

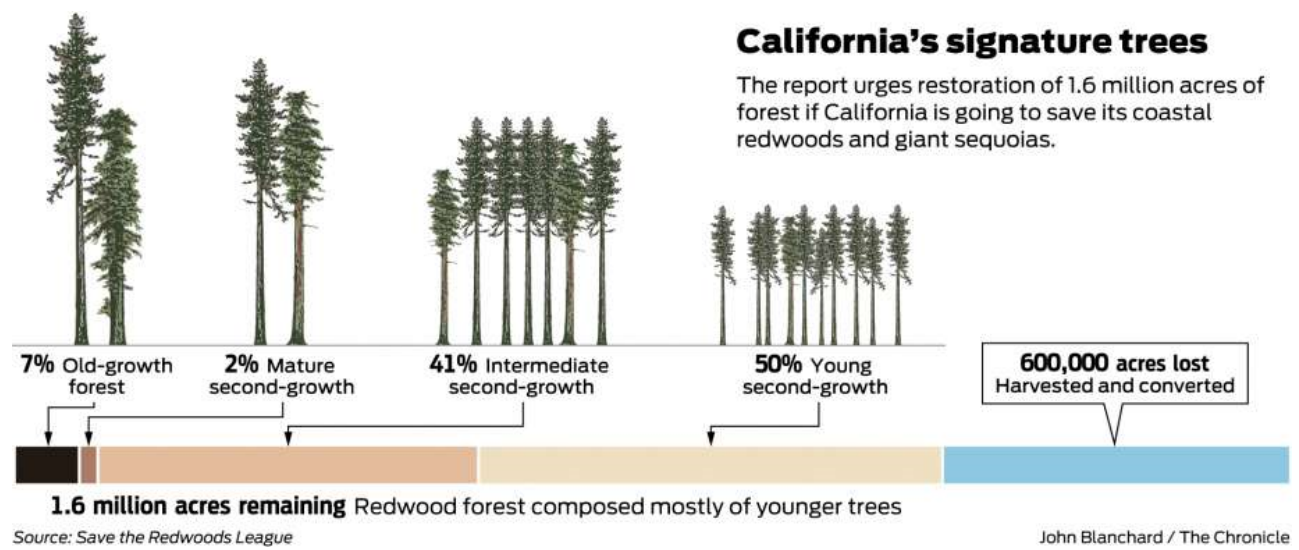
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A plea to save California's treasured coast redwoods, giant sequoias

By Peter Fimrite | April 17, 2018

The magnificent coastal redwood and giant sequoia forests of California are a shadow of their former selves, but their future could be bright if public officials and private land preservationists commit to protect and restore the ancient ecosystems where the mammoth conifers thrive, an analysis of the state's signature trees found.

The report, released this week by the San Francisco nonprofit Save the Redwoods League, is the most detailed assessment yet of the state of the redwoods, which cover 1.6 million acres across the state, a reduction from 2.2 million acres due to decades of logging, development, road building and other human encroachment.



The State of Redwoods Conservation Report outlines the biggest challenges facing coastal redwoods and their high-altitude cousins, the giant sequoias, including warming temperatures, increased fire danger, destruction of redwood habitat and wildlife, and the encroachment of roads, development, agriculture and illegal marijuana plantations.

“We are learning how critical these forests are,” said Sam Hodder, president of the redwoods league, which prepared the report in celebration of the organization’s 100-year anniversary. “They are critical to our climate, to our identity; they inspire us with their beauty and power, and they are a critical resource for our future.”

The report offers a vision of the future, where young forests are protected, nourished and allowed to grow large like their ancestors.

To do that, it says, the government would have to forge partnerships with conservation groups, property owners and local communities to decommission roads and make strategic land acquisitions. Money would need to be dedicated for science-based forest management, including limited and sustainable logging practices and interpretive and educational programs to inspire a shared sense of ownership of this extraordinary resource, the report said.

The plan would include restoration of the vast forest ecosystem and the protection of the diverse array of plants and animals that depend on redwoods and sequoias. Tree biologists and geneticists would work with state and federal forestry professionals to identify healthy stands, reduce tree density and preserve the most genetically robust trees.

The idea would be to create an ecological bridge between old-growth and second-growth stands and develop a passion among the entire populace for the growing forest and its remarkable carbon-capturing properties. Second-growth trees are those that have grown out of the logged old-growth redwoods, usually in a circle, called a fairy ring, around the stumps.

Old-growth trees, which can live up to 3,000 years, once covered the Sierra Nevada and huge swaths of land along the California coast all the way to the Oregon border. Starting in the 1850s, loggers began cutting them down, including a massive stand in Oakland that researchers say might have contained the largest coast redwoods in the world.



Photo: Paul Chinn / The Chronicle

Visitors look up towards the canopy of old-growth redwoods at Muir Woods National Monument.

The report said 95 percent of California's old-growth redwoods were wiped out in the 150 years after the California Gold Rush, leaving only 113,000 acres of the oldest and largest coast redwoods and some 32,000 acres of old-growth giant sequoias.

It was a staggering loss, but coast redwoods are still the dominant tree over much of their original range, according to the report. Only about 600,000 acres of redwoods, about 27 percent, were paved over or converted to other human uses over the past 170 years, including, for example, large sections of Arcata in Humboldt County and Mill Valley and Larkspur in Marin County.

That means 1.4 million acres of logged-over groves still exist between San Luis Obispo and Oregon. Giant sequoias, which generally grow at 5,000 to 8,000 feet in elevation, have a much smaller footprint than coast redwoods, covering a total of

48,000 acres in the Sierra Nevada. About 16,000 acres have been logged in 24 of the 73 groves that exist on the western slopes of the Sierra.

Although protection of old-growth trees has always been the focus of conservationists, Save the Redwoods League now sees the preservation of second-growth trees as a key for the future, but it's not going to be easy. Second-growth trees, and some third-growth, make up 95 percent of the redwood acreage across the state.

The report found that half of the remaining coast redwood trees are very young, with an average trunk diameter of just 8 inches. Nearly 40 percent of what remains is also bisected by roads, degraded by development, or fragmented by farming and agriculture.

"They are packed together," said Emily Burns, director of science for Save the Redwoods League. "Many of these forests are going to be slow to grow because of that tree density, and they might grow into forests that are not as rich in redwood trees as they used to be."

North Coast redwood trees were used to rebuild San Francisco after the 1906 earthquake and fire, a time when the rampant clear-cutting of the ancient forests began to generate public alarm. Save the Redwoods League was founded in 1918 when it was becoming clear that California's mammoth old-growth trees would soon be gone if nothing were done to protect them.

Only 22 percent of the coast redwood ecosystem has been thoroughly protected from commercial logging, subdivision or other development, Burns said. Although most sequoias have been protected, 1,200 acres are still vulnerable, including the Alder Creek Grove, in the southern Sierra near Sequoia National Monument.

Burns said sequoias and redwoods have proven to be resilient over the millennia, but much more care is needed over the next century if they are going to survive for another thousand years.

“It’s pretty remarkable what they’ve been able to withstand, and now it’s our turn to nurture what’s around us,” Burns said. “While we can’t re-create old growth in 100 years, we can grow a forest that will store a significant amount of carbon in the wood, yield better water quality and still be a beautiful forest to walk through. Generations from now, they will be the old growth of the future.”

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