OREGON OFFICE OF EMERGENCY MANAGEMENT

ShakeAlert in Oregon

Fact Sheet: March 1, 2021

ShakeAlert™

WHAT: **ShakeAlert® earthquake early warning system, powered by USGS,** is an infrastructure of sensors, technology and systems in place along the West Coast to detect significant earthquakes quickly so that alerts can reach people before shaking arrives. Seconds of advance warning allows people **precious seconds to take protective actions to mitigate injuries and casualties, and infrastructure damage, before the shaking arrives at their location.**

ShakeAlert detects earthquakes that have already begun. It does not predict when or where an earthquake will occur or how long it will last. Depending on your location, alerts may not occur before shaking begins.

WHEN: As of 10 a.m. on March 11. This date coincides with the 10th anniversary of the M 9.1 Great Tohoku, Japan earthquake. Like Japan, a subduction zone earthquake lies off the coast of Oregon, capable of generating M9.0 earthquakes. Even seconds of warning can save lives and protect infrastructure.

No specific actions need to be taken on March 11. See next section on how to ensure you can receive alerts.

WHO: The ShakeAlert® Earthquake Early Warning System is a program of the U.S. Geological Survey.

HOW: ShakeAlert powered alert delivery to the public via Wireless Emergency Alerts (WEA) like a severe weather alert or an Amber Alert. The device makes a distinctive notification sound and the alert pops up in a text window on the screen. In the case of an earthquake alert, the WEA text will read: *"Earthquake Detected! Drop, Cover, Hold On. Protect Yourself. -USGS ShakeAlert."* This message is available in Spanish for phones set to receive alerts in that language. Some devices with text-to-voice capability may read out the message text.

- One mobile app is currently available in Oregon: **QuakeAlertUSA.** The QuakeAlert app uses data provided by the USGS and ShakeAlert. It sends

an alert that earthquake has occurred to your mobile device. Information includes expected shaking intensity at your location and the time until the expected shaking, along with a message instructing you to drop, cover and hold on.

- Cell Phone Operating Systems: In 2020, Google released an earthquake alert feature that is powered by ShakeAlert. This service is only available on wireless devices using the Android operating system.
- Apps and OS thresholds are magnitude 4.5 or greater and shaking intensity 3.0 or greater, the public may get an alert delivered on their cell phone via the WEA system

OTHER: ShakeAlert infrastructure is already in place along most of the West Coast, and is operational for automatic-action systems such as water utility valve shutoffs and starting back-up generators.

When you receive an alert: Take protective action: Drop, Cover and Hold On (DCHO). Do not risk injury by moving to another location or outside; earthquakes occur without warning and may be so violent that you cannot run or crawl. Guidelines for what to do if you are disabled, not at home/work and other locations at www.shakeout.org

News releases from OEM about ShakeAlert are translated to Spanish, Vietnamese AND Russian. The USGS ShakeAlert toolkit is available in English, Spanish, Chinese, Tagalog, Vietnamese and Russian

RESOURCES:
ShakeAlert
How does ShakeAlert work? IRIS Video
USGS
University of Oregon – Oregon Hazards Lab
Pacific NW Seismic Network -
Oregon Department of Mineral and Geologic Industries
Two Weeks Ready
Earthquake Safety Information
Tsunami Safety Information
Living on Shaky Ground (English) (Spanish)
Without Warning Earthquake
Without Warning Tsunami (English) (Spanish)
Oregon Seismic Safety Policy Advisory Commission (OSSPAC)
Oregon Resilience Plan
Cascadia Region Earthquake Workgroup (CREW)
Cascadia Island Mapping