

## CALIFORNIA WILDFIRES

# In disaster-prone California, emergency sirens get high-tech makeover

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Mill Valley Fire Department Battalion Chief Scott Barnes shows a microphone and backup battery in the new warning system.

Photo: Photos by Michael Short / Special to The Chronicle

It was blustery on the first Saturday in December. Wind and rain drove most residents of a quiet neighborhood in Mill Valley's hills into their homes, except for

a few brave dog-walkers. Then suddenly, at noon sharp, a siren pierced through the canyon on Vasco Court.

“This is only a test,” a robotic voice recording blared. It was a routine monthly check of a new siren system, activated with a tap on a cell phone app by Mill Valley Fire Battalion Chief Scott Barnes. In a wildfire, it could save lives.

“It seems that every large fire we’ve had in the past ... some of the negatives we hear are ‘I wasn’t notified. I didn’t get an emergency notification,’” said Barnes, who’s been with the fire district for 29 years. “This system is one more tool to provide that notification.”

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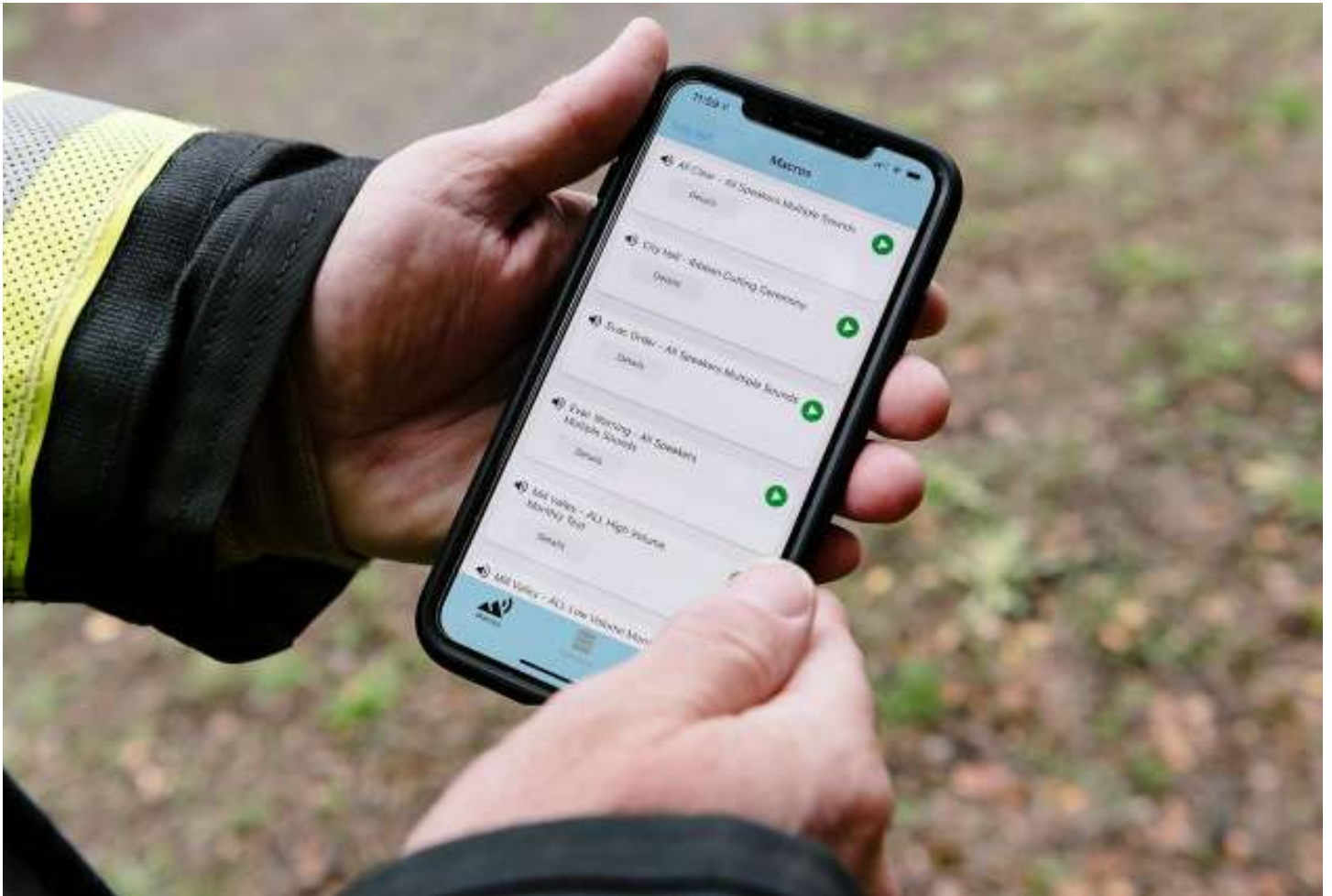
This year Mill Valley was one of the first California cities to install this new siren system, called Long Range Acoustic Device, or LRAD. Mill Valley’s previous, 2-decades-old siren emitted a generic alarm for all emergencies. The new system can blare messages with specific instructions about what to do or where to go. It has battery backup that can survive PG&E power shut-offs and backup activation methods for when cell phone networks fail.

Long before text messages, Bay Area residents learned of impending disasters via sirens. But worsening wildfires, power shut-offs and wireless outages have raised the profile of alert systems.

During the 2017 Tubbs Fire, Sonoma County officials faced criticism for failing to send alerts until residents had to flee for their lives. A year later, Butte County didn’t activate a phone-takeover emergency system during the Camp Fire,

the state's deadliest. And this year, with mass electrical shut-offs during the Kincade Fire, some cell towers also went down, especially in Marin.

Faced with these communication problems, some local governments are improving their sirens.



Mill Valley Fire Department Battalion Chief Scott Barnes uses an app to control the city's new satellite-based siren emergency notification system.

Photo: Michael Short / Special to The Chronicle

In San Francisco, 119 sirens have broadcast a test every Tuesday at noon for more than half a century, but will now go silent for two years for upgrades. The system is powered by commercial, battery and solar power, said Lauren Jones with the city's Department of Technology. A control center uses a radio frequency like a walkie-talkie to send out voice messages and tones.

The city is replacing hardware and upgrading software to address security vulnerabilities. It hasn't decided on specific features for the new system, Jones said.

Last year, Sonoma, Napa and Solano county sheriffs installed sirens that emit two tones — high and low — from emergency vehicles that drive around and alert neighborhoods. Another siren system, along the San Mateo coast, alerts residents to tsunamis. It has solar power and battery backup but can't send specific messages.