Dead or Dying: How Can You Tell

From Forestland Steward*, Winter 2007 newsletter, courtesy of California Forest Stewardship Program*

From *The Curious Gardener*, Summer

Trees die even in healthy forests; it's part of the cycle of life. But if you notice large numbers of previously healthy trees with brown needles or other signs of disease or damage, there may be a problem.
As you monitor the trees in your forest, note any dead or dying trees and try to determine the cause. If the tree is a hazard to life or property, you will want to remove it.

It's relatively easy to determine if a tree is dead—look for a uniform color change throughout the entire crown. If any green remains, the tree is still alive.

Determining if a tree is dying is a bit trickier. A tree attacked by bark beetles may be dying but still green. It takes careful inspection and expertise to make sure.

On the other hand, there are a number of diseases or abiotic factors, such as winter damage, that can cause needles to look dead even though the tree will recover and green up with new growth in the spring. If there is no new growth at that time, the tree is dead.

Conifers naturally shed old needles each year in the fall. The quantity shed varies from year to year depending on conditions. Trees that are drought stressed may lose more needles. Look for green needles on the tree as a sign that the tree is still alive.

if a tree is alive is to cut into the inner bark (phloem), the living part of the bark just next to the wood. A live conifer has cream-colored, moist inner bark whereas in a dead tree it will be brown.

If the inner bark is dead around the entire circumference of the trunk, the tree is dead. In some cases, part of the inner bark may be alive while another part is dead. This may be due to a non-lethal injury from which the tree can recover, or the tree may be in the process of dying.

According to the Forest Practice Rules a dying tree is one that meets at least one of the following criteria:

- Fifty percent or more of the foliage-bearing crown is recently dead (as indicated by a uniform change in color over that part of the crown). Note: dead tops with no foliage do not count toward that 50%.
- Successful bark beetle attacks with indications of dead cambium and brood development distributed around the circumference of the bole (trunk).
- Seventy-five percent or more of the circumference of the lower bole is girdled by wildlife.
- The tree is designated by a Registered Professional Forester as likely to die within one year.

---Adapted from" Identifying Dead and Dying Conifers on Private Land in California" by Don Owen, CAL FIRE Tree Notes #30. Available at http://ceres.ca.gov/ foreststeward/pdf/treenote30.pdf. All photos from www. forestryimages.org

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PLACER COUNTY
11477 E Avenue
Auburn, CA 95603
(530) 889-7385
E-Mail: ceplacer@ucdavis.edu

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NEVADA COUNTY
255 So Auburn
Grass Valley, CA 95945
(530) 273-4563
E-Mail: cenevada@ucdavis.edu

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