## Before Battling Blazes, Firefighters Chop Down Dead Trees in Sierra

Fresno Bee Razi Syed July 2, 2016

Shaver Lake - Walking on top of several inches of dried pine needles, desiccated wood chips and dust on a ridge near Shaver Lake, three firefighters picked up the stripped branches from cut-down ponderosa pines and tossed them into the chipper.

A conveyor belt-like mechanism took hold of the jagged tree limbs, a loud, grinding sound was heard, and a fierce fusillade of dust and wood chips were emitted from the exhaust chute, landing up to 20 feet away.

It has been a scene playing out daily in the Sierra this spring and now summer: Cal Fire firefighters cutting down trees and thinning out parts of the forest in the wake of an unprecedented crisis, the deaths of 66 million California trees, said Edwin Simpson, a forester with Cal Fire. On Thursday, Cal Fire officials were working around a ridge in Meadow Lakes, close to Shaver Lake, to clear a firebreak.

The combination of a dramatic rise in the number of Western bark beetles and the drought, which has further stressed the trees, has resulted in the Fresno County foothills being full of densely packed trees that could carry and spread flames quickly in the event a large wildfire broke out, Simpson said.

Federal officials are aware of the potential for devastating fires.

"Tree dies-offs of this magnitude are unprecedented and increase the risk of catastrophic wildfires that puts property and lives at risk," Secretary of Agriculture Tom Vilsack said.

The beetles bore into the trees, drilling tiny pathways that inhibit the trees' ability to absorb moisture, Simpson said. The ponderosa pines, which are beetles' tree of choice, usually use sap to push the beetles out, but several years of drought have weakened their ability to fight off the insects.

"Because we haven't logged for so many years, there's too many trees per acre in the whole Sierra Nevada mountain range," Simpson said. "So every tree has a baseline of stress, and you add two or three years of epic drought on top of that, and the trees are really stressed. That allows the bark beetle population to explode."

Firefighter Ryan Katz said the condition of trees in the Shaver Lake area has dramatically deteriorated from year to year.

"This year and last year have been a lot worse than they ever have been, You could tell going up the four-lane, you can see the percentage of dead trees increasing each year," he said.

Over the past few weeks, Cal Fire has been steadily working to extinguish small blazes in the area, Katz said. With summer here and high temperatures expected for weeks, the agency is preparing for the possibility of a blaze that could climb over the Sierra foothills and threaten roads and homeowners.

"We actually just had a fire just below this area that we're working on right now," Katz said while clearing the firebreak in Meadow Lakes. "Luckily, with this size of a department, we have a lot of resources. We have ground resources, which would be ourselves and the engine. We also have helicopters and air attack that can hit the fire from above, while we hit it from below.

The density of the trees can prevent firefighters from driving through to problem spots during a wildfire, which makes air efforts crucial to controlling the spread of fires in the foothills, Katz said.

Katz said Cal Fire makes every effort to keep any flames contained to 10 or fewer acres.

While the wood chips expelled from the chipper still are flammable, getting rid of the loose tree limbs piled in the woods makes any potential fire easier to fight. "Wood in any form is still a fire risk, but what we're doing is taking these piles around here, called slash, which takes the fires and gives them ladders to get into trees," Katz said. "If a fire is on the ground and has a small flame, then it's much easier to tackle." Large logs left from the felled trees are stacked into log decks to eventually be taken to a lumber mill.

As of mid-June, the U.S. Forest Service had felled more than 77,000 hazard trees and treated more than 13,000 acres along 228 miles of roads around communities and recreation sites throughout California, with work still continuing on another 15,000 acres.

The crisis has created a variety of risks for the public, Katz said.

"It's a compilation of everything – we have all these trees that are falling, which are a risk to the public for falling trees, or us while we're out there fighting fires," Katz said. "They also help fire to grow into the grounds of the trees, and they also keep the fires fed with fuel. Fuels on the ground, fuels in the air – there's just a big continuity of fuels that increases the risk of fires getting larger."

Staci Heaton, a regulatory affairs advocate with the Sacramento-based Rural County Representatives of California, is a member of the Tree Mortality Task Force, which is

comprised of state and federal organizations and tasked to coordinate the efforts of various agencies around the state. RCRC represents 35 rural counties.

Heaton said the current situation is dire and has been exacerbated by decades of ineffective management of the national forests.

"We're bracing ourselves for this to be one of the worst wildfire years we've seen in history," she said.

Part of the reason the trees are so densely packed is because the management of the national forests has not been as good as it should have been, Heaton said, pointing to the lack of efforts to thin the forests.

"It's been through years of wildfire suppression that the understory has gotten densely thick," she said. "One thing that needs to happen is a little more prescribed burning." Such planned fires would involve mapping out an area and creating a fuel break around it to control the spread of flames, Heaton said. "It mimics historical natural fire thinning." As fire officials work to maintain firebreaks and protect the public, the priority is to cut down dead trees that threaten major roadways, such as Highway 168, and those that endanger communities, Simpson said.

Authorities hope that several years of above-normal rain will lower the bark beetle populations, but the trees killed during the past few years will have to be dealt with, Simpson said.

"This project will go on forever – for our lifetimes, I would say," he said. "Because these trees are going to start falling down."

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