

## **Peak Fire grows slightly, but containment jumps**

The Bakersfield Californian, Sunday, July 25, 2021

The Peak Fire has grown slightly to some 2,098 acres, but containment has jumped to 73 percent, according to an incident management team report issued Sunday.

About 440 personnel are working on the fire south of Lake Isabella. While 40 residential structures are considered threatened, evacuation orders were no longer in place as of Saturday morning.

Saturday "firefighters and helicopters resources continued to make excellent progress and completed the line around the fire. They will work to strengthen that line, especially on the east side above Loco Bill Canyon," an incident news release said.

"In addition, hotspots in an oak stand within the west side drainage will be a priority. On the north side, crews are backhauling some of the 12,000 feet of hose used in firefighting. Suppression repair is the priority on the north and south boundaries of the fire (Sunday). Crews are building water-bars to direct future water flow, spreading cut vegetation over bare ground to prevent erosion, and placing rocks back to discourage future informal trail building to protect the land."

The incident team noted that public lands managed by the Sequoia National Forest and the Bureau of Land Management Bakersfield Field Office are under complete fire restrictions. The use of propane stoves with an on/off switch is permitted, but campfires are not allowed.

## **California's largest fire burns homes as blazes scorch West**

The Bakersfield Californian, Monday, July 26, 2021

INDIAN FALLS, Calif. (AP) — California's largest wildfire merged with a smaller blaze and destroyed homes in rugged and remote areas, as numerous other fires burned across the U.S. West.

The Dixie Fire had already leveled over a dozen houses and other structures in Northern California when it combined with the Fly Fire and tore through the tiny community of Indian Falls after dark Saturday.

An updated damage estimate was not available Sunday, though fire officials said the blaze had charred more than 301 square miles (779 square kilometers) of timber and brush in Plumas and Butte counties. It was 21% contained.

The fire prompted evacuation orders in several small mountain communities and along the west shore of Lake Almanor, a popular resort area. More than 10,000 homes were under threat, officials said.

Firefighters also reported progress against the nation's largest wildfire, the Bootleg Fire in southern Oregon, containing 53% of the blaze that had scorched 640 square miles (1,657 square kilometers) of land.

The lightning-caused fire has burned 67 homes, mainly cabins, and at least 2,000 houses were under evacuation orders.

Firefighters have been dealing with perilous fire behavior, with flames consuming huge areas of vegetation each day. Such conditions are often from a combination of unusual random, short-term and natural weather patterns heightened by long-term, human-caused climate change. Global warming has made the West much warmer and drier in the past 30 years.

In southwest Montana, officials were focusing on structure protection for three fires amid weather forecasts of rising temperatures, low humidity and westerly winds this week, factors that could produce explosive growth.

Crews were trying to protect about 200 homes and cabins and prevent the 44-square-mile (144-square-kilometer) Trail Creek blaze from reaching the Big Hole National Battlefield in Beaverhead County, fire spokesman Jason Nedlo said. The battlefield site, operated by the National Park Service, has been closed because of the fire threat.

Five federal firefighters were in stable condition Sunday after being burned when swirling winds blew a lightning-caused wildfire back on them in eastern Montana on Thursday. The five were building a defensive line at the Devil's Creek Fire in Garfield County when the weather shifted suddenly.

Elsewhere in California, the 105-square-mile (272-square-kilometer) Tamarack Fire south of Lake Tahoe continued to burn through timber and chaparral and threatened communities on both sides of the California-Nevada state line. The fire, sparked by lightning July 4 in Alpine County, California, has destroyed at least 23 buildings, including more than a dozen in Nevada. It was 45% contained.

In north-central Washington, firefighters battled two blazes in Okanogan County that threatened hundreds of homes and again caused hazardous air quality conditions Saturday. And in northern Idaho, east of Spokane, Washington, a small fire near the Silverwood Theme Park prompted evacuations Friday evening at the park and in the surrounding area. The theme park was back open Saturday with the fire half contained.

More than 85 large wildfires were burning around the country, most of them in Western states. They had burned over 1.4 million acres (2,135 square miles, or more than 553,000 hectares).

## **California's largest fire torches homes as blazes lash West**

Associated Press

The Bakersfield Californian and The Fresno Bee, Saturday, July 24, 2021

INDIAN FALLS, Calif. (AP) — Flames racing through rugged terrain in Northern California destroyed multiple homes Saturday as the state's largest wildfire intensified and numerous other blazes battered the U.S. West.

The Dixie fire, which started July 14, had already leveled over a dozen houses and other structures when it tore through the tiny community of Indian Falls after dark.

An updated damage estimate was not immediately available, though fire officials said the blaze has charred more than 181,000 acres (73,200 hectares) in Plumas and Butte counties and was 20% contained.

The fire was burning in a remote area with limited access, hampering firefighters' efforts as it charged eastward, fire officials said. It has prompted evacuation orders in several small communities and along the west shore of Lake Almanor, a popular area getaway.

Meanwhile, the nation's largest wildfire, southern Oregon's Bootleg fire, was nearly halfway surrounded Saturday as more than 2,200 crew members worked to corral it in the heat and wind, fire officials said. The growth of the sprawling blaze had slowed, but thousands of homes remained threatened on its eastern side, authorities said.

"This fire is resistant to stopping at dozer lines," Jim Hanson, fire behavior analyst, said in a news release from the Oregon Department of Forestry. "With the critically dry weather and fuels we are experiencing, firefighters are having to constantly reevaluate their control lines and look for contingency options."

In California, Gov. Gavin Newsom has declared a state of emergency for four northern counties because of wildfires that he said were causing "conditions of extreme peril to the safety of persons and property." The proclamation opened the way for more state support.

Such conditions are often from a combination of unusual random, short-term and natural weather patterns heightened by long-term, human-caused climate change. Global warming has made the West much warmer and drier in the past 30 years.

On Saturday, fire crews from California and Utah headed to Montana, Gov. Greg Gianforte announced. Five firefighters were injured Thursday when swirling winds blew flames back on them as they worked on the Devil's Creek fire burning in rough, steep terrain near the rural town of Jordan, in the northeast part of the state.

They remained hospitalized Friday. Bureau of Land Management spokesperson Mark Jacobsen declined to release the extent of their injuries, and attempts to learn their conditions Saturday were unsuccessful.

Three of the firefighters are U.S. Fish and Wildlife Service crew members from North Dakota, and the other two are U.S. Forest Service firefighters from New Mexico.

Another high-priority blaze, the Alder Creek fire in southwest Montana, had charred over 6,800 acres (2,750 hectares) and was 10% contained Saturday night. It was threatening nearly 240 homes.

Elsewhere in California, the Tamarack fire south of Lake Tahoe continued to burn through timber and chaparral and threatened communities on both sides of the California-Nevada state line. The fire, sparked by lightning July 4 in Alpine County, has destroyed at least 10 buildings.

Heavy smoke from that blaze and the Dixie fire lowered visibility and may at times ground aircraft providing support for fire crews. The air quality south of Lake Tahoe and across the state line into Nevada deteriorated to very unhealthy levels.

In north-central Washington, firefighters battled two blazes in Okanogan County that threatened hundreds of homes and again caused hazardous air quality conditions Saturday. And in northern Idaho, east of Spokane, Washington, a small fire near the Silverwood Theme Park prompted evacuations Friday evening at the park and in the surrounding area. The theme park was back open on Saturday with the fire half contained.

Although hot weather with afternoon winds posed a continued threat of spreading blazes, weekend forecasts also called for a chance of scattered thunderstorms in California, Utah, Nevada, Arizona and other states. However, forecasters said some could be dry thunderstorms that produce little rain but a lot of lightning, which can spark new blazes.

More than 85 large wildfires were burning around the country, most of them in Western states, and they had burned over 1.4 million acres (2,135 square miles, or more than 553,000 hectares).

## **From heavy metals to COVID-19, wildfire smoke is more dangerous than you think**

Hayley Smith Los Angeles Times

The Fresno Bee, Monday, July 26, 2021

When Erin Babnik awoke on the morning of Nov. 8, 2018, in Paradise, California, she thought the reddish glow outside was a hazy sunrise.

But the faint light soon gave way to darkness as smoke from the burgeoning Camp fire rolled in.

"The whole sky turned completely black, and there were embers flying around," Babnik recalled. "I remember it smelling horrible."

She hastily evacuated to nearby Chico with little more than an overnight bag. Her rented home, along with nearly every other structure in Paradise, would soon be reduced to ash.

Although several years have passed and thousands of additional wildfires have ignited across California, researchers are still unpacking the precise dangers of smoke from blazes like the Camp fire. Already this year, plumes from Western fires are making their way across much of the U.S. and Canada.

One recent study found that smoke from the Camp fire was particularly noxious because it contained particulates from burned homes as well as vegetation — something officials fear will become more common as home-building pushes farther into the state's wildlands.

Another study linked wildfire smoke to an increased risk of contracting COVID-19.

The findings indicate that as fire season ramps up, the dangers of respiratory illness and other serious side effects from smoke loom nearly as large as the flames.

The 2018 Camp fire was the deadliest wildfire on record in California. At least 85 people died, and nearly 19,000 buildings were destroyed, mostly in Paradise.

The fire also generated a massive plume of heavy smoke that spewed dangerously high levels of pollution into the air for about two weeks, according to a study released this month by the California Air Resources Board.

Researchers examined data from air filters and toxic monitors to determine that smoke from the fire was in many ways more harmful than that of three other large fires that burned mostly vegetation that year — the Carr fire, the Mendocino Complex fire and the Ferguson fire.

Elevated levels of chemicals such as lead, zinc and iron generated by smoke from the Camp fire were detected in nearby Chico and as far away as San Jose and Modesto, the study found.

The lead was of particular concern because it has well-documented health impacts on blood pressure and reproductive systems and has been strongly linked to cancer and neurological disorders, especially in children, said Michael Benjamin, chief of the Air Quality Planning and Science Division at the California Air Resources Board.

"There are very good reasons why we try to keep lead out of the air," Benjamin said, noting that federal and state governments already have taken actions to protect people against the chemical, such as banning lead paint and leaded gasoline.

Many of the buildings razed in the Camp fire were likely constructed before the 1978 lead paint ban, Benjamin said. And many of the vehicles that burned likely contained chemicals such as zinc.

"When we have an incident like this, where you have 19,000 structures that burned in Paradise ... all of those metals are vaporized and released into the atmosphere," he said.

Lead levels in Chico, the closest available monitoring site to the Camp fire, were 50 times higher than normal for one 24-hour period during the fire, Benjamin said.

The study results didn't surprise David Little, who was editor of the Chico Enterprise-Record when the fire broke out and now serves as executive vice president of communications at the North Valley Community Foundation, which provides relief and recovery efforts for Camp fire victims.

"We have fires here every year, but this was something spectacular and different," Little said of the Camp fire's smoke. "It was like this curtain coming down. It went from blue sky to black, like someone turned out the lights."

And the smoke wasn't like what billows from a regular forest fire or brush fire, he said. It was more akin to a tire fire, where "black stuff comes out of the air and lands on you."

"That's what our whole county was enveloped in for many, many days," he said.

The air board's Benjamin said researchers have not yet tracked specific health impacts on residents who lived through the Camp fire, but he noted that millions of people in Northern California were exposed to brief but elevated lead levels during its wrath.

Researchers are, however, beginning to examine the "negative synergy" between wildfire smoke and COVID-19, he said, noting that the coronavirus can "compromise people's respiratory systems and make people more susceptible to the impacts of particulate and smoke."

At least one group of scientists at the Desert Research Institute in Nevada already has found a correlation.

A study published this month in the Journal of Exposure Science and Environmental Epidemiology found that wildfire smoke may greatly increase susceptibility to COVID-19.

Researchers focused on about 36,000 patients at a hospital in Reno between Aug. 16 and Oct. 10, 2020 — the period most affected by smoke from Western fires like the August Complex, the Creek fire and the Glass fire — and found that an increase in particulate matter from wildfire smoke was associated with a nearly 18% increase in the number of coronavirus cases.

The findings are "important to be aware of as we are already confronting heavy wildfire smoke from the Beckwourth Complex fire and with COVID-19 cases again rising in Nevada and other parts of the Western U.S.," said Daniel Kiser, an assistant research scientist at DRI and one of the study's co-authors.

The study controlled for variables such as the general prevalence of the virus and the number of tests administered. Scientists said the findings likely can be extrapolated to other areas affected by fires.

There are no definitive answers about how wildfire smoke and COVID-19 are linked, said Gai Elhanan, a health data scientist at DRI and another of the study's co-authors. One possibility is that exposure to smoke is altering peoples' immune response, while another is that the smoke creates an overexpression of ACE2 respiratory cells. A third is that the coronavirus' particles may attach themselves to smoke particles, making people more susceptible to ingestion of the pathogen.

The effects of wildfire smoke also depends on what's burning, Elhanan said.

"This is part of the complexity of what we inhale," he said.

Neither study is the first to examine the harmful impacts of wildfire smoke: Last year, researchers found it contains fungi, bacteria and other airborne pathogens. But the latest findings add to a growing list of evidence about its dangers.

And as wildfires become larger, more frequent and move closer to communities, experts said it is increasingly important for people to be aware of what the blazes are belching.

"You're not only now burning wood," said Peter DeCarlo, an associate professor of environmental health and engineering at Johns Hopkins University. "You're burning heavy metals, and you're burning plastics and other things that wouldn't burn just in a forest fire. ... Those add additional chemicals, many of which we know are toxic and noxious, to what's already bad from wildfire smoke."

And thanks to extremely parched vegetation, fires also are burning hotter and with greater intensity, which can enable smoke to travel farther, he said.

"How intense the fire is burning determines how high in the atmosphere [the smoke] gets," DeCarlo said. "The higher it gets in the atmosphere, the easier it is to transport long distances."

Satellite imagery from 2018 showed the massive smoke plume from the Camp fire swirling over California, while smoke from fires in 2020 traveled as far as Europe.

Residents in the path of wildfires aren't the only ones facing respiratory issues from smoke, as firefighters spend hours and sometimes days in their fumes.

Many firefighters who worked the Camp fire, Carr fire and 2017 fires in Santa Rosa finished those assignments with some type of respiratory infection or ailment, said Brian Rice, president of the California Professional Firefighters labor union.

"There's no question that our members get a major exposure to toxins. Whether they're metals or benzines or polyfluor carbonates, we get them," he said. "It's known, it's there. It's killing us."

The problem is becoming more common as firefighters increasingly tackle blazes where the built environment meets the natural one, Rice said. Respirator technology that works well for urban structure fires doesn't translate easily into wildland areas, where crews often are working in remote, high-altitude terrain and carrying supplies on their backs.

A firefighter in those conditions can burn through a 30-minute supply of clean air in 10 minutes, he said.

"We know the products of combustion that are known carcinogens are in that smoke," Rice said, noting that fumes from burning cars, homes and even pesticide-sprayed agriculture can harm fire crews. "And when you are working under stress, you breathe harder."

As fire season in California is starting earlier and running longer, researchers from both studies said smoke is becoming increasingly inevitable, so protection against its exposure should be a top priority.

One important step is making sure people have a supply of N95 masks — particularly those in disadvantaged or underserved communities. Cloth masks worn for COVID-19 protection don't work as well against wildfire smoke particles, which are about 30 times smaller than a strand of human hair, researchers said. N95 masks are more effective against both the virus and smoke, according to the California Department of Public Health.

Smoke relief centers can also help mitigate exposure.

Though it's difficult to determine whether one person's sickness — be it COVID-19, asthma or another respiratory issue — is definitively linked to one particular fire, Benjamin said, wildfire smoke of any kind is most certainly a danger.

When it comes to particulate matter, "the nose is a good early warning system," he said. "And if people smell smoke, they should assume they are being exposed."

## **Wildfires blasting through West draw states to lend support**

By Nathan Howard Associated Press  
The Fresno Bee, Sunday, July 25, 2021

*BLY, ORE.*

Out-of-state crews headed to Montana Saturday to battle a blaze that injured five firefighters as the U.S. West struggled with a series of fires that have ravaged rural lands and destroyed homes.

Progress was being made on the nation's largest blaze, the Bootleg Fire in Oregon, but less than half of it was contained, fire officials said. The growth of the sprawling fire had slowed, but increased fire activity was expected Saturday, and thousands of homes remained threatened on its eastern side, authorities said.

"This fire is resistant to stopping at dozer lines," Jim Hanson, fire behavior analyst, said Saturday in a news release from the Oregon Department of Forestry. "With the critically dry weather and fuels we are experiencing, firefighters are having to constantly reevaluate their control lines and look for contingency options."

In California, Gov. Gavin Newsom on Friday declared a state of emergency for four northern counties because of wildfires that he said were causing "conditions of extreme peril to the safety of persons and property." The proclamation opens the way for more state support.

On Saturday, fire crews from California and Utah were headed to Montana, Gov. Greg Gianforte announced. Five firefighters were injured Thursday when swirling winds blew flames back on them as they worked on the Devil's Creek fire burning in rough, steep terrain near the rural town of Jordan.

They remained hospitalized Friday. Bureau of Land Management spokesperson Mark Jacobsen declined to release the extent of their injuries, and attempts to learn their conditions Saturday were unsuccessful. Three of the firefighters are U.S. Fish and Wildlife Service crew members from North Dakota, and the other two are U.S. Forest Service firefighters from New Mexico.

In California, the Tamarack Fire south of Lake Tahoe continued to burn through timber and chaparral and threatened communities on both sides of the California-Nevada state line. The fire, sparked by lightning July 4 in Alpine County, has destroyed at least 10 buildings.

In Butte County, California, the Dixie Fire continued to burn in rugged and remote terrain, hampering firefighters' efforts to contain the blaze as it grows eastward, becoming the state's largest wildfire so far this year.

Heavy smoke from both huge fires lowered visibility and may at times ground aircraft providing support for fire crews. The air quality south of Lake Tahoe and across the state line into Nevada deteriorated to very unhealthy levels.

In north-central Washington, firefighters battled two blazes in Okanogan County that threatened hundreds of homes and again caused hazardous air quality conditions Saturday. And in northern Idaho, east of Spokane, Washington, a small fire near the Silverwood Theme Park prompted evacuations Friday evening at the park and in the surrounding area. The theme park was back open on Saturday with the fire half contained.

Although hot weather with afternoon winds posed a continued threat of spreading blazes, weekend forecasts also called for a chance of scattered thunderstorms in California, Utah, Nevada, Arizona and

other states. However, forecasters said some could be dry thunderstorms that produce little rain but a lot of lightning, which can spark new blazes.

More than 85 large wildfires were burning around the country, most of them in Western states, and they had burned over 1.4 million acres (2,135 square miles, or more than 553,000 hectares).

## **California's largest fire burns homes as blazes scorch West**

The Associated Press

The Fresno Bee and GV Wire, Monday, July 26, 2021

*INDIAN FALLS, CALIF.*

California's largest wildfire merged with a smaller blaze and destroyed homes in remote areas with limited access for firefighters, as numerous other fires gained strength and threatened property across the U.S. West.

The massive Dixie Fire, which started July 14, had already leveled over a dozen houses and other structures when it combined with the Fly Fire and tore through the tiny Northern California community of Indian Falls after dark Saturday.

An updated damage estimate was not available Sunday, though fire officials said the blaze had charred nearly 298 square miles acres (772 square kilometers) of timber and brush in Plumas and Butte counties. It was 21% contained.

Firefighters carrying hand tools were forced to hike through rugged terrain where engines can't go, said Rick Carhart, spokesman for the California Department of Forestry and Fire Protection.

"It has been burning in extremely steep canyons, some places where it is almost impossible for human beings to set foot on the ground to get in there," he said. "It's going to be a long haul."

Still, crews made progress Saturday by proactively setting fires to rob the main blaze of fuels, Carhart said.

The fire prompted evacuation orders in several small mountain communities and along the west shore of Lake Almanor, a popular resort area. About 10,000 homes remained under threat, officials said.

Firefighters also reported progress against the nation's largest wildfire, the Bootleg Fire in southern Oregon, containing 46% of the blaze that had consumed nearly 640 square miles (1,657 square kilometers).

More than 2,200 firefighters battled the blaze, focusing Sunday on constructing containment lines at the north and eastern edges in dense timber. Crews could get a break from rain and higher humidity predicted for this week, said Marcus Kauffman, spokesman for the Oregon Department of Forestry.

The lightning-caused fire has burned 67 homes, mainly cabins, and at least 2,000 houses were under evacuation orders.

Oregon Gov. Kate Brown told CNN's "State of the Union" that it's imperative federal and state authorities invest in mitigation such as tree thinning and preventive burns to limit the number of similar massive blazes. But she conceded that "the harsh reality is that we're going to see more of these wildfires."

"They're hotter, they're more fierce, and obviously much more challenging to tackle. And they are a sign of the changing climate impacts," Brown said Sunday.

In California, Gov. Gavin Newsom declared a state of emergency for four northern counties because of wildfires that he said were causing "conditions of extreme peril to the safety of persons and property." The proclamation opened the way for more state support.

Such conditions are often from a combination of unusual random, short-term and natural weather patterns heightened by long-term, human-caused climate change. Global warming has made the West much warmer and drier in the past 30 years.

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Heavy smoke from that blaze and the Dixie Fire lowered visibility and may at times ground aircraft providing support for fire crews. The air quality south of Lake Tahoe and across the state line into Nevada deteriorated to very unhealthy levels.

In north-central Washington, firefighters battled two blazes in Okanogan County that threatened hundreds of homes and again caused hazardous air quality conditions Saturday. And in northern Idaho, east of Spokane, Washington, a small fire near the Silverwood Theme Park prompted evacuations Friday evening at the park and in the surrounding area. The theme park was back open Saturday with the fire half contained.

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