

## Wildfire season: How to stop California burning

In the Napa Valley, private groups and local businesses are doing what they can to mitigate fire risk

**Dave Lee** in Napa Valley, California YESTERDAY

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Most people driving through Napa County, California’s famed wine region, see only beauty. Steven Burgess sees something different. Spotting clumps of juniper along the edge of a multimillion dollar property, he calls out the combustible shrub’s local nickname: “green gasoline!”

The 49-year-old volunteer firefighter and former vintner is giving the Financial Times a history tour, pointing out the scars of mega blazes that have intensified here and around the world over the past decade, capturing global attention and concern.

That’s where the Atlas fire started, Burgess says, pointing up at the winding Atlas Peak Road, where a blaze burnt 50,000 acres in 2017. Elsewhere we see remnants of the LNU Lightning Complex fire that covered 360,000 acres in 2020, part of the most destructive year on record, when 4mn acres were scorched.

The tour takes us right up to the present. So far in 2022, more than 180,000 acres have burnt in more than 5,000 fires, according to statistics published by Cal Fire, the state’s fire fighting agency. That’s less activity than at the same point in 2021 and 2020, but drought conditions and hot weather suggest a highly active remainder to the season, experts have said.



Workers in Napa clear vegetation to form a protective fire break in June © Andri Tambunan/FT

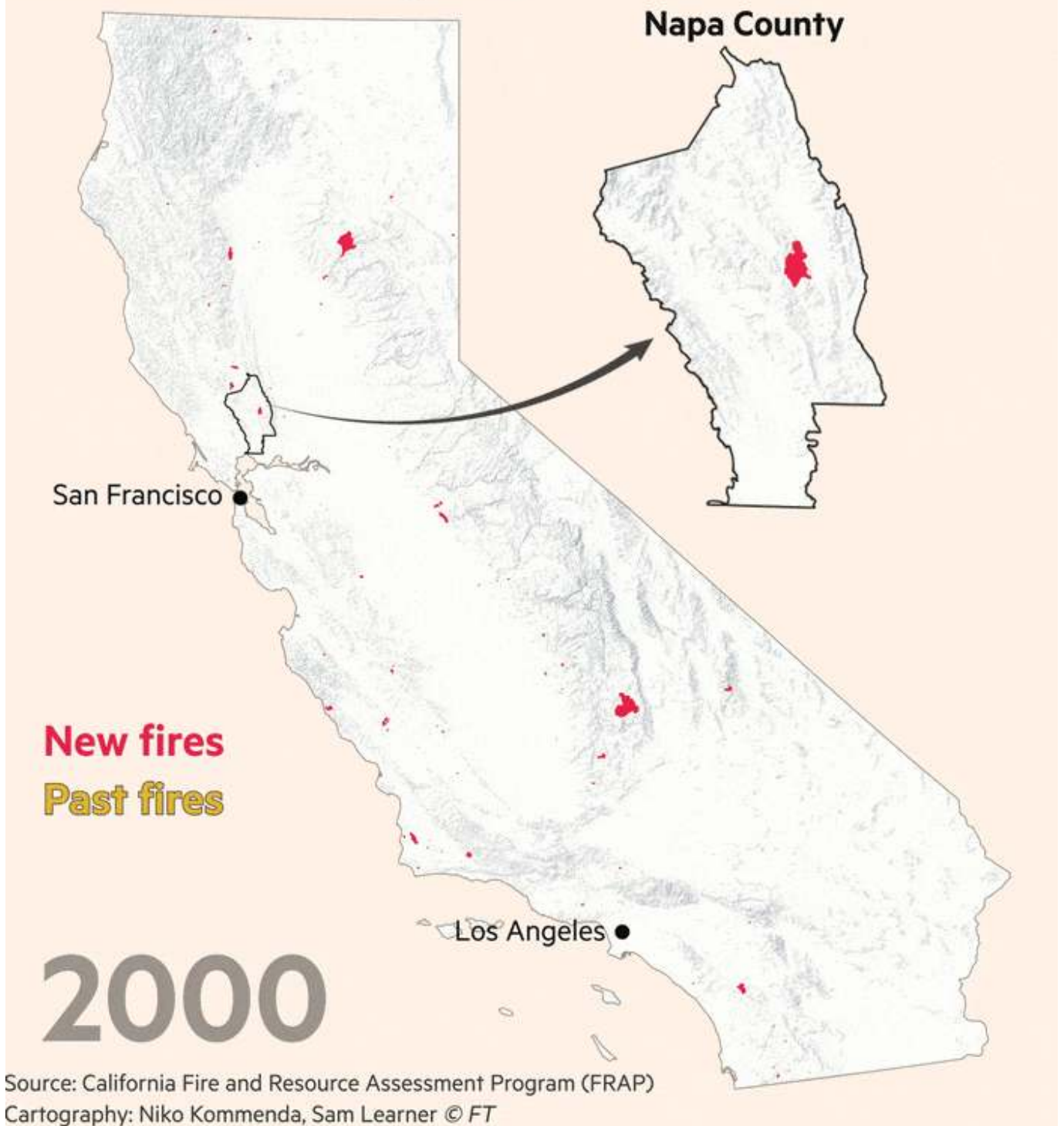
Burgess wants to do what he can to prevent this. He works with the Napa Communities Firewise Foundation as a wildfire mitigation specialist. It’s a non-profit, funded by grant money and private donations, which has earmarked 325 preparedness projects across the county at an estimated cost of \$550mn, including maintenance of completed areas.

So far, only \$23mn has been committed, mostly from state and federal grants. Napa Firewise sees it as an unpredictable source of income that hinders the ability to plan ahead.

“It’s personal,” adds Burgess, who grew up in Napa County. “If I wasn’t somehow internally motivated to save this Valley’s ass, I would not be here right now. I want to help save it. I think it’s save-able.”

As our planet gets warmer, and our summers get hotter, wildfires are becoming more frequent and more intense across the northern hemisphere. Extreme heat in the Mediterranean region this summer helped create large wildfires in France, Spain, Portugal and Greece. Last year, smoke from wildfires in Siberia reached the North Pole for the first time since records began.

## Napa County has been hit hard by California wildfires in recent years



In California, a state with 33mn acres of forest that has been in drought for much of this century, the past two years have seen fires reach unprecedented levels, according to Cal Fire. The state government has announced plans to mitigate the risk with fuel reduction projects, working with the US Forestry Service. The target, as set out by Governor Gavin Newsom, is to treat up to 1mn acres of forest every year by 2025.

Yet even if it can meet that goal, it will represent just a fraction of the state’s forested areas.



There's now an increasing realisation among local businesses and private organisations like Napa Firewise that the private sector must step up — from the utility companies burying cables underground, to the vineyards funding private fire fighters, to the insurers and homebuilders being encouraged to work together to make more resilient communities.

“The [government] can't do it alone, it's overwhelming,” says Mike Wilson, director of Napa Firewise's wildfire fuel mitigation programme. “A built-up environment of fire suppression over 100 years, now in combination with climate change, drought conditions. The whole thing has come together.”

## Clearing the fuels

Beside Highway 128 one June day, a team of half a dozen men from Napa Firewise worked in the sweltering sun, chopping off low branches and dragging the brush down a hill and into a chipper.

It's a painstaking, dangerous task, surrounded by poison oak and the occasional rattlesnake. A tank containing about 100 gallons of water is on hand should they find themselves dealing with fire themselves.

Wilson says the work Firewise does with private funding rather than grant money has an upper hand as it allows them to cut out the “green tape” that can delay treatment projects by many months, while environmental and archaeological approvals are sought. Some projects using public funds, Wilson says, quickly become “insanely complicated”.

“We can do privately funded projects much more efficiently,” he says, “and still provide protection for the environment.”



Firefighters work to contain a blaze at the Paradise Best Western Hotel in Paradise, California, in 2018 © Joel Angel Juarez/ZUMA Wire/Shutterstock

However, private funds make up only a fraction of the revenue Napa Firewise has at its disposal — about 6 per cent. Wilson wishes deep-pocketed business based in California would step up. “Google, Facebook, Apple,” he says. “We should be tapping into those funds.”

As it stands, the team can treat areas at a rate of about a mile a month. It won't stay "done" for long. There's a three- to five-year cycle in which the work is essentially reset by regrowth.

Napa Firewise goes to great lengths to emphasise that their work does not remove the area's natural beauty; merely tames it. The aim is to create a landscape that is "parklike" but safer, improving access for firefighting teams, particularly on the winding roads that act as the main arteries in and out of affected areas.

## Underground lines

But no tinderbox bursts into flame without a spark. And while wildfires can be started by arsonists or lightning strikes or [bizarre accidents](#), the majority are ignited by electrical infrastructure. In the areas it protects, Cal Fire has said 74 per cent of wildfires between 2018 and 2020 were caused by issues with electrical power, such as vegetation blowing on to cables due to strong winds.

For that reason, alongside the work of groups like Napa Firewise, mitigation work is also being undertaken by Pacific Gas and Electric, the largest utility provider in the state.

The publicly traded group, responsible for powering the homes and businesses of up to 16mn Californians, has been pinpointed as a culprit in many of the largest fires. Ageing or poorly maintained equipment has typically been to blame.

In 2018, the failure of a badly maintained steel hook, which was holding a high voltage cable, provided the spark for the Camp Fire — a blaze that destroyed the town of Paradise and took the lives of at least 84 people, the deadliest on record. PG&E later pleaded guilty to 84 counts of involuntary manslaughter.

The company was forced into bankruptcy in 2020 due to what bordered on an almost incalculable liability from its equipment being a leading cause of major fires.

Now restructured and today valued at around \$27bn, the utility has embarked on a programme to bury cables in areas of high fire risk, such as Pope Valley, an off-the-beaten-track part of Napa County.

The frontline in that work is precisely that: a line, dug into the road, a couple of feet wide and up to 5ft deep.





Along Pope Valley Road, contractors are burying the cables in the soil surrounded by blackened tree stumps sticking up like burnt matchsticks. Often, space restrictions mean digging up the road surface. Despite this, says one worker, “We’re doing about 500 or 600 feet a day”.

It is not only the cables that need burying. Transformers, encased in an 8-tonne concrete vault, must also be completely buried — one every 800 feet.

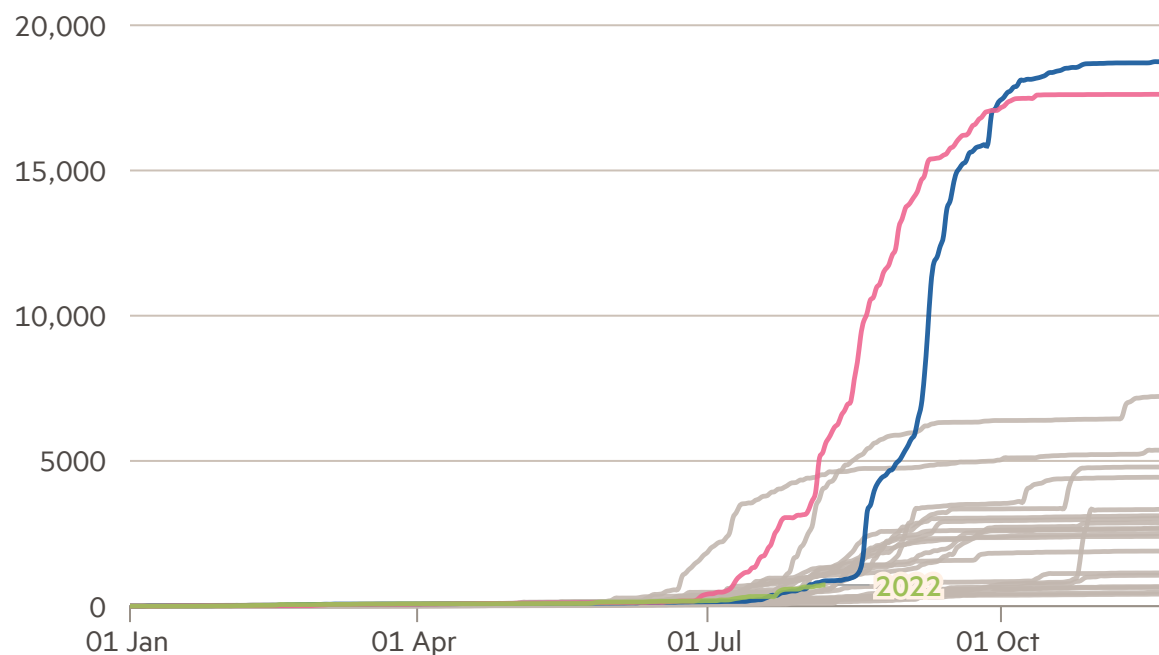
About a month after the work is done, the cables become live. The process reduces the risk of ignition by 99 per cent, says PG&E.

By September, barring any “unforeseen circumstances”, PG&E aims to have buried 175 miles of electricity cable, at a cost of \$3.6mn per mile. It hopes to reduce that cost by 2026 to \$2.5mn — with the capability to bury 1,200 miles per year by then, on its way to its ultimate target of 10,000 buried miles.

In addition to “undergrounding”, the company is engaged in multiple projects to install stronger poles — wrapped in heat resistant fibreglass — and coating smaller power lines in plastic to prevent sparking. The cost of PG&E’s programme comes in at \$5.96bn for 2022 alone.

## The past two summers have seen record-breaking wildfire activity in California

Fires detected by satellite, by year, since 2001. Cumulative, by date



Source: [FIRMS/MODIS satellite data \(Nasa\)](#) • FT Graphic: Sam Learner, Niko

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“The drought, hotter temperatures and higher winds have significantly increased the risk of catastrophic wildfires,” said Deanna Contreras, a PG&E spokesperson, on hand to give a tour of the work. “Extraordinary times call for extraordinary solutions. We have taken a stand that catastrophic wildfires shall stop.”

PG&E’s work may be of unprecedented scale, but some question whether meaningful enough progress is being made by the state and utility companies.

In a stinging letter to the governor earlier this year, California’s state auditor described wildfire mitigation plans, including PG&E’s, as “seriously deficient” in tackling the issue of power lines in high fire threat areas. The governor’s energy infrastructure safety director Caroline Thomas

Jacobs said she had some “differences of opinion” on some of the report’s points, but said, “we welcome the input” of the audit report.

Meanwhile, progress on Newsom’s pledge of having 1mn acres treated each year appears up in the air. [An investigation](#) carried out by a coalition of public service broadcasters in California determined that Cal Fire has been unable to track precisely how much work has been completed.

## Wine country at work

While they are sympathetic to the enormity of the state’s task, patience is wearing thin among some of Northern California’s most prominent business owners — particularly in the industry that makes the region famous: winemaking.

There are 475 wineries in Napa County alone, producing 9mn cases of wine every year. Almost all are family-owned, according to data from the Napa Valley Vintners trade association.

One of the most celebrated wineries is Chappellet, which for more than 50 years has been producing award-winning wines, including its famous Cabernet. Its distinctive wine “cathedral” building sits atop a hill that overlooks picturesque Lake Hennessey.

Cyril Chappellet, the company’s president and chief executive — and son of its founders, Donn and Molly — has seen the environment around the winery change dramatically as a result of the growing wildfire threat. “The fire concerns have become much more real, much more intense than we’ve ever seen before,” he says.



Steven Burgess, wildfire mitigation specialist, and Mike Wilson, programme director for Napa Communities Firewise Foundation © Andri Tambunan/FT

Since 2017, when the ferocity and frequency of fires began to escalate, he has invested about \$300,000 per year on fire mitigation efforts. “You don’t really have a choice. If we don’t save our properties and protect our properties from burning, there will not be the Napa Valley as we know it today.”

The expensive work has also become necessary if Chappellet is to be able to insure his property, an increasingly fraught process and one which many insurers have simply refused to engage with given the relentless threat. To receive his current coverage, Chappellet had to show evidence of what fire prevention methods they were using, including a video submission.

Even with this effort, Chappellet says he can only now afford to cover a fraction of what needs protecting, with huge deductibles, or excess. “I’m insuring less than a fourth of our insurable assets,” he says. “And I’m paying four times the price that I used to pay to have full insurance for the whole property.”

So crippling are the costs, he says, that other vineyards have opted to leave their properties uninsured — resigning themselves to simply losing the business should the worst happen.



Patti Poppe, CEO of PG&E, at a weekly operating review meeting at the PG&E Wildfire Risk Command Center in San Ramon, California, in 2021 © Bloomberg

It means many are turning to private fire fighting forces in order to protect their investment. These private firefighters have become the source of considerable controversy. During one fire in 2020, Cal Fire began investigating concerns that a private company had illegally set backfires as a way of protecting a property they had been hired to defend.

Backfires are intentionally lit, small fires that serve the purpose of removing fuel, creating a fire break. Cal Fire uses the technique regularly, but private services are not permitted to use the strategy.

Chappellet says private firefighters must be allowed to supplement the work of the state authorities. “Cal Fire has a job to do and I am completely supportive of it,” he says. “They’ve got to go places that have the most lives threatened and protect those places first. But it’s really important that we have private firefighting companies to come protect us because the resources for the state and CalFire are minimalistic.”

## Using the land more responsibly

Chappellet’s frustration over insurance costs are by no means isolated. Indeed, some think the tension holds the key to a more sustainable, safe future of Californians, one which doesn’t rely solely on the unending task of removing fuel and thinning trees in the state’s forests and along its roads.

One shared characteristic of many communities devastated by wildfire has been a susceptibility



to blazes thanks to the materials used to build houses, and often a lack of will or foresight in hardening those locations.

More than 11mn Californians live in the wildland urban interface, known as the WUI, where risk of losing homes — and lives — to wildfires is greatly increased. In these areas there exists an inconsistency on standards and enforcement of building codes, meaning many properties are rebuilt without adequate fire protection in mind. Most insurers, facing huge losses, have pulled out.

Preventing wildfires requires rethinking urban planning and land use, say Dave Winnacker and Donnie Hasseltine, two fellows at the Hoover Institution at Stanford University, where they have studied wildfire mitigation. The pair served together as Marines before taking different paths — Winnacker is fire chief of the Moraga-Orinda Fire District, while Hasseltine is chief security officer at Xenon Partners, a software investment group.

“The future will be hotter, it will be drier, and it will continue to have destructive wildfires,” Winnacker says. “The question is how destructive.”



Clinton Heise, left, and Jonathan Niksa, right, active members of Lake Berryessa Estates Firesafe Council, at Pope Valley Station 220 Fire Department in Napa © Andri Tambunan/FT

The researchers are calling for insurance companies, using input from government and climate scientists, to better assess risk over future years; and then, using that insight, offer financial incentives to encourage stronger homebuilding in return for lower premiums in the long run.

It would mean two neighbours could be paying vastly different rates depending on their investments in protecting their homes. Early discussions with insurers and other relevant industry groups had been positive, Winnacker says.

“I am moving beyond cautiously optimistic to just optimistic that we’re getting close. People are willing to talk in ways that would have been just politically not possible three, four or five years ago.”



It is hoped the approach will move the burden of tackling the fire problem to the population at large, rather than relying on the slow-paced, expensive work from one or two state and federal agencies.

“Going the government route is kind of a Hail Mary,” says Hasseltine, referring to a last-gasp, hopeful long pass in American football. “It depends on a lot of time, a lot of bureaucracy and a lot of money – which we can’t ensure is going to be there for the future.”

## Climate Capital

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