

Wildfire prevention takes a backseat in Calif.

By Julie Cart, CalMatters

Dave Kinateder has a keen eye for trees. But when Kinateder, a fire ecologist in the Plumas National Forest, surveys a hillside lush with pines, he doesn't see abundance or the glory of nature's bounty.

He sees a disaster-in-waiting.

"It's a ticking time bomb," he said, gazing across the dense, green carpet of trees near Quincy, a small community high in the northern Sierra Nevada.

Last year's wildfires, the worst in modern California history, have put a microscope on the forests that cover a third of the state – in particular, on managing these wooded lands in ways that would reduce the frequency and intensity of such blazes.

California is grappling with the counterintuitive dilemma of too many trees, packed too closely together, robbed of the space they need to thrive—and with how to clear out more than 100 million dead trees, felled by drought or insects, that provide tinder for the next infernos.

Curing these unhealthy forests is difficult and expensive, and as with human health, prevention is far less costly than treatment. But these days the state firefighting agency, CalFire, spends the bulk of its resources battling fires rather than practicing preventive measures.

At stake is nothing less than life, property, air quality and the lands that hold most of California's water. A state commission recently prescribed radical changes to address what it terms the "neglect" of California's largest forests.

A 19th-century California forest would have held fewer than 50 trees an acre. Today the state's forests have grown to an unnatural 300 to 500 trees an acre, or more. That doesn't count the 2 million drought-stressed trees a month lost to bark beetles that have killed entire stands.

Gov. Jerry Brown, who in 2014 declared tree mortality a state of emergency, said in his January state of the state address that California needs to manage its forests more intelligently. He vowed to convene a task force "to review thoroughly the way our forests are managed and suggest ways to reduce the threat of devastating fires."

California has dozens of agencies attacking problem but still cannot keep up with the work. Crews around the state have been busy clearing trees as fast as funding allows. This wielding of chainsaws they call "whacking and stacking" leaves massive wood piles along highways in some areas. But it amounts to no more than triage: Cal Fire removes trees on fewer than 40,000 acres a year, far short of its goal of clearing a half-million acres annually.

Kinateder estimates that removing trees in this way costs as much as \$1,400 an acre. By comparison, controlled burns—those set by fire managers to remove vegetation from forests—is a bargain at less than \$150 an acre. Fighting a wildfire comes in at just over \$800 an acre, according to the report.

Far from the forest floor, California officials are wrestling with the financial and environmental cost of the state's forest practices. At a hearing in March in Sacramento, legislators listened to lurid descriptions of raging fire and wrenching stories of human misery recounted by a stream of state and local officials: flames rearing up like an enormous beast, residents running for their lives, neighborhoods leveled, fire burning so hot and for so long that soils were rendered sterile.

A portion of the proceedings focused on a recent report about wildfires and forest health from the Little Hoover Commission, an independent state oversight agency that gave its findings to the governor and Legislature in February. The document pulled no punches, calling the state of the Sierra Nevada's forests "an unprecedented environmental catastrophe."

It cited a century of "mismanaging" the 10 million wooded acres in the Sierra, calling out state and federal firefighting agencies for their longstanding policy of aggressively putting out all fires rather than letting those that can safely burn do so, thereby thinning the choked woodlands.

Helge Eng, deputy director of CalFire, acknowledged the report was "spot on" in its assessment of the state of the Sierra, adding that the analysis "did an especially good job of recognizing that there are no easy, black-and-white answers to the problems we are facing."

CalFire boasts that it stops 95 percent of fires at 10 acres or less, saving lives, property and entire forests from conflagration. Fire experts argue that a negative could be turned into a positive if fire bosses let them burn while still steering them away from people and structures and toward overgrown wildlands in need of clearing.

That's an approach sometimes used by the National Park Service, but it's difficult to defend when forests are ablaze, frightening the public and many elected officials alike.

Still, the report said, "it is not enough for agency leaders, scientists and advocates to recognize the benefits of fire as a tool; the bureaucracy of the state government and public sentiment as a whole must undergo a culture shift to embrace fire as a tool for forest health."

Eng said CalFire is considering adopting the managed-burn approach, when appropriate, but noted that federal

firefighters are often working in wild settings, away from development.

“CalFire’s mission is different; we protect life and property” in areas that may be densely populated, Eng said in a written response to questions. “There is most often not an opportunity to let a fire burn. The risk to human life is just too great.”

The report also detailed a public safety threat from 129 million dead trees, the crushing cost—up to \$1,000 a tree—to private property owners to have trees removed from their land and the enormous burden on rural governments to both recover from fire and prepare their forests to mitigate the intensity of the next one. In no uncertain terms, the commission prescribed dramatically ramping up tree-thinning projects and, as awful as the optics are, creating and controlling some fires to achieve the same result.

Eng agreed that the state firefighting agency was far from achieving its “aspirational” goal of clearing a half-million acres of land each year, citing such impediments as “the logistics of capacity of staff and equipment and environmental compliance,” among other factors.

In a moment notable for its rarity in Sacramento, there was bipartisan agreement in the hearing room this month about the problem, its scope and the appropriate measures to deal with it. Focus more intensely on the problem, they agreed, and throw money at it. The state spent \$900 million fighting fires last year. Just one of those late-season blazes caused more than \$9 billion in reported property damage.

“We’ve made mistakes, and we’ve created systems that are unwieldy... It’s all of our fault,” Jim Branham, executive officer of the Sierra Nevada Conservancy, a state agency, told *CalMatters*. “Money alone won’t solve it, but we won’t solve it without money, either.”

The mosaic of land ownership in California means the state

owns only 2 percent of the forests but has legal responsibility over much more: 31 million acres, including land in rural counties.

CalFire received more than \$200 million for forest health projects last year and has proposed an additional \$160 million for the next fiscal year. Those sums are on top of the agency's current \$2.7 billion budget. CalFire, in turn, doles out millions of those dollars in grants to local governments and community groups to do some thinning themselves, and it teams with the federal Forest Service to tackle clearing projects.

The work to improve forest health dovetails with other state priorities—protecting water sources and reducing greenhouse-gas emissions.

The Sierra Nevada range is the headwaters for 60 percent of California's developed water supply. Burned, denuded hillsides don't store water efficiently when it rains. Sediment cascades downhill, filling streams, affecting water quality and loading up reservoirs, reducing their storage capacity

The carbon equation is equally direct: When trees burn or decay, they release greenhouse gases. The 2013 Rim Fire near Yosemite National Park produced emissions equal to those of 2.3 million cars in a year.

Prescribed burns emit less carbon than higher-intensity fires, because managed fire is aimed at smaller trees and shrubs. Cleared forest land may still ignite, but it will burn with less intensity and fewer emissions.

Moreover, when trees die, they stop absorbing carbon from the atmosphere. The state depends on that critical service to help reduce greenhouse gases. Research suggests that severely burned areas regrow with shrubs or grasses, plants that store about 10 percent less carbon than trees do.

John Moorlach, a Republican state senator from Costa Mesa, suggests the Democratic governor, a champion of the fight against climate change, has a “gigantic blind spot” when it comes to reducing carbon emissions. Moorlach said in an interview that Brown’s emphasis on electric cars, for example, ignores the role of fire in California’s greenhouse gas inventory.

“We’re being absolute phonies about climate change if we are not dealing with the real driver of greenhouse gas; that’s these wildfires,” said Moorlach. He has proposed that the state dedicate 25 percent of the revenue from its cap and trade greenhouse-gas-reduction system to help counties’ fire mitigation efforts.

Counties would welcome the help. Randy Hanvelt, a supervisor in Tuolumne County, said that where forest management is concerned, there’s a “leadership problem.”

“Talk is cheap,” he said. “We have got ourselves a giant colossal mess. This is a war of sorts. Time is against us. Every available tool has to be applied.”

One such tool is carefully designed burns. But the meticulous planning necessary can take two to three years, and the burns require favorable weather, a permit from the local air district and, crucially, buy-in from local communities that must first be educated about the benefits. And controlled doesn’t mean risk-free.

“Politically, you have to have the ability to make mistakes and move on,” he said.

Nick Bunch, who plans thinning projects for the Plumas National Forest, pointed to a partly cleared hillside outside of Quincy where one of his extensively planned prescribed burns went awry, undone by a shift in the wind.

“We were about an hour into the burn and the smoke started

going into town," Bunch said, shaking his head at the memory. Even though the burn was going as planned, the smoke was not acceptable to nearby residents, who protested to fire officials. "Phones started ringing. Calls were made, and we shut it down."

Another method is used in Florida, which trains and certifies private property owners to burn their overgrown land and provides limited liability coverage in some cases. Florida cleared 2.1 million acres this way last year. Scott Stephens, who heads a wildland fire research lab at UC Berkeley, said the widespread adoption of the policy has educated residents on both its benefits and risks.

Back in Plumas County, a hulking building in a parking lot outside a community health complex may offer the final piece of the forest-health puzzle: creating a market for trees removed from California's forests.

Part of a project managed by the Sierra Institute for Community and Environment, the unremarkable square structure shows a potential use for California trees. The building is the state's first to be fully constructed from cross-laminated timber—layers of wood pressed together to make thick sheets and posts—equal to or greater than the strength of steel.

In addition, the \$2.3 million facility will house a large boiler to provide heat for the health center by consuming 500 tons of local wood chips a year.

The project is the brainchild of the institute, which envisions it as a way to boost the economies of forest communities. It's the kind of innovation the governor and Legislature hoped to promote by establishing a Wood Products Working Group to develop commercial uses for the piles of trees beside the state's roads.

There's little left in California today of the early 20th century's timber cutters, sawmills and biomass industry. If

the state follows the Little Hoover Commission's recommendations and accelerates forest thinning, an entire segment of state industry would need to be rejuvenated.

Meanwhile, officials emphasize the need to educate Californians about the role of forests in the ecosystem.

"If you want people to care about something, they have to understand why it matters," said Pedro Nava, chairman of the Little Hoover Commission. "They need to understand the deep connection between the health of our state and the state of our forests."

Branham, of the Sierra Nevada Conservancy, said that won't be easy.

"Some of our messages are counterintuitive: We must cut down healthy living trees to save the forest," he noted. "It's a challenge."