



WATERING NATIVE OAKS PROPERLY

The roots of our native oaks (Valley oak, Coast Live oak and Blue oak) share soil space with the Armillaria fungus (oak root fungus) that specializes in eating oak roots. Under natural California conditions, the Armillaria is dormant during the hot, dry summer, and comes to life only with the rains.

Should I water my native oak in the summer?

Yes, but not more than once a month and not around the trunk. If we water near the trunk during the dry season, the Armillaria will grow through the combination of warmth and moisture. Eventually as the tree matures, continued watering around the trunk maintains the fungus infestation which in turn will cause the tree to fall over or simply die. This is why it is important to keep the area within 10 feet of the trunk of a native oak undisturbed and clear of any vegetation and irrigation. If you want a lawn near a native oak, keep the lawn 10 feet away from the dripline of the tree.

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WATERING YOUR MATURE TREE

Is watering my mature tree really important?

Yes. Most tree problems in our area relate to water—either too much or too little. We live in an unusual and extreme climate zone with little or no rainfall during the hottest months of the year. A mature tree can lose hundreds of gallons of water a day through its leaves, especially in hot or windy weather. This creates a lot of stress for trees, especially those brought from places where summer rains are common.

The rule of thumb is that most trees in our area will benefit from a thoughtful summer watering regimen. This includes all trees, from native oaks to Japanese maples.

What are my tree's watering needs?

Because we grow trees native to many different climate zones, it's a good idea to know what trees you have and what their watering needs are. If you don't know, ask long-term neighbors, check the CANOPY website, attend tree walks, hire a knowledgeable, certified arborist and/or refer to the *Sunset Western Garden Book*.

What are some signs of water-related stress?

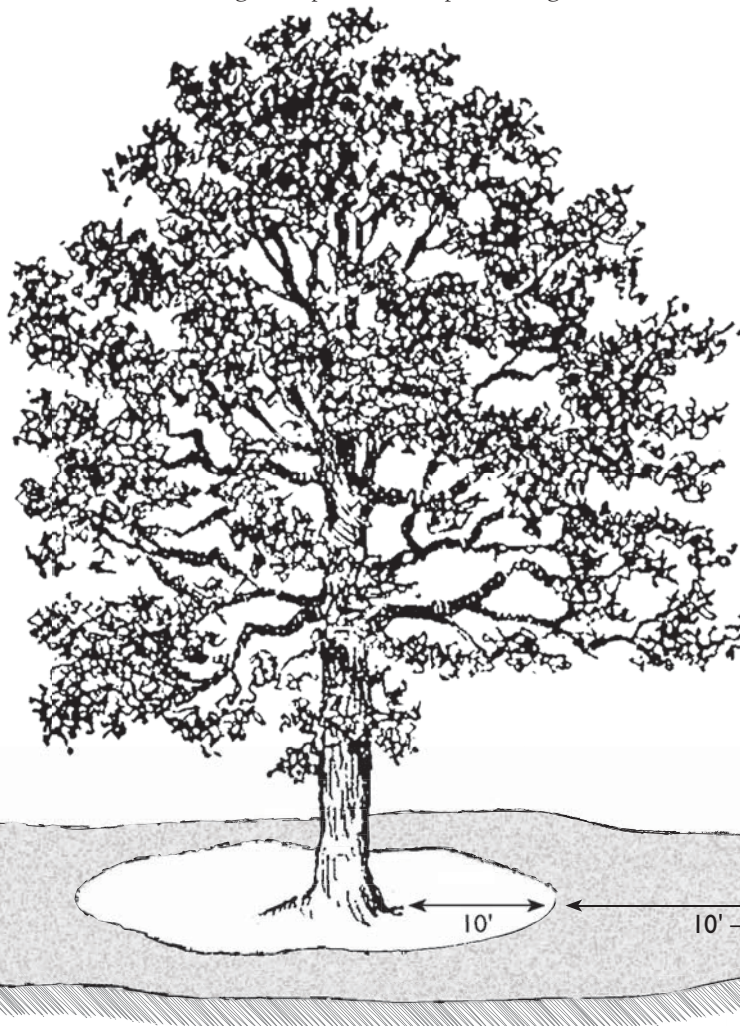
Signs of water stress include browning of leaf edges, lack of abundant new growth in spring, and dieback of leaves, twigs and branches.

How do I know if the tree needs water?

Before watering, check to make sure that water is really needed. Dig or probe the soil down 6 inches to one foot at the dripline. Is the soil moist at this depth? If yes, don't water and wait a week or more to check again. A tubular steel soil sampler, roughly 18 inches in length, is ideal for checking soil moisture.

How frequently should I water?

- Watering mature trees deeply every month or two during the dry season (typically May through October) can be tremendously beneficial, especially for stressed trees, and may be necessary to keep trees alive during times of drought. Water-loving trees need more frequent watering.
- If possible, avoid frequent, light applications of water which encourage shallow roots that are more susceptible to summer heat stress. If you choose to water lightly and frequently anyway, please supplement this light watering with periodic deep watering.



Where do I water for maximum benefit?

Don't bother watering near the trunk—there are few feeder roots there. Irrigate the soil from half-way between the trunk and the dripline to 10 or 15 feet beyond the dripline (see illustration).

Note: If you have a native oak do not irrigate within 10 feet of the trunk (see reverse).

How do I water the tree?

Watering can be done with permanent soaker hoses (ideally covered with mulch), temporary soaker hoses, or by using a sprinkler that is moved sequentially within the watering area described above. Apply enough water to moisten the soil down 18" to 24". Depending on the tree size and method of irrigation, this may take multiple hours. It is best to check the soil again, 6 inches to one foot down, after watering, to check that water has penetrated.

My tree is in a lawn with automatic sprinklers.

Is it receiving enough water?

Turf irrigation often wets only the top few inches of soil, and the soil below can be bone dry. Trees in our area regularly die of drought while sitting in a green lawn. Trees growing in lawns may require the watering strategy described above. Once again, the only way to know if more water is needed is to sample the soil moisture 6 inches to one foot below the ground.

Can I over-water my tree?

Too much water is just as bad as too little. Excess soil moisture excludes oxygen from the soil. Roots die without "air". The soil should be moist but never soggy and squishy for any length of time.