

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.

Earthquakes can happen in California at any time and with new technology, warning is possible! Businesses should be appropriately prepared to react and respond quickly when an earthquake occurs, including using earthquake warnings as part of their preparedness efforts. The California Governor's Office of Emergency Services (Cal OES) invites businesses to learn about how they can receive warning before shaking is felt with the state'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 organizational existing earthquake preparedness plans for full instructions on how to proceed during an emergency.

To receive earthquake warnings, individuals and family members can 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.

Benefits and Applications

While most businesses in California can benefit from an effective earthquake warning system, those businesses that operate potentially dangerous (e.g. high-heat boilers, moving heavy equipment) or hazardous equipment/facilities (e.g. chemical use / storage) represent inherently high-risk work environments where a large earthquake can magnify the level of risk for employee injury/fatality and property damage. Worker safety is a factor for all businesses in California, and the primary benefit of Earthquake Warning California is preventing injuries and deaths.

Additionally, businesses operating sensitive or critical equipment/machinery may be able to automatically put equipment and machinery into a safe position or mode, preventing an accidental release of dangerous materials.

Earthquake Warning California benefits:

- Prevent injuries to workers
- Prevent or mitigate damage to sensitive and critical equipment
- Provide workers with warning to drop, cover, and hold on and to avoid dangerous areas
- Avoid lengthy recovery and downtime periods
- Prevent repair or recalibration of equipment
- Avoid lost operational time needed to hire and train replacement workers
- Prevent the loss of operational downtime and lost revenue
- Prevent the potential release and subsequent cleanup of hazardous materials

Getting Businesses and Employees Prepared

Careful planning can help ensure the safety of employees and customers if an earthquake occurs. Below are five tips that can aid in the preparation process:

1. Identify Risks and Hazards.

By identifying potential hazards specific to each business, business leaders can better understand how to prepare and mitigate the risks of an earthquake. For example, what types of equipment or processes could pose a potential threat in an earthquake situation? Is there a "safe mode" that can be automatically turned on when shaking occurs? Is heavy office equipment bolted down? Assess risks early and often as part of a regular business operations plan. One of the first steps is to identifying potential hazards and risks. Survey the area and property, both internal and external.

Potential Internal Hazards:

- Unbraced shelves
- Filing cabinets and other large furniture not bolted or anchored to the floor or wall studs
- Heavy or breakable items on high shelves or bookcases
- Not backing up computer data and/or not storing data offsite
- Non-structural components (e.g., architectural elements, light fixtures, storage racks, water heater, HVAC equipment, piping)

Potential Internal Hazards:

- Business located near a railroad, airport, freeway, or other major transportation infrastructure
- Downed power lines or levees
- Poor building infrastructure (e.g., concrete buildings, unreinforced masonry, soft story configuration, cripple walls)

2. Include Earthquake Warnings in Emergency Preparedness and Mitigation Plan.

Business preparedness plans should include measures to protect the safety of all employees and any customers, delivery persons, or other individuals that may be onsite. Assess both non-structural mitigation activities (e.g., securing shelves, anchoring filing cabinets, automatic fire sprinklers) and structural risk (e.g., reinforcing walls, anchored roof system) to determine where improvements can be made. Be sure all emergency exits are appropriately marked and accessible at all times. If possible, identify how to put machinery that could pose a major hazard into safe mode.

3. Schedule Practice Drills.

All employees should be appropriately trained through practice drills. These exercises provide opportunities to practice with community partners and identify gaps or weaknesses in existing emergency plans. Make sure employees know what actions to take whether in the office, warehouse, working from home, on the road, or out in the field.

4. Download the MyShake App or Adjust Phone Settings.

The MyShake App, Android Alerts, and WEAs can supplement existing warning systems and give employees time to take cover before shaking starts. Businesses that supply employees with phones should consider steps to ensure a warning can be activated in an emergency situation, such as setting phone location settings to “always on.” For businesses that do not supply phones, consider providing information about how to download the MyShake App, or enable Android Alerts or WEAs to all employees.

5. Share Information.

Remind employees that natural disasters can strike at any time in California. Individuals that are prepared and know the appropriate steps to take during and after an earthquake can mitigate injuries or fatal hazards. Encouraging other community businesses to develop an emergency preparedness plan can help protect and build a resilient community.



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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.

For information, questions, or comments relating to this fact sheet, email Cal OES at: earthquakeinfo@caloes.ca.gov.