# California Today: Amid Wildfires, Bad Air Becomes a Threat, Too

By Jose A. Del Real New York Times, Thurs., Aug. 9, 2018

Billowing smoke from this year's historic wildfire season in California has caused hazardous air conditions across the state, prompting air quality alerts and forcing many residents to take refuge indoors to avoid unhealthy exposure to bad air.

Hazy skies and thick, smoky air aren't just symptoms of the fire — they present their own dangers, even when wildfires themselves remain very far away. Poor air quality can have disastrous effects on people's health: like coughing, sore throats, extreme wheezing among people with respiratory disease, and cardiovascular illness. Prolonged exposure to bad air can even work its way into your lungs and blood stream.

Conditions in the San Joaquin Valley are particularly bad because of the natural geography and weather patterns of the region, experts say, even though the state's major fires are elsewhere. As smoke drifts into the valley, mountains and the climate trap the pollution, which then gets pushed toward the ground because of the heat. Currently the Ferguson Fire and the Mendocino Complex Fires are dumping smoke into the region.

"A good analogy is a clogged bathtub. You're just putting more and more pollution into a limited space and it's getting more concentrated, more concentrated, more concentrated," said Jamie Holt of the San Joaquin Valley Air Pollution Control District.

"We don't create more pollution than other parts of the country, we actually create a lot less pollution," she added. "But because we have this topography and meteorology, we have less ability to clear the pollution out."

It's not just the inland San Joaquin Valley that is getting hit. An air quality advisory has also gone out for the Bay Area, which has been affected by smoke from the nearby Mendocino Complex Fire. A "spare the air" alert was even issued by the Bay Area Air Quality Management District — which oversees nine counties around the bay — asking people in the area to reduce their driving to minimize smog; those alerts are issued when air quality has reached levels that are potentially unhealthy.

The Sacramento Valley has received less bad air than the San Joaquin Valley, but a "spare the air" advisory was released there as well.

"It doesn't really matter which way the wind blows because you'll get smoke from some fire or another," said Jamie Arno of the Sacramento Metropolitan Air Quality Management District.

Experts are hopeful that smog and particulate matter will dissipate soon, carried off by wind and ocean breezes. But in the San Joaquin Valley, home to some 4 million people, it is difficult to know when the air quality will get better.

"That's the million dollar question. Everyone is asking us that," Ms. Holt said. "We need a change in the weather pattern to physically push the pollution out of the valley. We need a little bit of a change of weather. But we also need the fires to be extinguished. The long term solution is for the fires to stop burning."

## Bad air could get worse with smoke from Orange County fire

By Dakota Allen Bakersfield Californian, Thurs., Aug. 9, 2018

More smoke could soon be coming our way from the Holy Fire in Orange County, which had burned more than 4,000 acres as of Wednesday afternoon.

Although dependent upon the winds and how they may shift, the smoke on its current trajectory seems to be on its way to Kern County.

"There's definitely a potential. There's a lot of smoke from that fire and it's all blowing northeasterly," said Cassandra Melching, an outreach and communication representative for the San Joaquin Valley Air District.

Melching said there are currently three fires in proximity to the valley. With a red flag warning for fire risk in Los Angeles County, any additional fires that spark can have an impact on local air quality.

"If that smoke becomes high enough, it could very well go over the mountains and come into Kern County," Melching said.

The Mojave Air Quality Management District, which covers the region southeast of Kern County including Victorville and Barstow, issued an air quality advisory yesterday morning as smoke from the Holy Fire moved up through the Riverside and San Bernardino counties, combining with smoke from Northern California fires.

Looking at wind trajectories, Brian Orr, who conducts community relations for the Mojave air district, said it appears the Holy Fire smoke will blow into the Tehachapi area and into Bakersfield.

A wildfire smoke health advisory also came from the Eastern Kern Air Pollution Control District Wednesday afternoon urging people in the district from Kernville down to Rosamond to stay indoors.

These types of alerts have been popping up all over as satellite imagery shows smoke hovering across state. Melching said this is from winds changing trajectories in the morning and evening, spreading smoke throughout California and beyond.

The San Joaquin air district recommends people stay updated on air conditions by using the Valley Air app or going to ValleyAir.org.

#### Wildfires continue to bring smoke into the Valley

By Sabra Stafford Turlock Journal, Tues., Aug. 7, 2018

The calendar and the temperature index still show that it's summer, but the sky looks more like a dreary winter day as smoke from the various wildfires burning in the state continue to leave a lingering haze over the Central Valley and Foothill regions.

The Ferguson Fire in Mariposa County and other fires burning in California has created a thick blanket of smoke that is affecting air quality in locations throughout the entire San Joaquin Valley with especially severe conditions in the foothill and mountain communities. The San Joaquin Valley Air Pollution Control District wants to remind Valley residents that a health caution is in place and smoke impacts will continue until the fires are extinguished.

Smoke from fires can cause serious health problems including lung disease, asthma attacks and increased risk of heart attacks and stroke. Where conditions warrant, people with heart or lung disease should follow their doctors' advice for dealing with episodes of particulate exposure. People with existing respiratory conditions, young children and elderly people are especially susceptible to the health effects from these pollutants. Anyone being exposed to poor air quality or wildfire smoke should move inside to an air-conditioned environment.

Fine particulate matter can invade the bloodstream, get deep into the lungs and has been linked to heart attacks and stroke. The District's Real-time Air Advisory Network detects the fine particulates in the air.

The RAAN monitors are designed to detect the fine particulates, which are microscopic in size and not visible to the human eye) that exist in smoke. Ash particles are much larger in size and will not be detected by the monitors. Therefore, an area may be experiencing ash impacts from potential fires while the PM monitor reflects a moderate reading. The Air District said if people can see ash or smell smoke then they should try to remain indoors.

The public can check the District's wildfire page at <u>www.valleyair.org/wildfires</u> for information about any current wildfires and whether they are impacting the Valley. In addition, anyone can follow air quality conditions by downloading the free "Valley Air" app, available in the Apple store or Google Play.

### California wildfires threaten the health of young and old

By Anna Gorman and Ana B. Ibarra, Kaiser Health News Fresno Bee, Modesto Bee and other papers, Thurs., Aug. 9, 2018 Debbie Dobrosky noticed a peculiar hue in the sky on Monday – "a very ugly yellow casting" – as she peeked outside. A large cloud of smoke had begun to cover the sun.

By Tuesday, the smoke was so heavy that "even inside my apartment I've had to use my inhaler twice this morning, which is not a normal thing," said Dobrosky, a Riverside County, Calif., resident who lives about 30 miles from a fast-growing fire in the Cleveland National Forest.

"Today I'm stuck inside, there's no going out," said Dobrosky, 67, who has chronic obstructive pulmonary disease (COPD), an inflammatory lung condition.

At least 17 large fires are burning across California, destroying hundreds of thousands of acres, sending toxic pollutants into the air and contaminating water supplies. The air quality in certain areas – particularly near the massive Mendocino Complex Fire in the northern part of the state – is among the worst officials have ever seen.

And conditions aren't expected to improve as new blazes break out and others rage uncontrolled. With temperatures at times reaching into the triple digits, unpredictable winds and desiccated brush that serves as kindling, there's no end in sight to this year's fire season.

"We are in a situation now where the wildfire season doesn't really have its normal beginning or end," said Lori Kobza, spokeswoman for the Sacramento Metropolitan Air Quality Management District.

The 629,000 acres burned this year follows large swaths torched last year in Ventura, Santa Barbara, Napa and Sonoma counties, causing dozens of deaths, according to the California Department of Forestry and Fire Protection. Many scientists attribute the more frequent and ferocious fires in the U.S. and around the world, at least in part, to climate change.

Meanwhile, air quality districts around the state have issued warnings to stay indoors – with windows shut and the air conditioner running – and to limit outdoor activities. In many places, kids' ball games, riding lessons and summer camps have been canceled.

NASA satellite photos show towers of smoke in California billowing into the atmosphere. Up and down the state, air quality officials have marked huge swaths as red with spots of purple – places where air is unhealthy or very unhealthy to breathe. Smoke and ash can travel dozens or even hundreds of miles.

Children, older people and those with respiratory illnesses such as asthma and COPD are particularly at risk of smoke-related health problems. But otherwise-healthy people also may experience short-term breathing problems, eye irritation and coughing.

Fine particulate matter, which is mostly invisible, can lead to inflammation of the lungs and other organs. For people with cardiac problems, toxic smoke has been associated with an increased risk of heart attacks, strokes and death, said Dr. Michael Schivo, associate professor of medicine at University of California-Davis.

Schivo, who has lived in the Sacramento area most of his life, said he can't remember the air being as bad as in the past few years. More patients with chronic lung disease are experiencing more uncontrolled symptoms, he said.

Lisa Suennen, 52, who lives in Marin County, about 100 miles from the Mendocino fire, has gone to the doctor three times in recent weeks because of lingering respiratory issues. She said her problem started as a cold, but as the air got worse, she developed bronchitis and her asthma flared up. "My lungs do not feel healthy right now," she said. "It is just not natural to breathe."

Air quality experts and physicians said more fires are bound to occur, and people with health issues need to have a plan for the bad air days, such as keeping extra medications on hand. "This isn't the first fire season California has had and it won't be the last," said Patrick Chandler, spokesman for the South Coast Air Quality Management District. "You can't really tough this out."

Some people say they have no choice but to take risks. Alyssa Mayo, 31, who has struggled with respiratory issues for two decades, runs a rehabilitation center for horses and dogs northeast of Sacramento. Now, she can't see the mountain range out her window because of the smoke.

But Mayo said she has horses and dogs to care for. "Unfortunately, with our business, we can't sit inside all day," she said. "I wish I could hunker down and stay out of it, but these animals depend on us."

Air quality may be the most pressing issue, but scientists say that ultimately water – another human necessity – is in danger, too. Ash, burned soil and toxic residue from incinerated houses, businesses and machinery can make their way into lakes, rivers and reservoirs, said Carmen Burton, a hydrologist with the U.S. Geological Survey's California Water Science Center in San Diego. The extent of the contamination depends on factors such as topography and the number and type of materials burned.

Wildfires typically sweep through rural areas more than urban – and this year follows that pattern, said Catherine Dunwoody, chief of the monitoring and laboratory division for California's Air Resources Board. Dunwoody cited some of the mountainous areas in and around Yosemite, in particular, where a 94,000-acre fire was substantially contained as of Tuesday afternoon.

Yet as housing complexes encroach on wild lands, residents increasingly risk their homes, their health and even their lives.

Some parts of the state suffer more than others. The entire San Joaquin Valley faces the ill effects of blazes not only in nearby Yosemite but throughout Northern California, said Anthony Presto, a spokesman for the San Joaquin Valley Air Pollution Control District. This region, he explained, is surrounded on three sides by mountain ranges, making it easier for pollutants and smoke to funnel southward and become trapped in a bowl.

Kimberly McCoy, who lives in Fresno, has seen that firsthand. She and her son both have asthma, and she said her chest feels tight and her son has been wheezing. McCoy said she hasn't let her son outdoors in recent days. "That's really hard for an active 6-year-old," she said.

In Sacramento County, smoke is now trapped under a ridge of high pressure. Kobza, of the local air district, said that if masks are worn, they should be specialized to protect from the fine particulate matter. Dust masks from the hardware store won't cut it, she said.

"People have a false sense of security," she said. "If it's small enough to get into the bloodstream, it's small enough to get through paper."

Some people are wearing masks even in their cars. Dobrosky, of Riverside County, said she recently ordered a pack of specialized masks from Amazon after running out during last year's blazes. After those fires, she also bought a treadmill so that she could exercise inside. Even so, Dobrosky said, her lungs are sore.

"Breathing" she said, "has become a chore."

(Alex Leeds Matthews and Stephanie O'Neill contributed to this report. Kaiser Health News (KHN) is a national health policy news service. It is an editorially independent program of the Henry J. Kaiser Family Foundation.)

#### Firefighters nearly double containment of Ferguson Fire

By Jim Guy Fresno Bee, Thurs., Aug. 9, 2018

Firefighters battling the Ferguson Fire in and around Yosemite National Park nearly doubled containment of the blaze raging for nearly a month, authorities reported Thursday morning. Containment jumped to 79 percent from 43 percent on Wednesday.

Crews took advantage of higher humidity levels to advance on the blaze, which erupted July 13 and closed Yosemite Valley to visitors indefinitely. The fire has burned 95,104 acres. Nearly 2,000 firefighters and support personnel continue to work for complete suppression. The cause of the fire remains under investigation.

Air quality in the central San Joaquin Valley remains unhealthy for sensitive groups due to smoke from the Ferguson Fire and other wildfires ravaging California.