

## **Sequoia Complex up to 18 percent contained**

Porterville Recorder, Monday, Sept. 21, 2020

As of Monday morning, the Sequoia Complex, consisting of the Castle Fire and the Shotgun Fire in the Golden Trout Wilderness, was up to 18 percent.

The fires have burned 137,508 acres. There are 1,440 personnel battling the fires. The Sequoia National Forest has no estimated full containment of the fires won't happen until October 30.

## **Creek Fire live updates: Shaver Lake waste facility damaged, causing re-population delays**

By Bethany Clough and Manuela Tobias

Fresno Bee & Modesto Bee, Sunday, Sept. 20, 2020

The Creek Fire consumed more than 6,000 acres overnight and has now burned 278,368 acres, Cal Fire said Sunday morning, while containment by the evening was announced at 27%.

The wildfire near Huntington Lake, Shaver Lake and Mammoth Pool in eastern Fresno and Madera counties is the seventh-largest wildfire in state history, passing the 2003 Cedar Fire (273,246 acres) in San Diego County.

Four of the five largest wildfires in the state have occurred this year, led by the August Complex Fire in the Mendocino National Forest at 833,967 acres. It is 34% contained. There have been 7,900 wildfires that have burned more 3.5 million acres in California, and since Aug. 15 there have been 26 fatalities and more than 5,800 structures destroyed.

### **Largest fires in state history:**

- August Complex, 2020; 836,871 acres
- Mendocino Complex, 2018; 459,123 acres
- SCU Lightning Complex, 2020; 396,624 acres
- LNU Lightning Complex, 2020; 363,220 acres
- North Complex, 2020; 291,200 acres
- Thomas, 2017; 281,893
- Creek, 2020; 278,368

As of Saturday night, damage assessment was 92% complete with 842 structures destroyed and 71 damaged. There were more than 8,000 structures still threatened by the Creek Fire.

The fire started Sept. 4. The cause is under investigation.

### **9 p.m.: Monday weather, and vehicle retrieval**

Zack Tolby, the Creek Fire incident meteorologist, said during Sunday night's update via Facebook Live that down-slope and ridge winds will kick in overnight in the fire region.

It will be warmer on Monday, in the 80s at the lower elevations and 70s at upper elevations. With that, up-slope winds will also be a factor by Monday morning.

Tolby said similar conditions are expected for the coming days, but the warmer weather predicted will not reach the same level as when the fire first ignited. The weather has among crucial factors allowing firefighters get a handle on the fire.

The weather outlook for the region on Monday will cause smoke to become a problem once again. Tolby said crews are expecting about three miles of visibility, with some clearing in the afternoon.

As crews work through the weather, Madera County Sheriff's Sgt. Joseph Wilder said that vehicle retrieval from Mammoth Pool is progressing. Two loads of cars were taken out Sunday.

Wilder said anyone with a car still in Mammoth Pool will be contacted by deputies, and residents should remain patient. He said there is a limit to the amount of people that can get up to the area per day.

#### **8:30 p.m.: Assessments rise, but damage is heavy**

Officials said in a Sunday night update on Facebook Live that damage inspection in the Creek Fire region has increased to 95%.

At the same time, an update was provided on the number of structures damaged. Marty Adell, incident commander for the Great Basin Team 1 provided this update:

- 39 single-family residences damaged and 501 destroyed
- four multiple-family residences damaged and five destroyed
- one mixed commercial/residential property damaged and 59 destroyed
- 12 commercial businesses damaged and 18 destroyed.
- 15 minor structures damaged 270 destroyed.

#### **7:30 p.m.: Good news for Central Camp, containment increases**

Containment of the Creek Fire increased to 27% while the acreage remained at 278,368, county, state and national officials said during Sunday night's update.

There was good news for homes in Central Camp. Officials announced they have been able to hold the fire half a mile away. Crews are attempting to let the fire reach the containment line that was created to protect the community.

Tyler Monroe of the Great Basin Team 1 Operations Section, assured residents that "things are progressing very well around Central camp, and we don't anticipate any problems."

Pacific Gas and Electric spokesman Denny Boyles said about 300 personnel assigned to the incident are working to repair and otherwise clear equipment and trees to make it safer for crews and residents. He said 886 customers are still without power in the area.

The Fresno County Sheriff's Office is urging residents to remain patient and refer to the fire maps in order to determine the latest on evacuations.

Entrance to the fire zones is under strict enforcement and assessed each day.

"We don't want anybody to get hurt, seriously injured, burned or killed because we reduced status of the zone too soon," Fresno County Sheriff's Lt. Kathy Curtice said.

#### **4:30 p.m.: Devin Nunes, Supervisor Magsig host call**

U.S. Rep. Devin Nunes and Fresno County Supervisor Nathan Magsig hosted a brief phone conference on Sunday to provide residents with the latest details on the local wildfires.

The two spoke about firefighters' ongoing efforts to protect structures from the Creek and SQF Complex fires, which span four counties in the Sierra. Nunes, R-Tulare, called the damage "severe."

The representative also remarked about the loss of timber mills in the central Valley region and the need for them to dispose of trees, especially after thousands of them are being cleared from areas devastated by fires.

Supervisor Magsig, on the call, said as much as "3 million pounds per acre" of potential fire fuels have been cleared from the ground in recent fire crew work around the Creek Fire.

The supervisor also said the county will work closely with residents — not only when it's time to rebuild their homes, but also to help them get to their property to retrieve valuable items.

It was unknown how many people listened in on the call. Neither Nunes nor Magsig took any questions.

#### **2:15 p.m.: SQF Fire evacuations downgraded**

One week after fire threatened the community of Three Rivers, some evacuation orders from the SQF Complex Fire were downgraded to warnings.

The warnings are in place for the Three Rivers areas of Cherokee Oaks, Old Three Rivers Road, portions of South Fork Drive, north of Conley Bridge (just south of Heidi Drive) and the South Forks Estates.

The change means residents can return to their properties, although they are cautioned to be alert should fire conditions change, according to the Tulare County Sheriff's Office. The announcement was effective at 1 p.m. Sunday.

### **1:30 p.m.: Big gains on Bullfrog Fire**

The Bullfrog Fire, burning in the Sequoia National Fire about 43 miles northeast of Clovis on the eastern fringe of the Dinkey Lakes Wilderness, is at 20% containment, according to the U.S. Forest Service.

The wildfire, which started Sept. 9, has burned 890 acres. The cause is under investigation.

Fire crews were to continue suppression and containment work Sunday along the southeast edge of the wildfire, which has been fueled by timber, brush and short grass. The plan is to use a minimal impact suppression tactic using natural features including trails and creeks as fire breaks, and a direct containment approach will be used where firefighter safety permits.

A handline to protect Courtright Village if the fire moves south has been completed – the village is to the northwest of Courtright Reservoir and includes 50 residential structures.

Fire behavior remains low to moderate due to an inversion layer over the fire, according to Forest Service officials. A specialized Cobra helicopter is being used to map the fire using infra-red imagery and assist in a focused ground attack.

### **11:45 a.m.: Yosemite closed, but through roads open**

Yosemite National Park remains closed because of hazardous air quality due to nearby wildfires.

But through roads are now accessible for drive-through vehicle traffic, and limited services are available throughout the park.

The accessible roads through Yosemite are Wawona Road (continuation of Highway 41), El Portal Road (continuation of Highway 140) and the Big Oak Flat and Tioga roads (continuation of Highway 120).

Limited restroom facilities are available on all road corridors, but park visitors should be prepared to drive through without stopping, according to park officials.

Glacier Point Road and Mariposa Grove Road remain closed, as do all lodging facilities, campgrounds, restaurants and visitor centers.

Hiking, cycling, climbing and camping are prohibited.

The Air Quality Index for Yosemite late Sunday morning was 178, according to IQAir, an unhealthy level.

Yosemite will reopen when air quality conditions improve and allow for the health and safety of park visitors and employees.

Updated road and weather conditions for Yosemite National Park are available 24 hours a day at 209-372-0200 (press 1) and [nps.gov/pose](https://www.nps.gov/pose)

### **8 a.m.: SQF Fire up to 135,802 acres**

The SQF Complex Fire burning in the Sequoia National Forest south of the Creek Fire burned 2,000 more acres overnight to 135,802 acres and remains 14% contained.

In the east zone, active fire behavior was mostly on the southern end of the fire from Camp Nelson to the Kern River. All active fire edges in this area did see growth.

Fire crews – there are 1,481 personnel working the wildfire – are focused on point protection for structures that are immediately threatened. Structure assessments are being conducted and crews

continue to monitor the communities of Sequoia Crest, Alpine, and Cedar Slope where the possibility of flare-ups remains.

The wildfire is a combination of the Castle and Shotgun fires.

Evacuation orders remain in place for the following communities:

- Ponderosa
- Pyles Boys Camp
- South Fork
- Redwood Drive
- Alpine Village
- Sequoia Crest
- Doyle Springs
- Highway 190 south from the intersection of Balch Park Road, north to Blue Ridge Lookout, east to Moses Mountain, and south to Highway 190 at Mahogany Flat
- Upper Tule River Corridor (Camp Nelson, Pierpoint, Coy Flat, Mountain Aire)
- Cedar Slope
- Portions of Three Rivers, including south and east from 198, east to south of the Fork Campground, including South Fork Drive, Horn, Cinnamon Canyon, and Cahoon Mountain, and adjacent roads
- Silver City
- Mineral King

## **California wildfire likely to grow from wind, low humidity**

By Stefanie Dazio, Associated Press

Bakersfield Californian, Sunday, Sept. 20, 2020

LOS ANGELES (AP) — The destruction wrought by a wind-driven wildfire in the mountains northeast of Los Angeles approached 156 square miles (404 square kilometers) Sunday, burning structures, homes and a nature center in a famed Southern California wildlife sanctuary in foothill desert communities.

The blaze, known as the Bobcat Fire, is expected to grow through Sunday and Monday as critical fire weather conditions continued due to gusty wind and low humidity. Additional evacuation warnings were issued Sunday afternoon.

Firefighters were, however, able to defend Mount Wilson this weekend, which overlooks greater Los Angeles in the San Gabriel Mountains and has a historic observatory founded more than a century ago and numerous broadcast antennas serving Southern California.

The Bobcat Fire started Sept. 6 and has already doubled in size over the last week — becoming one of Los Angeles County's largest wildfires in history, according to the Los Angeles Times. No injuries have been reported.

The blaze is 15% contained as teams attempt to determine the scope of the destruction in the area about 50 miles (80 kilometers) northeast of downtown LA. Thousands of residents in the foothill communities of the Antelope Valley were ordered to evacuate Saturday as winds pushed the flames into Juniper Hills.

Roland Pagan watched his Juniper Hills house burn through binoculars as he stood on a nearby hill, according to the Los Angeles Times .

“The ferocity of this fire was shocking,” Pagan, 80, told the newspaper. “It burned my house alive in just 20 minutes.”

Resident Perry Chamberlain evacuated initially but returned to extinguish a fire inside his storage container, according to the Southern California News Group, and ended up helping others put out a small fire in their horse stall.

Chamberlain said Juniper Hills had been like a majestic “sylvan forest” but the fire burned the Juniper and sage brush and a variety of trees.

“It used to be Juniper Hills,” he said. “Now it’s just Hills.”

The wildfire also destroyed the nature center at Devil’s Punchbowl Natural Area, a geological wonder that attracts some 130,000 visitors per year.

Though the Bobcat Fire neared the high desert community of Valyermo, a Benedictine monastery there appeared to have escaped major damage, according to the Los Angeles Times.

Statewide, nearly 19,000 firefighters continue to fight more than two dozen major wildfires. More than 7,900 wildfires have burned more than 5,468 square miles (14,164 square kilometers) in California this year, including many since a mid-August barrage of dry lightning ignited parched vegetation.

Meanwhile, officials were investigating the death of a firefighter on the lines of another Southern California wildfire that erupted earlier this month from a smoke-generating pyrotechnic device used by a couple to reveal their baby’s gender.

The death occurred Thursday in San Bernardino National Forest as crews battled the El Dorado Fire about 75 miles (120 kilometers) east of Los Angeles, the U.S. Forest Service said in a statement.

The name of the firefighter killed has not yet been released. A statement from the California Department of Forestry and Fire Protection, or Cal Fire, said it was the 26th death involving wildfires besieging the state.

Authorities also have not released the identities of the couple, who could face criminal charges and be held liable for the cost of fighting the fire.

In Wyoming, a rapidly growing wildfire in the southeastern part of the state was closing in on a reservoir that’s a major source of water for the capital city, Cheyenne.

The water system remained safe and able to filter out ash and other burned material that flows through streams and reservoirs after wildfires, said Clint Bassett, water treatment manager for the Cheyenne Board of Public Utilities.

## **Enjoying the clean air in Fresno? Here’s why it may not last long**

By Bethany Clough

Modesto Bee, Saturday, Sept. 19, 2020

After weeks of living in a smoky haze, people in the Fresno area likely rejoiced Friday and Saturday when they awoke to healthy air quality, sunshine and patches of blue sky.

Enjoy it, because it’s probably not going to last.

Conditions are expected to change by the middle of next week, said San Joaquin Valley Air Pollution Control District spokeswoman Heather Heinks.

“Yes, enjoy the chance to go outside this weekend, embrace that, but still be aware that we have major fires burning all around us in the state and unhealthy conditions are just a few hours away in some cases,” she said.

The good air quality is a welcome relief following nearly a week where it sat at the “hazardous” level, the worst possible where everyone is advised to stay indoors.

Local residents can check current air conditions by typing their address into the air district’s real-time advisory network online, or by checking sensors at [PurpleAir.com](https://purpleair.com).

The Valley has been affected by smoke since lightning first sparked numerous fires around the state in mid-August. The Creek Fire, which started Sept. 4 in the Big Creek area northeast of Fresno, has also sent smoke into the Fresno area.

The clean air this weekend came from a shift in the wind, which is sending smoke toward Nevada. The fires in Northern California, though still burning, are also not producing the intense emissions that they were a few weeks ago, Heinks said.

Smoke is still hugging the foothills and the Sierra Nevada, she said.

"It's not good there, but it's not pouring into the Valley basin," she said.

Sequoia-Kings Canyon and Yosemite national parks are all closed due to the air quality.

The air quality in Fresno County is predicted Saturday to top out at level 2, where only sensitive individuals should reduce prolonged or vigorous outdoor activities.

Conditions are expected to be slightly worse for Tulare County, where the air is expected to be unhealthy for sensitive groups, or level 3, on Saturday.

"But fires are still burning and the reprieve may not last too long," Heinks said.

Another shift in the wind is expected next week, which could bring back unhealthy air to the Fresno area.

### **Pollution**

The air district has issued a health caution that will remain in effect until the fires are out. The wind can shift at any time and change conditions, even if healthy air quality was predicted.

Particulate matter pollution (tiny bits of solid particles and liquid droplets called PM 2.5) can trigger asthma attacks, aggravate chronic bronchitis, and increase the risk of heart attacks and strokes.

People with existing respiratory conditions, including COVID-19, and young children and the elderly are especially vulnerable to such pollution.

Cloth and paper masks worn to protect against coronavirus do not filter out wildfire smoke.

The air district's monitors are designed to measure tiny particles in smoke. But they may not catch large particles, such as ash.

If you smell smoke or see falling ash, the district recommends assuming the air quality is at unhealthy levels.

### **Creek Fire live updates: Shaver Lake waste facility damaged, causing re-population delays**

By Bethany Clough and Manuela Tobias  
Sierra Star, Saturday, September 19, 2020

#### **Air quality**

Most Fresnoans awoke Friday and Saturday to healthy air quality, following nearly a week of very hazardous air where residents were advised to stay inside.

A shift in wind is now sending smoke toward Nevada.

The air is expected to stay relatively healthy in the Fresno for a few days, but smoke will likely return by the middle of next weeks, according to the San Joaquin Valley Air Pollution Control District.

A health caution remains in effect until the fires are out.

### **Tiny particles from wildfire smoke follow 'wind all the way down to your smallest air sacs'**

By Cathie Anderson  
Fresno Bee & Modesto Bee, Saturday, Sept. 19, 2020

The potential health consequences of exposure to wildfire smoke can go well beyond the coughing, sore throats and the watery eyes that most Californians have experienced over the last few weeks.

Just as with viruses and bacteria, tiny particulate matter from these wildfires, undetectable to the human eyes, poses the greatest challenge to people's health both in the short term and years down the road.

"While the big particles are bad, they may not be quite so bad as the small particles, the PM 2.5," said Dr. Brian Christman, a national spokesperson for the American Lung Association. "They're about 1/30th the size of a human hair, and they're small enough that, when you breathe, they will just follow the wind all the way down to your smallest air sacs and they can lodge in your delicate lung tissues and cause a lot of inflammation."

There are estimates, he said, that 300,000 premature deaths worldwide are related to poor air quality due to wildfires.

These deaths may be sudden in onset, as when the microscopic particulate matter manages to move into the circulatory system from the lungs' tiny air sacs. Once in a blood vessel, they can inflame areas of blood vessels already narrowed by fatty deposits called plaque, said Christman, an expert in pulmonary diseases who is the chief of medicine at the U.S. Department of Veterans Affairs Tennessee Valley Health System.

plaques can rupture, resulting in sudden clot formation and blocking of the vessel," he said. "In the heart, this is a heart attack or myocardial infarction."

If such a blockage occurs in the brain, it's called a stroke he added. With ongoing exposure, he said, the ultrafine particles get even more opportunity to cause inflammation and scarring in the lungs and blood vessels, potentially leading to health problems later in life.

Christman and Dr. Carlos Nunez said that, while there haven't been periods in history where people have been repeatedly exposed to wildfire smoke, there is plenty of research on how PM 2.5 from smog and other types of air pollution affects people's health.

"If you live in an area where you have chronic exposure to unhealthy air, whether it's from wildfires or from smokestacks at factories, smog from automobiles, you name it, we see that our lungs don't do well when we don't breathe clean air," said Nunez, chief medical officer at the digital health company ResMed, "Now instead of worrying about that factory smokestack in your neighborhood, you might have to worry that (you) live in a place where there will be significant wildfires every year. It's likely that (you're) going to have several weeks or several months every year of poor air quality."

#### **UCD: Severe wildfires on the increase**

Researchers at the University of California, Davis, released a study Thursday showing that, in northern coastal California, the number of high-severity wildfires has been increasing by about 10% per decade since 1984.

They studied coastal foothill and mountain ranges stretching north to the Klamath Mountains and southeast to Berryessa Snow Mountain National Monument and surrounded by Central Valley lowlands to the east. The Berryessa range spans much of nearby Yolo, Solano, Colusa, Lake, Napa, Mendocino and Glenn counties.

Published online in Environmental Research Letters, the UCD research shows that the drought of 2012-2016 nearly quadrupled the area burned severely, compared with the land mass affected by the relatively cooler drought of 1987-1992.

"With climate change, rising temperatures are extending the growing season, but then at the peak of summer, it's so hot and dry that the exuberant growth turns into kindling for fires," Christman said. "It's a tough problem. People living on the coast are a little bit luckier in that there's a breeze from the oceans that clears out that bad air a little bit faster."

Christman and UC Davis physiology researcher Kent Pinkerton urged residents to take steps to protect their lungs and circulatory systems from PM 2.5 but also to consider behavioral changes that could reduce the consequences of climate change.

To prevent exposure to particulate matter, remain indoors on days when the air is unhealthy, they said, and if you must go outdoors, wear an N95 respirator. Because of the coronavirus pandemic, they acknowledged, these respirators can be particularly hard to find.

Set auto air conditioning units to recirculate the air already inside the vehicle rather than drawing in air from outdoors, they said. In most vehicles, that button will have the symbol of an auto with an arrow turning around.

Also, they said, change the air filter on home air conditioning unit more frequently as they will clog up faster when the outdoor air is highly polluted. Air filters designed for high-efficiency particulate absorption, or HEPA, will keep out 99.7% of particulates measuring 3 micrometers or larger. Air purifiers with carbon filters, UV lights and HEPA filters will add an extra layer of protection.

Cloth masks help to prevent wearers from spreading their own germs and may reduce the overall load of both viral and fine particulate matter coming into nasal passages, Pinkerton said, but they are not nearly as effective as N95 respirators. To add an extra layer of protection, he said, some people are adding the fibrous blue shop towels like the ones used by auto mechanics in masks with openings for filters.

### **Toxic risk to Sacramento**

Long term, though, Pinkerton said, he hopes more Californians will embrace ways to reduce the burning of fossil fuels. For instance, people could walk, bicycle, or take public transit rather than driving, he said. When air quality is good and outdoor temperatures are mild, open doors and windows to cool homes rather than running air conditioning units.

These measures “may seem a little vague,” he said, “but they actually do represent an active effort on an individual’s part to help counteract the effects of climate change.”

He and other researchers at UC Davis have been closely studying wildfire air pollutants and even comparing them to air samples of the same mass from cities in China that have a comparable geographic nature as the Sacramento region.

Normally, air pollution levels in China are about 10 times higher than they are in Sacramento, but if you look at equal-mass samples from when Northern California has these acute levels of wildfire particulate matter, the Sacramento-area air is far more toxic than the samples from China.

“We’re trying to figure that out, why that could be,” he said. “Some chemists have expressed to us that there’s a lot more oxidated organics (carbon from trees and the like) in the Sacramento area than in China and that might be the reason why we’re seeing acutely a more significant toxic effect.”

The researchers also looked at what happens with repeated exposure to the local and Chinese air samples, Pinkerton said, and in those cases, China’s particulate matter produced significantly greater inflammation. The sample from China that had the largest effect on the lungs was taken, he said, from a region where coal is still burned.

### **Toll on expectant moms?**

Rebecca Schmidt, one of Pinkerton’s peers at UC Davis, has been working with a team trying to determine how pregnant women and their unborn children will fare after repeated exposure to wildfire smoke. They began that research immediately after the 2017 Napa-Sonoma fires and have continued collecting data on new and existing participants through this year.

The goal, Schmidt said, is to get enough data to draw valid conclusions, and that takes big numbers. Many of these women are in the ideal age range to have children, Schmidt said, and so they’ve had a subsequent pregnancy even as the risk of exposure to wildfire smoke has grown.

Schmidt and her team are following the women and babies through at least one post-natal visit, she said, and they hope to later get funding to do subsequent surveys of participants as they age.

“We’ve looked mostly at symptoms the moms reported up to a year out,” Schmidt said. “We still haven’t gotten to the point where we’ve looked at health outcomes in the babies. We’re also looking at things like contaminants in their blood, but that’s all on hold because the (research) labs were shut down for COVID-19. We don’t have as much as we hoped.”

What they do have are responses that reveal fine particulate matter is definitely making its way into the survey respondents' respiratory tracts, thereby getting a chance to move into their circulatory systems.

The moms reported respiratory problems such as sore throats, coughs, watery eyes. This was true even for expectant moms in the 2017-2019 fires who were able to use N95 respirators. Any particulate matter they breathed could hitch a ride to the lungs' smallest air sacs and into streams of blood cells, spread into ultra-thin layers to allow efficient absorption of oxygen.

Nunez predicted there will be a growing body of research on the effects of wildfire smoke, just as there was in the 1960s and 1970s when prevailing atmospheric conditions blew smog from Southern California traffic east where it settled over Loma Linda University.

Researchers at Loma Linda got busy examining the impact of the fine particulate matter from that air, and studies there and at other colleges motivated California leaders to crack down on automotive emission standards. It didn't stop there, though, Nunez said, because political leaders around the world adopted stricter regulations when they saw the benefits.

"Smog levels aren't perfect now, but they're much better than they used to be because of Loma Linda and other universities that studied that," Nunez said, "so you can imagine that in the next few years, we're going to see places in the West — California, Oregon, Washington universities — starting to study: What are the effects of this?"

That will eventually spur changes, he predicted, but in the meantime, Californians and other westerners will have to find ways to deal with acute levels of PM 2.5.

"(Earlier this month) in Portland, if you looked at the air quality index, you saw that they had levels of 491, which is in the high hazardous range," Christman said. "By comparison, on that same day, Dallas was at 41. That will show you how extremely high it was in Portland. (On Tuesday) in Sacramento, the PM 2.5 is at 117, which is unhealthy for sensitive groups."

### **19 bad air days**

Before things cleared, though, the Sacramento region sat in the unhealthy range of 150-200 on the AQI for 10 days during a period ranging from Aug. 19 until Friday. The air was unhealthy for sensitive groups on nine other days in that time-frame.

Sacramento, however, is surrounded by a number of fires still burning, and conditions could change rapidly if winds shift, air quality experts warn.

When it comes to the groups most vulnerable to acute and long-term problems with PM 2.5, Christman said it's the very elderly, the very young and people with pre-existing conditions such as chronic obstructive pulmonary disorders or asthma.

There are roughly 380 million people in the world that have COPD, Nunez said, and more than 300 million have asthma. COPD is the third leading cause of death in the world and also in the United States, he added.

"People with COPD (are) exquisitely vulnerable to things like respiratory infections and problems with air quality because, in their lungs, the tissue starts to break down in a way," Nunez said. "You'll see on an x-ray that their lungs look very different. They have what's called hyper-inflation, and...instead of tiny little air pockets, the air pockets start to get bigger, and they don't work as well."

In asthmatics, Nunez said, their airways swell shut or clamp shut as a reaction to environmental stimuli such as PM 2.5 and cause the wheezing associated with their condition. If you suffer from these or other pre-existing conditions, Nunez said, follow your doctor's instructions on medications and other home care to the letter.

Babies' airways are so small that even just a little bit of closure can cause bronchiolitis and airway congestion and wheezing, but even healthy individuals should take precautions when the AQI rises to unhealthy for sensitive individuals, Christman said.

"If I was going to go outside, I might go for a walk in the morning when it's cooler before the traffic starts, just as a way to minimize the exposure," he said. "In Portland the other day, when levels were so high, I

would advise that people wear protective masks when they go outside. If you were going to spend a substantial amount of time outside, maybe get an N95 respirator rather than a standard dust mask.”

Everyone should go to [airnow.org](https://airnow.org) or [sparetheair.com](https://sparetheair.com) to check air quality in their area before they go outside because it can have an sudden or long-term impact on their health, said Nunez, who suffered from what he called “brutal” asthma attacks as a child. If you ever have to struggle for enough oxygen, he said, you will experience some of the scariest moments of your life.

“Breathing is the very first most important thing we have to do as human beings,” he said. “If you don’t breathe, you’re dead in four or five minutes. You can go days without water. You can go many days without food, but you can’t go that long without breathing.”

## **Prescribed burns help save Mountain Home, Balch Park**

By Alex Espinoza

Porterville Recorder, Friday, Sep 18, 2020

On Friday morning, Tulare County Sheriff Mike Boudreaux was joined by Tulare County Supervisor Dennis Townsend and Assemblymember Jim Patterson at the Porterville Fairgrounds, where they attended the morning briefing for the SQF Complex fires, before heading up to Balch Park to tour some of the damage the fires have caused in the local mountain communities.

During the daily unified officers briefing on Friday, several of the CAL FIRE officers reporting used the phrase “OneTeam, One Fight” to assure all personnel working to contain the fires will continue to work as one team, even though they’re spread across a vast area of the SQF Complex fires. Townsend was offered a chance to speak, and he expressed his gratitude to the men and women actively working to contain the fires.

“I want to express to all of you who are working on these incidents, how much the community appreciates you,” said Townsend. “You guys and gals are in our hearts and in our prayers all the time. I have been receiving personal emails, texts, Facebook messages, saying how much the community does appreciate you. I know this is a terrible incident, but it could be so much worse. There could be many more losses if it weren’t for all of your heroic efforts working day and night on this. On behalf of the whole community, and on behalf of Tulare County, we really want to express our heartfelt gratitude to all of you.”

After the meeting concluded, Boudreaux hosted a small media briefing to explain the difference and the importance of voluntary and mandatory evacuations.

“I think it’s important for people to understand that when these notices go out that are voluntary, that’s really important for people to understand, assuredly that is voluntary,” said Boudreaux. “We are not making you leave at that point, but we are making notice that it’s important for you to begin to prepare. That preparation could be very important and vital when it comes to the mandatory (evacuation). When we push the button on that mandatory, that means that danger is assuredly coming quickly. We don’t want you to have to scamper for your pets or your family memories, or things you would hope not to be caught up in a fire. We want you to be fully prepared.

“The other important part that I think people don’t understand is that the mandatory is put in place to open up the roadways. We don’t want roadways blocked, we want people to be able to get into the area as far as trying to get to the fire. If we can get people out before emergency services has to go in, that planning and that good communication ahead of time is important for resources to get there quickly and for families and people who live there can get out in a safe way and not in a rush.”

Shortly after 10 a.m., Boudreaux, Townsend and Patterson loaded into a car and drove into the Sequoia National Forest towards Balch Park to tour some of the damage the SQF Complex fires have caused. While they didn’t witness any active fires on Friday, they did speak with Karine Hunt, CAL FIRE Forestry Assistant II, who explained the importance of prescribed burns in the forest, and how the prescribed fires can help the Old Growth Giant Sequoia trees regenerate.

“Here at Balch Park, CAL FIRE and Balch Park Tulare County had the good opportunity to work together last year, and we did a prescribed burn in here,” said Hunt. “A lot of the char you see here on the Old Growth Giant Sequoias, and you’ll notice that there’s not much debris underneath, all of that is gone

thanks to that prescribed burn. That fire was in here for months, so that really helped a lot here in order to protect it from extreme fire.

“When we go through and do our prescribed burns, we do fuel treatments to make sure that we keep it low severity. We obviously don't want to burn up the Old Growth Giant Sequoia trees, but you have to take into consideration that they love fire. They depend upon fire, that's how they regenerate. All the fire was burning up when it came through here was anything that hadn't been taken out by the prescribed fire or that had been dropped this year.

“In some of our areas that have a federal border and have had a little less treatment or based on the landscape or topography, we definitely did see some more severe fire. One thing I think is really important to remember though, is that the Sierra Nevadas have evolved in the face of fire. They need fire, a lot of the trees we see here need fire. But what they're not used to is lack of fire for so long and a build up of fuels. In these areas where we've been able to do the treatments, get in and do prescribed fire and fuel treatments, we don't see that crown fire and things like that.”

Patterson was amazed at the impact the prescribed burn had on the area of Balch Park. Patterson stated prescribed burns would make it safer for firefighters to fight extreme fires when they occur.

“To me, this really is the story,” said Patterson. “What you're seeing is the result of the strategic and tactical use, not only now with the resources that are here, but what you did previously to anticipate, and that's what we see here... When you do this kind of stuff, our firefighters are safer... The more we do this, the less we're going to lose, and the safer our firefighters are going to be. That's the lesson I've learned here.”

**UP TO 129,000 ACRES**

As of Friday evening, the Sequoia Complex consisting of the Castle Fire and the Shotgun Fire in the Golden Trout Wilderness, had burned 128,902 acres and remained at 12 percent contained.