

EARTHQUAKE WARNING CALIFORNIA



Earthquake Warning California

Scientists are still unable to predict earthquakes, but thanks to new technology, individuals and organizations can potentially receive a few seconds of notice to take appropriate safety precautions before an earthquake strikes. Earthquake Warning California utilizes the California Integrated Seismic Network, which is a partnership between Cal OES, United States Geological Survey (USGS), UC Berkeley, the California Institute of Technology, and the California Geological Survey. The system uses ground-motion sensors to detect earthquakes that have already started and estimates their size, location, and impact. When it detects a significant magnitude, the system issues a ShakeAlert® Message, providing a warning before shaking begins. To receive earthquake warnings, for individuals and family members should download the MyShake App and ensure phone settings are adjusted to receive emergency alerts, including:

- **Wireless Emergency Alerts (WEAs):** No-cost text messages for emergency situations (magnitude 5.0 or higher and Modified Mercalli Intensity IV shaking);
- **MyShake App:** Free smartphone app that provides iPhone and Android users with audio and visual warnings (magnitude 4.5 or higher and Modified Mercalli Intensity III shaking). Available in the Apple App and Google Play stores; and
- **Android Earthquake Alerts:** Android phones with updated operating systems are automatically subscribed to Android Earthquake Alerts, which uses the same technology as the MyShake App.

DON'T GET CAUGHT OFF GUARD

Earthquakes can happen in California at any time and with new technology, warning is possible! The telecommunications sector should be appropriately prepared to react and respond quickly when an earthquake occurs. The California Governor's Office of Emergency Services (Cal OES) invites the telecommunications sector to learn about how you can receive warning before you feel shaking with California's comprehensive earthquake warning program, "Earthquake Warning California." The program includes tools and resources to help warn Californians and visitors as soon as shaking is detected.

This document is intended to supplement existing emergency preparedness procedures. Please review existing organizational earthquake preparedness plans for full instructions on how to proceed during an emergency.

Benefits and Applications

Earthquake Warning California can enable telecommunication facilities to take protective actions as soon as possible, ideally before shaking begins or becomes too intense for effective response. Once an earthquake is detected and analyzed in real time to exceed an expected intensity threshold, a warning message is delivered via smartphone or other telecommunications technology to users in locations that might be affected. This also provides a warning to telecommunications providers who may take appropriate action with the goal of maintaining services to a greater extent than without a warning; such action may include enabling generators to be switched on, anticipation of traffic surges, traffic loads to be redirected, etc.

Getting Prepared

Telecommunications are an essential part of rapidly deploying assistance following an emergency. Emergency response services such as police officers, fire fighters, and ambulatory services rely heavily on telecommunications to protect and save lives. Below are five tips that can aid telecommunications providers in the preparation process:

- 1. Understand Local Hazard Vulnerability.** Assess the community's vulnerability to hazards and prioritize preparedness measures for specific areas. Be sure to assess infrastructure at risk, such as inundated call channels, telephone lines, and satellite communication infrastructure.
- 2. Community Preparedness Roles.** Coordinate support with other telecommunication partners to ensure ongoing connectivity and tactical capabilities, such as satellite, radio, high frequency, data, and cellular capabilities in the event of an emergency. Work with emergency personnel to establish lines of communication in the event of a system overload, such as the use of pagers, two-way radios, and other tools. Ensure all instructions for system users are in layman's terms so they are easy to follow.

- 3. Download the MyShake App and Adjust Phone Settings.** The MyShake App, Android Earthquake Alerts, and WEAs can supplement existing warning systems and give employees time to take cover before shaking starts. Demonstrate to employees what an earthquake warning sounds and looks like. Employees should take steps to ensure earthquake warnings can be activated and heard in an emergency situation, such as ensuring their phone location settings are set to "always on" for the MyShake App and Android Earthquake Alerts to work properly.

- 4. Include Earthquake Warnings in Telecommunications Emergency Plans.** Telecommunications should evaluate which functions of their operations can be automatically enabled in advance of an earthquake and which can be quickly done by employees while still keeping them safe. This may include putting equipment into safety mode or reprovisioning connections to avoid data loss. Determine whether capabilities are available to automatically implement emergency protocols when a warning is issued.

- 5. Education the Public.** In major catastrophes, telecommunications channels can easily be overwhelmed as family and friends make efforts to check in on loved ones, post their status to social media, and calls for help go out to emergency lines. Consider providing public education materials on the use of communication channels in an earthquake to help lines stay open for emergency response, including using text messaging and limiting social media and voice calling. Identify individuals that may be at risk in the event of a downed power line or other infrastructure failure, and work with the community to reinforce existing structures and educate them on actions to take to stay safe when an earthquake warning is issued.



For more information: Earthquake Warning California is managed by Cal OES. It provides individuals, organizations, and communities with easily accessible earthquake warning and emergency preparedness information, as well as resources. For the latest news and resources, visit earthquake.ca.gov. Send questions or comments regarding this fact sheet to earthquakeinfo@caloes.ca.gov.

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