

Jeffrey pine beetles taking toll on Tahoe trees

By Kathryn Reed

Jeffrey pine beetles love drought. It means trees are weaker and unable to fend off this species that is native to the Lake Tahoe Basin. It means they get to proliferate.

What it means for the trees is more will die. This in turn creates more fuel for wildfires.

Officials throughout the Western United States are concerned about the proliferation of beetles as the wildfire season gets under way in what is now the fourth year of one of the worst droughts on record.

The Jeffrey pine beetles are black and are no more than one-quarter-inch long. They have a history of wreaking havoc in Tahoe. There was a huge outbreak in the basin from 1991 to 1996 that wiped out nearly 40 percent of the Jeffrey pines in the basin.

“We need to react to the outbreak quicker than we did in the 1990s,” Kit Bailey, fire chief for the Lake Tahoe Basin Management Unit, told *Lake Tahoe News*. “We won’t stop it, but we may moderate the negative affects.”



Orange trees at the Spooner Lake area in 1995 show the devastation of the Jeffrey pine beetle. Photo/U.S. Forest Service

Not leaving the tinder dry wood is one way to deal with the carnage.

Dave Fournier, vegetation specialist with the LTBMU, said removing the infested trees in the fall would be key to keeping the infestation in check and reducing the mortality rate of trees. Felling the trees and hauling them out of the basin removes the beetles that continue to lay their eggs in the dead or dying tree. This kills off the next generation of beetles before they can hatch in the spring.

During the drought in the early 1980s a beetle outbreak affected mostly fir trees. Because there were osprey nests no trees were removed, Fournier said. This was in Slaughterhouse Canyon on the East Shore.

Two decades later the powers that be finally realized trees needed to be removed because they were so thick. Trees were so close together and others were scattered about the ground that

it took an hour to walk 100 feet, Fournier said.

No trees were removed in the '90s during the Jeffrey beetle outbreak. This, too, created an overabundance of fuel for a fire.

Policies and philosophies have changed in the intervening years. Now thinning projects are seen as a way to combat the beetle problem.

The denser the tree stand, the less water there is to go around. Less water means a tree is not completely healthy and is therefore more susceptible to being overtaken by a beetle.

About 60 percent of the wildland urban interface in the basin has been thinned. The Forest Service has the funds to complete about half of what is left. The problem is these areas are heavy fuel loaded stands that are 100 years old.

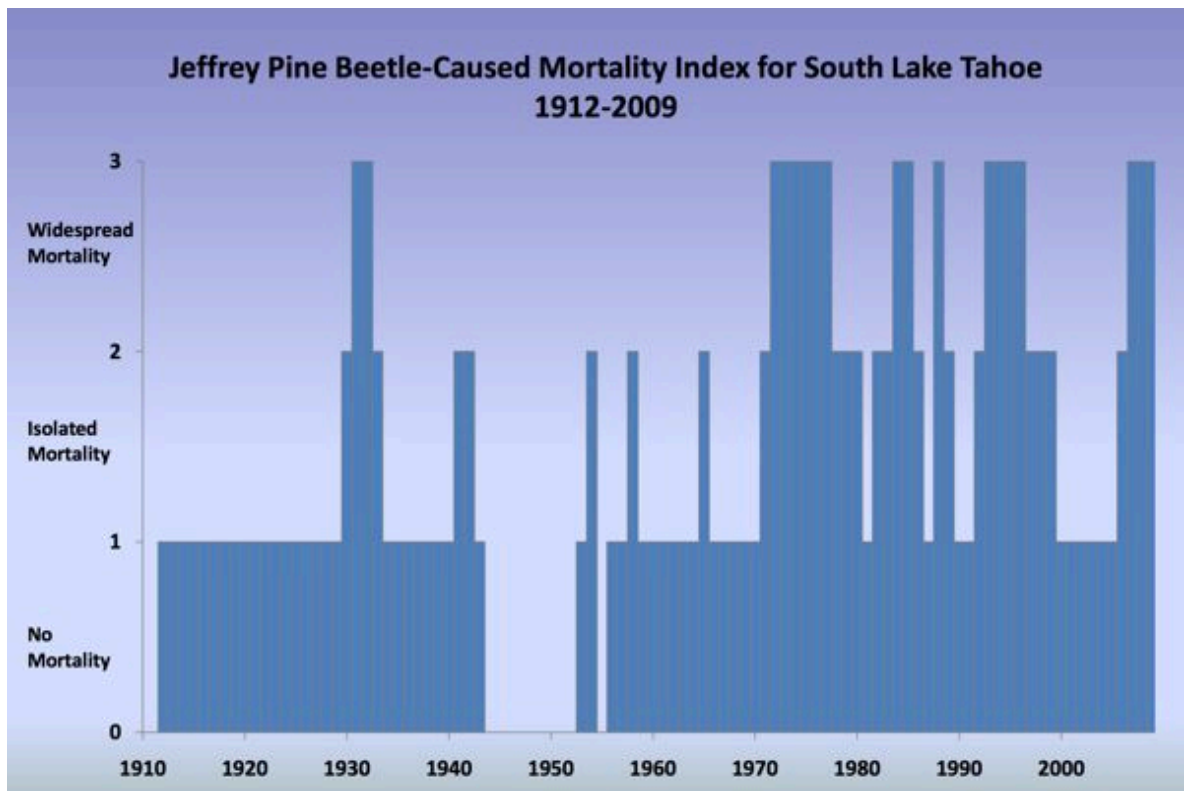
"My prediction is that these stands that have been thinned using current standards should not see a sea of red providing the thinning was sufficient," Fournier told *Lake Tahoe News*.

Another issue the Forest Service is contending with is that until about 10 years ago large diameter trees were not removed. This is a problem because their roots are deep and they need more water than smaller trees.

The U.S. Forest Service annually surveys its land by air. In 2014, 800,000 acres of tree mortality were found in California. This compares to 2013 when there were 350,000 acres.

Charles Goldman at a talk June 4 in Incline Village touched on forest health, saying, "Up to 70 percent of the trees in some areas are dead or dying" from bark beetles.

Fournier is already documenting evidence of the resurgence of these beetles. They are ravaging trees at Kiva Beach on the South Shore.



Source: *U.S. Forest*

Service

A sea of red trees is the telltale sign of beetle infestation. By fall it will be easier to see the devastation. However, with so little moisture for the past few winters, the dead needles are likely to first be evident this summer to the average person.

The Jeffrey pine beetle is one of 220 species of beetles. Of those, 12 like to burrow into the various pine trees. Usually the different beetles are confined to a select area of the state.

A good winter normally kills off many of the beetles – keeping their populations in check. But that hasn't happened for a few years. This has given the beetle population an opportunity to grow.

They bore into the trees in the late fall. A healthy tree can use its pitch to extract the beetle so it never takes hold.

But the drought has weakened trees' ability to fend for themselves and therefore the beetles are winning.

"Once they lay eggs the tree is girdled," Fornier explained. "Then it's just a matter of time for how long it takes for that tree to shutdown."

While the Jeffrey pine beetles are native to the basin, in a normal winter about one tree in every 3 acres dies – not groves, as is happening today.