

## Earthquake Warning California For K-12 Education

### Don't Get Caught Off Guard

Earthquakes can happen in California at any time. K-12 education 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 teachers, staff, parents, and students to learn about important resources that can help them to prepare and respond when an earthquake happens. This fact sheet outlines some of the resources available through "Earthquake Warning California," California's statewide earthquake warning system, and how they can be applied in K-12 school settings.

This document is meant to supplement existing emergency preparedness procedures and help all Californians to learn about available earthquake warning tools and resources to help ensure their safety. School administrators should review existing campus earthquake preparedness plans for full information on what to do in an emergency situation.

### Earthquake Warning California

Scientists are still unable to predict earthquakes, but thanks to new technology, individuals and organizations can potentially receive a few seconds notice to take appropriate safety precautions before an earthquake strikes. Earthquake Warning California is the first statewide earthquake warning system in the nation, and includes tools such as:

- **Wireless Emergency Alerts (WEAs)** that deliver no-cost text messages for emergency situations for earthquakes magnitude 5.0 and higher;
- **MyShake App**, a free smartphone application that provides users with an audio and visual warning for earthquakes magnitude 4.5 and higher; and
- **Android Alerts** that use the same ground sensor technology as the MyShake App and are automatically included in Android phones with updated operating systems.

Earthquake Warning California uses technology to detect earthquakes that have already started and ground motion sensors to estimate the earthquake size, location, and impact. When the estimate predicts a strong enough magnitude, Earthquake Warning California quickly issues a warning through its various communication channels (MyShake App, etc.) to warn mobile device users nearby that shaking is about to

occur. When users receive warning, they should immediately take steps to protect themselves, such as to drop to the ground, cover their heads with their arms, and hold onto their necks with both hands until shaking stops.

## **Benefits and Applications**

Certain K-12 educational settings pose above average risks during an earthquake, including science labs, libraries, storage areas, and buildings known to have structural hazards. Younger and special needs children are especially at risk because they may take longer to process situations before protecting themselves. Most public schools in California are already required to conduct annual earthquake training drills for students and staff, which could easily incorporate the earthquake alert system. Most schools are also equipped with a Public Address (PA) system that can communicate verbal messages and announcements in an emergency.

K-12 schools can incorporate Earthquake Warning California resources as follows:

- Integrate a hard-wired interface between the earthquake warning system and the school's PA or alarm system
- For special needs students, consider additional warning tools such as television screens or blinking lights
- In the event of an earthquake warning, train teachers and staff to shout to students to drop, cover, and hold, and do the same themselves
- If possible, office staff should use the PA system to warn students and others on the premises to take cover if a warning is issued
- If children are in a moving bus, the driver or other relevant staff should take steps to safely slow and stop the bus (see the "Transportation" fact sheet for more information on steps for transit to take in an emergency situation).

### Earthquake Warning California Benefits

- Reduce injuries and deaths
- Less stress among students when performing drop, cover, and hold on
- Allow emergency responders to focus on other high priority rescue efforts in event that injuries at K-12 are minimal
- Student trained to respond to earthquake warnings can educate and benefit their own families

### Earthquake Warning California Costs

- Cost of interface between earthquake warning system and PA system
- Installation cost, including IT staff time
- Annual technology cost, such as internet
- Annual maintenance and service cost for equipment

- Staff time to teach students about Earthquake Warning California resources and how to take protective actions

## **Getting Your School, Staff, Parents, and Students Prepared**

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

- 1. Building Safety & Securing Furniture.** Ensure school buildings meet current earthquake protection standards. Anchor shelves, audio-visual equipment, and other heavy objects to the wall. Make sure no classroom decorations are in places that can fall and injure students or teachers. For at-home learning, ensure students are aware of places to take shelter in the event of an earthquake, such as under a sturdy table. Do not stand in doorways.
- 2. Create An Emergency Plan With Emergency Supplies.** Each school should have a clear emergency plan that all staff, students, and parents understand. The Department of Education sponsors the [Readiness and Emergency Management for Schools](#) (REMS) website, which includes free resources and links to publications to aid in developing a [school-wide emergency plan](#). Consider how to tailor instructions for at-home learning environments.
- 3. Practice Earthquake Drills and Evacuation Plans.** Students, staff, and teachers should be familiar with safety procedures such as to drop, cover and hold on. A carefully planned and practiced evacuation plan can not only help administrations figure out the process, but prepare students to quickly and safely evacuate during an emergency. If schools don't already have a practice drill planned, setting aside a day for an earthquake drill. Adapt drills for at-home learning as necessary.
- 4. Download or Enable Earthquake Warning California Resources.** Schools typically have a strong warning system in place and are equipped with automatic alarms to contact emergency services. The MyShake App, Android Alerts, and WEAs can supplement existing warning systems and give students and teachers time to take cover before shaking starts. Demonstrate to students what an earthquake warning sounds and looks like. Teachers, students, or other instructors with access to mobile phones should be familiar with enabling phones to sound a warning in an emergency situation, such as ensuring their phone location settings are set to "always on." Earthquake warnings do not override silent and "Do Not Disturb" settings.

- 5. Encourage Teachers, Parents, and Students to Be Prepared.** Remind parents, caretakers, and students that natural disasters can strike at any time. Families, caretakers, and students should have their own emergency plan in place, practice drills at home, and be familiar with Earthquake Warning California resources and how to use them.

### **For More Information**

Earthquake Warning California is a comprehensive program of earthquake warning services managed by the California Governor's Office of Emergency Services (Cal OES). The goal of the program is to provide individuals, organizations, and communities with direct and easily accessible emergency preparedness information and resources to keep individuals and families safe in an emergency situation. Visit the Earthquake Warning California website for the latest tools, news, information, and resources: [www.earthquake.ca.gov](http://www.earthquake.ca.gov).

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