TECHNICAL DATA SHEET

Redwood

Using Redwood: An Environmentally Sound Decision

Redwood is a popular building material due to its beauty and long-lasting performance, but the question arises: If I choose to build with redwood, what is the effect on the environment? The answers given here are based on independent studies and reports of experts including: the U.S. Forest Service, the California Department of Forestry and the California Board of Equalization.

Wood is a renewable resource. . .redwood as the fastest growing softwood in the nation is one of our most renewable building materials. . .

The Redwood Parks

The most productive forest land in the United States lies in a narrow strip along the California coast from just north of the Oregon border to Monterey County south of San Francisco. Here may be found 1.74 million acres[1] of the nation's tallest trees, the coast redwood.

The most spectacular groves of redwoods are found at the mouths of rivers and on river benches where periodic flooding over time deposited layers of nutrient-rich soil. Unlike other trees, redwoods were able to put out new roots into each fresh layer and thrive while other species suffocated and disappeared. These small groves of very large, old trees are relatively rare and are not typical of most of the redwood forest. They probably never exceeded 10 percent of the total redwood forest area.

Redwoods are preserved in more than 250,000 acres of parks and reserves. . .

These groves are the best of the redwoods and they have been preserved. In fact, no other commercial species in the world has had so great a proportion of its trees set aside forever in government parks and other reserves.

There are 350,800 acres of land in the publicly owned redwood coastal units comprised of Redwood National Park, the federal monuments, state parks and forests, national forests, city and county parks and other public reserves and administratively withdrawn lands in the Redwood Region.[2] Of this, 78,500 acres are held by the National Park Service, 186,000 acres are in state parks, 51,100 are in a state-owned forest and 35,200 are in the other public reserves. In addition, to the 140,100 acres of young redwood forests withdrawn in the public parks and reserves, a total of 98,500 acres of outstanding old groves are preserved here.[3]

The redwood companies operating today all have deep roots in the history of the Redwood Region, and all have donated or transferred superlative groves of trees in their holdings to Save the Redwoods League, Nature Conservancy, the State of California and other public agencies for preservation in parks.

In addition to the coast redwoods that are preserved, 95% of the other redwood species, the Giant Sequoia, is preserved in state parks and groves. . .

In addition to the numerous parks in the North Coast area, 95 percent of the acreage of the state's other redwood species--the Giant Sequoia (Sequoiadendron gigantea) of the Sierra Nevada--is preserved in state and federal groves.[4]

Clearly, hundreds of thousands of acres of redwood parks and groves have been preserved forever.

The Commercial Redwood Forest

The commercial redwood forests tend to be different in nature from the parklands. These forests are seldom 100% redwood; typically, they are a mixture which can include redwood, Douglas fir, white fir, hemlock and hardwoods.

Tree nurseries operated by the forest industry produce more than 4.5 million redwood seedlings annually for reforestation programs. . .

The other major difference between the two types of forests is that today's commercial forests are predominantly young growth. These are privately-owned lands where redwood mills and tree farmers have planted and grown redwood trees specifically to be harvested. Young growth timber—trees that have grown back on areas that burned or were logged—is already supplying upward of 60% of the total log production in the region.[5] Trees over 200 years old are usually considered old growth.

Land that can sustain and nurture redwood trees is extremely valuable and the private owners take good care of this resource. Five major companies in the redwood region operate tree nurseries with a total output of more than 13 million seedlings annually--4.5 million of them redwoods[6]--to support their reforestation programs, and the productivity of all industrial redwood land is fully maintained after harvest. State law requires it and good business practice dictates it.

The species' own tenacity probably does even more to regenerate the redwood forest than the planting of seedlings. Redwood is the only softwood in the country that sprouts from stumps. These new young trees grow quickly, thriving on the existing, mature root system. In some areas, early pioneers were actually unable to clear redwood forests to make pasture land. The trees kept returning in spite of all their efforts.

Redwoods are harvested under the most stringent regulations in the world. . .

Today, California's forest-practice law, the strictest in the nation, requires that every harvest operation must be reviewed in advance and approved by the State Department of Forestry. If an adequate number of trees are not left on the harvest site to make up the new forest, state law requires the landowner to replant to assure that a new stand is established. The law further requires the State Board of Forestry "to provide for protection of soil, air, fish and wildlife, and water resources."

The commercial redwood forest is home to many species of birds, fish and mammals. Redwood lumber companies employ biologists to study these animals in the ever-changing habitat of the growing forest. So, in addition to planting and growing hundreds of thousands of acres of trees, the companies in the Redwood Region conduct a variety of wildlife and fisheries programs, many of them in cooperation with the California Department of Fish and Game.

The young growth commercial redwood forest is home to bear, deer, owls, salmon and many other forms of wildlife. . .

Redwood Resource Trends

Young redwood forests are growing at a phenomenal rate. This is important because this growth, the natural production of wood fiber, is what serves our construction needs in the future. As forests renew themselves through growth, they provide us with the materials we need for our own growth. In this respect, young forests are productive while mature forests are not. Young growing forests also serve to "scrub the atmosphere" by filtering the air and removing carbon dioxide. Researchers have found that mature trees in the old-growth forests actually give off as much carbon dioxide as they consume and decaying trees are carbon emitters.

There are more redwoods today than when man first harvested the species. . .

A forest growing at 2 percent or more a year is considered a healthy forest, and growth of young-growth redwood forests is running overall at 2.9 percent annually with trees on some sites exceeding 6 percent a year.[7]

Growth rates are expected to accelerate rapidly in the young redwood forests after the turn of the century, and annual redwood growth is projected by 2040 to reach a rate 28 percent greater than now.[8] Some forest industry experts expect to double the rate of timber growth on their lands by the year 2040.

The private timberlands owned by ranchers and others are posting especially large gains in growth over harvest. Growth on these lands is even now running at three times the rate of harvest, and future increases in production from these lands are considered to be inevitable, according to forestry experts.

A Final Note

A forest is a living biological entity, forever changing and renewing itself through successive stages of growth, death, decay and resurrection. California's redwood forest may be seen in two parts today. One part includes the more than 250,000 acres preserved in public parks and reserves, slowly reshaped by nature decade after decade. The other part is the growing, productive forest–a habitat for a wide variety of wildlife and a resource for man, managed to serve a number of needs and values.

The facts in this paper are based on reports and studies of experts, such as the U.S. Forest Service, the California Department of Forestry and the California Board of Equalization. . .

References:

[1] U.S. Forest Service Inventory and Analysis, Pacific Northwest Forest and Range Experiment Station, Portland, Ore., reporting 1,244,000 acres with a plurality of redwood trees and another 496,000 acres with redwoods present. (See also Fox III, Lawrence, "A Classification, Map and Volume Estimate for the Coast Redwood of California," 1988, revised Oct. 1989, Humboldt State University, Arcata, Calif., with California Department of Forestry; reporting a plurality of redwoods on 1,663,000 acres and occurring on another 287,000 acres.)

[2] Solinsky, Frank and Dean, Consulting Foresters, Trinidad, Acreage and Volume of Coast Redwood Timber In Public Ownership in California, Sept., 1990.

[3] Solinsky, Frank and Dean, Ibid.

[4] Weatherspoon, C. Phillip et al, "Management of Giant Sequoia," proceedings of 1985 workshop. Gen. Tech. Report PSW-95, Pacific Southwest Forest and Range Experiment Station, Berkeley, 1986.

[5] 1989 Report, California Board of Equalization, Sacramento.

[6] Lowell, Phillip, Redwood Region Conservation Council. Unpublished survey, 1989.

[7] Green, Kass et al, "The Status and Productivity of Areas Harvested under the 1973 Forest Practice Act in the Coast Forest District of California." Report to Calif. Dept. of Forestry by Pacific Meridian Resources, Emeryville, Calif., and Hammon, Jensen, Wallen & Associates, Oakland. June 1989.

[8] McKillop, William. "Future Timber Supply from Private Lands in the California Redwood Region." Paper presented before the Redwood Region Conservation Council, Feb. 12, 1988.

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