

San Francisco Chronicle

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# Survival Guide

A dramatic night scene of firefighters battling a large fire at a residential property. The firefighters are silhouetted against the intense orange and yellow flames. One firefighter in the foreground is holding a thick yellow hose that snakes across the driveway. Another firefighter further back is also managing a hose. The fire is consuming a structure, with bright light and thick smoke rising into the dark sky. The overall atmosphere is one of urgency and danger.

**Prepare for wildfire**

Essential tips and tools for securing your family and home

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**Last year, flames from the Caldor Fire directly impacted the west side of the Sierra-at-Tahoe Resort with a large amount of tree loss and damage to several structures.**

## ON THE COVER



Scott Strazzante/The Chronicle

Firefighters try to keep house fires from spreading on Mountain Hawk Drive as the Shady Fire burns in Skyhawk area of Santa Rosa on Sept. 28, 2020.



Brontë Wittpenn/The Chronicle

## SURVIVAL GUIDE

# Here's why wildfire risk remains high after wet winter

By Kurtis Alexander

California's extraordinarily wet winter, followed by a cool spring, has kept the state from sliding precipitously into high fire danger, a welcome change after so many summers with ready-to-burn hills and devastating blazes.

With snow still lingering in the mountains, and valleys moist with runoff, this year's peak fire season is on track to begin much later than usual, particularly at higher elevations. A best-case scenario is that the window for widespread burning doesn't open until August or later and ends with early autumn rains.

Fire experts, however, caution that anything can happen. A single bout of extreme heat could quickly dry out the new, pervasive growth that hatched with the soggy winter. Also, fall could be hot and windy. In either case, it wouldn't take much for a fire to start and the season to spiral — again.

Keep in mind: The conditions that have made California's landscape increasingly vulnerable to wildfire haven't gone away, including the vast swaths of dead trees that came with drought, the densely vegetated wildlands resulting from decades of forest mismanagement and rising temperatures at the hands of climate change.

"Things this year are certainly better at this point in the year than they have been in recent history," said Issac Sanchez, a battalion chief at Cal Fire, the

state's firefighting agency. "But we do know that that's going to change. It's changing as we speak."

The slow start to fire season, experts say, is a good time for Californians to make sure they're ready for what might come and if they're not ready, get ready. Even those living outside of fire-prone areas would be wise to plan for periods of heavy smoke and power outages.

The Chronicle's Survival Guide offers guidance from firefighters, weather forecasters, insurance experts and others on how to best prepare, whether it's protecting your home from flames, planning your escape or tracking the fallout of fire on air quality and the electrical grid.

Anyone who has lived in California in recent years knows the stakes. Eight of the state's 10 biggest wildfires on record have occurred over the past decade. Tens of thousands of homes have been destroyed. Dozens have died. Millions of acres have burned.

As experts encourage residents to do more up-front planning, local, state and federal fire agencies have continued to step up preparation, pouring billions of dollars into hardening the state to wildfire and improving firefighting capacity.

In one of the latest initiatives this year, Cal Fire secured contracts with vendors to pre-position private planes and helicopters across the state to supplement the agency's already

*Guide continues on W4*



Brontë Wittpenn/The Chronicle

The West Bowl area of the Sierra-at-Tahoe ski resort sustained the largest concentration of damage from the Caldor Fire, which consumed a large number of pines.

## GUIDE

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robust aerial fire force. The department has more than 60 fixed and rotary winged craft, including a growing fleet of Sikorsky S70i helicopters, similar to military Black Hawks.

On the prevention front, both Cal Fire and the U.S. Forest Service worked to increase proactive burning and mechanical thinning, with the goal of reducing overgrowth in California's wildlands and the risk of a fire spreading too explosively.

The two agencies have collectively committed to doing 1 million acres of forest management work a year by 2025, an ambitious goal that's far greater

than what has so far been accomplished. State and federal data this budget year shows that Cal Fire completed about 55,000 acres of work so far, between July 2022 and the end of May, while the Forest Service counted about 105,000 acres between October 2022 and May.

The amount of burning and thinning is even lower than in the past few years, in large part, because of the stormy winter, which diverted forest management crews to clean-up and even flooding and other emergencies, state and federal officials say.

"These (efforts) are important starting points for getting ahead of the curve," said Don Hankins, a professor of geography and planning at Cal State Chico

who specializes in forest restoration and managed burning. "We need to see more prescribed fire and cultural fire."

Fire experts also say that homes and property need to be made more resilient to lessen destruction. The endeavor, though, can involve costly upgrades, to roofs, windows and siding, in whole neighborhoods and even towns.

"The problem we have is the flammability of communities," said Mark Schwartz, an ecologist and professor of environmental science and policy at UC Davis. "We aren't allocating near enough (state) money to home hardening."

Despite its shortcomings, California escaped the worst of the wildfire crisis last year, even

as a prolonged drought continued to ravage the state. About 330,000 acres burned in wildfires, compared to 2.5 million acres and more than 4 million acres the prior two years.

With drought conditions stamped out by the wet winter, and fire preparation efforts continuing, experts are hopeful that another mild year is in the works. Snowpack in California's mountains, as measured at the historical April 1 peak, was 237% of average. Rainfall was more moderate, though it did set records in some places.

The state's still partially moistened landscape, as of the end of June, reflected the lesser fire risk. Craig Clements, a professor of meteorology at San Jose State University and cli-

mate science director of the school's Wildfire Interdisciplinary Research Center, says vegetation moisture levels in many areas are running about a month behind, in terms of drying out.

That said, Clements added, the hills and valleys will eventually dry, and there's no knowing if hot weather will follow and how quickly the rainy season will return.

"Even though it's been cool, if you're in California, you need to be prepared for fire," he said. "The cool weather now doesn't mean we're not going to have fires later in the summer and fall."

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## PLANNING

# Track air quality readings near you through PurpleAir and AirNow

By Kellie Hwang

Hunting for air quality readings has become a familiar drill for Bay Area residents whenever smoke pollutes the region's skies during Northern California's frequently severe wildfire seasons.

Those looking for current conditions and longer-range forecasts have several good resources to consult: the federal AirNow.gov website; the Bay Area Air Quality Management District, which is responsible for protecting air quality in the Bay Area's nine counties; and PurpleAir, a website that pulls its data from sensors that people purchase and install on their own.

Because their readings are gathered from different sources using different methods, their numbers typically differ. However, all use the Air Quality Index, the Environmental Protection Agency's color-coded scale for reporting air quality. Levels range from 0 to 500 — the higher the AQI reading, the greater the pollution level and associated health risk.

Here's what to know about the different resources, how to use them and what they can tell you about air quality in your area.

## AirNow

AirNow.gov is a federal website managed by the EPA with partners at the local, state and federal and levels, including in the Bay Area. Users can enter a specific location to pull up AQI data and a five-day air quality forecast. It's the most accurate information available, relying on regulator-approved air quality monitors, but sampling, analysis and quality-control steps create a lag, meaning the



Yalonda M. James/The Chronicle

**Bay Area residents can check current and long-range air quality conditions using the AirNow and PurpleAir websites and apps.**

reported measurements are a few hours old.

The agency's Fire and Smoke Map, [fire.airnow.gov](http://fire.airnow.gov), shows pollution levels from wildfire smoke, known as fine particle pollution or PM<sub>2.5</sub>. It combines data from AirNow and PurpleAir and applies some mathematical adjustments. The map includes layers that can be

turned on and off to show the different types of sensors, large wildfire incidents and smoke plumes.

## Bay Area Air Quality Management District

The agency tracks AQI data on an hourly basis for a number of Bay Area regions and shares it on its website,

[baaqmd.gov](http://baaqmd.gov). AirNow's Fire and Smoke Map shows data from the Air District's monitoring stations, temporary monitors that agencies have placed to monitor wildfire smoke events and PurpleAir low-cost sensors.

The Air District is also responsible for issuing air quality advisories and Spare the Air

alerts. Advisories indicate that events such as wildfires are affecting local air quality, but not at levels exceeding federal health-based standards. Spare the Air alerts are issued when pollutants like PM<sub>2.5</sub> are expected to push the Air Quality Index to the unhealthy level, above a reading of 100, in any *Air Quality continues on W7*

## PLANNING

# Have emergency kits packed and ready

Packaged kits are available from retailers.

If you assemble your own, here's the minimum it should contain, according to the American Red Cross.

For the car, gear is best placed tightly into a backpack to save space.

## For the car

- **Water:** A three-day supply amounting to 1 gallon per person per day. (For the car kit, you'll need to keep this outside the backpack in your vehicle's trunk.)

Because 3 gallons of water can be bulky for the car, some people prefer to store as little as a quart a day, which is bare survival mode.

Each quart can be stored in the backpack in small foil packets, available at disaster-supply sites or stores.)

- **Food:** A three-day supply, about 1,000 calories — something lightweight like energy bars

- Water purification tablets, or a water filter, in case you go beyond three days and need to find alternate sources of water

- Portable radio

- Flashlight and/or light stick

- Charger for cell phones and devices, powered by batteries, along with a cell phone charger cord for the car

- Batteries

- Blankets: Emergency survival models are compact and light

- Tube tent

- Sanitation and personal hygiene supplies, including toilet paper

- Duct tape

- Work gloves

- First-aid kit

- Sewing kit

- Whistle



Carlos Avila Gonzalez/The Chronicle

## For the home

**All the previous items plus these:**

- Medications: At least a seven-day supply
- Cash: Small bills and coins
- Tools: Foldable shovel, hatchet, Leatherman-style multitool, screwdriver, pliers, pocketknife and can opener
- Extra clothes
- Battery-powered lamp

- Maps of the area

## Other items to consider

- Additional medical supplies (hearing aids, glasses, contacts, syringes, etc.)
- Baby supplies
- Games and toys for children
- Pet supplies
- Two-way radios
- Extra car and house keys

- Smoke/dust mask
- Gas meter valve shut-off wrench
- Instant hand warmers
- Leatherman-style multi-tool or pocketknife with can opener, screwdriver heads and knife blade.
- Poncho or other rain gear
- Candles
- Waterproof matches
- 50 feet of rope (3/16 inch or bigger)

- Scissors
- Sleeping bags
- Plastic sheeting (for emergency shelter)
- Paper or plastic plates, bowls and cutlery
- Small cooking pot
- Soap and bath towels
- Copies of personal documents
- Emergency contact list

— Chronicle staff report

## AIR QUALITY

From page W5

one of five reporting zones in the Bay Area. Users can sign up for alerts via text, email, phone or website notification.

### PurpleAir

PurpleAir (purpleair.com) manufactures low-cost air quality sensors — ranging in price from about \$200 to \$300 — that anyone can purchase and install outside their home. Many schools, companies and government organizations also use them. The sensors use light-scattering technology to estimate particle concentrations in the air. According to PurpleAir, about 24,000 sensors in the U.S., including approximately 13,000 in California, have been online in the past 90 days.

The data refreshes every 10 minutes and appears on a map on the company website. You can search by address or sensor location, zoom in and out or use a drag function to see other areas. With far more sensors than the government's network, it's useful for getting a real-time sense of the air quality in a specific neighborhood. Howev-

er, compared to the federal data, it is of lower quality.

PurpleAir's website says its sensors may appear to "read high" in wildfire smoke conditions because the density of smoke particles differs from that of other airborne particles of similar size, affecting its calculations of particle concentration. However, it adds, sensors on its real-time map now display with a conversion factor for wildfire and wood smoke conditions developed by the EPA, so that the readings align more closely with regulatory-grade monitors. Experts say that those looking for absolute values should check them against government agency data.

### The Chronicle's Air Quality Map

The San Francisco Chronicle's map, [sfchronicle.com/projects/california-air-quality-map](https://sfchronicle.com/projects/california-air-quality-map), shows readings down to the neighborhood level and is powered by PurpleAir data. It also features functions to show the smoke forecast and wind conditions.

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Paul Chinn/The Chronicle

Joggers, cyclists and others can check air quality levels before exercising in smoky conditions.

## Make sure your pets are safe, nourished and provided for

- All pets should be identified with tags and, preferably, microchips.
- In an emergency, dogs tend to bolt and cats tend to hide. Be prepared for unusual behavior. If your dog behaves erratically when Fourth of July fireworks go off, expect much more of the same during a fire.
- Keep on hand a pet first aid kit, with disinfectant, bandages, tweezers and antibiotic ointment.
- Store a week's worth of pet food, and periodically check its expiration date. Canned food will keep longer than dry. Make sure to have more water than you think you'll need.



**Axis Felty comforts his dogs at an evacuation center in Grass Valley after being evacuated from the River Fire on Aug. 5, 2021. The River Fire ignited on Aug. 4 and burned 2,400 acres and dozens of structures.**

Chronicle file photo

- Pets (and people) drink more when under stress.
- Have bowls, leash, can opener, medicine, pet toys and plenty of cat litter, plastic bags or other cleanup gear ready to use.
  - Train your pets to ride in a car, perhaps in a pet carrier. Remember, if you must evacuate your home, not all hotels and motels allow pets. Make a list of those near your area that do.
  - Reassure your pet, calmly and often. It's good for both of you. Pets take their cues from their humans. If you're panicked, they will be, too.

— Chronicle staff report

## PLANNING

# Get financial, insurance documents in order

Thousands of people who have lost homes in the California wildfires have discovered too late that their insurance coverage has not kept up with the rising cost of lumber, labor and other rebuilding materials.

Talk to your insurer to make sure you have enough coverage but, for a quick reality check, ask a local contractor how much it costs to build per square foot and multiply that by your home's size.

One of the most painful post-disaster tasks is compiling an inventory of possessions so you can seek reimbursement. It's far easier to put the list together beforehand.

Here are other tips for shoring up your finances:

**Safeguard your documents:** Keep a copy of your will, trust, birth and marriage certificates, Social Security cards, insurance papers, medical information, most recent tax return, receipts for high-ticket items and other important documents in a safe deposit box. You can also scan and save them to a DVD or flash drive, which you can give to a trusted friend or family member outside the region. Another option is to save them in the cloud.

**Break out the camera:** Your insurance will pay for everything you lost — up to your policy limits — as a result of a covered “peril,” such as fire. To get reimbursed for your personal belongings, most companies require a detailed inventory of every item lost, although some will advance a portion of your contents coverage without this list. While your house is still standing, use an online inventory or app or print a blank one from the California Department of Insurance or consumer group United Policyholders. Store it away from your home or better yet, in the cloud. At the very least, take photos or videos of everything in your



Michael Short/Special to The Chronicle

**Mary Ann Bainbridge-Krause gets help unloading belongings from her neighbor Evan Hailey, 13, when she returned home after fleeing the Kincade Fire in Windsor in October 2019.**

home and outbuildings, including the inside of drawers, cabinets and closets.

**Know your coverage:** Most policies will pay for losses from fire, smoke, wind, hail, water (excluding floods), vandalism and theft. They do not cover losses caused by earthquakes and floods. Those require separate policies.

Make sure you have replacement-cost coverage. This will

pay to replace your building and contents — up to your policy limits — with new ones of similar kind and quality. Avoid actual cash value policies, which pay only the depreciated value of what you lost.

It's good to have extended replacement-cost coverage, which will pay a certain amount above your policy limits. This can help pay for the surge in local building costs

that often follows a widespread disaster. Also opt for building code upgrades, which will pay an amount over your policy limit to comply with new code requirements. A guaranteed replacement-cost policy will pay to replace your house no matter the cost, but these are not common and very expensive.

For homes that are not damaged or destroyed in a disaster,

but are located in a ZIP code within or adjacent to a fire disaster, an insurer cannot cancel or refuse to renew a residential property insurance policy for one year after the declaration of a state of emergency. CalFire determines the fire perimeter, and the insurance commissioner announces which ZIP codes are included.

If you don't already have private insurance, getting it may be more of a challenge than in the past. State Farm, California's largest property insurer, in May announced it would no longer issue new home, business and casualty insurance policies in the state. Allstate also paused new homeowner, condominium and commercial insurance policies in California in early June. Existing customers are not affected.

Homeowners who can't get covered by a mainstream insurer may need to seek coverage from a “non-admitted” carrier, such as those affiliated with Lloyd's of London. Also called surplus lines, these insurers are far less regulated than admitted carriers and do not participate in the California Insurance Guarantee Association, which pays claims if an admitted carrier fails.

If you can't get insurance elsewhere, contact the California Fair Plan, which provides insurance for the home or contents from fire or lightning, internal explosion and smoke. For an additional premium, you can add extended coverage (for windstorm, hail, explosions, riots, aircraft, vehicles and volcanic eruptions as well as vandalism/mischief). You can purchase a Fair Plan policy from a licensed agent or broker or contact the plan directly at 800-339-4099. The Fair Plan's maximum coverage limit for homes is \$3 million.

Email: [metro@sfbchronicle.com](mailto:metro@sfbchronicle.com)



## COMMUNICATIONS

# Useful tech tools to help during a disaster

## FREE APPS

**FEMA Mobile:** The federal disaster-relief agency's official app will allow you to set weather alerts from the National Weather Service for up to five locations within the United States, which provide information about wildfire risks, dangerous storms and heat waves. You can also share emergency alerts, prepare a disaster checklist and learn preparedness tips. The app is also available in Spanish.

**American Red Cross:** The nonprofit provides a number of free emergency alert apps for download, including an all-inclusive Emergency app and one specifically for earthquakes. Other apps also include one called First Aid, which provides information if you need to render emergency care.

**Zello:** This app can turn your phone into a walkie-talkie, allowing you and anyone else with the app to communicate via short audio messages. It can be a helpful way to stay connected to others during an emergency, or to make quick contact with separated family members.

**5-O Radio Police Scanner:** You can listen to live police scanners using this free app, including San Francisco's City Police Dispatch and San Francisco fire and emergency medical services. Police scanners can sometimes provide useful information during natural disasters.

## COUNTY-SPECIFIC APPS

**Alameda County:** To enroll in the county's AC Alert system, download the Everbridge app and search for AC Alert. The system allows you to provide multiple methods of emergency contact and other useful information. You can also register for AC Alert at [www.acalert.com](http://www.acalert.com).

**Santa Clara County:** The ReadySCC free mobile app helps you create an emergency preparedness kit and an emergency preparedness family plan, including important emergency contacts and links to resources and information.

## PHONE AND EMAIL

You can register your phone and email address for location-specific

Power blackouts and poorly thought out evacuation-alert systems have left Californians without critical information during natural disasters in the past. But there are some free apps for your phone, numbers to text, systems to register for and technology to buy that could ensure that you have the most accurate and up-to-date information when disaster strikes, even during a power blackout. To best ensure you get critical information when you need it, it's best to choose a diverse range of disaster preparedness technology options. The Federal Emergency Management Agency also reminds people that mobile networks can become overwhelmed in a crisis, and it is often easier to receive information via text than by a phone call or on an app during those times. All of these apps are available for iOS in the Apple App Store or Android in the Google Play store unless otherwise indicated.



**Sarah Stierch, a citizen journalist, acknowledges an alert on her cellphone as she monitors scanners in real time in Sonoma. She was viewing social media channels as she worked in her dining room tracking wildfires.**

Lea Suzuki/  
The Chronicle

alerts with local and federal government sources.

If you text "PREPARE" to 43362, your phone number will be signed up for FEMA text alerts and emergency preparedness tips.

Save the number 43362 in your contacts. If you text this number with the word "SHELTER" and your ZIP code, you can find open shelters.

## COUNTY-SPECIFIC ALERTS

For most Bay Area counties, you can sign up for local government and public safety alerts, including emergency warnings, via Nixle by texting your ZIP code to 888-777.

You can also fill out an online registration form to receive alerts via phone or email for some Bay Area counties. Search your local county government website for information on signing up in Marin, San Mateo,

Santa Clara, Sonoma and Solano counties.

## TWITTER

You can also receive useful information from emergency alerts shared on county and other government Twitter accounts.

**San Francisco:** @SF\_Emergency

**Contra Costa:** @ContraCostaFire, @CCCounty and @CoCoCWS

**Marin:** @AlertMarin, @MarinSheriff and @MarinCountyFire

**Alameda:** @AlamedaCoAlert, @AlamedaCoFire and @AlamedaCoSheriffs

**Napa:** @napacountyfire, @napasheriff and @CountyofNapa

**San Mateo:** @sanmateoco, @SMCSheriff and @SanMateoPD

**Santa Clara:** @sccfiredept,

@SCCGov and @SCC\_OES

**Solano:** @SolanoFire, @SolanoSheriff and @SolanoCountyEMS

**Sonoma:** @CountyofSonoma and @SonomaSheriff

**Cal Fire:** @CAL\_FIRE

## WIRELESS EMERGENCY ALERTS

Federal agencies like the National Weather Service and local governments use a system called Wireless Emergency Alerts to communicate with most cell phones. The alerts are usually accompanied by a sound and vibration pattern so that users can identify their importance.

But in areas with poor or no cell phone service, the alerts may be critically delayed or not arrive. Some

people have reported that they did not receive essential emergency alerts when they were supposed to. Other apps and messaging systems that rely on Wi-Fi and data plans may help fill in the gaps left by the wireless emergency alert system.

The federal Emergency Alert System is a separate system that uses broadcasters and satellite providers to broadcast emergency warnings to television and radio. If you cannot access cell service or the internet, turning on a radio or television during an emergency may help you get the critical information you need.

Both the WEA and the EAS are part of the Integrated Public Alert and Warning System, which also uses digital road signs and sirens as alternative alerting mechanisms.

## KEY HARDWARE

FEMA and the California Governor's Office of Emergency Services recommend that families have an emergency charging option for cell phones in case of a power outage. Be sure to keep at least one backup portable charger.

Most state and local emergency preparedness lists recommend finding a battery-powered or hand-cranked radio so that you can get information if you cannot access the internet or any cell-based technologies. Some lists also recommend extra batteries and a portable drive or cloud-based storage to hold scans of important documents, like insurance information.

If cell and internet networks are knocked out during a natural disaster, satellite phones can be an option to stay in touch because they rely on a network of satellites unaffected by natural disasters.

Though expensive, there are a few satellite phones commonly recommended for emergency use, including the Inmarsat IsatPhone 2 and the Iridium 9555. Some retailers have offered the Inmarsat for free alongside a yearly plan, and it may be worth exploring if you're willing to spend somewhere between \$50 and \$100 a year to keep a satellite phone active for emergencies.

— Chronicle staff reports

## PLANNING

# Take steps to protect your property

**Create a defensible zone:** You don't have to strip everything down to dirt, but minimizing fuel danger is the goal. (See graphic for details.)

**Avoid flammable plants:** Bamboo or the oily eucalyptus can light like a match head. Opt instead for high-moisture succulents such as aloe or fire-resistant hardwood trees such as maple.

**Consider the weather:** Don't operate power tools to trim vegetation when the weather is hot and windy; sparks can light the yard in a twinkling.

**Inspect power lines:** Notify Pacific Gas & Electric Co. whenever you notice power lines brushing up against tree limbs, or close enough for a strong wind to slap them together. Its crews can come trim the trees. Several big fires, including the devastating 2021 Dixie Fire, were sparked by power lines hitting trees, or hitting against other power lines.

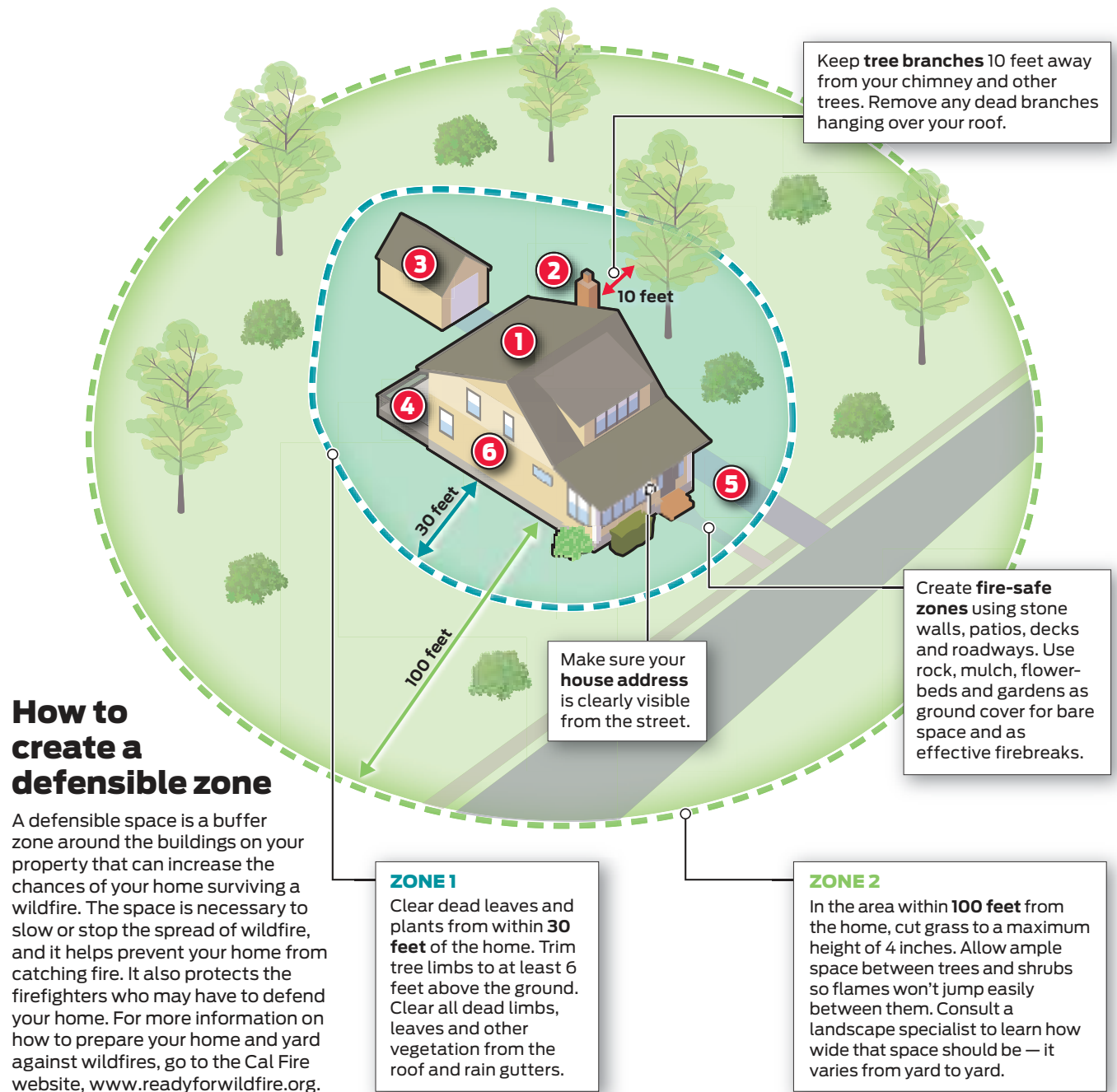
**Assess roofing materials:** Roofs should be made of flame-retardant materials, such as metal, asphalt composition shingles or clay tiles. Make the overhangs as wide as possible — in the catastrophic 2017 Wine Country fires, some homes fared better with flying embers when they had fire-resistant overhangs of 4 feet or more to keep them from hitting the walls.

**Locate the gas valve:** Know where your gas shutoff valve is, and keep a wrench next to it. If you see a wildfire getting dangerously close, shut off the gas — and close any propane tanks you might have around.

**Have a wildfire plan:** In just two minutes, a house fire can become deadly, according to the Department of Homeland Security. In five minutes, a house can become fully engulfed in flames. Plan for the worst.

**Understand your risk:** Cal Fire maintains maps of areas prone to wildfire, and cities and counties are required to keep safety plans that contain procedures for evacuations and communications.

— Chronicle staff report



## How to create a defensible zone

A defensible space is a buffer zone around the buildings on your property that can increase the chances of your home surviving a wildfire. The space is necessary to slow or stop the spread of wildfire, and it helps prevent your home from catching fire. It also protects the firefighters who may have to defend your home. For more information on how to prepare your home and yard against wildfires, go to the Cal Fire website, [www.readyforwildfire.org](http://www.readyforwildfire.org).

### ZONE 1

Clear dead leaves and plants from within **30 feet** of the home. Trim tree limbs to at least 6 feet above the ground. Clear all dead limbs, leaves and other vegetation from the roof and rain gutters.

### ZONE 2

In the area within **100 feet** from the home, cut grass to a maximum height of 4 inches. Allow ample space between trees and shrubs so flames won't jump easily between them. Consult a landscape specialist to learn how wide that space should be — it varies from yard to yard.

### 1 Roof

The most vulnerable part of your home, it should be made of flame-retardant materials. Homes with wood or shingle roofs are at higher risk of being destroyed in a wildfire.

### 2 Chimney

Cover it with a non-combustible screen.

### 3 Garage

Have a fire extinguisher and tools such as a shovel, rake, bucket and hoe available for fire emergencies. Store combustible and flammable liquids away from ignition sources.

### 4 Deck

Surfaces within 10 feet of the building should be built with ignition-resistant or noncombustible materials. Remove combustible items from underneath your deck.

### 5 Driveway

Driveways should be built according to state and local codes to allow emergency vehicles to reach your home. Trim trees and shrubs overhanging the road to allow vehicles to pass.

### 6 Windows

Heat from a wildfire can break windows even before the house ignites. This allows burning embers to enter and start fires inside. Single-pane and large windows are particularly vulnerable. Install dual-pane windows with one pane of tempered glass to reduce the chance of breakage in a fire. Consider limiting the size and number of windows that face large areas of vegetation.

Sources: California Department of Forestry and Fire Protection, Getty Images



Burned-out cars sit in front of a hillside scarred by the Dixie Fire in Belden in July 2021.

Cal Fire

# What to do if you get trapped

Here are Cal Fire's recommended courses of action if you become trapped and can't make your way to safety.

## In your car

- Stay calm.
- Park your vehicle in an area with little vegetation.
- Close all of your vehicle's windows and vents.
- Cover yourself with a wool or cotton blanket or jacket.
- Lie on the vehicle floor.
- Call 911 and advise rescue personnel of your location.

## On foot

- Stay calm.
- Find an area clear of

vegetation — a ditch or depression in level ground if possible.

- Lie face down and cover your body.
- Call 911 and advise rescue personnel of your location.

## In your home

- Stay calm and keep your family together.
- Call 911 and advise rescue personnel of your location.
- Fill sinks and tubs with cold water.
- Keep doors and windows closed but unlocked.
- Stay inside the house.
- Step away from outside walls and windows.

Source: Cal Fire

## How to help neighbors after a disaster

When disaster strikes, trained volunteers can make a big difference in helping communities respond. Here are two options for participation in these types of volunteer networks:

**The Citizen Corps:** The organization brings together local government, business and community leaders to prepare for a disaster.

**Community Emergency Response Teams:** CERT offers training for individuals to respond to fires, earthquakes or other disasters. More than 6,000 individuals participate. The San Francisco Fire Department organizes free training

### MORE INFORMATION

**The Citizen Corps:** On Twitter: @citizen\_corps. Online: [www.ready.gov/citizen-corps](http://www.ready.gov/citizen-corps).

**Community Emergency Response Teams:** [www.ready.gov/community-emergency-response-team](http://www.ready.gov/community-emergency-response-team). In San Francisco: <http://sf-fire.org/neighborhood-emergency-response-team-nert>

for the city's Neighborhood Emergency Response Team (NERT).

— Chronicle staff report



**Community Emergency Response Teams volunteer Kay Blackwolf helps Erik Rose load a free case of water into his car in front of the San Lorenzo Valley Water District building in Boulder Creek in 2020.**

Sara Gobets/  
Special to  
The Chronicle

## PLANNING



Brontë Wittpenn/The Chronicle

Fire experts advise residents in fire-prone areas to formulate a plan to escape from your home and neighborhood if a wildfire breaks out, and practice it twice a year.

# Create an escape plan — and practice it

The majority of fire deaths — about 85% — happen in homes. Yet just 1 in 5 families has practiced getting out of their home in the event of a fire. Do you know how you'd escape from your home if a fire breaks out? If the answer is no, it's time to make a plan and practice.

- Walk through your home and identify exits and escape routes, making sure doors and windows can be easily opened.
- Install smoke alarms in every

room where someone sleeps.

- Keep hallways and stairs free of clutter.
- Choose a meeting place outside — such as the nearest stop sign or light post.
- Assign someone to get any pets.
- Practice escape routes twice a year, making the drill as realistic as possible, the Red Cross advises. The idea is to practice, not scare anyone, so it doesn't need to be a surprise drill.

Drills should include making sure children know not to go back for toys, not to hide and not to go near the fire.

- Teach children to “get low and go.” Have them practice escaping each room by crawling along the perimeter to an exit and to “stop, drop and roll” if their clothing catches fire.
- If children are fearful about fire, or fire drills at school or home make them anxious, try

visiting a fire station or turning the drills into games, perhaps “Simon says, ‘Get low and go.’ ”

- For those in multistory homes or buildings, practice setting up and using escape ladders from a first-floor window.
- Not everyone may be able to get out, so family members should be taught how to insulate themselves in a room by closing doors and using duct tape or wet towels to seal

cracks. Those who are stranded should wave a flashlight or light-colored clothing at the window so firefighters know where they are.

- Turn on emergency alert notifications on your cell phones. This will allow you to get alerts when a vegetation or other kind of fire becomes a threat. Also, sign up for your county's emergency alert system if applicable.

— Chronicle staff report

# What to do before you evacuate

When an evacuation is anticipated, follow these checklists — if time allows — to give your home the best chance of surviving a wildfire:

## OUTSIDE

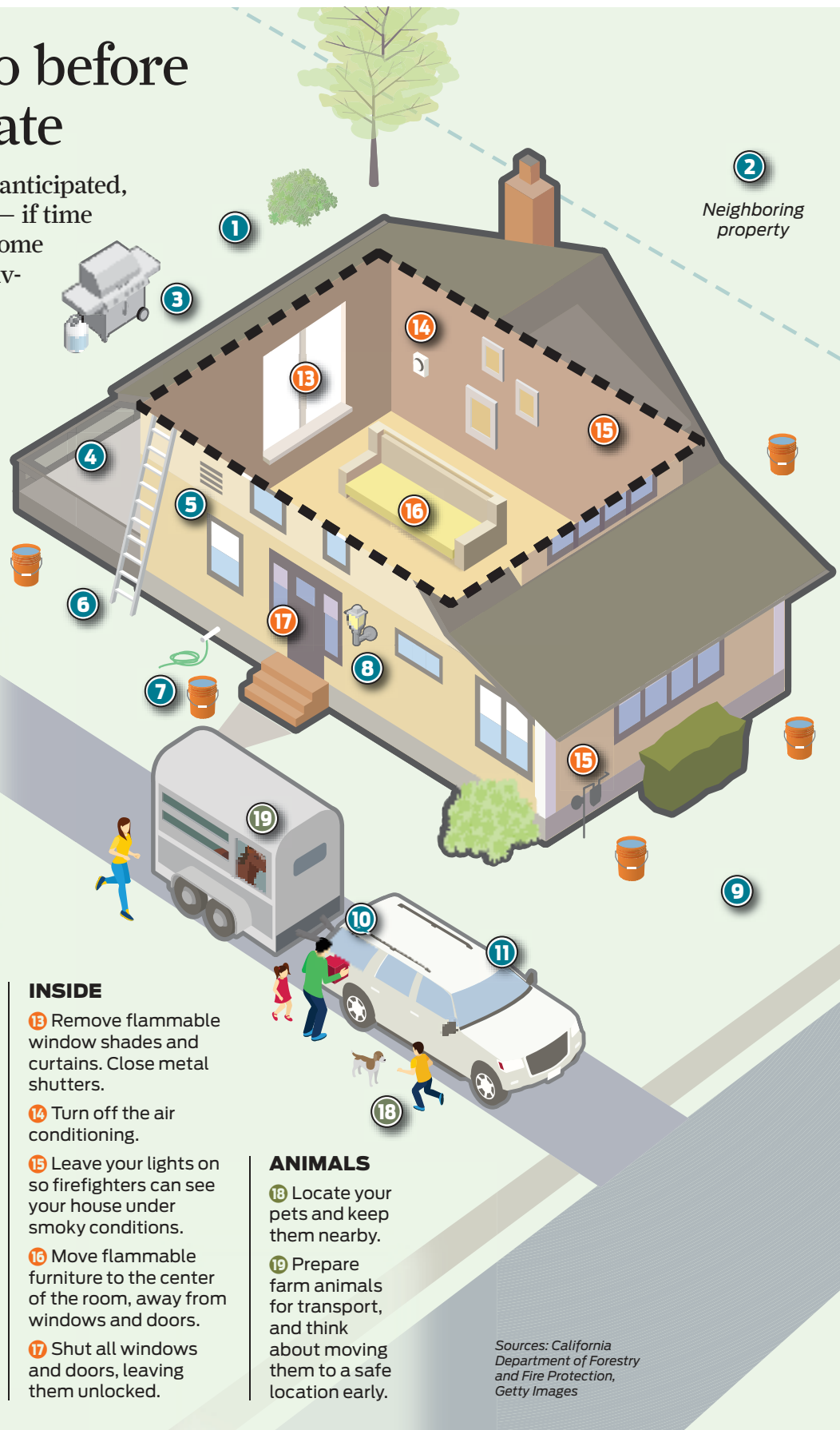
- 1 Monitor your property and the fire situation. Don't wait for an evacuation order if you feel threatened and need to leave.
- 2 Check on neighbors and make sure they are preparing to leave.
- 3 Move propane barbecue appliances away from structures. Turn off propane tanks.
- 4 Gather up flammable items (patio furniture, toys, doormats, trash cans, etc.) from outside the house and bring them inside or place them in your pool.
- 5 Seal attic and ground vents with precut plywood or commercial seals.
- 6 Have a ladder available and place it at the corner of the house for firefighters to quickly access your roof.
- 7 Connect garden hoses to outside water valves or spigots for use by firefighters. Fill water buckets and place them around your house.
- 8 Leave exterior lights on so your home is visible to firefighters in the smoke or darkness of night.
- 9 Don't leave sprinklers on or water running; they can affect critical water pressure.
- 10 Put your emergency supply kit in your vehicle.
- 11 Back your car into the driveway with vehicle loaded and all doors and windows closed. Leave the car keys in the ignition.

## INSIDE

- 13 Remove flammable window shades and curtains. Close metal shutters.
- 14 Turn off the air conditioning.
- 15 Leave your lights on so firefighters can see your house under smoky conditions.
- 16 Move flammable furniture to the center of the room, away from windows and doors.
- 17 Shut all windows and doors, leaving them unlocked.

## ANIMALS

- 18 Locate your pets and keep them nearby.
- 19 Prepare farm animals for transport, and think about moving them to a safe location early.



# Act in the first critical minutes

## In the event of a fire

- Flee the minute calamity becomes imminent, and certainly if you are told to evacuate.
- Take your disaster kit and important documents with you.
- Back your car into an open space to load it, leaving it pointed in the direction you plan to head. While you load up, leave the car's doors unlocked and the key in the ignition.
- If the fire has reached your house before you've had time to escape, check the temperature of any doorknob you need to use before you open it. A hot knob means the flames are close on the other side of the door. Pick another exit.
- If you have to exit through a room on fire, crawl so you will be below the smoke level.
- Throw on a heavy coat to protect against burning embers.

## If you have time and winds aren't high

- Wet down the roof of your house with a garden hose. But don't try to be a hero, emergency officials say. They don't want to waste valuable time they could use to fight the fire to rescue you.
- To reduce or slow the spread of fire, move combustible patio furniture inside, or at least to the other side of the house from where the fire is approaching. Flaming embers will have less to ignite.

— Chronicle staff report

Sources: California Department of Forestry and Fire Protection, Getty Images

## RECOVERY

## Tips for tracking down missing loved ones

Even with the best-laid plans, family members might be unable to meet at prearranged points. Cell phones with contact information might be left behind in the rush to escape danger. Here are some tips for locating loved ones:

- Parents should ask child care providers or schools what their policy is for when a catastrophic disaster hits and whom they'll need to call if children need to be moved.
- Persistence matters. There may be several roadblocks before one contact method pans out.
- Try calling the people you're searching for during off-peak hours, when working phone lines are less clogged.
- Try texting if calls aren't going through.
- Check social media — Facebook, Twitter, Instagram — to see if they are online.
- Email. Even if a phone is gone, those who are missing might still be able to log on to a computer.
- Call people whom missing loved ones are close to who may know where they are.
- Check in with their neighbors, employer, school or church — anywhere they usually spend time.
- For those in distant locations, try sending a snail-mail letter that has a good chance of getting forwarded if the missing person has relocated.

— *Chronicle staff report*



Noah Berger/Special to The Chronicle

**A couple embrace while looking over the remains of their Santa Rosa home after a fire in 2017.**

## Coping with disaster: What to expect next

Surviving a wildfire is just the first step. An important one, yes, but the danger and challenge is rarely over right away. Be prepared to push on for the next several hours, days, or even weeks.

- If your house is livable, stay with it even if the utilities are out because shelters might become overcrowded. This is where your survival kit will prove its worth, for food, water, first aid and the rest. Be prepared to go it alone for as many as three days.
- You may have turned off your gas, but if you smell or suspect a leak don't light a match or a candle or flip any light switch, which can cause a spark, until you're sure the gas danger is over.

- Never touch a downed power line.
- If your home is unlivable and staying in a hotel or with relatives is not an option, go to an emergency shelter. Do so quickly so you can get situated, reconnect with family or work, and apply for aid and get in touch with your home insurance agent.
- If you are ordered to evacuate, you may be directed to an evacuation point, not a traditional shelter.
- If you rent or decide not to replace your house, prepare to make relocation arrangements — signing a new lease, getting new furniture or other belongings, applying for insurance payments or governmental emergency assistance. If you

are moving back into an apartment that was only damaged, the landlord is responsible for making your unit fit to live in again — but not for the loss of your personal property.

- Take care of yourself. Consider counseling, stay healthy through exercise and good diet, stay current with your friends — in other words, recognize you've gone through an emotional wringer, and let yourself process the grief. Remember: To some extent, you will be rebuilding your life, and that comes one slow step at a time. Find more tips on how to recover from the American Psychological Association: [www.apa.org/helpcenter/residential-fire.aspx](http://www.apa.org/helpcenter/residential-fire.aspx).

— *Chronicle staff report*

## Tuning in to the news

No power, no internet? A battery-powered radio may be your best way to get information about what's going on.

- Tune in to AM radio. In the Bay Area, KCBS 740 carries regular news updates, and it is set up to run emergency information broadcasts from local authorities.
- Listen for a warning siren. The city of San Francisco, for example, will blast its sirens during a major disaster, which is a cue to listen to an emergency radio broadcast. (The sirens are tested at noon every Tuesday.)
- Consider buying an emergency radio. These radios include channels that regular AM-FM radios don't get, including essential weather and disaster broadcasts from the National Oceanic and Atmospheric Administration. To find your local NOAA station, go to [www.weather.gov/nwr/station\\_listing](http://www.weather.gov/nwr/station_listing).

— *Chronicle staff report*

# Where to turn for financial assistance



Stephen Lam/The Chronicle

**Jason Butcher, a forester with the Cal Fire Humboldt unit, performs a damage assessment on a property destroyed by the Dixie Fire in Greenville on Aug. 5, 2021. Act quickly after a major disaster to see if you qualify for financial assistance.**

After a major disaster, you may qualify for tax relief, unemployment insurance, federal grants and low-interest loans, but it helps to act quickly. Here's where to turn:

**File a claim:** Contact your insurance agent as soon as possible to start a claim. If you have to move out of your house, most policies will pay for living expenses up to a certain amount of money and time. You can usually get an advance to cover temporary housing, food and other immediate needs. Some firms will give a percentage of your content coverage before you submit an inventory. If you believe your insurance company is not

treating you fairly, file a complaint with the California Department of Insurance and consider hiring a public adjuster to represent you. If the treatment is egregious, consider hiring an attorney.

**Federal assistance:** You could be eligible for individual assistance from the Federal Emergency Management Agency if your loss is part of a federally declared disaster. FEMA can provide grants and low-interest loans to cover uninsured losses, up to certain limits. For more information: [www.fema.gov/individual-disaster-assistance](http://www.fema.gov/individual-disaster-assistance).

**Mortgage relief:** If you have a mortgage, contact your

loan servicer. You can usually get at least a 90-day moratorium on payments and temporary relief from foreclosure activity.

**Tax relief:** If your home is damaged or destroyed, you may be eligible for property tax relief. File a claim with your county assessor's office within 12 months. The assessor can reappraise the property in its current condition and potentially refund some taxes. When you rebuild, the value of your property before it was damaged will be restored. Also check with the IRS and California Franchise Tax Board to see if they have extended tax-filing deadlines for disaster

victims.

If your loss was caused by a federally declared disaster, you may be eligible to deduct casualty losses that exceed 10% of your adjusted gross income on your federal return, if you itemize deductions.

**Unemployment benefits:** If you lose your job as a direct result of a federally declared disaster and are not eligible for regular state unemployment benefits, you could qualify for up to six months of unemployment benefits from a federally funded program called Disaster Unemployment Assistance. For more information: [www.benefits.gov/benefit/597](http://www.benefits.gov/benefit/597)

— Chronicle staff report

## USEFUL WEBSITES AND APPS

Understand your risk. Cal Fire maintains maps of areas prone to wildfires, and cities and counties are required to keep safety plans that contain procedures for evacuations and communications.

- [www.readyforwildfire.org/Prepare-Your-Family](http://www.readyforwildfire.org/Prepare-Your-Family)
- [www.readyforwildfire.org/Defensible-Space](http://www.readyforwildfire.org/Defensible-Space)
- [www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/fire](http://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/fire)

## SURVIVAL KITS

- [www.sf72.org/supplies](http://www.sf72.org/supplies)
- [www.ready.gov/build-a-kit](http://www.ready.gov/build-a-kit)
- <http://bit.ly/2lYtJxJ>

## FAMILY RESOURCES

- Sesame Street Emergency Preparedness Toolkit: [www.sesamestreet.org/toolkits/ready](http://www.sesamestreet.org/toolkits/ready)

## PET SAFETY

- [www.aspc.org/pet-care/general-pet-care/disaster-preparedness](http://www.aspc.org/pet-care/general-pet-care/disaster-preparedness)

## DURING AND AFTER A WILDFIRE

- [www.readyforwildfire.org/Evacuation-Steps](http://www.readyforwildfire.org/Evacuation-Steps)
- [www.readyforwildfire.org/What-To-Do-If-Trapped](http://www.readyforwildfire.org/What-To-Do-If-Trapped)
- <http://anrcatalog.ucanr.edu/pdf/8386.pdf>
- [www.usfa.fema.gov/downloads/pdf/publications/fa\\_46.pdf](http://www.usfa.fema.gov/downloads/pdf/publications/fa_46.pdf)
- [www.apa.org/helpcenter/residential-fire.aspx](http://www.apa.org/helpcenter/residential-fire.aspx)

## FAMILY FINDER APPS

- [www.life360.com/family-locator](http://www.life360.com/family-locator)
- <http://mamabearapp.com>
- <https://redcross.org/safewell>

## RECOVERY

# Disaster checklist: What to do before and after

### PREPARATION

- Download this guide as a PDF ([sfchronicle.com/survival](https://sfchronicle.com/survival)).
- Download apps that will be useful during an emergency.
- Compile a list of where to get emergency information, including radio stations, social networks, websites and public safety alerts.
- Keep the list in your car and in your home.
- Microchip your pets.
- Take photos of your belongings.
- Review and update your insurance coverages.
- Make copies of your important documents and store them in a safe place or on the cloud.
- Replace the batteries in your smoke detectors at least twice a year.
- Replace your smoke detectors at least once every 10 years.
- Check your fire extinguishers and make sure they and other firefighting tools are easily accessible.
- Pack emergency survival kits for your home and car — don't forget items for your pets.
- Plan and practice family escape routes from your home and establish a meeting place.

- Assign responsibilities to family members during an emergency, such as contacting other family members, turning off the gas and gathering pets.
- Know where your gas shutoff valve is and have necessary tools easily accessible.
- Maintain a defensible zone around your home.
- Notify PG&E if you notice unsafe power lines.
- Identify combustible building materials and replace them if possible.
- Consider buying alternate power and communication devices.

### AFTERMATH

- Seek federal assistance, mortgage relief, tax relief and unemployment benefits.
- Contact your insurance provider and start a claim as soon as possible.
- Consider counseling as you rebuild your life.
- Reach out to family — for your sake and theirs.