



United States
Department of
Agriculture

Forest
Service

Northern California
Shared Service Area

2400 Washington Ave.
Redding, CA 96001
530-242-2336

File Code: 3400

Date: May 18, 1999

Route To:

Subject: Oak Failure

To: Mark Hudson, LEO
Shasta Lake Ranger Station

On April 30, 1999, Dave Schultz (Entomologist, Forest Pest Management) and I (Pathologist, Forest Pest Management) accompanied Mark Hudson to an area near Holiday Harbor (above Lake Shasta) where the falling top of an oak tree hit a power line and started a fire. While at the site, we made several measurements and observations.

Before the top of the oak fell, it was alive and approximately 59-feet tall. The power line that was hit was approximately 35-feet tall. The break occurred 24 feet up the bole. The top 11 feet of the fallen branch was scraped where it had hit the power line. Decayed wood was evident at the end of the standing portion of the break. The fallen piece of the bole contained rot and a large hollow above the break. Termites and wood boring insects were also noted in the hollow and decay. An old broken branch stub leading into the hollow remained near the break point. The hollow and decay extended 64 inches from the break up toward the top of the tree. We measured the thickness of sound wood at various points along the hollow and found that only 1-1/4 to 2 inches of sound wood had supported the 10-1/2 to 13-inch diameter bole. It thus appeared that the decay in the trunk most likely originated at the broken branch near the break. At the time of the break, very little sound wood remained to support the top. Several additional broken, dead branch stubs were also noted in the standing portion of the tree, indicating the likelihood of additional decay. Similar broken, dead branch stubs were also noted many other oaks in the area.

While in the area, we noted that many of the oaks had hollows similar to the one in the tree that failed. Such defects are not uncommon and can usually be easily seen. Trees with hollows and high target potential are usually considered to have high risk potential. However, while such hollows usually indicate the presence of decay within, in order to fully assess the extent of the decay, one must use an increment borer to determine the relative amounts of sound and decayed wood. The final decision on whether to remove the tree in question would depend on the extent of decay and how much risk the landowner is willing to assume.

If you have any further questions regarding the observations in this report, feel free to contact Dave Schultz or me.

/s/ Pete Angwin
Pathologist
Forest Pest Management

