

# NEWS CLIPS

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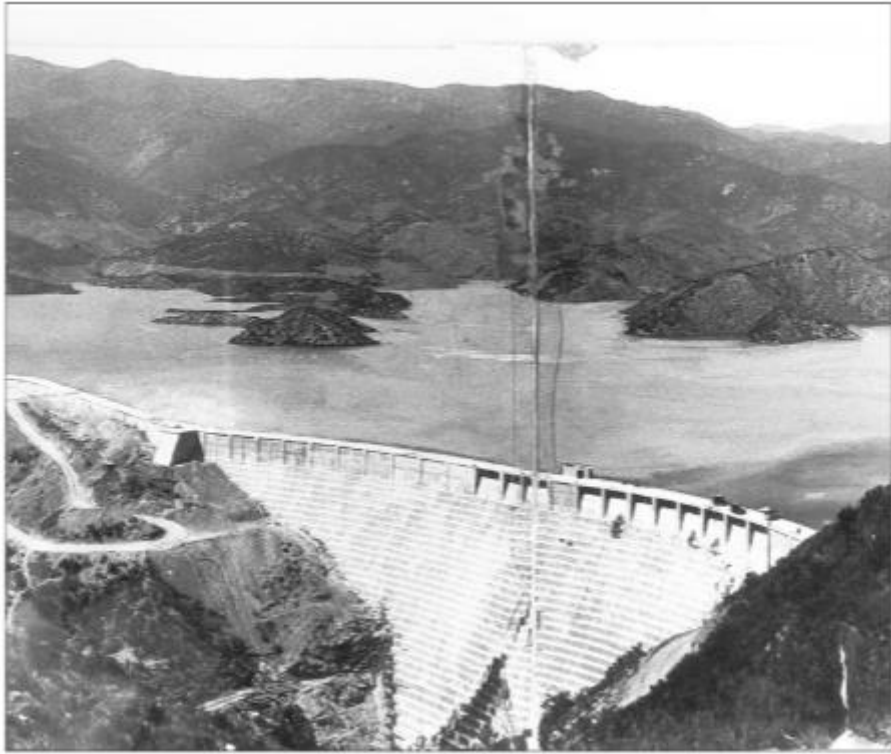
**Resource Conservation and Public  
Outreach**

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## OP-ED

### When our control of nature failed

With disasters rocking the state, California needs to remember the St. Francis Dam.





Los Angeles Times photos

**THE ST. FRANCIS DAM** before and after its catastrophic collapse in 1928.

By Erik Altenbernd and William Deverell  
LA Times 11/16/2018

There is a quiet campaign underway in northern L.A. County that deserves the support of people across California. The Santa Clarita Valley Historical Society is pushing for the site of the St. Francis Dam to be declared a national memorial. The designation would commemorate both the dam and the more than 400 lives that were lost when it collapsed, the worst man-made disaster in California history.

The St. Francis Dam was squeezed into San Francisquito Canyon, about 20 miles north of what is now the city of Santa Clarita. Construction began in early 1925 and was completed in May 1926. Built to hold back some 12 billion gallons of water, the structure was more than 200 hundred feet tall and more than 1,200 feet wide.

About two years after it was finished, on March 12, 1928, just before midnight, the dam failed. Water had saturated a portion of the foundation underlying the dam, causing “uplift,” which expanded and destabilized its main concrete structure.

When the dam gave way, it let loose a 100-foot wall of water that raged for hours through the Santa Clara River Valley, blasting through Saugus, Piru, Bardsdale, Fillmore, Santa Paula, Ventura and other communities. The torrent morphed quickly into a flood not just of water but of concrete, asphalt, railroad rails and ties, farms, cars and homes. This gargantuan flow of debris was an equal-opportunity killer.

The first victims were city of Los Angeles employees. Lilian Curtis, who was several months pregnant, narrowly escaped after climbing a nearby hill while carrying her 3-year-old son. Her husband, Lyman, who worked for the Bureau of Power and Light, and two young daughters were all carried off.

A 12-year-old boy named Louis Rivera experienced something similar near Castaic Junction. Awakened by the rumble of the approaching water, he managed to grab his younger brother and sister and get them to higher ground. He watched helplessly as his mother and older brother got swept away.

There are dozens more stories like these. And there are no stories at all for the many victims who remain unidentified more than 90 years later.

The St. Francis Dam disaster has largely been forgotten, even though it is part of a larger saga that Los Angeles cannot help but remember.

The dam was built as a vital extension of the Los Angeles Aqueduct, the lifeline that continues to bring water more than 200 miles from the Owens Valley.

The project was the brainchild of William Mulholland, who at the 1913 opening of his “Big Ditch” said famously of the water that came cascading through its sluice gates: “There it is, take it.”

After the dam burst — an engineering failure for which Mulholland was largely responsible — he uttered a similarly terse statement during a coroner’s inquest: “The only ones I envy about this thing are the ones who are dead.”

In history and popular culture (most notably in the film “Chinatown”), the main victims of L.A.’s thirst for unbridled growth are the residents of the Owens Valley, the people whose water and land the city stole.

But the Santa Clara River Basin made sacrifices every bit as worthy of commemorative recognition.

The St. Francis Dam disaster is an event of national importance as well. The accident imperiled the Boulder Canyon Project Act — the legislation that authorized the building of the Hoover Dam.

To secure passage of the bill in the wake of the St. Francis disaster, California Gov. C.C. Young and other Hoover Dam boosters waged an effective campaign that the country needed more, not fewer, dams like the St. Francis. They stressed that its failure was an aberration, the result of specific errors made by Mulholland. Progress in California and the American West, they argued, meant learning from — but also forgetting about — the St. Francis Dam disaster.

Today, a different piece of legislation, the Saint Francis Dam Disaster National Memorial Act, could ensure that the disaster is better remembered. The bill was passed by the House of Representatives last year. Should it pass in the Senate, where it was

recently advanced by the Committee on Energy and Natural Resources, it will return to the House for a second vote. Then it will need to be signed by President Trump.

Living in California means living close to the beauty and power of nature. It also means understanding that we will pay a price when our supposed control of nature fails.

California has much to learn from the terrible legacy of the St. Francis Dam, particularly at a moment when disasters are once again rocking the state. Congress and the president should move quickly to make the bill law.

Erik Altenbernd is an assistant professor of history at College of the Canyons. William Deverell is a professor of history at USC and the director of the Huntington- USC Institute on California and the West.

# PG&E asked last month to hike bills over California fires

**Jonathan J. Cooper, Cathy Bussewitz and Garance Burke** ASSOCIATED PRESS  
Ventura County Star 11/16/2018

SACRAMENTO – A utility facing severe financial pressure amid speculation its equipment may have sparked a deadly Northern California wildfire asked U.S. energy regulators last month for permission to raise its customers' monthly bills to harden its system against wildfires and deliver a sizable increase in profits to shareholders.

In an October filing with the Federal Energy Regulatory Commission, Pacific Gas & Electric Co. laid out a variety of dangers confronting its transmission lines running through Northern California, saying its system faced a higher risk of wildfires than any other utility.

“The implications of PG& E’s exposure to potential liabilities associated with wildfires are dramatically magnified,” the filing said. “Overcoming the negative financial impact of any significant damages that might ultimately be attributed to PG& E will require an ongoing commitment of capital from investors.”

San Francisco-based PG& E – one of the nation’s largest electric utilities serving most of Northern and central California – made the request a month before the Camp Fire broke out Nov. 8 and quickly ballooned into the deadliest U.S. wildfire in a century. No cause has been determined, but speculation has centered on PG& E, which reported an outage around when and where the fire ignited.

The company has lost \$15 billion in market value, its shares plummeting 60 percent in a week.

PG& E already faced financial pressure from its suspected role in a series of deadly fires in California wine country last year. The company’s filing last month said it needed to boost revenue to keep investors from fleeing, noting that its credit rating was downgraded and its shares had plummeted since the 2017 fires.

# Cities ravaged by flame

Unrelenting fire slams into Oak Park and marches south

By The Acorn Staff | on November 15, 2018  
By Ian Bradley



MICHAEL COONS/Acorn Newspapers

Eric and Diane Haupt spent the night of Nov. 8 in the Agoura Hills Library where Diane works, their eyes glued to cellphone video of a 40-foot inferno consuming the creek that lies just a few yards from their home in Old Agoura.

Forced to flee, the only lifeline to their home came in the form of a front door camera streaming video to Eric's phone.

"We knew as long as the video was transmitting, our house was still standing," Eric Haupt said. "Our guardian angel was watching over us."

The Haupt's' story is just one of thousands from the most destructive fire in Conejo Valley history, which, as of Wednesday, had destroyed 480 homes from Bell Canyon to Newbury Park to Malibu, a figure that could still grow as recovery efforts continue.

Among the hardest hit in the burn area were two mobile home parks: Seminole Springs, south of Agoura Hills, which lost more than 80 of its 200 coaches, and Oak Forest Estates in Westlake Village, which reportedly lost 17 of its 180 mobile homes.



TURN AROUND—The Woolsey fire destroyed the Chesebro bridge in Old Agoura. It is impassable. JOHN LOESING/Acorn Newspapers

More than 100 homes caught fire in Oak Park and North Ranch, which was also the target of attempted looting, police said.

Nightmare begins



Residents woke Nov. 8 to the news that a gunman had taken 12 lives at Borderline Bar and Grill in Thousand Oaks. But around 2 p.m., before the public could even learn the victims' names, there were reports of a fire near Hill Canyon in the Santa Rosa Valley. An hour later, smoke was rising to the north and word spread of a separate fire in Woolsey Canyon in Simi Valley.

As hundreds made their way to the Thousand Oaks Civic Arts Plaza for a candlelight vigil for the victims of the shooting, they were greeted by howling winds, the same force that within 10 hours had pushed the Woolsey fire across the 101 Freeway at Liberty Canyon in Agoura Hills and deep into Malibu.

As the Hill fire raced across the 101 Freeway and headed toward the coast, first responders were forced to close the freeway at Camarillo Springs and begin evacuations. By early evening, a "leave now" order was in place for a large swath of homes from Bell Canyon to the Ventura County line affected by the Woolsey fire.



GONE, NOT FORGOTTEN—Marsha Maus, 74, look for pieces of her past as she sifts through the debris at the Seminole Springs mobile home park on Nov. 11. Many of the 200 homes were destroyed in the fire. RICHARD GILLARD/Acorn Newspapers

Without the luxury of air support—the 40 mph winds made helicopter drops impossible and fixed-wing aircraft never fly at night—firefighters were forced to keep boots on the ground.

By 2 a.m. Nov. 9, Woolsey flames had arrived in the Lang Ranch neighborhood before quickly moving through Westlake and heading toward Thousand Oaks Boulevard, where it destroyed multiple homes both north and south of Hillcrest Drive. At the same

time, fires were popping up all across Agoura Hills, which lost seven homes in all. Flames licked the doorstep of Agoura High School, but the campus was spared.

Chief Mark Lorenzen of the Ventura County Fire Department warned that situations like these have become the new normal for California.



RED MENACE—Fire retardant dropped from the sky proved critical. Courtesy of Steve Goldman

“Things are not the way they were 10 years ago. If you look at the fires in Napa (Valley) last year, the Thomas fire, the fire in Butte County right now, and this fire . . . the rate of spread is exponentially more than it used to be,” Lorenzen said.

Officials became increasingly concerned about residents who ignored the mandatory evacuations.

“Please heed evacuation warnings; do not stay in your homes to try to protect them. Leave that to us; do not put your lives at risk. We want to be able to go in and protect your homes. We do not want to have to go in to protect lives, but we will. When we ask you to leave, please leave.”

At their peak, the fires displaced an estimated 250,000 people. From Bell Canyon to Camarillo, Oak Park to Malibu, residents were also forced to flee parts of Simi Valley and Thousand Oaks. The Woolsey fire burned almost 98,000 acres.

Many of those who did leave sheltered in evacuation centers in Newbury Park, Thousand Oaks and Pierce College in Woodland Hills. T.O made use of the Alex Fiore Teen Center that only hours earlier had been designated a gathering place for families of the Borderline shooting victims.

As the night wore on, confusion reigned as to when residents in the line of fire should leave and where they should go to.

“Unfortunately, (we were) hampered by people that have not evacuated. When we have to confront those situations, it takes away from our firefighters’ ability to protect structures and put up containment,” Chief Daryl Osby of the Los Angeles County Fire Department said.

#### Lives lost

In addition to untold millions in property damage, the Woolsey and Hill fires claimed three lives. On Nov. 9 a man and a woman were found dead inside a burned-out vehicle in the 33000 block of Mulholland Drive in unincorporated L.A. County.

Though law enforcement has yet to identify the victims, a source with knowledge of the deaths said the deceased are an Oak Park man and his mother, killed when their car was overcome by flames in Decker Canyon as they tried to escape.

The man, his wife and their two sons had evacuated Oak Park the night before and stayed at the grandmother’s house off Mulholland Highway near Malibu, the source said. On Friday, when the fire changed directions and headed for the beach, the entire family left in three cars—dad and grandmother in one, mom in another, and the two sons in the final vehicle—to evacuate back to Oak Park.

The bodies were discovered in a residential driveway. According to another source, the man and his mother, disoriented by thick smoke and rising flames, were following a fire truck to what they thought was safety; instead, the engine took them to a private residence. By the time they realized their mistake and tried to turn around, their car was engulfed in flames, the source said.

The wife and sons both survived, the former suffering burns and one of the latter, smoke inhalation.

On Nov. 14 another body was found inside a burned home at the 32000 block of Lobo Canyon Road in Agoura Hills.

No serious injuries were reported among the more than 3,590 firefighters who battled the two fires, many of whom remained on the front lines for several days in a row.

Called into service were 619 engines, 22 helicopters, 23 bulldozers and several fixed-wing planes provided by CalFire.

Internet, cable down

Residents worried about the safety of their homes were left out of touch after Spectrum internet and cable cut out on Friday evening, affecting customers from Simi Valley to Oxnard.

The cause of the outage, according to Spectrum: the Woolsey fire had destroyed a major fiber-optic cable. Service was restored by Saturday night.

There were other complications as well.

Southern California Edison power lines went down at 5:45 p.m. Friday leaving 23,000 people without power, mostly in Los Angeles County. By Nov. 14, electricity was still down for 9,000 SCE customers, some of whom live in Thousand Oaks.

Students in the Conejo Valley and Las Virgenes school districts were told not to return to class until Nov. 26 after the Thanksgiving break.

Area lakes including Lake Lindero, Westlake Lake and Lake Sherwood offered up their water to thirsty fire department helicopters.

And while customers of the Calleguas and Las Virgenes water districts were told to expect fluctuations in water pressure due to the fires, only LVMWD issued a boil warning for its residents east of the Ventura County line, south of Westlake Village, north of Malibu and west of Corral Canyon.

The lessons learned are many as residents still try to fathom what is now known as the worst fire in Conejo/Las Virgenes history.

“You prepare for the worst and hope for the best,” evacuee Eric Haupt said.

Kyle Jorrey and Dawn Megli- Thuna contributed to this article.

## Whole landscapes are gone

Losses, both small-scale and massive, are staggering



KARI OSTROVKY comforts daughter Teagan at Oak Forest Mobile Estates, where their home burned. (Al Seib Los Angeles Times)

By Matt Hamilton, Javier Panzar and Alene Tchekmedyian  
LA Times 11/14/2018

Rachel Bailey stepped out of her Volvo SUV, walked up to the smoldering strip of rubble and stared at what little was left. Blackened mattress springs. The husk of a couch. The tile that once graced her foyer.

Home after home in her pocket of a canyon in Westlake Village was leveled by what officials say is one of the largest fires to strike Los Angeles County in more than 100 years.

“This street just got annihilated,” Bailey said, surveying what was left of their Oak Forest Mobile Estates neighborhood.

“Well, the yard’s bigger now,” quipped her partner, David Carr, standing above the exposed steel beams of the soot-covered foundation.

As fire crews boosted containment lines around the massive Woolsey fire Tuesday, the breadth of the destruction it left began to set in for many families who were allowed to return home. The inferno tore through a 97,114-acre swath of Ventura and Los Angeles counties from Bell Canyon to the Pacific Ocean, obliterating roughly 435 homes and businesses and devastating neighborhoods.

The fire has burned about 150 square miles, including about 83% of national park land in the Santa Monica Mountains National Recreation Area, a stunning loss of a cherished open space for Southern California.

“To put that in perspective, that is the size of Denver,” Los Angeles County Fire Department Chief Deputy David Richardson said of the fire’s footprint.

At Malibu Creek State Park, the landscape was charred black beyond the parking lot, where the burned-out shell of a security vehicle sat. Although the campground remained largely untouched, the buildings in the back of the park are gone, as is much of the area that formed the backdrop for shows such as “MASH.”

The blaze also has destroyed power poles, toppled trees and damaged sewage and water lines, officials said. Firefighters were warned to watch out for trees and buildings that have been damaged by the fire over the last six days, some of which are beginning to weaken. An apartment building along Pacific Coast Highway collapsed early Tuesday.

Several of the Las Virgenes Municipal Water District’s facilities were damaged, including a composting facility and a filtration plant in Westlake. Power outages affected the entire service area, but water district staff called on backup power and portable emergency generators to keep critical pumps running for customers and firefighters, water district spokesman Mike McNutt said.

The Los Angeles County Board of Supervisors voted Tuesday to proclaim an emergency, citing the loss of lives, destruction of property and widespread evacuations. They also declared a health emergency and ordered that no debris be removed without a hazardous materials investigation.

The ordinarily humdrum government proceedings were punctuated by the appearance of celebrity residents who asked for food, water, gas and shelter in the aftermath of the fire, as well as assistance rebuilding.

“I have witnessed many fires in my community and experienced the devastation ... but none as catastrophic as the events that have taken place in our community these last five days and nights,” said actor Pierce Brosnan. “We beseech you to do everything in your power to save our community.”

Amid the devastation, firefighters were busy Tuesday grappling with a second consecutive day of red flag conditions, which signify a powerful mix of heat, dry air and winds that could stoke a small fire into a deadly inferno.

“We are not out of the woods yet,” Ventura County Fire Chief Mark Lorenzen said. “We still have some incredibly tough conditions ahead of us.”

A flare-up Tuesday morning prompted a massive response by firefighters as flames scorched a hillside in the Santa Monica Mountains. The spot fire was fanned by strong winds that pushed the flames upward toward a peak called Boney Mountain and away from communities.

“It looks scary but it’s not an imminent threat,” said Ventura County Fire Capt. Stan Ziegler.

The flare-up was burning into the scar of the 2013 Springs fire and hitting patches of rocks in the mountains above Lake Sherwood and Hidden Valley. A caravan of helicopters dropped water from Lake Sherwood onto the blaze and tankers were painting the mountain ridges with retardant.

Still, the flames were seizing on dry fuel that had not burned in 50 to 60 years, Ziegler said. The blaze sent periodic columns of smoke skyward that were visible for miles around.

Such flare-ups are expected within the wider Woolsey fire burn area, because there are untouched pockets of brush scattered inside the fire’s boundary.

Back in Westlake Village, Bailey rummaged through the remnants and found a metal case that once held colored pencils, along with a ceramic piggy bank. Burned pages of a Harry Potter book were scattered about. Carr’s collection of vintage surfboards was now melted into a pile of fiberglass. His truck was a burned out husk of metal. Six bikes and his scuba gear, all gone.

So much was lost, some of it irreplaceable.

Years of love letters Bailey had written to Carr, a man she had known since she was 13 and with whom she reconnected later in life, gone with the house.

They moved into the home in February and had initially struggled to get fire insurance. They loved the neighborhood, a secluded cluster of homes in a canyon ensconced by dozens of oak trees, giving shade and privacy.

“It was the most magical street — so much shade. The treehouse was right here,” she said, pointing to a charred oak.

“We lost everything,” she repeated, like a grim refrain.

“I loved this house,” Carr said, crying. Bailey embraced him. Carr apologized, feeling guilty that he wasn’t here to save the house.

“I’m sorry,” he said. “I loved this house.”

Bailey comforted him.

“We’ll rebuild,” she said. “We’ll do it again.”

Times staff writers David Pierson, Nina Agrawal, Hanna Fry, Melissa Etehad and Richard Winton contributed to this report.

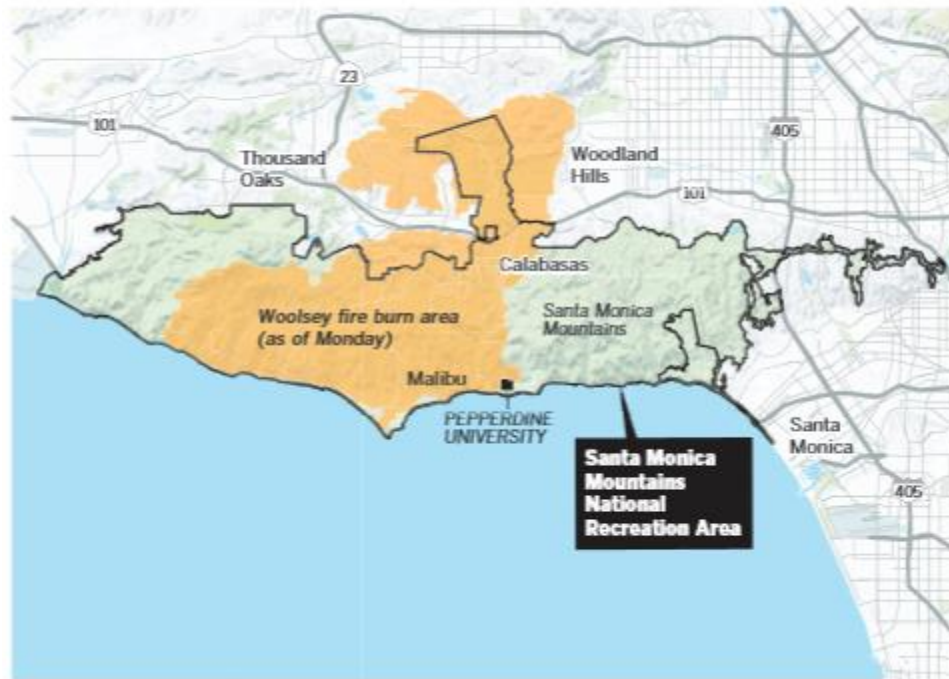


A FIREFIGHTER walks amid smoke and flying debris as crews work to stop the Woolsey fire from overtaking structures in Malibu. (Genaro Molina Los Angeles Times)



## Woolsey fire devastates Santa Monica Mountains

Cal Fire reports that 83% of all National Park Service land in the area has been burned.



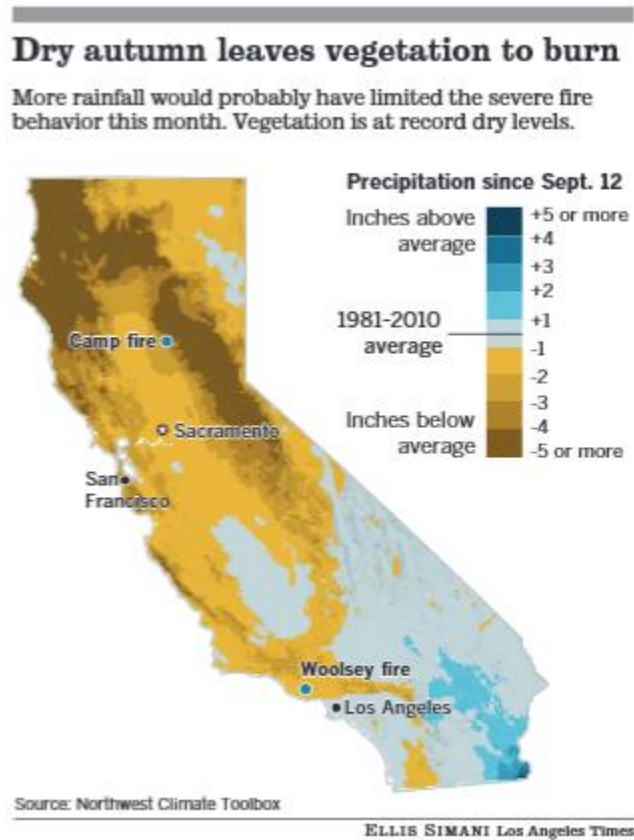
Sources: USGS, National Park Service, Nextzen, Open Street Map

Los Angeles Times

## Fall rains vanish to fuel conditions ideal for wildfires

As autumn rainfall vanishes in California amid global warming, fires worsen up and down the state.

By Rong-Gong Lin II, Matt Hamilton and Joseph Serna  
LA Times 11/13/2018



PARADISE, Calif. — This is a wet place by California standards.

It averages about 55 inches of rain a year, thanks to its prime location in the verdant foothills of the Sierra Nevada, which wrings rain out of Pacific storms.

But when the Camp fire sparked on Thursday, Paradise was parched. The area usually gets about 15 storms during the summer and early fall, adding up to 5 inches of rain. But this year, it got a measly one-seventh of an inch.

The vegetation around Paradise was explosively dry, resulting in the worst fire in modern California history that left 7,000 structures destroyed, at least 42 dead and scores still missing.

Across California, the lack of autumn rain is having dire consequences. Ventura County, where the Woolsey fire last week destroyed hundreds of homes, also got almost no rain through the

summer and fall. Early storms were supposed to have ended the Northern California fire season by now, allowing more firefighters to head to Southern California to battle fires spread by Santa Ana winds.

With the Camp fire raging in Butte County, officials said there were fewer firefighters at hand to battle the blaze that swept through Thousand Oaks, Westlake Village and Malibu.

“A lot of resources we typically rely on were not available,” Los Angeles County Fire Chief Daryl Osby said. “Our help came from further away,” including as far away as Texas.

Scientists say that in a future affected by climate change, California should expect drier autumns and springs, with more of the rain and snow concentrated in the winter months.

That is bad news for firefighters, who rely on early rains to ease the threat from extreme winds that plague California beginning in late September and help quickly spread many of California’s worst blazes.

“I would anticipate we will more frequently see this extension of the fire season into the fall and even into the early winter,” said Nina Oakley, regional climatologist with the Western Regional Climate Center.

In the last six years, California’s southern coastal region has been drier than average during the fall.

Climate experts have long said the fire season is really a race over what comes first: the powerful winds or the rain. With much less rain in the fall, “you’re waiting for a disaster to occur,” said John Abatzoglou, a University of Idaho associate professor of geography, who has studied California extensively.

The lack of rain brought record dryness for vegetation, and that has helped fires burn more explosively. Tinder-dry vegetation only fuels fires further; it sent an exceptional amount of heat into the air during the massive Carr fire in July, leading to a “fire tornado” that carved its own unpredictable path in Redding to spread the flames, leading to a death of a firefighter.

In Paradise, about 80 miles north of Sacramento, the dry vegetation contributed to a turbocharged spread that many residents could not outrun.

“It has jumped a 300-foot lake at least three times, [spreading to] areas where you’d expect the fire not to continue forward,” said Jonathan Pangburn, a fire behavior analyst with the California Department of Forestry and Fire Protection.

Paradise sits in the foothills of the Sierra, at an elevation of about 1,000 feet. It’s not unusual for the town to get 20 inches of rain in a single month during the rainy season.

“Paradise is a pretty wet place,” National Weather Service meteorologist Johnnie Powell said. “Throughout Northern California, it’s been one of the driest falls.”

Paradise has its rain gauge at a fire station, and that station was one of Powell's best weather observers. Paradise's last weather report was sent in on Wednesday, the day before the fire began. Since then, the reporting station has gone silent.

An extremely late start to Southern California's rainy season last year also contributed to bone-dry conditions just before the Thomas fire in December devastated Ventura and Santa Barbara counties, leading to the second-largest California wildfire in the modern record, burning up 282,000 acres.

Typically, more than 4 inches of rain falls in Camarillo between July and December; in 2017, only 0.09 of an inch fell.

"If Northern California had received anywhere near the typical amount of autumn precipitation this year," UCLA climate scientist Daniel Swain said, "explosive fire behavior and stunning tragedy in Paradise would almost certainly not have occurred."

If the land around Paradise had been damp, even the strong winds coming downhill — pushed by 50-mph gusts from the northeast — won't drive the same kind of wildfire, Swain said. "That shortening of the rain season, as we're seeing two years in a row, is really consequential."

It's not just the widening overlap between the dry season and the start of Santa Ana season that's a problem. Besides the unusually dry weather, increasingly hot temperatures are also drying out vegetation to record levels.

A key thing "you need for these apocalyptic fires is an extremely dry, heavy fuel load," climatologist Bill Patzert said. "Up and down the state, everyone is in the same situation.

"These more intensive heat waves precondition the brush for more intense fires," Patzert said.

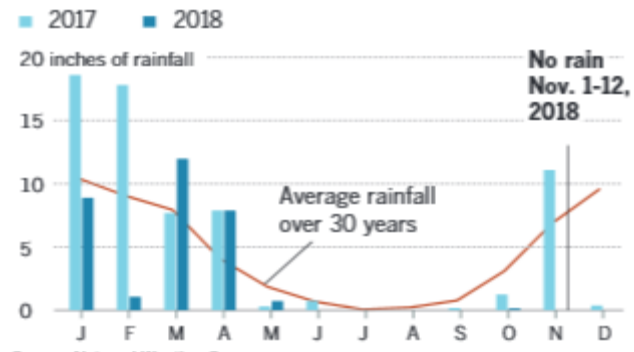
And it's been hot throughout the state recently. California experienced its hottest month on record this past July, in terms of highest minimum temperatures recorded statewide. On July 6, all-time temperature records were set across Southern California, with UCLA hitting 111, Van Nuys 117 and Chino 120.

Having late wildfires also poses problems for the rainy season to come. After the Thomas fire hit, weeks later, rains triggered deadly mudslides that killed more than 20 people.

"When you have these wildfires backed up against the first rainfall ... there's very little time to get in teams to do assessments and employ mitigation strategies before rainfall occurs," Oakley said. "You have communities that are still reeling from wildfire and need to prepare for the threat of post-fire debris flows."

Lin reported from Los Angeles, Hamilton from Malibu and Serna from Paradise, Calif.

## Rainless November in Paradise



Source: National Weather Service

SWETHA KANNAN Los Angeles Times

## Las Virgenes water district declares state of emergency, reduces bills in Woolsey fire area



Several major facilities were damaged, including the Rancho Las Virgenes composting facility and the Westlake filtration plant. (Las Virgenes Municipal Water District)

By Alejandra Reyes-Velarde  
LA TIMES NOV 13, 2018 | 1:10 PM

Las Virgenes Municipal Water District declared a state of emergency after several of its facilities were damaged by the Woolsey fire, officials said Tuesday.

Several of the district's major facilities were damaged, including the Rancho Las Virgenes composting facility and the Westlake filtration plant, the district said in a statement. Las Virgenes Municipal Water District serves more than 65,000 residents in the cities of Agoura Hills, Calabasas, Hidden Hills, Westlake Village and unincorporated areas of western Los Angeles County.

The entire service area experienced power outages, and emergency generators were used to keep critical pumps running, the water district said.

"Our water system performed exceptionally well under tremendous demand, while supporting the aggressive firefighting efforts throughout the service area," said David Lippman, director of facilities and operations. "However, we did experience some localized water outages and low pressure due to water main breaks and leaks from homes that were destroyed by the fire."

Over the weekend, 500 customers were instructed to boil their water before drinking it or using it to cook, or to use bottled water because firefighting efforts caused a significant loss of pressure within the water systems. That could lead to increased bacteria in the water, officials said.

The emergency declaration approved Tuesday will allow staff to obtain necessary equipment and hire contractors to repair critical water and wastewater facilities damaged by the fire.

The district is also waiving water and wastewater charges for the billing period during which a home was destroyed or rendered uninhabitable because of the fire, and it reduced bills for customers who used more water to protect their properties.

## Edison, PG&E plunge as fires rage

Investors hammer the utilities' shares over worries about massive liabilities from blazes.



SOUTHERN California Edison said an outage occurred near the Woolsey fire's suspected starting point. Above, damage on Kanan Road. (Wally Skali Los Angeles Times)

By James F. Peltz and Joe Ryan  
LA Times 11/13/2018

Stocks of California's two largest utility owners, PG&E Corp. and Edison International, plummeted again Monday as investors feared that the deadly wildfires raging in the state could leave the utilities with massive liabilities.

It was the stocks' worst drubbing since the California power crisis more than 15 years ago.

The shares plunged in the first minutes of trading — with PG&E dropping 37% and then being briefly halted — before they later pared their losses.

PG&E, the parent of Pacific Gas & Electric, closed down \$6.94, or 17.4%, to \$32.98 a share. Edison International, which owns Southern California Edison, dropped \$7.44, or 12.2%, to \$53.56 a share.



PG&E shares have dropped one-third in the two trading sessions since the Camp fire in Butte County broke out last week, wiping out more than \$7 billion of PG&E's total market value.

Edison International shares have dropped 24% in the last two sessions as the Hill and Woolsey fires spread in Ventura and Los Angeles counties.

They were the two utilities' worst declines since power shortages triggered rolling blackouts across California in 2000-01, a crisis that led the Pacific Gas & Electric unit to file for bankruptcy protection in 2001.

Although the causes of the fires have yet to be determined, investors are worried that the utilities could face liabilities associated with the blazes. Investigators are looking at electrical equipment as one of several possible causes of the Camp fire, about 150 miles northeast of San Francisco.

A PG&E transmission line in the area went offline 15 minutes before the fire was first reported, and the San Francisco company reported finding a damaged transmission tower near where investigators said the fire began.

The Camp fire's death toll climbed to 29 on Sunday, with the whereabouts of 228 people still unknown, authorities said.

Southern California Edison, meanwhile, said that a power outage occurred near the suspected starting point of the Woolsey fire and that a sensor detected a disturbance in its equipment two minutes before the blaze was reported. Two people have died in that fire.

Together, the wildfires have destroyed more than 6,700 structures and could cost the state, insurers and homeowners at least \$19 billion in damages, according to an estimate by Enki Research.

"We're not going to speculate or comment on what factors may or may not be impacting the market," said Paul Doherty, spokesman for PG&E. "Right now, our entire company is focused on supporting first responders and assisting our customers and communities impacted by the Camp fire."

Edison did not immediately respond to requests for comment.

Southern California Edison said last month that its electrical equipment probably sparked at least one starting point in the massive Thomas fire that ravaged Ventura and Santa Barbara counties late last year. That fire also killed two people.

Susquehanna Financial Group estimates that PG&E could face as much as \$5 billion in liabilities from the Camp fire. That would come on top of deadly fires in California last year that could cost the utility as much as \$17.3 billion, according to a JPMorgan Chase & Co. estimate.

Further clouding the issue of whether, or how much, the utilities might be liable for damages is a new state law that takes effect in January.

Among Senate Bill 901's requirements is that state regulators determine whether a utility acted responsibly before the outbreak of any fire linked to the company's equipment or operations. If they find that the utility did act responsibly, it could bear less liability — creating a chance for the utility to pay only a portion of the damages that the current rules might otherwise require.

But lawmakers, who haggled over the fine points of SB 901 for most of the summer, left what now appears to be a gaping hole in the new wildfire plans. The law gives PG&E, in particular, a mechanism to borrow money for costs related to the 2017 fires and for minimizing the financial effects for incidents beginning in 2019. But it leaves the existing system in place for any fires that break out this year.

As a result, the long-standing rules of "inverse condemnation" — under which a utility can be forced to pay millions of dollars without a strict finding of bad behavior — remain in place.

That bodes poorly for PG&E, according to Moody's Investors Service. The credit-rating firm noted Monday that the "legislation does not address recovery for any potential liabilities related to wildfires that occur in 2018."

As a result, "the magnitude of the [Camp] fire's destruction leads us to believe the potential liabilities could be material for PG&E," Moody's said.

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# Wind, drought worsen fires, say scientists

They take issue with Trump's management claim

**Seth Borenstein** ASSOCIATED PRESS

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WASHINGTON – Both nature and humans share blame for California's devastating wildfires, but forest management did not play a major role, despite President Donald Trump's claims, fire scientists say.

Nature provides the dangerous winds that have whipped the fires, and human-caused climate change over the long haul is killing and drying the shrubs and trees that provide the fuel, experts say.

"Natural factors and human-caused global warming effects fatally collude" in these fires, said wildfire expert Kristen Thornicke of the Potsdam Institute for Climate Impact Research in Germany.

Multiple reasons explain the fires' severity, but "forest management wasn't one of them," University of Utah fire scientist Philip Dennison said.

Trump tweeted on Saturday: "There is no reason for these massive, deadly and costly forest fires in California except that forest management is so poor. Billions of dollars are given each year, with so many lives lost, all because of gross mismanagement of the forests."

The death toll from the wildfire that incinerated the town of Northern California town of Paradise and surrounding areas climbed to 29, matching the mark for the deadliest single blaze in California history. Statewide, the number of fire dead stood at 31, including two victims in Southern California.

One reason that scientists know that management isn't to blame is that some areas now burning had fires in 2005 and 2008, so they aren't "fuel-choked closed canopy forests," Dennison said.

In those earlier fires, Paradise was threatened but escaped major damage, he said. In the current blazes, it was virtually destroyed.

The other major fire, in Southern California, burned through shrub land, not forest, Dennison said.

"It's not about forest management. These aren't forests," he said.

The dean of the University of Michigan's environmental school, Jonathan Overpeck, said Western fires are getting bigger and more severe. He said it "is much less due to bad management and is instead the result of our baking of our forests, woodlands and grasslands with ever-worsening climate change."

Wildfires have become more devastating because of the extreme weather swings from global warming, fire scientists said. The average number of U.S. acres burned by wildfires has doubled over the level from 30 years ago.

As of Monday, more than 13,200 square miles have burned. That's more than a third higher than the 10-year average.

From 1983 to 1999, the United States didn't reach 10,000 square miles burned annually. Since then, 11 of 19 years have had more than 10,000 square miles burned, including this year. In 2006, 2015 and 2017, more than 15,000 square miles burned.

The two fires now burning "aren't that far out of line with the fires we've seen in these areas in recent decades," Dennison said.

"The biggest factor was wind," Dennison said in an email. "With wind speeds as high as they were, there was nothing firefighters could do to stop the advance of the fires."

These winds, called Santa Ana winds, and the unique geography of high mountains and deep valleys act like chimneys, fortifying the fires, Thornicke said.

The wind is so strong that fire breaks – areas where trees and brush have been cleared or intentionally burned to deprive the advancing flames of fuel – won't work. One of the fires jumped over eight lanes of freeway, about 140 feet, Dennison said.

Southern California had fires similar to the Woolsey fire in 1982, when winds were 60 mph, but "the difference between 1982 and today is a much higher population in these areas. Many more people were threatened and had to be evacuated," Dennison said.

California also has been in drought for all but a few years of the 21st century and is now experiencing its longest drought, which began on Dec. 27, 2011, and has lasted 358 weeks, according to the U.S. Drought Monitor. Nearly two-thirds of the state is abnormally dry.

The first nine months of the year have been the fourth warmest on record for California, and this past summer was the second-hottest on record in the state.

Because of that, there are 129 million dead trees, which provide fuel for fires, Thornicke said.

And it's more than trees. Dead shrubs around the bottom of trees provide what is called "ladder fuel," offering a path for fire to climb from the ground to the treetops and intensifying the conflagration by a factor of 10 to 100, said Kevin Ryan, a fire consultant and former fire scientist at the U.S. Forest Service.

While many conservatives advocate cutting down more trees to prevent fires, no one makes money by cutting dead shrubs, and that's a problem, he said.

Local and state officials have cleared some Southern California shrub, enough for normal weather and winds. But that's not enough for this type of extreme drought, said Ryan, also a former firefighter.

University of Alberta fire scientist Mike Flanigan earlier this year told The Associated Press that the hotter and drier the weather, the easier it is for fires to start, spread and burn more intensely.

It's simple, he said: "The warmer it is, the more fire we see."



**Flames climb trees as the Camp Fire tears through Paradise on Thursday. NOAH BERGER/AP FILE**

## Drought taking a toll on Rhine

Diminished waterway has idled cargo ships in Germany, severely affecting commerce.



A PROLONGED dry spell has reduced the depth, volume and width of the Rhine River to precarious levels. (Photographs by Patrik Stollarz AFP/Getty Images)

By Erik Kirschbaum  
LA Times 11/12/2018

COLOGNE, Germany — The new stomping ground Cynthia Medzech and her dog Berfin discovered along the Rhine River in Germany normally rests 10 feet under water and about 200 feet from shore.

The strip of land serves as a perfect springboard for the 3-year-old Turkish shepherd as she leaps in and out of the dwindling river. But it also evokes myriad concerns about disruptions caused by record-breaking low water levels on one of Europe's most important inland waterways.

"It's great for us because we've now got all this new space to play around in," Medzech, 23, said during a recent walk. "It's not good for the cargo barges that can't sail anymore."

A prolonged dry spell across Germany and Central Europe that began with a record-breaking summer heat wave and extended through what is usually a rainy autumn season has reduced the depth, volume and width of the 765-mile-long Rhine to levels that are precarious for ships and commerce.

Other rivers in Central Europe such as the Danube, Elbe and Spree have suffered as well but none carry as many ships and commerce as the Rhine. About 10% of all cargo in Germany, Europe's leading economy, is transported by ship, and about 80% of those 220 million tons of shipped freight sails up and down the Rhine, according to German government figures.

The river, fed by melting glacier ice in Switzerland at its origins and 36 tributaries such as the Moselle in Germany, France, and the Netherlands along the way, on Oct. 23 recorded an all-time low water level of 26 inches in Cologne, the Rhine's biggest city with a population of about 1 million.

That is far below the river's average water level of 10.5 feet in Cologne and a fraction of its record high of 45 feet set in 1784.

The river's usual width of about 1,000 feet in Cologne — in times of flooding it can swell to nearly half a mile wide in the city — is down to about 600 feet.

"It's really scary to see the river getting narrower by the day," said Peter Beyer, a member of Parliament from a district near the Rhine north of Cologne. "Everyone's hoping for rain."

Usually, it rains an average of 263 days a year in Cologne, which means the Rhine is almost always full of swift-moving water and diesel-fume-belching barges tugging their way up- and downstream.

But the shallow, slow-moving waters have idled many of the hundreds of cargo ships and pleasure boats that normally traverse the Rhine — which has been an important transportation route since the Roman Empire.

"Most of Germany's freight shipping is concentrated on the Rhine because of historical reasons and industrial reasons — a large share of the country's heavy industry is based along the river," said Martyn Douglas of the Federal Environmental Agency.

Douglas said the drought was painfully showing how vulnerable the country's supplies were to the forces of nature.

A spokesman for the German Economy Ministry said it was difficult to quantify the economic damage caused by the drought and low water levels in the Rhine, though sharply rising fuel prices tied to the problem were hurting business and consumers across the country.

The ministry last month began releasing 84,000 tons of crude oil, 180,000 tons of diesel fuel and 67,000 tons of jet fuel from its national strategic reserves to try to limit the impact of higher prices. It was only the fourth time the ministry has temporarily dipped into those emergency stockpiles in the last 40 years; Switzerland also began temporarily releasing diesel fuel from its stockpile.

"The goal is to ensure continued supplies of fuel across Germany," the spokesman said. "There's no shortage of oil. It's a transportation problem."

Aside from sharply higher shipping fees for barges to take a third or less of their usual payload or the shifting of supplies to trucks or trains, there is little that companies, consumers or government leaders can do.

The Rhine is adorned with picturesque castles and world-famous vineyards farther south as well as heavy industry to the north toward its mouth to the North Sea in Rotterdam, Netherlands.

It is a vital shipping artery for commerce with companies exporting their cars, chemical products, machinery and oversized plant equipment around the world as well as for supplies of coal, and imported gas, diesel and jet fuel.

Those shipments have been delayed, stranded, canceled or partially shifted rather inefficiently to the roads or rails during the drought — one medium-sized cargo barge can carry the same payload as 150 trucks.

Many gas stations in the region have been running dry without fresh supplies from Rhine cargo ships, and winter home heating fuel deliveries have been curtailed or postponed. Some airlines operating from farther south in Frankfurt have grown concerned about their supplies of jet fuel.

Most cruise ship operators in Cologne decided to shut down a few weeks earlier than usual this autumn rather than risk running aground or into a submerged obstacle in the treacherously shallow waters. Items including unexploded World War II-era aerial bombs and other ordnance as well as rusting car wrecks have been found in the increasingly exposed riverbed. Scores of abandoned bicycles, tons of metallic objects and trash and even a still-locked safe have been recovered as the waters retreated.

“It’s amazing to see all the junk that ends up in the river,” said Thomas Herzog, the captain of the Rheinland pleasure boat, who was trying to take advantage of the slowdown to do repair work and maintenance on his boat.

Herzog, whose 120-foot-long boat carries up to 250 passengers for hours-long cruises on weekends, said he enjoys the challenges of low water levels because it forces the mind to concentrate.

“If you’re not careful you can run into the rocks and tear a hole in the hull or get stuck on a sandbar,” the 49-year-old Cologne native said, proud that he’s never had such a shipwreck even though he has seen several over the years.

“It’s more of a problem for the cargo ships than it is for me. Even when my boat is full, it’s hardly any lower in the water.”

There was an eerie calm on a river that is usually bustling with barges filled with coal, gas, chemicals and agricultural goods.



There seemed to be more one- and two-person kayaks than usual paddling out in the middle of the river recently, apparently taking advantage of the abnormal absence of the giant barges that can run up to 600 feet and carry up to 6,000 tons of freight.

“It feels weird not to see any barges out there because you get the feeling there’s something wrong,” said Laura Schmees, 33, as she walked alongside the river Tuesday.

“It makes you think about climate change possibly being a cause for the lack of rain and low water, and that makes me uneasy about the future. Things seem to be out of balance. It’s scary.”

The few barges on the river are riding higher than usual as they are only partially filled with cargo. One long coal barge heading south that passed beneath one of the seven bridges in Cologne on Wednesday was mostly empty, its unused decks glistening in the midday sun.

Many of the ferries that connect the east and west sides of the Rhine have also canceled service.

“There is a silver lining, though,” said Uwe Henning, 59, who was strolling on a wide meadow near the river that serves as a floodplain a few months each year. “The air around here and the river itself are a lot cleaner without all these smelly barges out there.”

Kirschbaum is a special correspondent.



**THE RHINE'S** record low levels have affected both pleasure boats and cargo ships in Germany, with supply shipments having to be shifted to trucks or trains.