

WILDFIRE READY UTAH · SESSION 1

Surviving a wildfire evacuation

Making good decisions before the fire and in the minutes that count. What California California learned the hard way can benefit Utah.

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**FIRE
SAFE
MARIN**

California: 100+ years of lessons



1923 to 2025

Marin and Berkeley to Los Angeles

Fire has been burning into California towns for a hundred years. Marin's first was 1923.



135,000

structures lost

Every one of them a data point on what burns and what doesn't.



3 of 4

of California's most destructive fires burned since 2015

A generation apart for a century. Now every year.



Millions

evacuated safely

Two hundred did not survive. Your odds are good, and good, and we know what the survivors did differently. differently.



Front pages: Napa Register 1923, San Francisco Chronicle 1964 and 2017. Same wind, same ground, three generations apart.

PARADISE, CA 2018. 12,500 HOMES LOST. 85 PEOPLE DIED. WHAT SURVIVED, WHAT DID NOT.

Defensible space, hardened construction, and distance from the neighbors. That's what determined survival.

35%

of Paradise homes more than 60 feet from a burning structure survived

Closer than 60 feet: 6%. Distance from the nearest burning structure was one of the two strongest predictors, with nearby tree canopy.

44%

of Paradise homes built to the 2008 wildfire building code survived

Built before 2007: 12%. Materials matter, and they are only one part of the system.

42%

of LA homes with little fuel in the first 30 feet came through undamaged

More than a quarter of Zone 0 holding fuel: 0 to 13% undamaged. Nearly every home inspected had something that burns within five feet.

16 to 58 ft

is where defensible space does its work

2,000 San Diego homes, ten years of fires. Clearing beyond 100 feet added nothing. The work is close to the house.

DEFENSIBLE SPACE IS LIFE SAFETY, NOT LANDSCAPING

Zone 0 is evacuation work

Zone 0 is the first five feet of **defensible space**, and the five feet that matter most to whether a home survives.

Most of the people who died were at home, or steps from the door.

The house is the last refuge whether you planned it or not. One that doesn't ignite buys the minutes that matter.

Burning houses along the road are what trapped cars in Paradise.

NIST identified 23 burnovers on Camp Fire evacuation routes. Burning structures produced the intense, long-duration exposures that shut the roads.

A neighborhood that doesn't feed the fire gives everyone more time.

Zone 0 and defensible space are evacuation infrastructure, and the only kind residents can build themselves.



CREATING ZONE 0

Remove anything that can burn within five feet of the house. Pull the mulch and the shrubs, move the woodpile and the stored stuff, and replace the fence section that touches the wall with metal.

WHO GOT OUT, WHO DIDN'T · CAMP FIRE, 85 DEAD

Get in the car and go. It is the safest way out.

Age, mobility, and waiting are what killed people. Cars didn't.

71

Average age of the victims. Youngest 39, oldest 95. No children.

Most

Found inside their homes or just outside the door. Some in bed. Some with a walker, a wheelchair, an oxygen tank.

A few

Died in or beside vehicles, where fire cut a dead-end road. Real, and the exception.

Santa Rosa in 2017 and Altadena in 2025 followed the same pattern: older, at home, often alone, and still there when the fire arrived. In the fire arrived. In the same decade, millions of people got in a car and lived.



THE PHOTO EVERYONE SAW

Nobody died in these cars.

They were empty. Their drivers got out. The cars burned after they were abandoned, and crews pushed them off the road to open the lane.

The headline above this photo said 200 feared dead, and the whole country assumed they were in the cars. They weren't. The car got people onto pavement, and pavement got them out.

PARADISE • NOVEMBER 8, 2018

She had a good plan.

They threw it out the morning the fire started.

THE NIGHT BEFORE

- Red Flag Warning, 72 hours out
- A neuroscientist and her husband, new in town
- The decision: any fire, we leave. No packing.

THE MORNING

- Smoke, dark sky, ash falling. No alert.
- New rule: we leave when someone tells us to
- Two cars, separated. One on a quarter tank.
- No cell service. No maps.
- Turn at the white house. Every house was burning.
- Out of gas. Left with a stranger.



Dr. Shannamar Dewey

Neuroscientist and Camp Fire survivor. She studies how people make decisions, then went back and studied her own.

When to evacuate?

Decide from what you see. Follow instructions.
Know the warning may never come.

No alert reached them. The cell towers were down and commanders couldn't keep pace with the fire. But the sky was dark, they smelled smoke, and ash was falling on the driveway. That was the signal. Sign up for every alert your county offers, then don't wait for one.

SPEED
LIMIT
25 MPH

THE LAST FIFTEEN MINUTES, PART ONE

Dress for survival

Long pants, long sleeves. Cotton or wool. Never synthetics; they melt. **Leather boots, leather gloves.** Not sandals, not sneakers.

Goggles and an N95. Smoke and embers, and you have to be able to see. **Hat or bandana.** Hair and ears burn first.

Headlamp. It will be dark at noon.

Keep it by the door, in the go-bag, and in the car. the car.

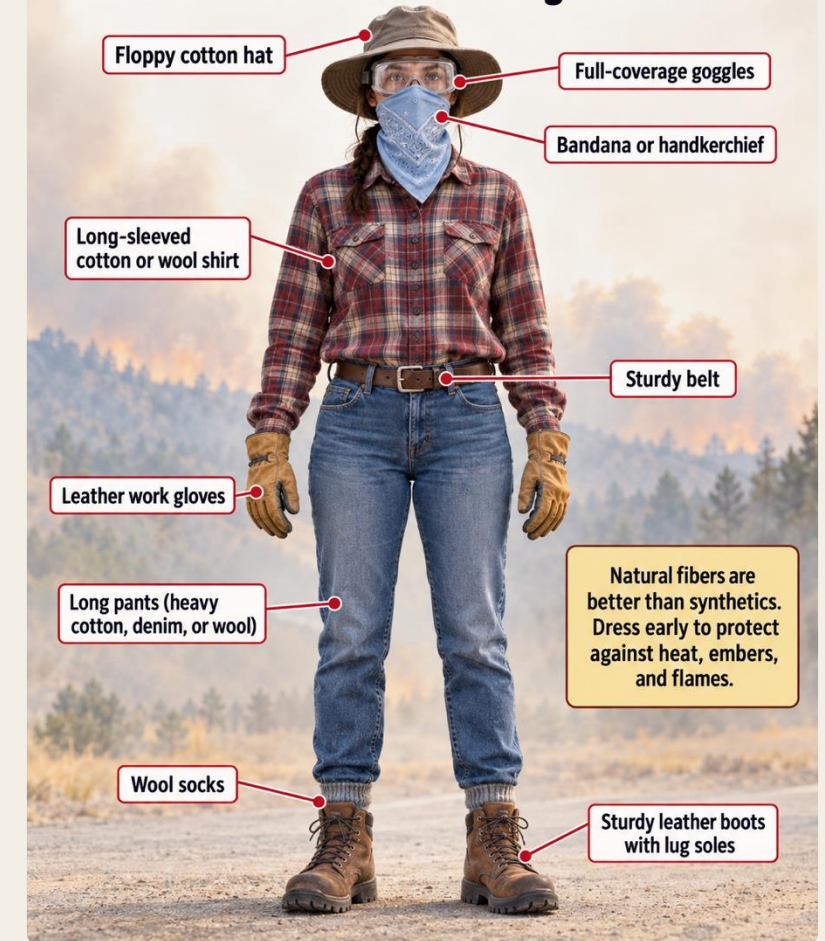
Put it on when the fire is near, not when you're leaving.

WHEN

If you're watching smoke, get dressed. Three minutes now. If the order comes, you walk out the door.

DRESS FOR SURVIVAL

What to wear when evacuating from wildfire



THE LAST FIFTEEN MINUTES, PART TWO

Stay in the car. Stay on pavement.

- 1 One car.** The one with the most fuel and the best clearance. Never split up.
- 2 Stay in it.** Lights on, windows up, air on recirculate. Keep moving if you can. It is the can. It is the safest place you have.
- 3 Stay on pavement.** Toward developed ground, away from vegetation. No fire roads, no trails, no shortcuts.
- 4 On foot is a last resort,** and only when the pavement is blocked.
- 5 Trapped?** A ball field, a parking lot, any open ground with little to burn. Wait it out and listen for instructions.



Ugly, slow, and alive. This is what a successful evacuation looks like. looks like.



Livestock and horses: trailers, fuel, a destination, and helpers have to be arranged before fire season. Michael will take that from here.

SIX MINUTES, ON YOUR PHONE, RIGHT NOW

Wildfire Evacuation: Make It Downhill Alive



youtu.be/91hgUjhmSIE

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Also on the Fire Safe Marin YouTube channel and
firesafemarin.org

Fire Safe Marin, 2024. Link will also be in the chat and the follow-up email.

Make your evacuation plan **NOW**. Then practice it.

Before spring, while nothing is burning.

- 1** **Decide your trigger** and write it on the fridge. Smoke close, ash falling, or an order: whichever comes first, you go.
- 2** **Sign up for your county's alerts** and learn what its words mean before you hear them at hear them at 3 a.m.
- 3** **Drive two ways out** on a sunny day. Find the spot(s) where one parked car or a downed tree or powerline would close the road.
- 4** **Clear the first five feet** around your house (Zone Zero), and ask your neighbor to do the same. Their house is your exposure. Yours is theirs.
- 5** **Name the person you'll pick up.** The elderly neighbor who doesn't drive, the parent with a walker. Tell them.

THREE THINGS TO SETTLE BEFORE BEFORE FIRE SEASON

**Decide your trigger.
Make a go bag. Keep the
gas tank above half.**

One is a decision, one an action, the other is a habit. Gas isn't cheap, and a quarter quarter tank is how a packed car ends up up abandoned on the shoulder.

Evacuation works. Leave early, in a car, before anyone tells you to.

Millions of Californians have done it. We paid for the lessons so you don't have to. Decide in January, practice in spring, go in July.

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