

Six burning questions about Central California's 2017 fire season

By Tim Sheehan

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No, it's not your imagination. California's long, hot summer is on a pace to produce a wildfire season with more fires scorching more acres this year than 2016 – more acres falling victim to flames, in fact, than all but three of the past 10 years.

How many fires? How many acres? Why are there more? In a prolific fire season following a wet winter that many people thought was supposed to end California's drought, you've got burning questions. We've got some answers.

How many fires?

According to the National Interagency Coordination Center, there were five major active fires in the Sierra Nevada from Yosemite National Park in Mariposa County to the Sequoia National Forest in Tulare County as of Thursday. Collectively, they've burned almost 40,000 acres. The largest is the Pier Fire near Springville in Tulare County. That fire started on Aug. 29 and destroyed two structures as it's grown to more than 25,000 acres. By Saturday morning, firefighting crews had managed to build containment lines around 50 percent of the fire area.

Then there's the Railroad Fire burning near the communities of Fish Camp and Sugar Pine in Madera County just south of Yosemite National Park. It also started on Aug. 29 and encompasses more than 12,300 acres at 64 percent containment. Inside the national park, the Empire Fire has burned since Aug. 1.

Two fires that started on Sunday, the Mission and Peak fires, are also still burning in the northern part of the Valley. The Mission Fire near North Fork was estimated at about 1,035 acres and was 65 percent contained by Saturday morning. The Peak Fire had burned almost 700 acres southeast of Mariposa but was estimated to be 98 percent contained by Friday evening.

It's not only the forests on the Valley's east flank that are feeling the heat. Of 43 "major incidents" listed by Cal Fire – the state's Division of Forestry and Fire Protection – since January in Fresno, Kings, Madera and Tulare counties, the largest wasn't in the Sierra Nevada, but in the Diablo Range of hills southwest of Avenal. The Garza Fire started in early July and, by the time it was fully contained a couple of weeks later, burned nearly 50,000 acres straddling the Fresno-Kings county line. The Garza Fire was the largest of 18 fires on the Valley's west side.

Statewide, more than 6,400 fires have flared in California from January through the Labor Day weekend, burning more than 626,000 acres in just over eight months. That's already more acres than all of 2016, when 622,659 acres were blackened by 6,954 fires.

It was a wet winter. Why are there so many fires?

Well, it's like this: After five years of drought, one winter with plentiful rain and snow in 2016-17 just isn't enough to save all of the dead and dying trees in the Sierra. In fact, the moisture created an environment that was ripe for plenty of grass and brush to grow this spring and dry out this summer, adding to the amount of fuel available to burn from lightning strikes or careless humans.

"There's a lot of dead wood on the ground, and it's not going to come back to life," said Scott McLean, a deputy chief and spokesman for Cal Fire. "Then you add the near-record winter we had, and it promoted vegetation growth like we hadn't seen in years. The grass growth was very intense, and it started drying out early in the year."

McLean called that grass "a fuse. This summer was hot and dry, and we had a substantial amount of 100-degree weather, and with just enough breeze behind it and dramatically lower humidity, it wicked all the moisture out of the vegetation. ... All of that combined has promoted the number of fires to dramatically increase."

And the worst could be yet to come. "Historically, September and October are the most devastating months for wildland fires," McLean said. "We've had months of summer to dry things out. The weather could be cooler, but the vegetation is still dry."

So how many dead trees are there, anyway?

Across the state, fire officials estimate the number of dead trees at about 102 million. And some of the greatest concentrations of tree mortality – 40 to 100 dead trees or more per acre – are in Mariposa County and eastern Madera, Fresno and Tulare counties, according to the California Tree Mortality Task Force.

Those four counties are among 10 that the state has deemed “high priority counties” that are suffering from severe tree mortality. Within those 10 counties in and along the Sierra, from Amador in the north to Kern in the south, about 76 million dead trees have been identified. Tulare and Fresno counties hold the unfortunate lead, with about 13 million and 12 million dead trees, respectively.

“Between 2010 and late 2015, U.S. Forest Service aerial detection surveys found that 40 million trees had died across California,” the Tree Mortality Task Force stated in an April report. “Surveys completed during the 2016 flight season resulted in the detection of approximately 62 million additional dead trees.”

McLean said some dead trees are toppling onto the forest floor, where most will likely be allowed to decay naturally. “The worst part is all the dead trees that are still standing,” he added. “They’re like matchsticks; they’re very receptive to fire.”

Many of the dead trees are in national forests and national parks, leaving it to the U.S. Forest Service and the National Park Service to cope with the potential fire hazards.

“These dead and dying trees continue to elevate the risk of wildfire, complicate our efforts to respond safely and effectively to fires when they do occur, and pose a host of threats to life and property across California,” then-U.S. agriculture secretary Tom Vilsack said in November. The U.S. Department of Agriculture includes the Forest Service.

Vilsack added that a lack of money has hampered efforts to cut down dead trees to reduce the risk of wildfires. “USDA has made restoration work and the removal of excess fuels a top priority,” he said, “but until Congress passes a permanent fix to the fire budget, we can’t break this cycle of diverting funds away from restoration work to fight the immediate threat of the large unpredictable fires caused by the fuel buildups themselves.”

Is the drought the only thing killing the trees?

Lack of water by itself could be enough to kill some of the trees, but insects are another major factor in the mortality of the past decade.

The Tree Mortality Task Force estimated that almost 30 million trees that died between September 2014 and October 2015 were victims of drought and insect infestation. In many instances, McLean said, insects like bark beetles finished what the drought started.

“The forests are so dense, all those trees are vying for every little bit of moisture and nutrient,” he said. “That stresses the trees out. When trees are stressed, their immune systems are compromised. And sap is the immune system for the trees.”

“Usually, when beetles bore in, the sap pushes the insects right back out,” McLean added. “But when the trees don’t have enough moisture or sap to do that, that’s how the beetles get into the trees and kill them.”

The beetles are always present in the forest; when there’s plenty of moisture, the trees can withstand them. “But this is one of the results of the drought, when the beetles can infest and destroy all these trees.”

I don’t live in the mountains. How can these fires affect me?

While communities on the Valley floor are miles from the actual flames, we’re not immune from the smoke that wildfires pump into the air. That means you and your family can potentially be affected by the fires in the region.

For several days last week, the skies over Fresno, Clovis and other Valley cities were more gray than usual for the summer, and that can be chalked up to fires in the Sierra. And let’s face it – the Valley’s air is bad enough without wildfires adding to the mess.

"We are seeing the air quality deteriorate a little bit," said Cassandra Melching, a spokeswoman for the San Joaquin Valley Air Pollution Control District. "Right now if you go outside, you can see haze in the sky, and it's all the smoke from the fires. When it's aloft, we're not breathing it. But in the evening and early-morning hours, that smoke comes down to the ground, and we can't predict when and where that will happen."

That's when the air may smell like smoke and people may even see bits of ash drifting down. "When you smell smoke and see ash, that's when people need to care, and treat it like a RAAN Level Four air quality alert," Melching said, referring to the second-most-severe warning level of the district's Realtime Air Advisory Network. "It can be harmful to people who have asthma, COPD (chronic obstructive pulmonary disorder) or cardiac issues. We advise that if you can smell smoke or see ash, stay indoors where there's cool, filtered air."

The problem components of smoke from wildfires are primarily microscopic particles called PM-2.5, and ozone. Melching said ozone is a concern when temperatures above 100 degrees effectively "cook" the chemical, but the cooling trend over the past few days has eased that worry. "We're getting a very needed break" from the ozone, Melching said.

Who's fighting these fires?

Every fire season, major wildfires put a strain on the available resources of Cal Fire, the National Park Service and the U.S. Forest Service. When multiple fires spring up, the state's Office of Emergency Services activates a mutual-aid system in which departments across California lend a hand by sending firefighters, fire engines and other equipment wherever it's needed.

As of Thursday, more than 200 firefighters from city fire departments in Fresno, Clovis, Selma, Visalia, Madera, Tulare, Coalinga, Porterville, Dinuba, Hanford, Woodlake, Reedley and Orange Cove – as well as county departments in Fresno, Kings, Madera and Tulare counties – were assigned to fires all over the state, from the Salmon-August complex of fires in Siskiyou County at the Oregon border to the Eclipse fire complex in San Diego County. The largest numbers were working on the Pier Fire near Springville in Tulare County and the Railroad Fire in Madera County south of Yosemite National Park.

Wildfire smoke still hugs Oakhurst. 'Stay home,' school districts told students

By Jody Murray

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Two Oakhurst-area school districts told children to stay home for a second straight day Friday because of lung-searing smoke from nearby wildfires.

While the news from fires near Fish Camp and North Fork was cautiously optimistic, Oakhurst continued to suffer from its bowl-like geography, which captures soot and smoke.

Yosemite Unified School District and Bass Lake School District closed Yosemite High and other Oakhurst-area schools. A statement on the Yosemite district's website expressed hope that schools would reopen Monday.

Earlier this week, a portable air pollution monitor in Oakhurst captured a one-hour peak reading for small particles more than six times higher than the level considered "hazardous to health."

The monitor on Tuesday recorded 601 micrograms per cubic meter for small particulates known as PM 2.5. The federal government says 75 micrograms is hazardous.

That's not a record for forest fire pollution in Oakhurst. The Rough Fire in Hume Lake two years ago nearly reached 1,000 on the monitor.

Small particulates are harmful not only to people with respiratory conditions but can get into the lungs and the bloodstreams of even healthy people, potentially causing lung, heart and other health problems.