Sierra Nevada ripe for catastophic fire

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With fuels ready to burn and the right burning conditions -- wind, low humidity and high heat -- there is no question that a catastrophic fire could happen in the local Mountain Area, said Dave Martin, district ranger for the Bass Lake Ranger District.

"The Sierra National Forest has been remarkably lucky compared to other national forests in the state of California," Martin said. "Every other forest has had a really, really big fire. Catastrophic fire is not normal for this area; it never was."

A hundred years ago, small creeping ground fires burned every five to 15 years, taking care of the undergrowth, Martin explained.

Early Sierra Nevada forests consisted of widely spaced large trees with sparse under-story beneath. Common trees like the ponderosa pine and sugar pine were more fire resistant due to their thick bark. Less under-story meant less fuel to feed fires, resulting in low-intensity fires that naturally pruned the lower branches on larger trees and burned away the grass and smaller trees below.

The forest did a great job of naturally cleaning itself, Martin said, but that all changed when people started making their homes in the Mountain Area. Before European settlement, wildfires were a natural part of the forest system.

At the turn of the century, millions of acres of large trees in the east and west were extensively cleared for timber to build up communities, Martin said. This prompted the formation of the Forest Service, with the purpose of conserving and protecting forests from fire and excessive clearing.

At the same time, Martin said, the Forest Service developed a more stringent policy on putting out fires. Although the Forest Service doesn't want to see disastrous or catastrophic fires, Martin said, it has come to realize that fire is a natural part of the ecosystem.

"Fire isn't a bad thing, in the right places, in the right time, in the right condition," he said.

White fur and incense cedars, which grow in tighter clusters and are more fire-prone, were planted to replace the larger, fire-resistant pine trees that once dominated the mid-elevation forests. This change, as well as a decrease in the frequency of fires, resulted in more ground cover and under-story that extend upward, creating fuel ladders that allow fire to quickly spread into the crowns of the trees.

Today the Forest Service faces the challenge of slowly changing the forest back to a more fire-resistant condition while dealing with an ever-increasing mountain population.

As more people continue to move into the foothills and mountain regions, firefighters must use available resources to protect property first instead of containing the fire.

"In essence, we are trying to keep up with what's going on in the wild and urban interface, as far as the number of people moving here," Martin said. "If people do all their clearing, we don't have to worry about the houses burning up because we know they're not going to. So we can put our resources out towards perimeter control and getting the fire corralled. That's probably the biggest concern that we have."

Vegetation management projects concentrated around homes and developments are led by the Forest Service, Cal Fire and other local agencies like fire safe councils. Treatment projects include thinning of some smaller trees like the white fur and incense cedar and leaving larger, more fire-resistant trees spaced further apart so crowns don't touch.

Mastication is another treatment used to take old growth manzanita and grind it down to the ground, removing ladder fuels, which in turn will reduce flame length in the event of a fire.

Instead of having a continuous fuel bed that carries the fire up into the canyons, Martin said the purpose of the treatments is that, if a fire hit a treated area, the fire would drop back down to the ground, making it more manageable.

A number of areas are currently being treated, Martin said, but at about $500 per acre the work gets expensive. Martin said a few years ago forest treatments were funded through lumber sales from the removed timber. The current lumber market is terrible, Martin said, and the money to treat the forests must now come from Congress.

A reasonably cool spring and late rains helped the current fire conditions, Martin said.

"The conditions right now aren't too bad," he said, noting that fire activity has started to pick up in the western United States as temperatures rise and vegetation dries out.

"There's a two-edge sword," Martin said. "When you have a cool, wet spring you get higher grass. Three-foot-high

grass is very difficult to put out and [fire] moves fast."

How a fire acts depends on many variables, Martin said. Better predictors of fire are the weather and fuel conditions two to three weeks before a fire starts, not necessarily what has happened during an entire season. If temperatures aren't too extreme and winds remain calm, Martin said he expects an average fire season this year.

With fire season in full swing and the Fourth of July right around the corner, most eastern Madera County and Mariposa County residents will have to forego any plans to celebrate with fireworks.

Use of fireworks is prohibited everywhere in the two counties except for the cities of Madera and Chowchilla, said Fire Capt. Matt Watson of the Fire Prevention Bureau. Any fireworks that explode, move about the ground or project in the air are illegal in the state of California.