

**EARTHQUAKE
WARNING
CALIFORNIA**



Don't Get Caught Off Guard

A Walkthrough of Earthquake Warning California
Tools and Resources

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Earthquake Warning California

Earthquake Warning California is the state's **earthquake early warning system**, which provides tools and resources to warn Californians before they feel shaking.

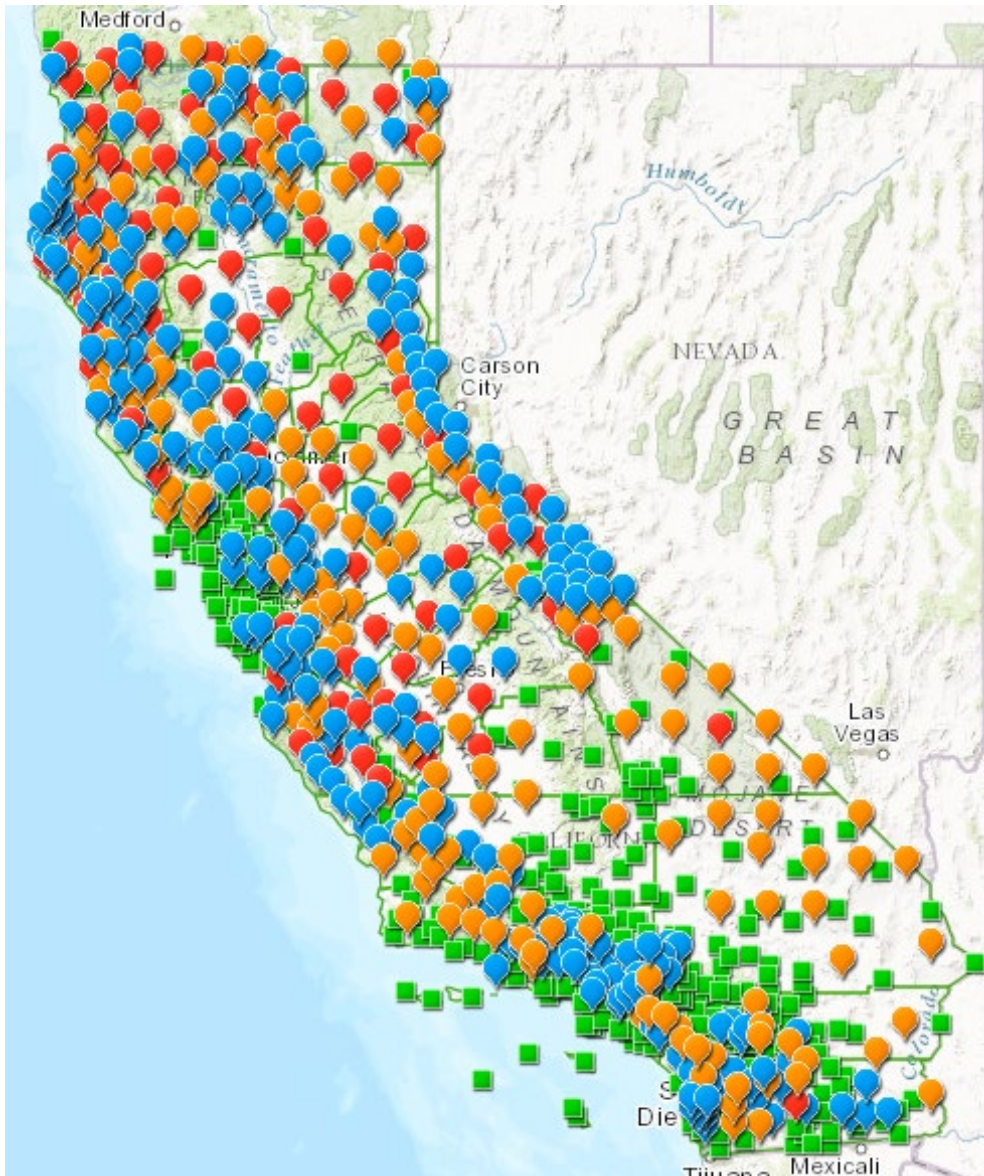
The system relies on **innovative technology** that sends warnings to smartphone applications, operating systems, and Wireless Emergency Alerts (WEA).

It can help the public, first responders, utility providers, transit systems and other key industrial and business sectors **take actions to save lives**.

Visit www.earthquake.ca.gov to learn more.



Statewide Seismic Network Overview



- Sensor Network:
 - 1,115 sensors statewide when complete
- **Green** = sensors currently contributing
- **Red** = NEW strong-motion and broadband sensors
- **Orange** = NEW strong-motion sensors
 - **Both sites:** arbitrary assigned by algorithm
- **Blue** = sites to be upgraded



CEEW System Operations

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MyShake App

MyShake is an app for mobile devices that uses ground motion sensors from across the state to detect earthquakes before humans can feel them.

It warns Californians to “**Drop, Cover, and Hold On**” in advance of an earthquake, if they are near where the shaking is happening.

Download the app for free via Google Play or the Apple App store.

Location services must be set to “always on” to allow the app to provide warnings.

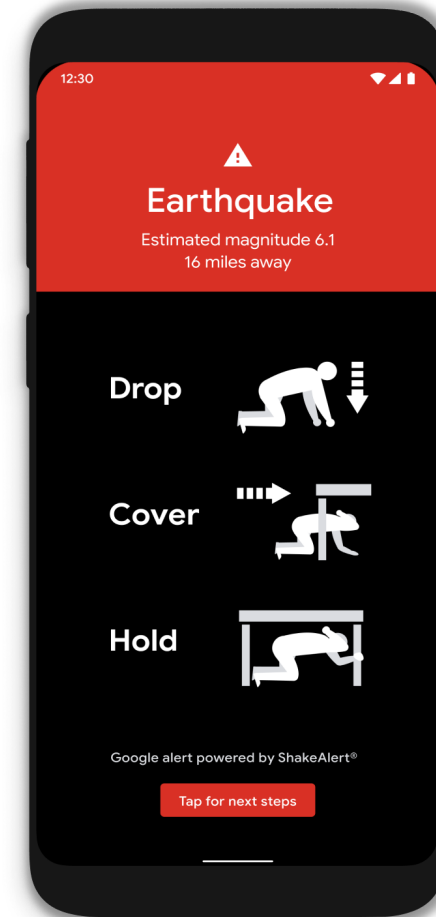
Data is collected by UC Berkeley to show trends and improve app earthquake monitoring, with **no personal or identifying information taken from users**.

The screenshot displays the 'NOTIFICATIONS' section of the MyShake app. At the top right, there is an 'EDIT' link. Below this, the 'EARTHQUAKE WARNINGS' section is visible. It contains text stating: 'Alerts delivered in California for Magnitude 4.5 and higher earthquakes in light to heavy shaking areas.' Below this, it says: 'Locations services must be on to receive alerts, only approximate locations are used (currently off)'. A green button labeled 'Click for Alert Sound' is present. At the bottom of this section, it says 'Powered by' followed by the 'EARTHQUAKE WARNING CALIFORNIA' logo and the 'ShakeAlert' logo. Below the warnings section is the 'RECENT EARTHQUAKE EVENTS' section. It starts with the text 'Events may take a few minutes to hours to arrive'. There is a toggle switch for 'Global' which is currently turned on. Below the toggle, it says 'MAGNITUDE 3.5 and above'. At the bottom of the app interface, there is a navigation bar with five icons: 'Recent' (a target icon), 'MyShake Data' (a waveform icon), 'My Log' (a document icon), 'Notifications' (a bell icon), and 'More' (a hamburger menu icon).



Android Earthquake Warnings

- Google partnered with the United States Geological Survey (USGS) and Cal OES to include built-in **earthquake warning technology** in its Android phones beginning in August 2020.
- The capability is included in **new phones** and **operating system updates** so warnings will be sent out to all California Android phones unless the user chooses to “opt-out”.
- Android Earthquake Warnings are generated by the same system powering Earthquake Warning California.



Wireless Emergency Alerts

ALERTING THRESHOLDS



INTENSITY	SHAKING
I	Not felt
II	Weak
III	Weak
IV	Light
V	Moderate
VI	Strong
VII	Very Strong
VIII	Severe
IX	Violent
X	Extreme

WEA used in response to magnitude 5.0 earthquake to people who will experience shaking level IV (light) or greater.

MyShake alerts used in response to magnitude 4.5 earthquake to people who will experience shaking level III (weak) or greater.

Android alerts used in response to magnitude 4.5 earthquake to people who will experience shaking level III (weak) or greater.

Wireless Emergency Alerts (WEA) send geographically targeted, text-like messages to mobile devices to warn users of imminent threats in their area.

Authorized national, state, or local government authorities can send WEA warnings for incidents such as Amber Alerts, severe weather warnings, or **earthquakes with a magnitude greater than 5.0.**

Users must **“opt-in”** on their mobile device settings to allow WEA notifications.

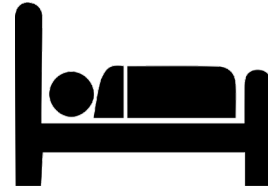


Earthquake Safety Tips

Here are a few ways to protect yourself the right way:



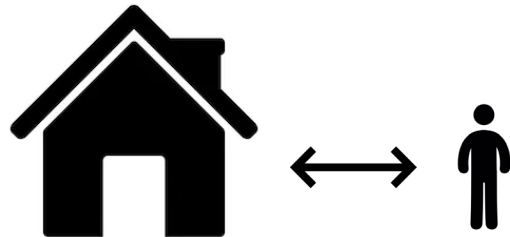
**When driving, pull over and stop.
Set your parking brake.**



**If you are in bed, turn face
down and cover your head
and neck with a pillow.**



**Do not get in a
doorway.**



**If you are outdoors, stay
outdoors away from
buildings.**



Do not run outside.



“Don’t Get Caught Off Guard” Campaign



- 2-year campaign to promote earthquake warning tools and Cal OES resources:
 - Advertising to promote Earthquake Warning California
 - Public education
 - Outreach to business and community partners
 - Media engagement
- Cal OES is engaging with a variety of partner organizations to present Earthquake Warning California information, share materials, and distribute information as widely as possible.



Using Earthquake Warning California Resources

1

Download the MyShake App and **enable WEAs** on mobile devices. Be among the first “citizen scientists” to receive earthquake warning information and help build a comprehensive seismic monitoring network.

2

Visit www.earthquake.ca.gov to see the latest news and information to help promote earthquake warning resources across California.

3

Help spread the word by signing up to receive our partner toolkits and materials to share – email earthquakeinfo@caloes.ca.gov. Toolkits contain newsletter content, social media posts, imagery, and the latest news from Cal OES that organizations can tailor for their audiences.



Earthquake Warning California in Practice



Photo source: www.bart.gov



Photo source: www.facebook.com/EagleRockHighSchool/



Photo source: www.cedars-sinai.org



Questions and Answers



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For more information:

Visit: www.earthquake.ca.gov

Email: EarthquakeInfo@CalOES.ca.gov

