

ADVERTISEMENT

CALIFORNIA

## What are red flag warnings?



Firefighters try to save a home from a wildfire on Tigertail Road in Los Angeles on Oct. 28. (Christian Monterrosa / Associated Press)

By RONG-GONG LIN II, MARY FORGIONE

NOV. 16, 2019



A red flag warning is an alert issued by the National Weather Service when:

- winds are strong,
- the air is dry, and
- moisture in vegetation is exceedingly low.

ADVERTISING



inRead invented by Teads

Typically, there are two levels of fire weather alerts for the public.

A **fire weather watch** offers the public notice that, in the next 36 hours, **it's possible** that conditions — high winds, low humidity and dry fuels — could develop and result in uncontrollable growth of fire if ignition occurs.

A **red flag warning** means the National Weather Service has **high confidence** these dangerous fire conditions will actually come about. Fire agencies deploy resources and equipment during these events so they're well positioned if a fire does break out.

An “**extreme red flag warning**” was issued in October 2019 by the weather service's Oxnard office. It's an exceptional term meteorologists at that office couldn't recall ever making before.



Los Angeles Times



SPONSORED CONTENT

**This isn't an aquarium. This is a glimpse into another world. [↗](#)**

By Monterey County CVB

Visit Monterey County & experience endless things to do. Each trip will bring something unique & new

The phrasing was meant to [emphasize exceptional danger](#) of those particular fire weather conditions, with a forecast of winds gusting up to 80 mph, extraordinarily dry air with no chance for overnight relief, and a spate of recent weather that had already desiccated vegetation.

It was a range of extreme conditions that seemed comparable with the fire weather conditions that led to some of the most destructive fires in state history, such as the 2017 [Thomas fire](#) that killed two people and destroyed more than 1,000 structures in Ventura and Santa Barbara counties and the 2018 [Woolsey fire](#) that killed three people and destroyed more than 1,600 structures in Los Angeles and Ventura counties.

Red flag warnings ended up being in place for the windiest spots of L.A. and Ventura counties for a continuous 91 hours. That's unusually long: Red flag warnings typically last only one or two days.

Just days earlier, the weather service office overseeing the Bay Area referred to its own red flag warning as exceptionally dangerous by calling it potentially "historic" and "extreme." At the time, forecasters in the weather service's office said the duration of the [Diablo wind event](#), which persisted over two overnight periods, was making conditions particularly dangerous and potentially historic for the region.

The messaging seemed to work. Firefighters credited an extraordinary marshaling of firefighting resources as critical to keeping fires in Northern and Southern California from becoming far worse.

## **A push from autumn winds**

Conventional red flag warnings are already meant to cause the public to take notice. But there's concern some people might not take them seriously because they're issued commonly in the autumn.

That's when California regularly gets strong winds from Nevada and Utah: Dry, high-pressure air speeds into California looking for low-pressure voids on the coast.

As winds rush down mountain slopes or canyon passes, the air dries out even more and heats up, leaving vegetation parched. The winds also give a ride to airborne embers, spreading fires rapidly.

Instead of the common California weather pattern where cool, moist ocean air flows from the Pacific Ocean onto land, wind events that heighten fire weather feature dry desert air flowing from Nevada and Utah toward the California coast.

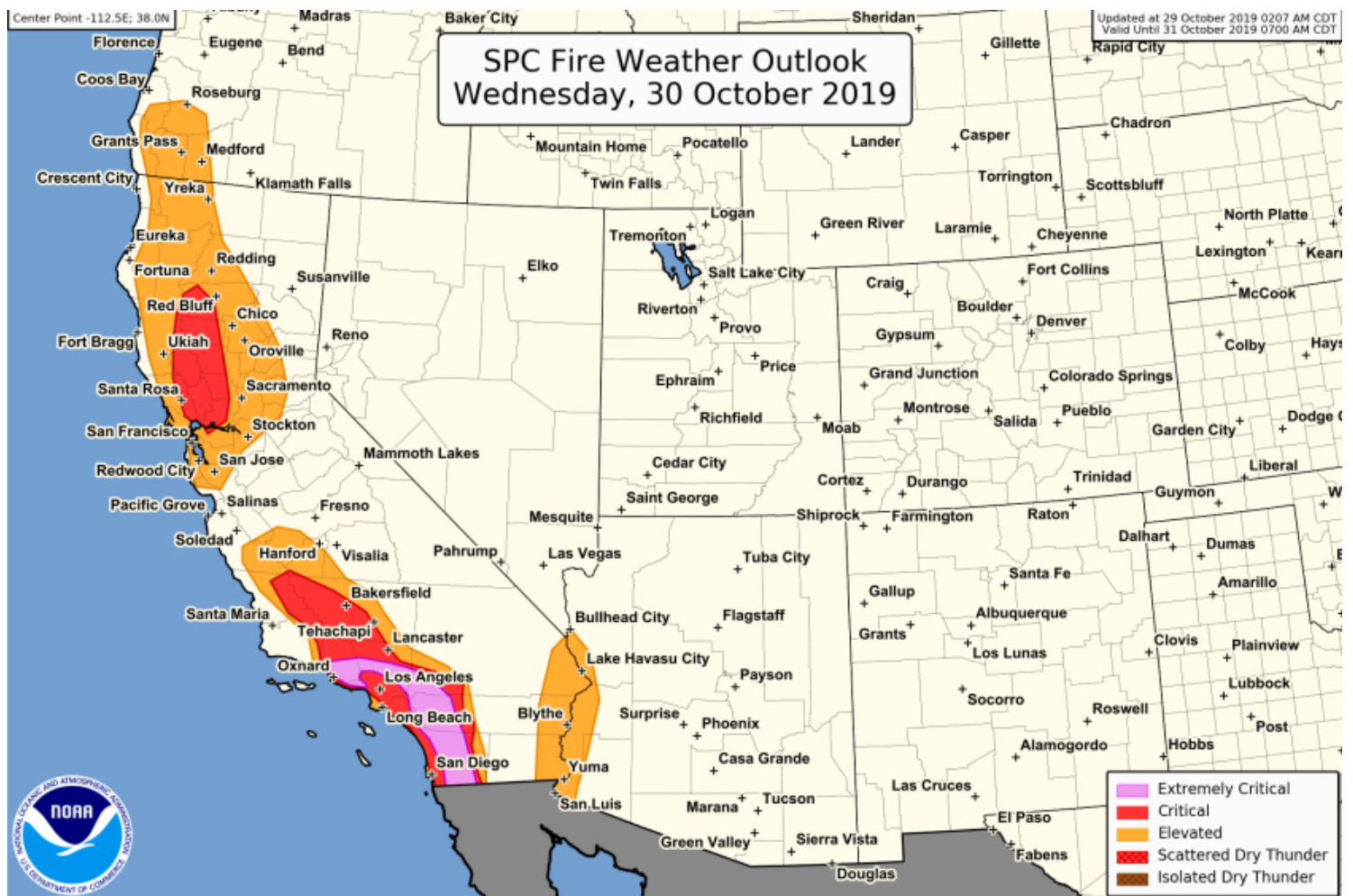
The winds come from the northeast and head southwest. In Southern California, they're called [Santa Ana winds](#); in Northern California, [Diablo winds](#). Strong winds are responsible for the rapid spread of many

of California's most destructive wildfires.

The only thing that can end a dangerous fire season is the arrival of rain. But there are signs that California's autumns are getting drier and autumn rains arriving even later than before, a trend linked to climate change that is expected to become more pronounced over time.

## Elevated, critical and extreme fire weather

The National Weather Service's Storm Prediction Center in Norman, Okla., issues a separate fire weather forecast that can map areas of the country into three categories of fire weather: elevated, critical and extremely critical (often shortened to just extreme).



An example of the elevated, critical and extreme fire weather conditions forecast in California. (National Weather Service Storm Prediction Center)

The maps can be helpful to show geographical areas where the fire threat is the most severe. The definitions can vary by region; the below definitions apply to California.

**Extremely critical:** In California, vegetation is particularly dry; sustained winds are expected at 30 mph over at least three hours; and relative humidity is 10% or less. Temperatures are at least 60 degrees in the winter or 70 degrees in the summer.

**Critical:** Vegetation is dry; sustained winds are forecast for 20 mph for a duration of three hours or more; relative humidity is 15% or less. Temperatures are at least 50 degrees in the winter and at least 60 degrees in the summer.

**Elevated:** There is no specific definition. This term can be used where some but not all the criteria for “critical” fire weather are met.

There are also two other categories: “isolated dry thunderstorms,” which refers to an elevated risk from dry thunderstorms, and “scattered dry thunderstorms,” referring to a critical risk from dry thunderstorms.

---

CALIFORNIA

FIRES

---

## NEWSLETTER

### Get our Essential California newsletter

[Subscribe](#)

Rong-Gong Lin II

[Twitter](#) [Instagram](#) [Email](#) [Facebook](#)

Rong-Gong Lin II is a metro reporter, specializing in covering statewide earthquake safety issues. The Bay Area native is a graduate of UC Berkeley and started at the Los Angeles Times in 2004.



Mary Forgione

[Twitter](#) [Instagram](#) [Email](#) [Facebook](#)

As Los Angeles Times assistant Travel editor, Mary Forgione writes and edits stories for the digital and print Travel section. She loves tips and stories about running, hiking and anything to do with the outdoors.



MORE FROM THE LOS ANGELES TIMES

CALIFORNIA

### California Housing Crisis Podcast: Fires prompt doomsday predictions

13 minutes ago

CALIFORNIA

### Fresno shooting: Police search for gunmen who killed 4, injured 6 at backyard party

1 hour ago

CALIFORNIA

### Our wacky weather: From record heat to snowfall as first storm of season rolls in

Nov. 18, 2019

CALIFORNIA

### California's changing demographics will further doom Republicans

Nov. 18, 2019

#### Around the Web

Ads by Revcontent



**The One Meat You Should Never Feed Your Dog**

DR. MARTY



**Top Gut Doctor: I Beg All Americans To Throw Out This Vegetable**

UNITED NATURALS



**25 Cool Christmas Gifts That Will Sell out Before Thanksgiving**

TRENDINGSCANNER



**Organic Bourbon Barrel-Aged Maple Syrup**  
STONEWALL KITCHEN



**Read This Before Going Solar in California (It's Genius)**  
UNDERSTAND SOLAR



**3 Ways Your Cat Asks for Help**  
DR. MARTY

ADVERTISEMENT

---

**LATEST CALIFORNIA >**

**CALIFORNIA**

**At Nic's sandwich shop, Paradise residents can have a beer, bump into friends and feel OK**

Nov. 18, 2019

---

**CALIFORNIA**

**In the Sierra, scientists bet on 'survivor' trees to withstand drought and climate change**

Nov. 18, 2019

---

**CALIFORNIA**

**California remains the top U.S. destination for foreign students, yet enrollment is slipping**

Nov. 18, 2019

---

**CALIFORNIA**

**California uses minors to bust illegal tobacco and alcohol sales. It hasn't done the same with pot**

Nov. 18, 2019

---

**CALIFORNIA**

**Stunned with grief after Saugus shooting: 'The scares and trauma we see on TV came to Santa Clarita'**

Nov. 18, 2019

---

ADVERTISEMENT

# Los Angeles Times

[Subscribe for unlimited access](#)

## Follow Us



---

Copyright © 2019, Los Angeles Times | [Terms of Service](#) | [Privacy Policy](#)