

One Billion Oak Trees at Risk in California

By Tom Gaman, Registered Professional Forester

Nobody takes the Santa Clarita oak for granted anymore. This tree, in the middle of a proposed road widening project in Los Angeles County, became a regular in the *Los Angeles Times*, and is arguably the most famous single oak tree in California.. After nearly three months with a tree sitter protesting in its branches, its roots are now cut for an attempted relocation (and likely slow demise).

But we still do not see the forest for its trees. California's signature oak woodlands, oak canyons, and black oak forests, taken individually, add up to a population of well over a billion trees¹. If seedlings and saplings were counted there would be billions more! Most Californians do not, however, understand that hundreds of millions of these billions of trees, on millions of acres, are at risk of the same slow death as that tree in Los Angeles County. The California Oak Foundation believes that it is time for the Board of Forestry to do something about this problem.

California's busy economy is burning, poisoning, cutting, grinding, paving, building, and sprawling its way into wildlands. Those cherished oak trees along the roadsides, and their counterparts deep in the wilderness, seem to just sit there and watch. Although we have the most sophisticated Forest Practice Act in the world, most Californians would be shocked to discover that our oak woodlands receive almost no protection at all, and could vanish any time for many reasons.

Millions and Billions

Gaman and Casey (2002) reviewed data from thousands of sample plots in California's National Forests. They identified 433 million trees of 6 oak species growing on more than 11.5 million acres. The Forest Service's Pacific Northwest Research Station ("PNW") conducted another forest inventory encompassing all other timberland (but not oak woodlands) in California in the 1990s (Waddell and Bassett 1997). It estimates 209 million oak trees on 5.2 million acres, plus 187 million tanbark oaks in the genus *Lithocarpus*.

An assessment of 5.5 million acres of oak woodland forest types in California shows that oak woodlands in the Sierra Nevada support an average of 45 oak trees per acre — accounting for another 269 million oak trees!

Taken together, these inventories account for 1,098 million oak trees over 5" in diameter, not including oaks scattered, in groups too small to count, within 10 million acres of Southern California chaparral.

¹ Trees over 5" diameter at breast height.

Timberland oaks receive some protection. More than half of the true oak (*Quercus* spp.) trees are not protected. The unreserved (and unregulated) lands contain about 4.1 billion cubic feet of oak wood. These trees provide habitat and maintain high landscape diversity, but they are readily available for industrial purposes. These oaks could be reduced to 51 million cords of firewood or over 100 million tons of bone dry woodchips.

Oak Threats

Though some timberland owners still poison them, most oaks in managed forests, parks, or in preserves are not threatened. Other large oak trees near urban areas, and virtually all the maturing oak woodlands, are at tremendous risk. Cattle overgrazing, and microclimate changes prevent new oaks from growing in the oak woodlands. While trees die, others do not take their place. Hot, dry annual grasslands gradually replace oak woodland ecosystems. In other areas, conversions are occurring — oak woodlands are being replaced by vineyards, intensive agriculture, industrial facilities, housing developments, and foothill ranchettes. Periodic fires once burned naturally through the woodlands. Today, after a century of fighting fire, black and blue oak woodlands are being invaded and shaded away by invading Douglas-fir and even incense cedar.

The Nature Conservancy report of April 2002 “States of the Union: Ranking America’s Biodiversity” ranks California first in biodiversity. This is in large part because California’s oak woodlands, known to harbor more than 300 species of terrestrial vertebrates (and thousands of other species), are so biologically rich. The Nature Conservancy’s report ranked California second (following Hawaii) in terms of resources at risk. Many of California’s rarest oak types, valley oak and Engelmann oak, are almost gone. The cumulative effects of landscape use and climate change do not favor our oak forests. These vast numbers of trees could, in a human generation or two, become just a few.

Protecting Oaks Now

Grassroots political activism, good science, and practical economics are necessary to protect California’s oaks. University of California’s Cooperative Hardwood Range Management Program has been researching oak restoration for 20 years. The U.S. Forest Service encourages hardwood regeneration, protects large trees, maintains species diversity, and implements restoration plans. Some farmers and forest landowners are selling or donating conservation easements on their lands — in exchange for secure futures and healthy tax writeoffs. New oak woodland conservation funds are available through the Wildlife Conservation Board and the Forest Legacy program, and urban forest researchers have shown that people value and will pay to keep trees standing.

California Oak Foundation President Janet Cobb addressed the California Board of Forestry (“Board”) at its March 2003 meeting by saying, “The time to protect oaks is now, the need is now.” The Board of Forestry is comprised of appointed volunteers who,

COF hopes will see the wisdom of increasing oak protection under the Forest Practice Act in 2003.

The Z' Berg Nejedly Forest Practice Act vested the Board with the responsibility to create rules that ensure sustainability and environmental protection on non-federal commercial forestlands. The Forest Practice Rules (established by the Board) provide for some protection for hardwoods when found mixed into commercial forestlands (usually conifers), but the Board does not protect oak woodlands or other non-commercial forests. It is within the power of the Board to take the matter one step further and to simply recognize that most oak (*Quercus*) species are “commercial” and therefore deserve protection under the Forest Practice Act.

Such recognition would require that state permits be obtained to harvest or convert oak woodlands to other uses (e.g., vineyards and sprawl). The Board could even write special rules and procedures for administering hardwood rangelands. As is the case with “commercial forestlands” today, the 1,000+ Certified Rangeland Managers and Registered Professional Foresters licensed by the Board would be available to help administer and enforce rules. Given its charter, we urge all Californians to ask that the Board recognize the obvious — that “woodlands” are also “forests” (mailto:board.public.comment@fire.ca.gov).

In the absence of leadership by the Board of Forestry, or the Legislature, it will remain up to the counties to protect oak resources at the local level. Unfortunately, oak protection is a low priority for most California counties. Financially strapped and struggling to serve growing populations with limited staff expertise, county planners do not have much time to think about oaks until one shows up in the middle of a proposed road. After all, there are billions of them.

Literature Cited

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