

SUNDAY, OCTOBER 7, 2018

San Francisco Chronicle

PREPARING FOR DISASTER



PREPARE | REACT | RECOVER

A guide to surviving the next big fire or quake

Noah Berger / Special to The Chronicle 2017

You can't predict an earthquake.
But you can be prepared for one.

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FROM THE EDITOR

DISASTERS WILL STRIKE — WILL YOU BE PREPARED?

The past two years have brought a chain of disasters unique even to California. Wildfires so energetic they swallowed whole neighborhoods in Sonoma County, where I grew up and live with my family. Rains so fierce they nearly toppled the state's tallest dam. Powerful mud flows that killed at least 21 people.

These events have altered how we look at our lives. Disasters are no longer things that happen to other people in other places, but to us and our loved ones. Among those who lost homes in last year's Wine Country fires were my childhood best friend and the woman who cleaned my teeth the other day. While my daughter's soccer coach fled the flames, his home was saved by a local hose-and-bucket brigade that included my stepbrother.

We've become reluctant experts on misfortune of all sorts. We know, for instance, that a fire makes a hillside ripe for a mudslide the next winter. We've signed up for emergency alerts and practiced opening garage doors by hand to be ready for a power outage. And we've spent hours in hardware stores, buying supplies we hope we won't need.

That brings us to this guide, which rests on a simple philosophy: Knowledge is power. The Chronicle recognized last year more than ever that our duty went beyond dispatching journalists to flooded or fire-ravaged towns. This is the second edition of a staff project meant to provide readers with the best information available about how to prepare for the inevitable.

Here you'll find tips on how to create survival kits, protect pets, shore up finances and much more. We've researched useful gadgets and apps. We've provided a checklist you can use, as well as links to more resources. And we've made it all available in a document you can download to your phone. Even if cell service is out, you'll be able to pull up the guide.

We hope this information is helpful — and that you'll need it only for peace of mind.

Demian Bulwa

Metro Editor

San Francisco Chronicle

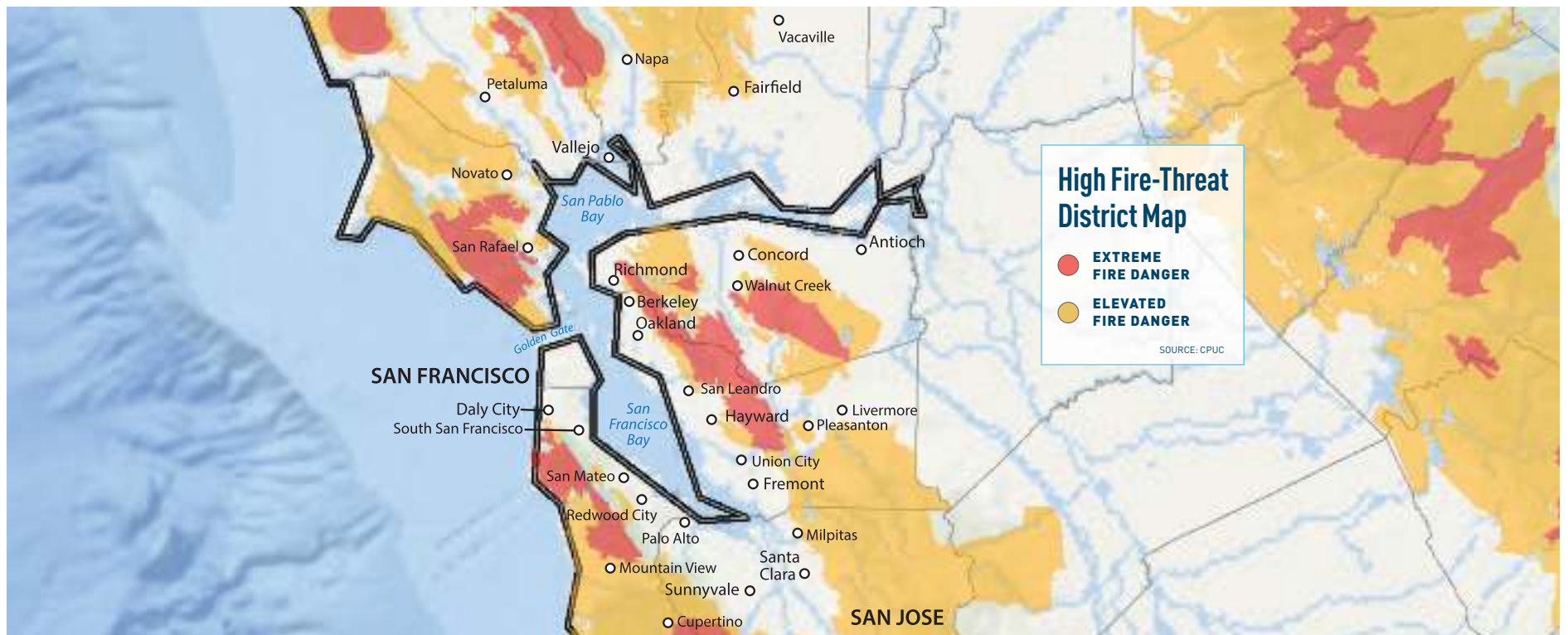
DOWNLOAD THE GUIDE

This guide to preparing for and surviving a major regional disaster is also designed to be available "offline" as a pdf, in the event that you need to access it and are unable to get cell service. Make sure to download it now at <https://www.sfchronicle.com/survival/> and follow these simple steps to find it when you need it.

For iPhones: To store this guide on an iPhone, download the document and open the Files app, which is included in iOS 11. If you don't have the latest version of the Apple operating system, you can store this document in iCloud or Google Drive (see instructions under "Another option.")

For Android: To store this guide on an Android phone, download a free file manager app such as ES File Explorer File Manager or use Google Drive. If you're using a file manager, the app will locate the guide once it's been downloaded onto your phone.

Another option: If you have Google Drive, you can store this document there and make it available for offline use. Once downloaded, navigate to the settings on the document and make it available for offline use.



DO YOU LIVE IN A FIRE-THREAT AREA?

The start of the 2018 wildfire season is already the worst on record, and the heart of fire season has just begun. Given the severe threat of wildfire facing our state today, PG&E is accelerating and expanding its robust vegetation work in high fire-threat areas to help keep local neighborhoods safe. This work is being undertaken as an additional safety measure to reduce the risk of vegetation coming into contact with power lines.

If you live in a high fire-threat community, you can expect to see PG&E crews and contractors working to trim, prune or remove trees that might come into contact with power lines. As an added layer of

protection and to enhance defensible space, we are working with customers, communities and first responders to reduce vegetation that could act as fuel in a wildfire.

In the interest of public safety, we are:

- Creating 12 feet of safe space above, below and around power lines, including overhanging branches or limbs
- Protecting you and your community by trimming or removing hazardous trees that could fall into lines
- Enhancing defensible space around homes, businesses and properties to improve public safety

Now, and in the years ahead, we must all work together to be better prepared for wildfires.

CRITICAL WILDFIRE SAFETY ACTIONS

- ✓ Meeting new state vegetation and fire safety standards
- ✓ Addressing overhanging branches or limbs
- ✓ Removing all wood debris, unless the property owner would like to keep it



To find out if you live in a high fire-threat area, visit pge.com/wildfiresafety.

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Noah Berger / Special to The Chronicle 2017

Flames consume a main building at Signorello Vineyards in Napa on Oct. 9, 2017.

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The Chronicle 1906

Ruined San Francisco City Hall in the aftermath of the 1906 earthquake and fire.

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Gabrielle Lurie / The Chronicle 2017

Evacuee Larry Broggi, 72, sleeps in his car following the Tubbs fire in Santa Rosa on Oct. 9, 2017.

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PREPARE INTRO



Michael Macor / The Chronicle 2017

Terrie Burns stands in the middle of her destroyed home in Santa Rosa last October at the scene of the Tubbs Fire that tore through Napa and Sonoma counties.

PLANNING FOR NATURAL DISASTERS

By Kurtis Alexander

California has counted nearly 300 disaster declarations since the federal government began using the designation in 1953. That's more than any other state.

Fires, floods and earthquakes top the disaster list. But freezes, punishing storms and even a hurricane have drawn the attention of Washington and its all-too-familiar legions of relief workers.

In recent decades, the number of

natural disasters in California has only increased, and scientists say a warming climate is likely to give rise to yet more weather extremes with the potential for greater havoc. The deadly wildfires over the past couple of years, from Wine Country to Redding to Yosemite, may be just the start.

"The reality is that climate is an increasing part of the picture," said Daniel Swain, a climate researcher at UCLA. "We can't say this is the singular cause of such events as

wildfire, but we can say that climate change is affecting the character of wildfire, how big they are, how hot they burn, how much damage they cause."

Increasing research is showing that warmer temperatures also induce longer heat waves, prolonged periods of drought and storms packed with additional moisture.

This outlook is more reason than ever for Californians to prepare for disaster.

Emergency experts say that while

few people have a strategy, a little planning can make a big difference in how you and your loved ones weather the unexpected.

Is your home as safe as it can be? What will you grab when you're told to evacuate? Where will you meet your family if you're separated? Do you have what you need to survive if emergency assistance is delayed?

You can't know when the next big disaster will hit, but you do have the opportunity to be ready.

PREPARE WILDFIRES



Michael Short / Special to The Chronicle 2017

The Atlas Fire burns near buildings east of downtown Napa last October. The 51,000-acre blaze killed six people and ruined more than 700 structures.

BEING READY TAKES GOOD DEAL OF WORK



Protecting your home from wildfire involves a lot more than just pouring water on the flames when they attack. It's about preparing well in ad-

vance — and chances are you have some work to do on that front.

More than 2 million homes throughout California — about 15 percent of the state's housing — are at high risk for wildfire, according to the Center for Insurance Policy and Research. That's more than any other state. Whether or not your house falls into that category, you need to make sure your property's risk is as low as possible.

There are two main goals when getting your home ready to withstand a wildfire: Keep the flames as far away as possible, and fortify the house against embers and whatever fire reaches its walls.

Here are the steps you can take:

» **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 any power tools to trim vegetation when the weather is hot and windy because 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 2015 Butte Fire, were sparked by power lines hitting trees, and hitting against other power lines.

» **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 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.

» **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 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.

— Kevin Fagan and Kurtis Alexander

How to create a defensible zone

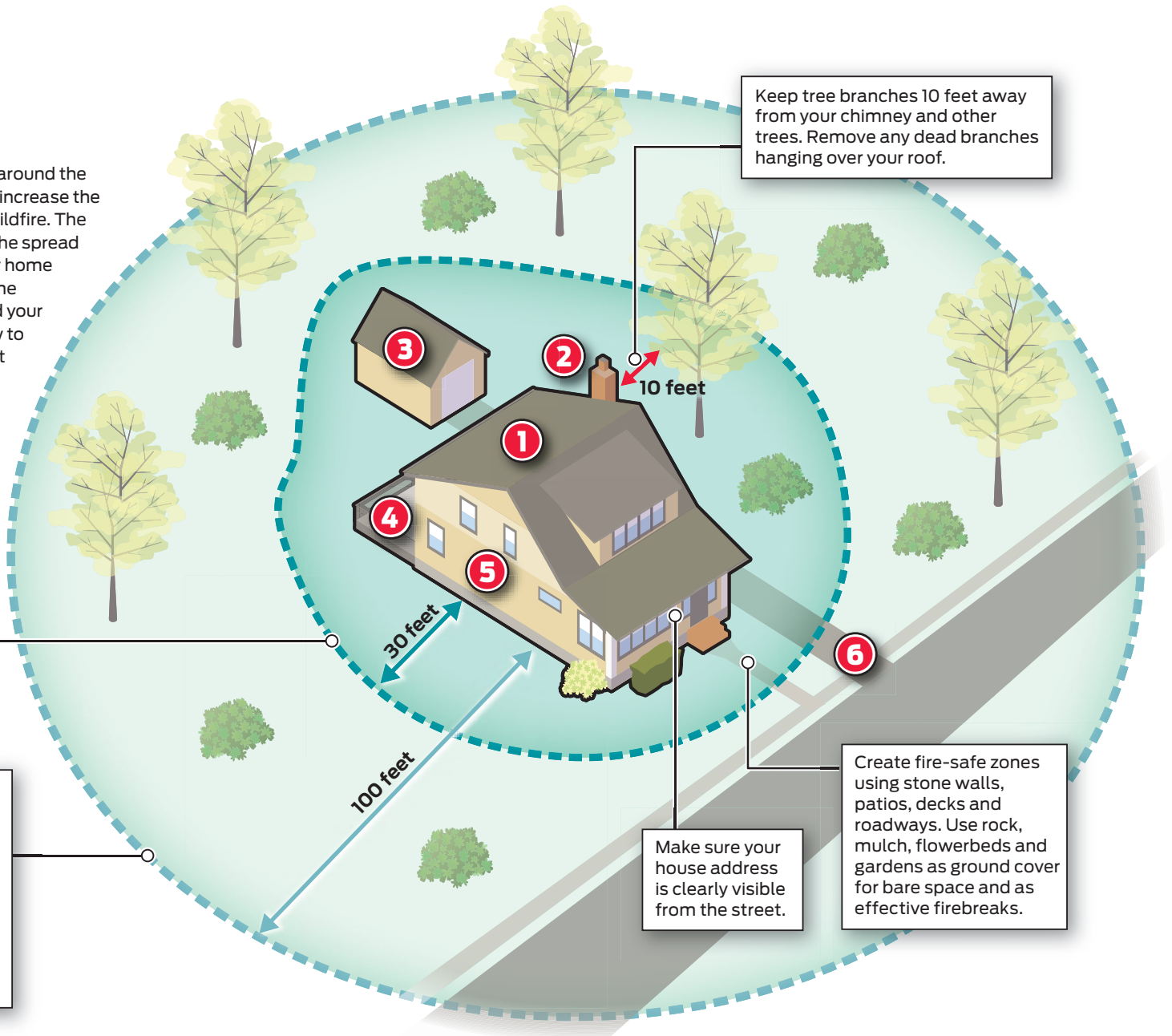
A defensible space is a buffer zone around the buildings on your property that can increase the chances of your home surviving a wildfire. The space is necessary to slow or stop the spread of wildfire, and it helps prevent your home from catching fire. It also protects the firefighters that may have 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.

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 **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 noncombustible 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 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.

6 Driveway

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.

PREPARE HOUSE FIRE

KEEP FLAMES FROM IGNITING YOUR HOME



From the second a fire ignites in your house, experts say you may have only two minutes to get out before being overwhelmed by smoke

and flames — and just five minutes before the entire structure is engulfed in flames. The trick is to prevent the blaze from getting to that point. Here are things you can do to accomplish that:

» Double-paned windows can slow the fire's invasion, as can fire-resistant walls such as stucco.

» Check the batteries in your smoke alarms once a month, and replace them twice a year. A good rule of thumb is to replace them when you change the clocks in the spring and fall.

» Get rid of old paints and other flammable liquids you don't need anymore, and store those you do in well-ventilated areas.

» Cover all outside vents with tight mesh of one-eighth- to one-quarter-inch openings to prevent embers from floating inside and igniting furniture or inner walls.

» Keep a disaster kit within easy reach of the front door — see the survival kit section in this guide — and make sure valuable documents such as deeds, passports and insurance policies, are in one handy place to grab quickly on the way out.

— Kevin Fagan

HALLWAY

» Install smoke detectors between living and sleeping areas.

BEDROOM

» Install a smoke detector in the bedroom, especially if you sleep with the door closed.

» Turn off electric blankets and other electrical appliance when not in use.

» Do not smoke in bed.

» If you have security bars on your windows or doors, be sure they have an approved quick-release mechanism so you and your family can get out if there is a fire.

GARAGE

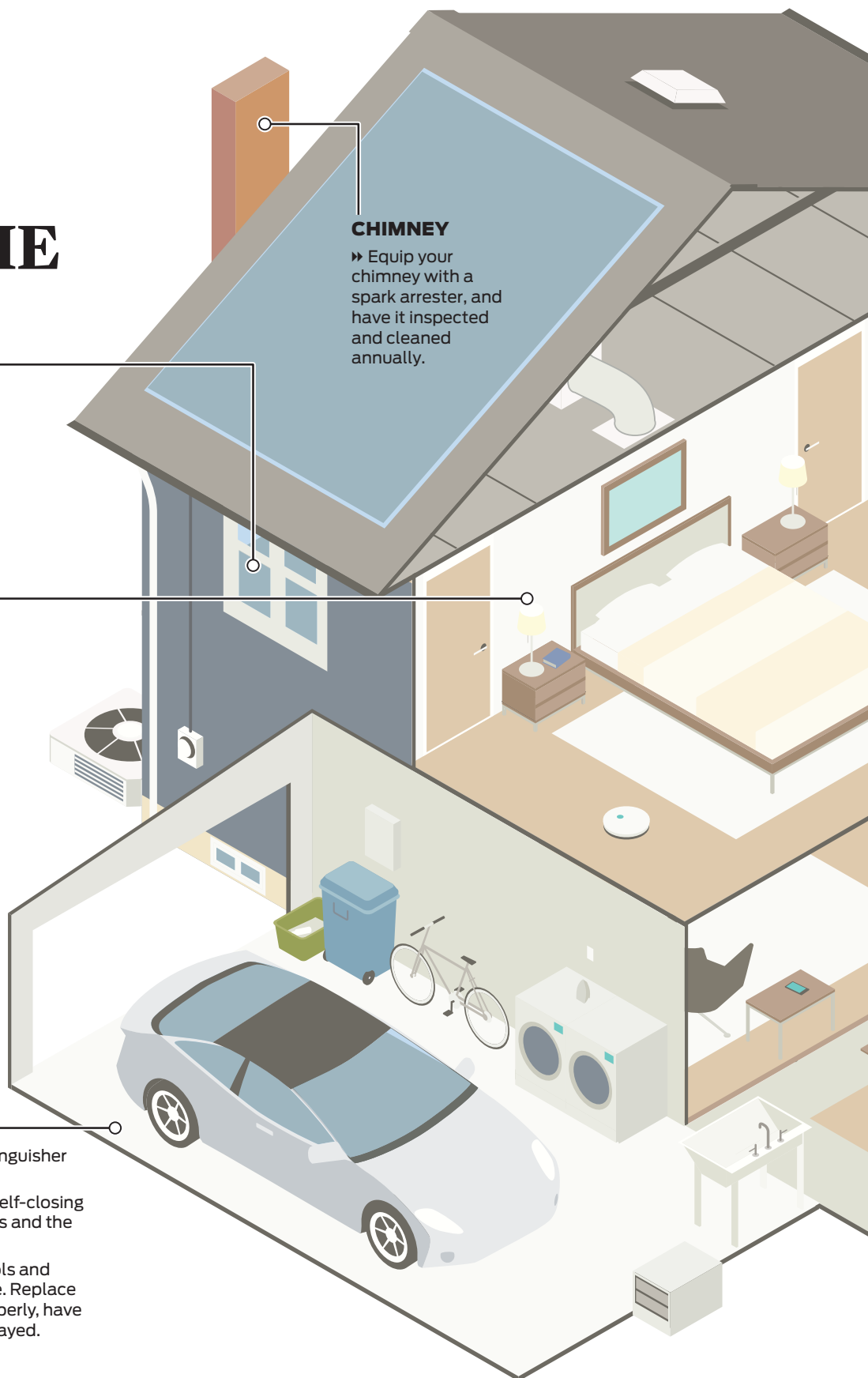
» Mount a working fire extinguisher in the garage.

» Install a solid door with self-closing hinges between living areas and the garage.

» Disconnect electrical tools and appliances when not in use. Replace cords that do not work properly, have loose connections or are frayed.

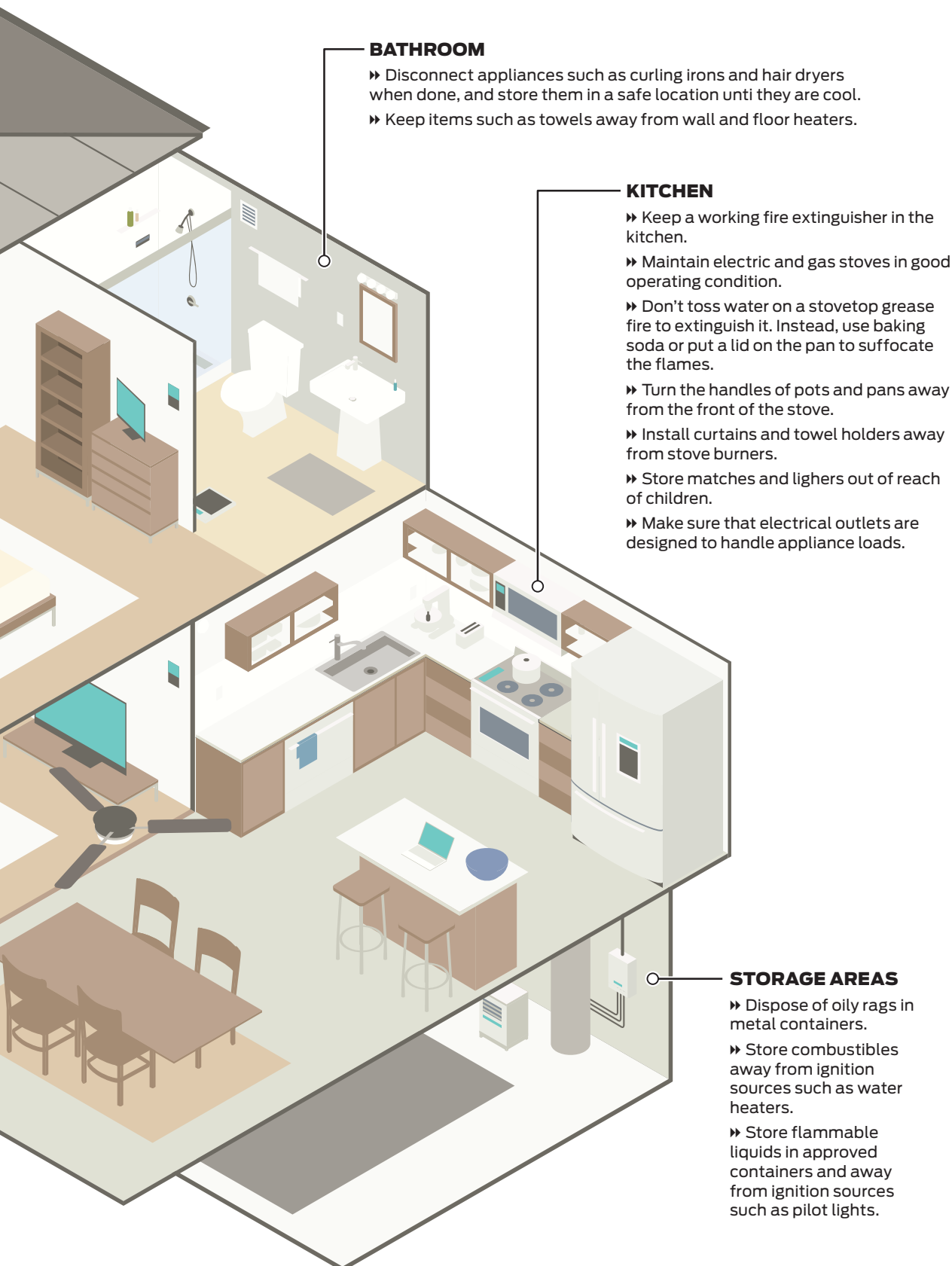
CHIMNEY

» Equip your chimney with a spark arrester, and have it inspected and cleaned annually.



Source: California Department of Forestry and Fire Protection

PRACTICE FOR WHEN BLAZE HITS



The vast majority of fire deaths — 85 percent — happen in homes. Yet, few families, just one in five, have practiced getting out of their house in the event of a fire. Do you know how you'd escape from each room if a fire breaks out? If the answer is no, it's time to make a plan and practice.

Here's what you can do:

- » Walk through your home, and identify exits and escape routes, making sure doors and windows can be easily opened.
- » Install alarms in every room where someone sleeps.
- » Keep hallways and stairs free of clutter.
- » Choose a meeting place outside — say the nearest stop sign or light post.
- » Assign someone to get the pets.
- » Practice escape routes twice a year, making the drill as realistic as possible, according to the Red Cross. The idea is to practice, not scare children, 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 or touch 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 towels or duct tape to seal cracks. Those who are stranded should wave a flashlight or light-colored clothing at the window so fire-fighters know where you are.
- » Turn on emergency alert notification 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.

PREPARE EARTHQUAKES

MAKE YOUR HOUSE A SAFE SANCTUARY



When the Big One hits — we're talking about a massive earthquake that causes towers and bridges to collapse and turns the region into chaos — you'll find yourself in ultimate survival mode. Your house, or those around you, may now be smoking debris.

People will die, emergency services will be overwhelmed and power will probably be out for days.

Shelters will eventually open and governmental aid will arrive to ease the day-to-day struggle, but don't count on that happening right away.

Your best chances of ensuring that you and your family emerge relatively unscathed after a devastating earthquake that occurs while you're at home is to make sure your house is a sanctuary of safety. Here's what you can do to have the best chance of that happening:

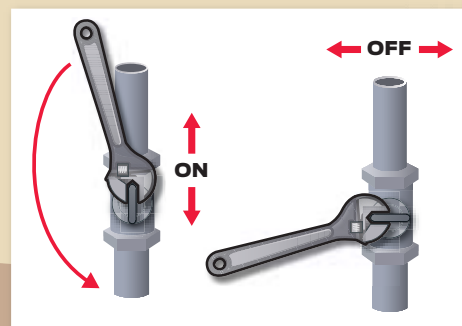
FORTIFY THE FOUNDATION

- ▶ Secure your house to its foundation with anchor bolts, if it hasn't already been done. It will help prevent the structure from sliding off its foundation.
- ▶ Install extra wooden sheeting along the home's cripple walls — those short walls in the crawl space between the foundation and floor. That will also help keep the house on its foundation.
- ▶ If you live in a soft-story house, meaning the first floor is not well reinforced and will collapse in a big temblor, it's recommended to spend the considerable amount of money it will take to have it retrofitted. Or if you don't own the building, talk to the landlord about this. In some cases, the retrofit is required by local law.
- ▶ For a mobile home, install braces or a tie-down system underneath to keep your house from collapsing during the shaking.

— Kevin Fagan

How to turn off natural gas

The gas shut-off valve is parallel to the pipe, usually 6 to 8 inches above the ground. Use a 12-inch or larger adjustable wrench to give the valve a quarter turn, so that it is crosswise to the pipe.



Source: PG&E

Todd Trumbull / The Chronicle

REINFORCE CEILING

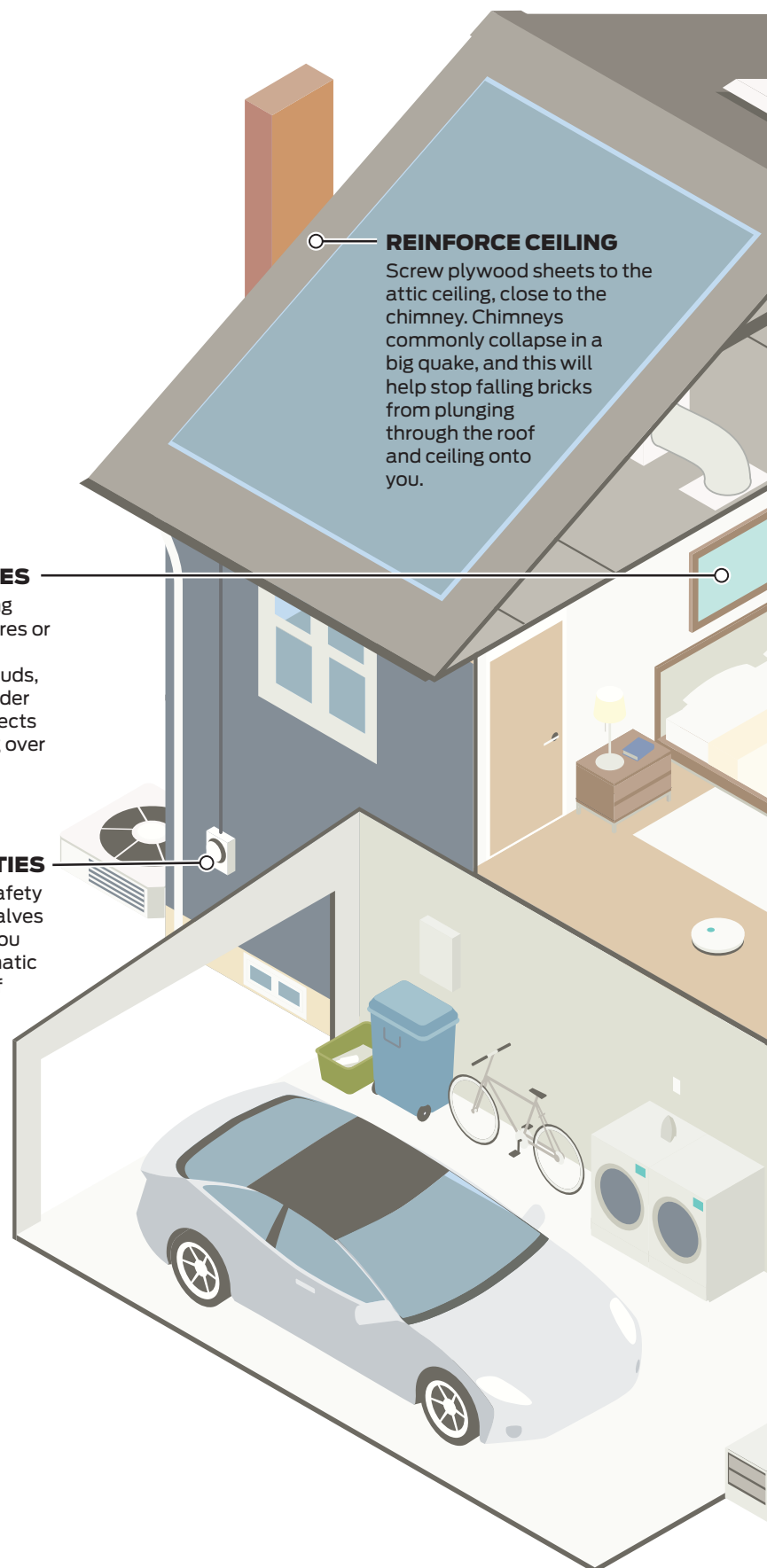
Screw plywood sheets to the attic ceiling, close to the chimney. Chimneys commonly collapse in a big quake, and this will help stop falling bricks from plunging through the roof and ceiling onto you.

FASTEN PICTURES

Attach heavy hanging objects like big pictures or mirrors to walls with screws driven into studs, not sheetrock. Consider relocating heavy objects that have been hung over beds and furniture.

SHUT OFF UTILITIES

Install earthquake safety automatic shutoff valves to your gas lines. If you don't have an automatic valve, keep a shutoff wrench by the valve so you can turn off the gas right after a big quake.



Source: Federal Emergency Management Agency

ACTION PLAN CAN BE A LIFESAVER

Unlike hurricanes or other more predictable natural disasters, earthquakes are sudden and scary. Sometimes there is a loud “boom” and then the house shakes like a monster has ahold of it.

As the experts like to say, “It’s not if a big earthquake will hit the Bay Area, but when.”

An action plan can save lives.

The national Ready Campaign says families should be able to answer these questions:

How will I receive emergency alerts and warnings?

What is my shelter plan?

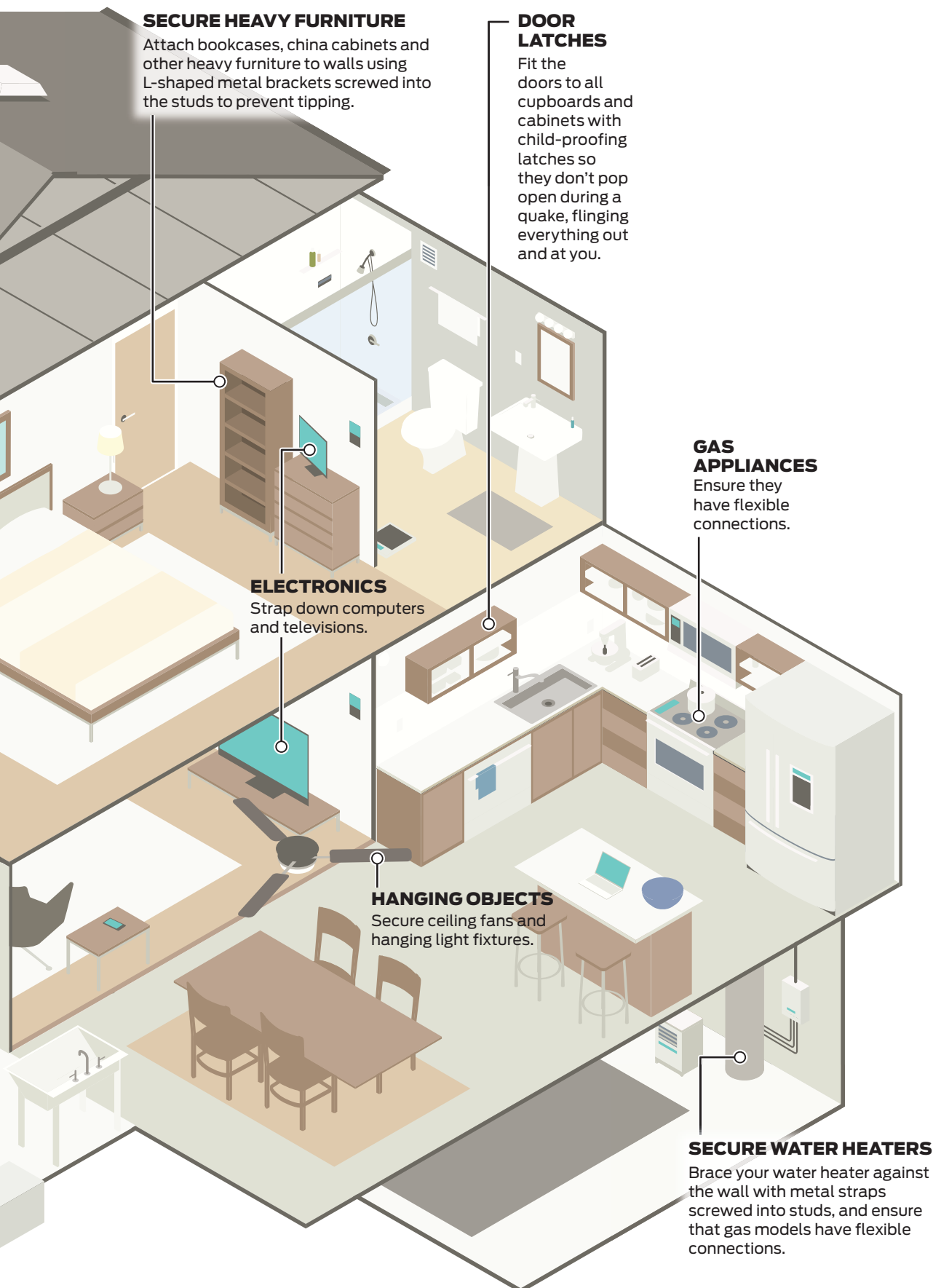
What is my evacuation route?

What is my family/household communication plan?

Here are practical tips on how to prepare for an earthquake:

- » Gather the family and create a plan together.
- » Pick safe places in each room to take cover when the shaking begins — under furniture or against an interior wall away from windows, bookcases or tall furniture that could fall. Stay away from kitchens and garages, which tend to be the most dangerous places in a home because of the objects kept there. Also, doorways are not stronger than other parts of the house, so don’t rely on them for protection.
- » Practice “Drop, cover and hold on” in each safe place — and schedule drills every six months.
- » Conduct a “hazard hunt,” looking for objects that could fall or fly through the air.
- » Put a working flashlight and shoes next to each bed.
- » Teach everyone to knock on something three times repeatedly if trapped.
- » Identify a safe place outside to meet up after the shaking stops.
- » Designate an out-of-state person for everyone to call to relay information.
- » Assign someone to turn off the gas and to gather pets.
- » Create an earthquake kit as a family, and include one comfort item per child, like a teddy bear or toy, as well as activities or children’s books.
- » Talk about what to do if an earthquake happens while family members are at school or work — reassuring young children that they will be safe until picked up while also creating a meeting place for adults and older children.

— Jill Tucker



Graphic by Getty Images and The Chronicle

PREPARE SURVIVAL KITS

HAVE EMERGENCY SUPPLIES READY FOR HOME, CAR

One of the key tools for making it through the next big disaster is an emergency survival kit — and it's important not only to store one at home, but to keep one in your car, because that's where you might be when chaos erupts. Pre-packaged kits are available from a variety of retailers, but if you want to assemble your own, here is the minimum you should have in it, according to the American Red Cross. For the car, the gear is best packed tightly into a small backpack, to save space. At home, a basic outdoor garbage can works best for storage.

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 — some-thing 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
 - ▶ **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)
 - ▶ **Duct tape**
 - ▶ **Work gloves**
 - ▶ **First-aid kit**
 - ▶ **Sewing kit**
 - ▶ **Whistle**
 - ▶ **Smoke/dust mask**
 - ▶ **Gas meter valve shut-off wrench**
 - ▶ **Instant hand warmers**



Photos by 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**
- » **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**
- » **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**
- » **Scissors**
- » **Sleeping bags**



Survival kits for your car, top, should fit in a backpack while home kits can be stored in a sealable garbage can.

— *Kevin Fagan*

PREPARE FINANCES

GET YOUR PAPERS IN ORDER

Part of getting ready for a disaster means getting your financial house in order.

Thousands of people who lost homes in the 2017 California wildfires discovered too late that their insurance coverage had 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 for the contents coverage. It's far easier to put the list together beforehand.

Here are other tips for shoring up your finances:



Michael Macor / The Chronicle 2017

Keith Norris shows what his car looked like before it was destroyed in the Tubbs Fire in Santa Rosa last fall.



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.

For a list of vital documents: <http://bit.ly/2zqvZDy>



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 or windstorm. 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 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 — 20 percent or more depending on the insurer — above your policy limits. This can help pay for the surge in local building costs that often follow 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.

Since the recent wildfires, more mainstream or “admitted” insurers are not renewing policies in the urban-wildland interface. Homeowners in those areas 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.



Quake and flood coverage

Your homeowners or renters insurance company can provide a National Flood Insurance Policy and a quake policy from the California Earthquake Authority. A few companies sell stand-alone earthquake insurance, and two companies have started offering private flood insurance in California. See bit.ly/2PL2mB6.

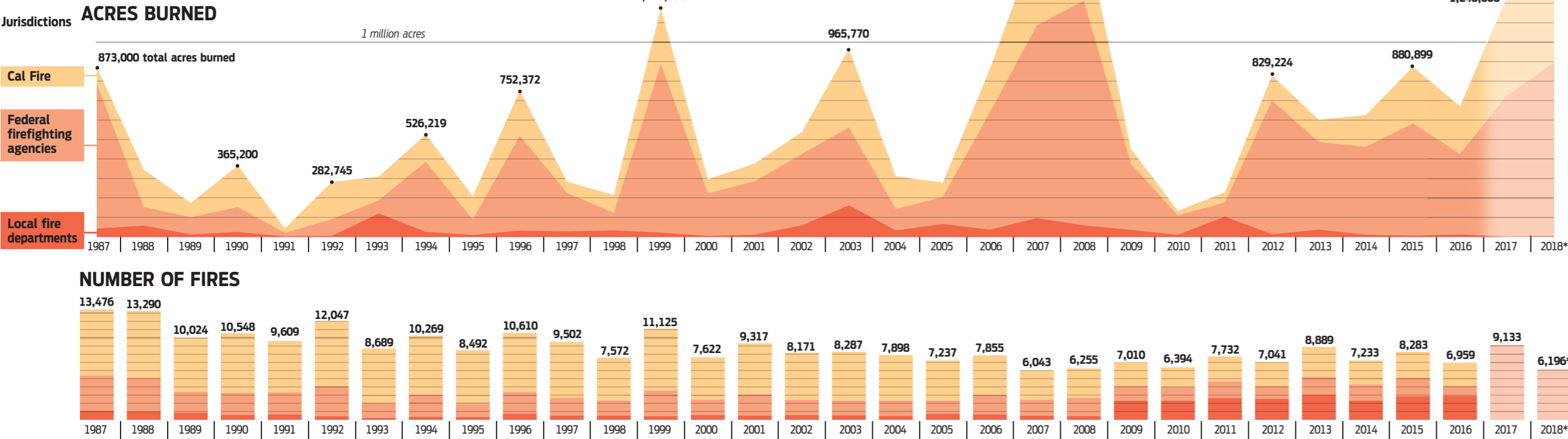
— Kathleen Pender

California burning

As the past two years have shown, the fire season in California is getting longer and more destructive. Here's a snapshot of the fire danger to those living in California:

What's already burned

The Mendocino Complex fire this summer was the largest in state history. The total acres burned for 2018 is approaching the highest on record. A look at historical data and how wildfires have increased the past two years:



Sources: Cal Fire, U.S. Forest Service, California Department of Insurance

What's burning now

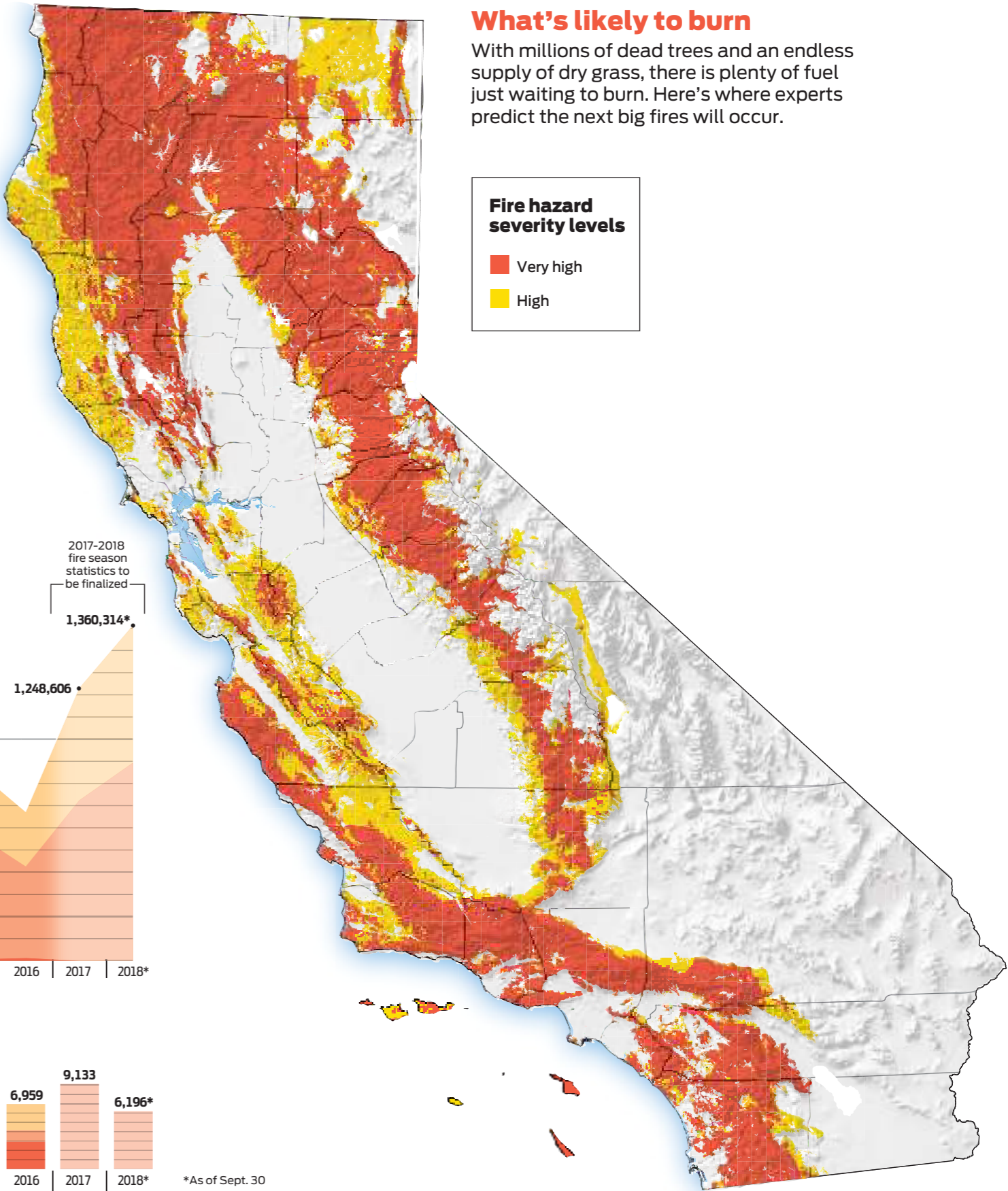
Stay updated on current fires burning in California by visiting The Chronicle's fire tracker at bit.ly/fire-tracker.

What's likely to burn

With millions of dead trees and an endless supply of dry grass, there is plenty of fuel just waiting to burn. Here's where experts predict the next big fires will occur.

Fire hazard severity levels

- Very high
- High



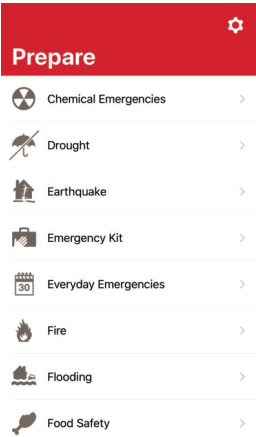
John Blanchard / The Chronicle

PREPARE APPS

DOWNLOAD THESE APPS BEFORE YOU NEED THEM

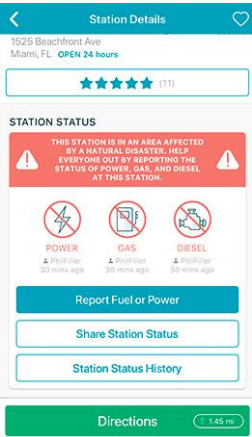
American Red Cross

The Red Cross has a slew of popular apps for disasters. A first aid app lists techniques for dealing with medical issues such as broken bones, burns and concussions, and locates the nearest hospitals. The earthquake app lets you track hazards in the Bay Area on a live map and gives tips on what to do during and immediately after an earthquake. An all-in-one emergency app monitors more than a dozen severe weather conditions, from floods to hurricanes. redcross.org/get-help/how-to-prepare-for-emergencies/mobile-apps



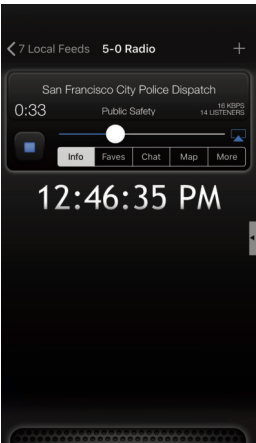
GasBuddy

This crowdsourced app normally helps drivers find the cheapest gasoline in their area. During an emergency, it can be helpful for finding filling stations that still have fuel and electricity to run pumps. The app now has a time-stamp feature, which allows users to see how current the information from a specific station is. <https://gasbuddy.com>



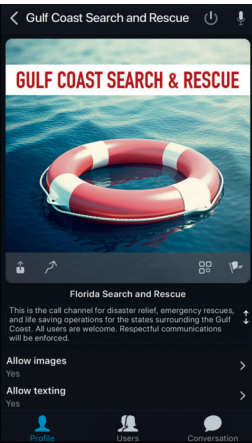
5-O Radio Police Scanner

Listen in on live police scanners through this app. Local feeds include the San Francisco City Police Dispatch, San Francisco Fire and emergency medical services, BART and SFO Airport. The app provides a guide to police codes to help decipher messages (for example, 10-33 means “Emergency, all units stand by”) and a chat function to engage in a discussion board with other listeners. Radio scanners could be helpful to gain information during a natural disaster. <https://apple.co/2pnxyLL>



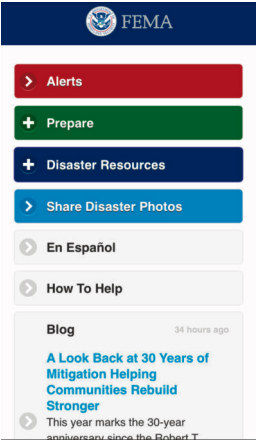
Zello

This app turns your smartphone, tablet or PC into a two-way radio, which can be useful for finding family members during a disaster. The app is particularly helpful in emergency situations when cellular network connection is poor. <https://zello.com/app>



FEMA

The official app of the Federal Emergency Management Agency helps you prepare for and survive natural disasters. Before an emergency, the app can be used to create an emergency family plan and emergency kit checklist. During an emergency, the app provides live alerts from the National Weather Service and safety tips for disasters like fires. It also helps locate nearby disaster recovery centers and emergency shelters. <https://www.fema.gov/mobile-app>



Noonlight

Feeling unsafe? This app tracks your location and discreetly sends it to the police in an emergency. Hold down the onscreen button when you think you're in danger, and let it go when you know you are in danger. Local police will be notified of your location. The app's newest feature is an automatic crash response: If you are in transit during a natural disaster and get into an accident, it will detect that via your phone's GPS, accelerometer and gyroscope, and send your location to emergency responders. <https://noonlight.com/>

— Rebecca Aydin and Benny Evangelista



PREPARE MISC.

POWER IT UP IF PRICE IS NO OBJECT



Candles and hand-cranked flashlight-radios will prove handy in a blackout. More elaborate options are available, but may prove costly. Here are some high-tech ways to power your home and maintain communications during an emergency:

Power sources

Tesla Powerwall 2: This wall-sized lithium-ion battery stores electricity generated by rooftop solar panels or electricity from your home's grid. The device can be attached to an interior or exterior wall or mounted on the ground. Powerwall's Storm Watch function charges the device to maximum capacity when severe weather is predicted.

Cost: \$5,900, with an added \$700 for a Backup Gateway, which helps to monitor usage and connect after an outage, and \$1,000 to \$3,000 in installation fees. One Powerwall can generate enough power to cover a 1,100-square-foot home, and two Powerwalls work for up to 4,600-square-feet — though if you're using an air-conditioner or electric vehicle, you may need more.

The catch: You'll need rooftop solar panels to weather an extended power outage. Stored electricity from the grid in one Powerwall will last for less than two days if you're running home appliances as usual.

Alternatives: Competitors to the Powerwall include the yet-to-be-released Solpad Home, an all-in-one battery, inverter and solar panel optimizer that won't require a wall mount. One system typically will be able to support a small house. The Solpad Home will be released in 2019, and the price will be determined then.

Power generators: Choices include a portable gasoline-powered backup generator or a permanently installed generator, powered by natural gas, propane or diesel, that automatically kicks in if the power goes off.

Cost: It varies wildly depending on your electrical needs; Honda's wattage calculator can provide an estimate.

Home Depot's website lists portables starting around \$100, but only a couple meet the 15,000-watt requirement for running a house full of appliances — including refrigerator, microwave, furnace fan, flat-screen TV, washer, dryer, air conditioner, computer, monitor, garage door opener and DVD player.

Permanent generators are available for anywhere from \$1,900 to \$29,000, although a \$3,500 model might be enough to make everything work in your house.



Iridium

Phones that connect to satellites might be the only option for communicating with loved ones and emergency services.

Communications

Satellite phones: If cell networks are incapacitated, landlines are down and Wi-Fi is unavailable, phones that connect to orbiting satellites might be the only option for communicating with loved ones and emergency services.

Cost: Iridium has the largest commercial communication satellite constellation with 66 satellites, enough to make a call from atop Mount Everest or from the North Pole to the Sahara. The Iridium Extreme 9575, which allows voice calls and SMS texting, costs \$1,200 on satellite phone sites like BlueCosmo.com. Other phones start in the neighborhood of \$500, but that doesn't include a service plan. The Extreme 9575 also features an SOS button, which sends your location to a pre-programmed contact or emergency response service.

Smartphone: Your phone can become a satellite phone with a device like Iridium GO! Global Smartphone Access, which creates a Wi-Fi hotspot that allows a connection of up to five smartphones and tablets to the satellites. The connection permits only one call at a time. It also supports texts and light email use, and it features the SOS button as well.

Cost: \$775 for the unit, plus additional monthly data plan costs.

The catch: Satellite phone equipment requires some form of power to charge the batteries.

— Rebecca Aydin and Benny Evangelista

MAKING SURE PETS ARE SAFE



Whether a home is shaking or burning, dogs and cats need tender loving care and common sense from their caretakers. Here are tips for pet survival in a disaster:

Tagging

All pets should be identified with tags and, preferably, microchips.

Behavior

Expect the unexpected.

In an emergency, dogs tend to bolt and cats tend to hide, as a general rule. 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 quake or fire.

First aid, food and water

Keep a pet first aid kit, with disinfectant, bandages, tweezers and antibiotic ointment, on hand.

Have a week's worth of pet food stored up, and periodically check its expiration date to make sure it's usable. Canned food will keep longer than dry. Make sure to have plenty of extra water, more than you think you'll need. Pets (and people) drink more when under stress.

And have bowls, leash, can opener, medicine, pet toys and plenty of cat litter, plastic bags or other clean-up gear ready to use. In an emergency, with problems all around, no one wants to walk needlessly into another problem because of a thoughtless pet owner.

Transportation and lodging

Train your pets to ride in a car, perhaps even 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.

— Steve Rubenstein

REACT INTRO



Mason Trinca / Special to The Chronicle 2017

Neighbors rush to help save a house with their water buckets on Baird Road in Santa Rosa during last year's Tubbs Fire.

ACT FAST, THEN GET READY TO CARRY ON

By Kevin Fagan

You've done everything you can to retrofit your house, cut down enough vegetation to clear fire-safe space in your yard, jack your mobile home up above flood level. That was just a start.

The real test comes when the disaster actually hits. Big fires, floods and earthquakes always come way too fast and cause far more commotion than most people can imagine. That's when you have to suppress the panic and act fast, whisking yourself and your loved ones to safety or hunkering down the best way you can.

And then — dig out and carry on. Which

could mean everything from literally digging yourself out of rubble and reconnecting with family to plotting how to get to work in a ravaged disaster zone. Experts say to be prepared with supplies and shelter to last three days on your own — so keep those supplies on hand and updated at all times.

Navigating insurance agencies and construction bids to rebuild what you lost could become like a second job for you for the next two years. Take a lot of deep breaths, get counseling if you feel it's necessary, talk everything over with those close to you, and realize that eventually your life will get back to something resembling a normal existence again. In the meantime, be patient with yourself.

REACT STAY CALM

WHAT TO DO IN 1ST CRITICAL MINUTES

It's finally happened: An earthquake is pushing your furniture around like a cat with toys, or a wildfire is roaring toward your house in a wall of crackling flame. Don't panic. Take a breath if you can. And follow these steps:

In the event of fire

- » Flee the minute calamity becomes imminent, and certainly if you are told to evacuate. It takes only two minutes for fire to ignite a house and five minutes to engulf it.
- » Take your disaster kit — with important documents, first aid kit and survival supplies — 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 hit your house before you've had time to escape, check 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 flee 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 emergency officials say don't try to be a hero. 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 on the other side of the house from where the fire is approaching. Flaming embers will have less to ignite.



Lea Suzuki / The Chronicle 2017

Paolo Solari uses a hose to put out embers that burn around his parents' home at Solari Vineyards in Calistoga last October.

As the earth begins to shake

- » "Drop, cover and hold on." That means, if you are inside, drop to the floor, find cover under a heavy table, and hold on to that table until the shaking is over.

- » If you are outside, dash away from buildings or large trees to as open a space as you can find.

- » If you are driving, pull over to the side of the road. Avoid overpasses, bridges, power

lines and other things that could tumble onto your car.

- » If it's an epic quake, a tsunami might follow — so get to higher elevation once the ground stops convulsing.

— Kevin Fagan

REACT FLOOD, CHEMICAL SPILL

WHAT TO DO WHEN WATER SURGES



California is a state prone to flooding. Over the past 60 years, more than 30 major floods have occurred, claiming more than 300 lives.

While some spots expect high water, such as along Sonoma County's Russian River where residents buy kayaks and build their homes on stilts, other places are far less prepared. Flooding came as a surprise for many of the 14,000 San Jose residents forced to evacuate near the city's Coyote Creek during the wet winter of 2016-17.

Scientists say that, as sea levels rise and storms pack more moisture with atmospheric warming, the risk of dangerous floods is on the rise. The Public Policy Institute of California estimates that 1 in 5 Californians, and more than \$580 billion of property, remain vulnerable to a flooding disaster.

Should you get caught in a flood,



Michael Macor / The Chronicle 2017

Water is released down the Lake Oroville spillway into the Feather River during a 2017 crisis at the Oroville Dam.

here's what to do:

- » Seek high ground — with an emergency kit if you have one.
- » If time allows, secure your home before leaving. Move valuables upstairs or to higher areas, disconnect electrical appliances, tie down outside furniture and seal basement vents.
- » Consult a reliable weather source,

such as a weather radio or www.weather.gov, about safe places to go and safe ways to get there.

- » Do not walk or drive through floodwater. Most flood-related drownings occur when someone drives into high water, according to the Centers for Disease Control and Prevention. The second leading cause of drownings is

walking into high water. Turn around and go the other way.

- » Should your vehicle stall out, leave it. Don't wait on the roof and become fodder for the nightly news broadcast — or worse. However, if the water is rushing, and you have a sense that you'll be swept away, stay put.

— Kurtis Alexander

WHEN HAZARDOUS MATERIAL BEFOULS AIR

With a high-tech economy and strict environmental codes, the Bay Area is not known as a hub of heavy industry and dangerous pollution. But there is still opportunity for dangerous chemicals to stir up a scare.

Should a toxic material become airborne, authorities may order evacuations of homes, schools and businesses, or they may ask people to shelter in place, depending on the substance and situation. Here's what you should do:

- » Comply with emergency orders. Consult the fire department, a reliable media source or a public safety alert system about what to do.

- » If you're ordered to evacuate, don't panic. Let others in the building know



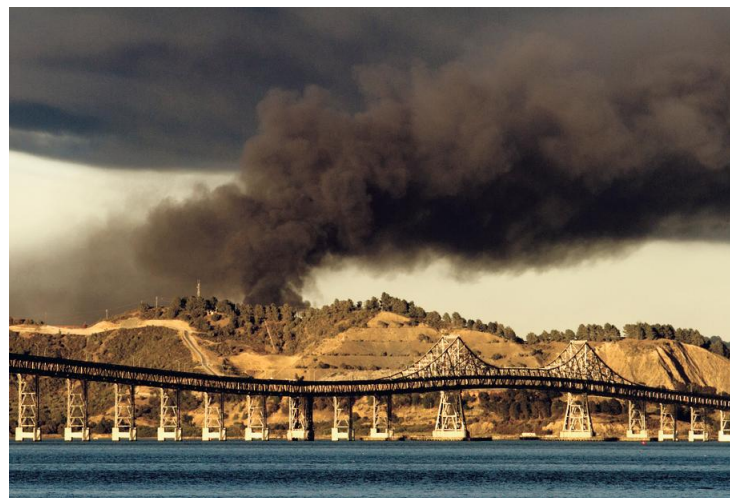
A plume of smoke from a 2012 fire at the Chevron Refinery in Richmond is seen from Tiburon.

the situation, then grab your wallet, phone and keys, as well as your emergency kit if you have one, and leave.

- » If you're ordered to shelter-in-place, close exterior doors and windows and move toward the center of the building.
- » Await further instruction before returning to your normal routine.

The federal Emergency Planning and Community Right-to-Know Act, passed in 1986, requires industries to report what hazardous materials they use. If you really want to be prepared, check out the inventory lists kept by county health agencies and local fire departments.

— Kurtis Alexander



John Storey / Special to the Chronicle 2012

REACT EVACUATION

WHAT TO DO BEFORE YOU GO

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 BBQ 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. Carry your car keys with you.

INSIDE THE HOUSE

- 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.



REACT TRAPPED



Noah Berger / Special to The Chronicle 2017

Chandra Bird Ganzler, evacuating Boulder Creek with her dog 4x4, speaks with firefighters as the 2017 Bear Fire approaches.

HOW TO ACT IF YOU'RE TRAPPED

The evacuation order has been placed and it's time to go.

But the fire has engulfed the roads. There doesn't appear to be a safe exit. You're 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 on 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.
- » Stay away from outside walls and windows.

RECOVER INTRO



Gabrielle Lurie / The Chronicle 2017

Evacuee Martha Lynn rests with her dogs at a Red Cross shelter after evacuating her home following the Tubbs Fire in Santa Rosa last October.

WHAT TO EXPECT AFTER A DISASTER

Surviving the unsettling jolt of a quake or the flames of a fire is just the first step. An important one, yes — but the danger and challenge is rarely over right away. You will need to push on for the next several hours, days, or even weeks.

Here's what experts advise:

» 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 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.

— Kevin Fagan

RECOVER REGROUPING

TIPS FOR FINDING MISSING LOVED ONES



When disaster strikes, people often go missing.

Even with the best-laid plans, family members might be unable to meet at pre-

arranged points. Cell phones, filled with contact information of friends and relatives, are left behind in the rush to escape danger, which means there is no way to check in with family or answer frenzied calls from friends out-of-state.

In those cases, the Red Cross en-

courages people to use its national website or contact local chapters to check in as safe and well, or use it to find someone who's missing.

But finding missing or displaced family and friends after a devastating event can be overwhelming and confusing.

Here are a few tips that may help:

» 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 chil-

dren 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 the working 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 missing loved ones are close to who may know where they are.

» Check in with their neighbors, employer, school or church — anywhere they usually hang out or 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.

— Jill Tucker

SERVICES READY TO OFFER THEIR AID

Uber, Lyft and Airbnb — the big three on-demand services — all stand ready to help when widespread disaster strikes.

How will ride-hailing work after a disaster?

Uber and Lyft will offer free or discounted rides to people in need during a disaster and its aftermath. Lyft said those rides must be to shelters, hospitals and other designated emergency areas; Uber didn't provide parameters. The companies will suspend surge pricing, the higher rates they use to lure more drivers to take to the streets when demand is high. Uber said it will provide refunds to passengers who pay full price (or surge prices before it was turned off) immediately after a disaster.

What if bridges or freeways are down?

Uber said it will alert its drivers and provide information from authorities about how service might be affected.

What will motivate drivers to work if there isn't surge pricing?

Uber said its incentives for drivers



Paul Chinn / The Chronicle 2016

Uber and Lyft say they will offer free or discounted rides to people in need during a disaster and its aftermath. Airbnb lets anyone sign up to provide free short-term housing to people displaced by disasters and to relief workers.

"depend on the circumstances." Lyft did not respond.

What if cell service is down?

Uber and Lyft require cell phones to function, so it would shut down both services.

How does Airbnb respond to disas-

ters?

Airbnb has a program called Open Homes that lets anyone sign up to provide free short-term housing to people displaced by disasters and to relief workers. Airbnb offers its website and customer support for free to facilitate this. It also reaches out to

hosts in and near impacted areas to ask if they have extra space to spare. New hosts can sign up during disasters to provide free housing. Airbnb waives its booking fees for both hosts and guests participating in Open Homes.

— Carolyn Said

RECOVER FINANCES, INFO

PLACES TO TURN TO FIND 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 in-

ventory.

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 presidentially 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

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 percent 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 presidentially declared disaster area 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: <http://bit.ly/2A73NCO>

— Kathleen Pender

OLD-SCHOOL DEVICES COULD BE HELPFUL



When disaster strikes, don't expect your iPad or cell phone to come to the rescue with needed information. Internet and phone service

may go out during a fire, flood or earthquake, leaving you with little access to the outside world.

In these situations a battery-powered radio is your best way to get information on what's going on. Consider the following:

► 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 in to an emergency radio broadcast. (The sirens are tested at noon every Tuesday.)

► Tune in to AM radio. In the Bay Area, KGO 810, KCBS 740 and KNBR 680 carry regular news updates, and each is set up to run emergency information broadcasts from local authorities.

► Consider buying an emergency radio. The radio includes 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, visit: <http://www.nws.noaa.gov/nwr/coverage/stations.php?State=CA>

If you've managed to maintain internet service, a few websites may be helpful:

U.S. Geological Service for earthquakes:

► <https://earthquake.usgs.gov/earthquakes/map/>

Cal Fire for wildfires:

► www.fire.ca.gov/current_incidents Nixle for local public safety details:

► www.nixle.com/

► Your county government website for local emergencies.

► Social media sites for information on friends and family.

And reliable news sources, such as

► www.sfchronicle.com and

► www.sfgate.com

— Kurtis Alexander



If internet access is unavailable, a battery-powered radio is your best way to get information on what's going on.

RECOVER RESOURCES

SUPPLEMENTAL DISASTER INFORMATION

WILDFIRES

- 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.
- » www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps
 - » www.readyforwildfire.org/Prepare-Your-Family
 - » <http://bit.ly/2yWc3Ek>
 - » www.readyforwildfire.org/Defensible-Space

FAMILY FIRE SAFETY

Preparation

- » www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/fire
- » <http://sparkyschoolhouse.org/app/uploads/2017/07/FPW17ParentLetter1.pdf>

Information for children, parents and teachers

- » www.firefacts.org

EARTHQUAKES

LIVING IN EARTHQUAKE COUNTRY

- » <https://pubs.usgs.gov/gip/2005/15/gip-15.pdf>

SURVIVAL KITS

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

PREPARING YOUR HOME

- » <http://resilience.abag.ca.gov/housing/homeowners/steps>
- » www.earthquakebracebolt.com/HomeownerRegistration

FAMILY RESOURCES

Sesame Street Emergency Preparedness Toolkit:

- » www.sesamestreet.org/toolkits/ready

Family Earthquake Preparedness Checklist:

- » www.uclahealth.org/workfiles/emergency/eq_familyprep.pdf

PET SAFETY

- » www.aspc.org/pet-care/general-pet-care/disaster-preparedness

DURING AND AFTER A DISASTER

WILDFIRES

- » www.readyforwildfire.org/Evacuation-Steps
- » www.readyforwildfire.org/What-To-Do-If-Trapped

FIRE RECOVERY

- » <http://anrcatalog.ucanr.edu/pdf/8386.pdf>
- » www.usfa.fema.gov/downloads/pdf/publications/fa_46.pdf
- » www.apa.org/helpcenter/residential-fire.aspx

QUAKES

- » www.earthquakecountry.org/dropcoverholdon
- » www.ready.gov/earthquakes
- » www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/earthquake#Before
- » <https://www.shakeout.org/california/index.html>

REGROUPING

Check in as safe and well with the Red Cross:

- » <https://safeandwell.communityos.org/zf/safe/add>

Search for a family member via the Red Cross:

- » <https://safeandwell.communityos.org/zf/safesearch/search>

Family finder phone apps:

- » www.life360.com/family-locator
- » <http://mamabearapp.com>

OTHER USEFUL TECHNOLOGY

- » www.amazon.com/dp/Bo6XCY92JV
- » www.tesla.com/powerwall
- » www.tesla.com/solarpanels
- » <http://powerequipment.honda.com/generators/wattage-calculator>
- » www.bluecosmo.com

HOW TO HELP YOUR NEIGHBORS



When disaster strikes, trained volunteers can make a big difference in helping communities respond.

Two options to participate in these types of volunteer networks are:

- » The Citizen Corps, which brings together local government, business

and community leaders to prepare for a disaster. More information on local chapters can be found on Twitter @citi zen_corps or online at www.citizen-corps.fema.gov

- » Community Emergency Response Teams offer training for individuals to respond to fires, earthquakes or other disasters. More than 6,000 individuals participate in their com-

munities. In San Francisco, the Fire Department organizes the free trainings for the city's Neighborhood Emergency Response Team, or NERT.

For more information: www.ready.gov/community-emergency-response-team

In San Francisco: <http://sf-fire.org/neighborhood-emergency-response-team-nert>

— Jill Tucker

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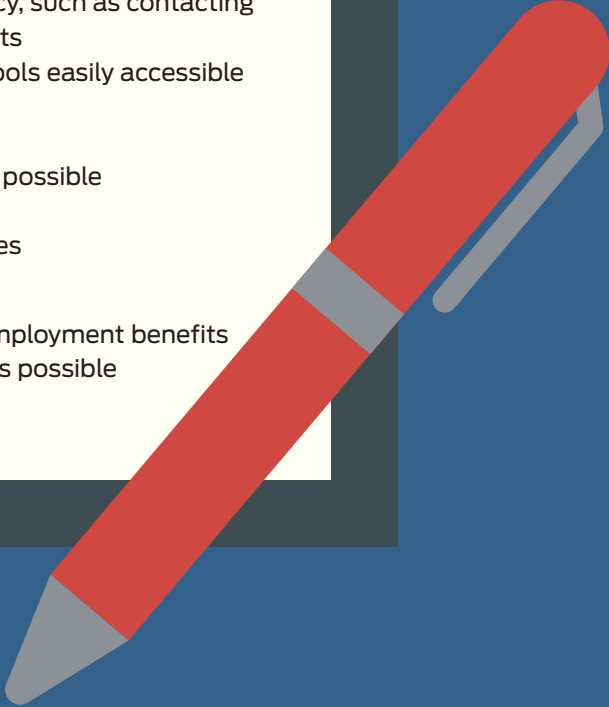
DISASTER CHECKLIST

Things you should do before and after a disaster strikes

BEFORE

- ☐ Download this guide as a PDF (see page 2 for instructions)
- ☐ 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
- ☐ Have family discussions about safe places in the home when an earthquake hits
- ☐ Assign family members' responsibilities 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
- ☐ Prepare your home to survive a massive quake
- ☐ Consider buying alternate power and communication devices

AFTER

- ☐ 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
- 

It could happen today.

It's not a matter of if, but when.

There are more than 500 active faults in California, and most of us live within 30 miles of one. Scientists say there's more than a 99% chance of a magnitude 6.7 or greater earthquake striking California within the next 30 years.

You need a separate earthquake policy.

If you don't have a separate earthquake insurance policy, you must pay to repair or rebuild your home, replace your belongings, and may need to live elsewhere until repairs are completed. In other words, you will pay all recovery costs yourself.

The government won't bail you out.

After a quake, government assistance is not always available. If offered, first you must qualify. Grants are limited to urgent health and safety needs. A loan to rebuild may be less than you need and, like your mortgage, still must be repaid.

Prepare to survive and recover from the next damaging earthquake.

CEA earthquake insurance now has expanded coverage choices, deductible options ranging from 5% to 25%, and discounts for retrofitted older houses.

Learn more at EarthquakeAuthority.com.

CEA CALIFORNIA
EARTHQUAKE
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