Removing Infected Trees

Trees infected with SOD pathogen may be prone to rapid decay and unpredictable trunk and limb breakage and may present a hazard to life or property. Contact a certified arborist for advice on removal of these trees. Be sure to contact the Town for a permit if the tree is a heritage oak. To avoid transmitting the SOD to new sites, leave the infested material on site. Chip the smaller pieces and spread them during the summer months to facilitate drying, which kills the SOD pathogen. Split the larger pieces for firewood. Alternatively, infected wood can be added to your yard waste pickup bin for composting. These materials are commercially composted at high temperatures that will kill the SOD fungus.

Other Health Problems in Oaks

When growing under natural conditions (i.e., cool, wet winters and long, dry summers), native California oaks are relatively resistant to diseases other than SOD. Problems can arise, however, when trees are incorporated into residential landscapes where they are subjected to frequent irrigation too close to the trunk of the tree, soil compaction, discing, and other disturbances around their root systems. In these circumstances, fungal diseases such as crown rot or oak root fungus or nutrient deprivation can develop that may damage or kill the tree.

If you suspect SOD on your property, consult with a certified arborist for diagnosis and advice on how best to manage it. Many other tree problems have symptoms similar to SOD.

Contact a certified arborist for advice if these signs of decline or decay develop in your oaks:

- Poor growth
- Thin, sparse foliage or yellow, undersized leaves
- Dead branches and limbs in upper canopy
- Wilted, brown leaves during spring and summer
- Many short shoots growing on trunk and branches
- Mushrooms at tree base or on the roots in fall or early winter
- Conks – shell-like mushrooms on trunk
- White, fan-shaped mats of fungus under the bark at soil line
- Cavities in trunk
- Soft, punchy wood
- Wet, oozing areas on the bark

Further Information

California Oak Mortality Task Force
www.suddenoakdeath.org

Homeowner's Guide to Sudden Oak Death
http://nature.berkeley.edu/comtf/pdf/HomeownersGuide2-08.pdf

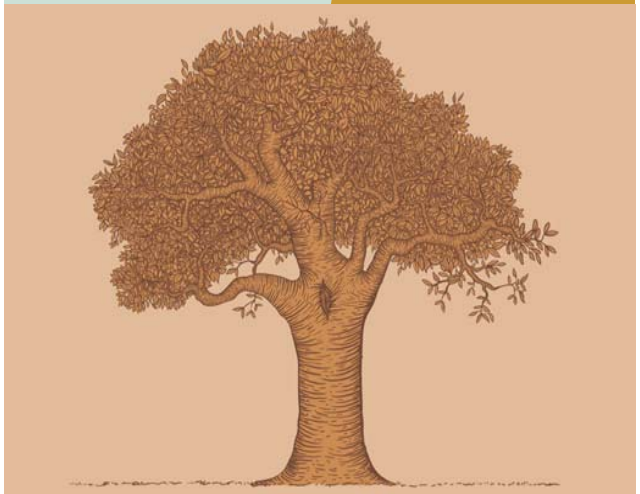
Santa Clara County Division of Agriculture
1553 Berger Drive, San Jose, CA 95112 (408) 918-4600

Information provided by the Los Altos Hills Environmental Design and Protection Committee and members of Open Space and Environmental Initiatives Committees

Town of Los Altos Hills
26379 Fremont Road
Los Altos Hills, CA 94022
(650) 941-7222
www.losaltoshills.ca.gov

July 2008

Town of Los Altos Hills



Guide to Sudden Oak Death in Los Altos Hills

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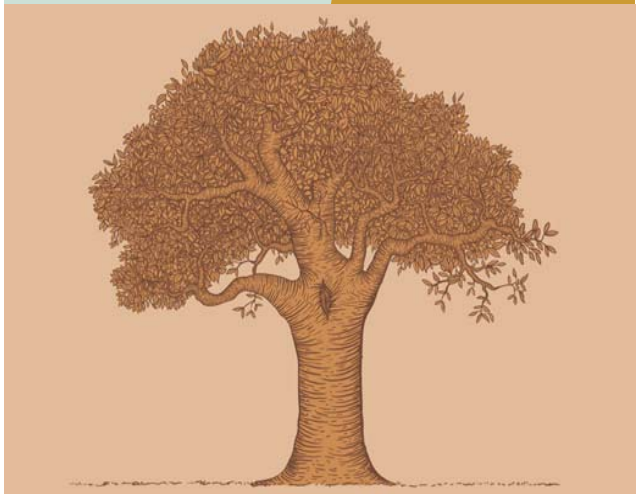

Guide to Sudden Oak Death in Los Altos Hills

Sudden Oak Death

Sudden Oak Death (SOD) is a fungal plant disease (*Phythophthora ramorum*) that is spreading rapidly through Northern California, killing millions of trees and dramatically changing the landscape. SOD attacks certain types of oaks and many other common trees and shrubs, including non-native nursery plants (e.g., rhododendrons and camellias). Most oaks die within one or two years of initial infection and no known cure exists.

The organism that causes SOD thrives in cool, damp climates and is found primarily in coastal areas and shady hillsides and ridges. It can be carried for long distances by wind and fog and has been found in soil, rainwater, and downed wood. SOD was first discovered in Northern California in early 2001 and has since spread to ten counties. SOD was first documented in Los Altos Hills in 2007, when a dozen trees in Byrne Preserve were confirmed to have the disease. All subsequently died. Since then, a number of Los Altos Hills residents have discovered infected trees on their properties. In spite of efforts to control spread, it is likely that many more oaks in our area will succumb.

SOD primarily affects tan oaks, coast live oak, California black oak, and Shreve oak, all of which are evergreen. Valley oaks and blue oaks, which are deciduous, are not affected. In the case of tan oaks the disease progresses quickly and usually kills the trees. Coast live oaks may become infected but not all will die. Little is understood about susceptibility and outcomes for individual trees. Bay laurel is the most common host and carrier of SOD in our area. Bays are not killed by SOD, but serve as a reservoir for the organism to infect and kill other types of trees. Redwoods and tan oaks are also important local hosts.

Protecting Your Oaks from SOD

Little can be done to prevent spores of the SOD pathogen from being carried onto your land by wind, fog, rain, or surface water. You may, however, minimize the risk of introducing SOD onto your property from other sources by the following:

- Avoid bringing infested soil and plant material onto your property
- Clean your car tires, bike tires, and hiking boots with disinfectant after visiting locales where SOD is known to be a problem
- Carefully inspect leaves of nursery plants for symptoms before making a purchase

Another step that may help protect oaks is to remove or prune back California bay laurels that are growing close to oaks. Bay laurels are the most common host plant for the SOD fungus in our area and reducing their contact with oaks may lower the risk of transmission to the oaks. Bay laurel foliage can be cleared for a few yards around oaks by pruning lower branches of larger trees. Indiscriminate removal of bays is not recommended, especially if they are along creek banks, where they are important for stabilizing the banks. Leaf spots and a dark brown color at the tip of leaves are indicators of the disease. Bay leaves should be tested by the Santa Clara County Department of Agriculture to confirm the presence of SOD because many other plant diseases produce similar symptoms. Contact the Santa Clara County Department of Agriculture at (408) 918-4600 for more information.

Because healthy oaks may be less likely to become infected, keeping your oaks in healthy condition may help. Follow these general guidelines suggested by the University of California Cooperative Extension:

- Avoid irrigating oaks. Oaks do not need supplemental water except in severe drought conditions or for remedial restoration under the recommendations of an arborist.
- Prune oaks only when necessary. Prune only dead and dying branches and others needed to maintain a safe canopy structure or to relieve limbs of excess weight.
- Prune oaks only in the dry summer months (June to September).
- Avoid damage to oak roots. The area under the crown (plus one third the distance more from the trunk) should not be disturbed by activities such as paving, soil compaction, extensive landscaping or discing.
- Protect the stem and lower branches from injury.
- Fertilize if the tree shows external symptoms of deficiency (e.g. yellowing leaves) and the deficiency is confirmed by a laboratory test.

Treatment of SOD

The fungicide, Agri-Fos, and the surfactant, Pentra-Bark, are approved by the State to treat oaks and tan oaks at high risk of becoming infected with the SOD pathogen. These chemicals are mixed together and sprayed on the bark of the trunk and lower stems of the tree. As an alternative, Agri-Fos (without Pentra-Bark) may be injected directly into the oak trunk. Although this treatment is not a cure, research has shown it to be effective in preventing trees from becoming infected or to slow the disease in newly infected trees. These treatments will not save a tree that already has serious symptoms of SOD. Consult a certified arborist or the California Oak Mortality Task Force web site for recommendations on professionals to apply the fungicide.

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