



Unfortunately, oak trees in residential settings often suffer damage and death due to preventable measures. Mostly the trees are damaged by over watering (especially during the summer) and disturbance to the root system.

Watering. Oak trees are very sensitive to over watering. Native oaks are naturally drought tolerant and adapted to the weather cycles we experience in southern California and usually do not require irrigation. Natural rainfall is generally the only water that is needed. The exception is if we are having prolonged drought conditions over a few years. Then deep watering is advisable during the winter and spring. Additionally, newly planted trees may require some additional watering during their first few summers.

It may take years for the damage of overwatering to show, but it commonly leads to the death of a healthy specimen.

Fertilizing. Mature oaks usually need little or no fertilizing. In cases where the soil is very poor, light fertilization can be provided during the late winter using a slow-release organic fertilizer. The best way to provide nutrients is to let fallen oak leaves remain and decompose.

Mulch. Leaf "litter" from the tree provides the best mulch for the tree. Crushed walnut shells or wood chips can be used, but the leaves that drop naturally are the best source of nutrients. Commercial mulch sometimes contains Oak Root Fungus so should be avoided. Additionally, redwood chips often contain chemicals which should not come in contact with the oak tree and roots. River rock can also be placed around the base as a decorative feature.

Pruning. As with all trees, care should be taken when pruning. Excessive pruning or thinning of limbs may expose interior branches to sun damage. It also may stimulate the tree to produce new growth that is subject to mildew. Pruning should be done to remove dead wood only *and* only be done during the summer months (late June through early September). This is when the tree is dormant. Cuts on green wood during could cause scars which can provide an entry area for organisms or disease. Pruning should be done with the advice of a certified arborist or other tree professional.

Oak Root Fungus. The biggest goal is to keep the trunk and area under the drip line dry. Trees that are stressed are more likely to be attacked by pests and disease. Most damaging of these diseases is the Oak Root Fungus which occurs naturally in the soil and thrives in wet conditions. The fungus does not require an open wound to enter the tree. Indications of the disease are:

- Die back of branches or tips.
- Honey colored fungus at or near the root crown.
- White fan-like fungus between.
- The presence of black, shoestring like growths in the soil.

Unfortunately, once the indications of the disease are obvious, treatment is often ineffective.

Problem signs. In addition to the indications of oak root fungus, there are a number of other indicators that may show that the tree is diseased or experiencing stress. If you see any of these signs, you should consult with a certified arborist. These signs may include:

- Significant changes in leaf color
- Branch die back
- Black sooty materials on leaves
- Excessive dropping of leaves
- Large masses of brown leaves in the crown
- General wilting
- Parasites such as mistletoe
- Open wounds
- Oozing sap
- Discolored or streaked leaves or bark
- Holes bored in the trunk accompanied by sawdust.

Planting around Oaks. If planting of additional plants under the oak tree is desired, there are some guidelines to follow:

- No planting within a minimum of 6-10' of the main trunk.
- Do not use plants that require supplemental watering. Ferns and other species that need lots of water should not be used.
- Choose plants suited for "dry shade".

If you are looking to plant within the dripline of an oak tree, here are some plants to consider for planting that are the most compatible with your oak tree:

- Howard McMinn Manzanita (*Arctostaphylos densiflora*) are 3' high, 6' wide with whitish pink flowers.
- Little Sur Manzanita (*Arctostaphylos edmundsii*). These shrubs are 1-2' high, 4-5' wide and are tolerant of shade.
- Monterey Carpet Manzanita (*Arctostaphylos hookeri*) are 1-2' high spreading to 12' wide by rooting branches. White to pink flowers.
- Carmel Creeper (*Ceanothus griseus horizontalis*) ground hugging, creeping shrub growing less than 2' tall with clusters of small blue flowers.
- Coral Bells (*Heuchera* spp.) grows in a 2-4' mound. Flowers on an upright stem 2-3" high and spotted with red or pink.
- Oregon Grape (*Mahonia aquifolium compacta*) 2-4' high shrub, spreading by underground roots. Bright yellow flowers.
- Evergreen or Catalina Currant (*Ribes viburnifolium*) 2-3' high spreading to 12' wide. Flowers pink to red in small clusters.

Paving. The protection zone for oak trees includes the areas most critical to the health and survival of the tree. This includes the entire canopy, 5' beyond the drip line, or at least 15' on either side of the main trunk of the root system, whichever is greater.

Paving under the canopy of oaks with asphalt or concrete prevents water from soaking into the soil and interferes with the exchange of gases between the roots, soil and the air. Paving usually requires grading, which causes damage to the oak's root system. If paving materials must be used within the protected area of the oak tree, porous materials should be used including brick or interlocking pavers with sand joints or river rock.