Why Lake Tahoe's forests face so much fire danger

By Paul Rogers
progers@bayareaonew.com

The Caldor Fire threatening communities and breathtakingly scenic landscapes around Lake Tahoe—a destination that Mark Twain once called “the fairest picture the whole earth affords”—is a dramatic, unfolding disaster.

But the conditions that led to the evacuation of more than 50,000 people around the famed alpine lake’s south and western shores—where embers rain down on rustic communities and soot chokes the normally pristine mountain air—didn’t spring up this week, this month or this year. They are the culmination of more than 150 years of decisions that people made to unwittingly set the stage for today’s catastrophe, experts say.

“We are in an emergency crisis throughout the Sierra,” said Susie Kocher, a forestry and natural resources adviser for the University of California Cooperative Extension in South Lake Tahoe.

Kocher, her husband, dog and cat evacuated their home in nearby Meyers on Monday to stay with relatives near Sacramento. Before she moved to the Tahoe area 15 years ago, she lived in Greenville, a small town in Plumas County. Nearly all of Greenville burned to the ground last month when the Dixie Fire raged through the northern Sierra Nevada’s forests.

“I’ve been watching the Dixie Fire and thinking about how this town could burn down too,” said Kocher, a registered professional forester. “It’s pretty obvious these fires are beyond our control. If you are anywhere in the direction the wind is blowing, you should be packing up.”

The problem around Tahoe, as with much of the Sierra range, Kocher and other fire experts said, dates back to the 1850s.

For centuries, fires burned about every 10 to 15 years on average through the forests around Lake Tahoe, said Brandon Collins, a research scientist with the U.S. Forest Service and adjunct professor of fire science at UC Berkeley.

Those fires, set by lightning strikes or by the native Washoe people, removed dead wood, accumulated needles and other fire hazards. When fires did burn, they typically remained close to the ground, and burned slowly. But everything began to change in 1859, when a huge deposit of silver was discovered 15 miles east of Lake Tahoe in Virginia City, Nevada.

Miners working on the Comstock Lode, which became the richest silver mine in the United States, cut large sections of Tahoe’s forests to obtain supports for the huge networks of underground tunnels. They removed large Jeffrey pines and other trees that were spaced apart by years of fires.

“There were big trees, lots of open spaces,” Collins said. “Now it’s kind of wall-to-wall trees.”

What grew back were dense numbers of white fir and other trees. Not only did the firs have thinner bark that made them more vulnerable to fire than the older pines, they have lower branches which makes it easier for fire spread.

John Muir, the conservation pioneer who founded the Sierra Club and helped save Yosemite Valley, wrote a letter in 1878 to the San Francisco Bulletin, sounding the alarm.

“In summer, the woods resound with the outlandish noise of loggers and choppers and screaming mills,” Muir wrote.

Muir tried to convince Congress to establish Lake Tahoe as a national park as he did with Yosemite. But in large part because of Tahoe’s damaged landscape and because of opposition from local landowners, lawmakers refused. Senators introduced bills in 1912, 1913, and 1918 without success.

Private development sprang up in the 1920s, including casinos, resorts and vacation homes. It expanded after World War II, bringing Frank Sinatra, Marilyn Monroe, the mob, speedboats, glitz and glamour. Neighborhoods of wooden houses with shake roofs were built in narrow streets under forests that once regularly burned. To protect those developments, fire crews began putting out fires.

With no fire to thin them, the forests grew thicker. In some places, where there were 20 to 40 trees per acre in 1850, there are 10 times as many today, Collins said.

Large sections of Tahoe’s forests have gone 100 years without a fire. So when fires do start, they burn much hotter and more violently. And Tahoe officials, because of the region’s popularity, have done more work to reduce fire risk than many other parts of the Sierra Nevada, he noted.

In 1997, as part of the
growing effort to preserve the lake’s clear waters from pollution, former President Bill Clinton and Al Gore held a summit at Lake Tahoe. New federal, state and local conservation plans were drawn. Since then 65,000 acres have been thinned or treated with prescribed burns around the 200,000-acre Tahoe basin, most of which is owned by the U.S. Forest Service, according to the Tahoe Fire and Fuels Team, a partnership of government agencies.

That work has gone well, Kocher said. But it must be expanded dramatically, particularly as climate change continues to dry out forests with higher temperatures.

“We need to think about making peace with fire, not just making war on it,” she said. “We’re good at that, but we aren’t winning.”

Collins agreed. He said forest-thinning efforts across the Sierra should be increased five-to-tenfold in the coming years. Such projects can be challenging, he noted, with controversies over smoke from prescribed burns, a cost of about $2,000 an acre with millions of acres needing treatment, and a shortage of places to take the wood, leaving it often chipped onsite.

“A lot of the early work, for good reason, was done right around homes and roads,” Collins said. “But we need the work to be done on a much bigger scale.”

Kocher, who has helped her neighbors prepare for fire, noted that in some cases, fires burn so hot, like the Angora Fire near Meyers did in 2007, that Jeffrey pines and other native trees must be replanted to keep the area from being overrun later with shrubs. Working with fire before it explodes out of control is the only way to unwind 170 years of history and restore forests to a more natural condition, she said.

“The money flows when there is a disaster,” Kocher said. “But there’s often not enough for prevention.”

Contact Paul Rogers at 408-920-5045.