CONSERVE & RECYCLE WATER

Inside: Place buckets in the shower to collect warm up water. Recycle water from the dehumidifier, collect air conditioning condensation, & “save a flush” to conserve. Outside: Convert irrigation systems to drip, low-flow or micro spray & fix leaks.

THE RIGHT TIME

Water early in the morning or after the sun has set, as this is when trees replace the water they’ve lost during the day. Also less water is lost to evaporation at these times. Mulching your tree will also keep soils warmer in winter & cooler in summer.

DON'T WASTE WATER

Water should soak into the ground rather than running off into the drain.

THE RIGHT WAY

During drought, water directly with a hose or 5-gallon bucket.

THE RIGHT DEPTH

Deep watering helps deep root growth & healthier trees.

THE RIGHT CHOICE

Plant native or drought resistant tree species that require less water. Choose trees over lawn, as trees are a long-term investment.



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Caring for Trees in a Drought

Trees are generally the most valuable asset in the home and business landscape; when their health declines, they are the most difficult and expensive to replace. Considering their value and the time needed to grow to maturity, ensuring the survival of shade trees should be a top priority for landscape professionals. A typical large tree may have a replacement value ranging from several hundred to tens of thousands of dollars. During times of drought, landscape retention decisions should be made based on value, risk assessment, and the cost and ease of replacing assets of equivalent size.

With Governor Brown's recent declaration "This [is an] emergency and I'm calling all Californians to conserve water in every way possible." It is imperative that professionals are able to both meet his call to action as well as preserve the irreplaceable mature tree canopy.

STEPS FOR CONSERVING WATER AND GROWING HEALTHY TREES

Whether trees are planted in turf, mixed beds, or alone, the following steps will help to conserve water while also improving the tree's ability to utilize the water it is offered.

Choose Species Wisely

Whenever possible, select species that are well adapted to arid climates. Native plants are not always drought resistant, so base decisions on water needs, and not necessarily on origin of the species.

Improve Soil Structure

Properly aerated soil is an essential factor for the functioning of a tree's root system and water permeability.

- Remove excess soil burying the flare of the tree trunk in a careful manner to minimize damage to the roots.
- Remove rocks, pavement and other impervious materials from beneath the tree canopy.
- Aerate the lawn so that roots of mature trees are better able to access water and oxygen.

Reduce Competition

- Remove all weeds and grass within four feet of the base of young trees.

Mulch

Leaves and chipped wood are ideal mulch materials. Organic mulch will break down and create nutrient-rich compost that will keep soil evenly moist, conserve water, and insulate roots while providing essential nutrients for the tree. Place mulch 4 to 6" deep, keeping it 4" away from the trunk.

Monitor Soil Moisture

- Use a moisture sensor, or place a shovel, small spade or a screw driver into the soil to a depth of 6-8" (near the trunk for a young tree and under the drip line for a mature tree). Squeeze a handful of soil

from that depth; if it feels dry and crumbly add water.

Recently Governor Brown proclaimed, “This year, we celebrate Arbor Day as the state confronts one of the most severe droughts on record. In the spirit of preserving trees for future generations, Californians are advised to honor this occasion by planting drought-tolerant trees and learning best practices in caring for trees during a water shortage.”

All trees need regular, deep watering when soil moisture is low. The best watering solution is a dual system of drip emitters and sprinklers which maximizes irrigation efficiency for young and maturing trees. However, as water restrictions increase we must utilize other watering techniques to ensure trees, whether newly planted or mature, receive the water they require to survive.

Young Saplings (between 1-3 years of age) and Maturing Trees (ages 4 to 15)

It is imperative that young trees receive water regularly to their root ball throughout their first three years in the ground.

- Apply five to ten gallons of water per week during mild weather. During the hot summer months, young trees may require up to 15 gallons of water per week. Lawn watering does not provide sufficient water for a young tree, as the root area is not extensive enough to absorb water irrigated over a large area.
- The best way to focus water on the tree’s rootball is to form a small temporary earthen berm/watering well around the tree, about 3–4 feet in diameter and about 4–6 inches high. Fill it slowly by placing a garden hose near the base of the trunk and set it at a slow flow.
- As trees grow, expand the temporary earthen berm to cover the enlarged root system or apply water to the soil outside the edge of the root ball to one foot beyond the drip line (the soil beneath the edge of the leaf canopy). Increase the amount of water to soak the expanding root area to a depth of at least 8 inches.
- Trees do not grow well in soil that is constantly wet — it is best to let the ground dry out between waterings. As the daytime temperatures increase, water more frequently. Check the moisture of the soil before watering.

Mature Trees (A mature tree is defined as fifteen years or older.)

Mature trees vary widely in their need for water, depending on size, age, species, soil types and slope. The water needs of most tree species planted in turf are generally met by the relative high water needs of turf. With restricted water use, it is likely turf will no longer be irrigated. This could have drastic effects on mature trees that are used to regular lawn watering. During this time, it is very important to deeply water the tree.

- The best way to water a mature tree is to apply the water slowly and uniformly using low-volume application equipment. One option is to use a soaker hose — spreading it around the tree to at least one foot beyond the drip line (the soil beneath the edge of the leaf canopy) and allowing the water to penetrate so that the soil under the tree becomes saturated to a depth of about 8–12”.
- The general rule for mature trees is deep, infrequent irrigation. Frequency of watering depends on temperature, shade cover and presence of mulch. Trees need oxygen as much as water. Allow the soil to dry between waterings — for most mature trees one to two deep waterings per month is adequate.

If you are concerned about the health of a mature tree, your best choice is to hire a Certified Arborist. A list of

Certified Arborists by zip code can be found listed at www.treesaregood.org.¹

¹ Information provided by the Sacramento Tree Foundation.