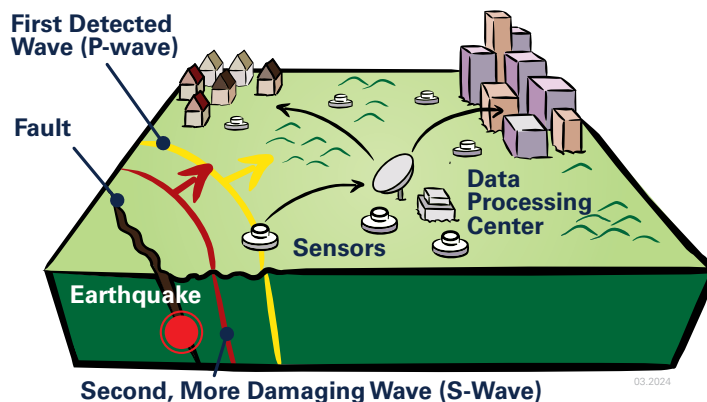


## NATIONS COLLABORATE ON PUBLIC SAFETY

# Earthquake Early Warning in the US and Canada

Earthquakes happen across the globe, including in the United States and Canada. The United States Geological Survey and Natural Resources Canada are collaborating to advance public safety through Earthquake Early Warning (EEW). Earthquakes threaten the safety of people and infrastructure across geopolitical boundaries. For this reason, collaboration is key to safety in these neighbouring nations, particularly in border areas.



If you **FEEL SHAKING** or **GET AN ALERT**...

When possible:			
	<b>DROP!</b>	<b>COVER!</b>	<b>HOLD ON!</b>
Using a cane?			
	<b>DROP!</b>	<b>COVER!</b>	<b>HOLD ON!</b>
Using a walker?			
	<b>LOCK!</b>	<b>COVER!</b>	<b>HOLD ON!</b>
Using a wheelchair?			
	<b>LOCK!</b>	<b>COVER!</b>	<b>HOLD ON!</b>
In a bed?			
	<b>TURN!</b>	<b>COVER!</b>	<b>HOLD ON!</b>

If driving?			
	<b>PULL OVER</b>	<b>SET BRAKE</b>	<b>STAY INSIDE</b>

## What is Earthquake Early Warning?

EEW systems rapidly detect and process information from earthquakes that have already begun so alerts can be delivered to people and infrastructure, providing seconds of advance warning before damaging shaking is felt. **EEW is not earthquake prediction.**

During an earthquake, a rupturing fault produces several different kinds of waves that send energy away from the epicenter, like ripples from a rock thrown into a pond. Seismic stations first detect the fast-moving P-wave and that information is sent to a processing center where the location, size (magnitude), and shaking of the earthquake is estimated. The goal of EEW is to deliver an alert before the slower and usually more damaging S-waves arrive.

People may receive an alert before, during, or after shaking arrives, depending on their distance from the epicenter and the mechanism used to receive the alert. One should take immediate protective action when shaking is felt or an alert is received.

## Why is Earthquake Early Warning Important?

**EEW can save lives, mitigate harm, and protect critical infrastructure and systems.** Many people will receive alerts through their cell phones, giving them time to take a protective action, such as Drop, Cover, and Hold On. Other protective actions may be recommended for individuals to adapt to their situation and environment. Alerts can also trigger automated safety actions, such as slowing trains, closing bridge gates, shutting water utility valves, and opening firehouse doors.

## How are the US and Canada Collaborating to Keep You Safe?

Earthquake Early Warning (EEW) is an ideal example of international partnership that includes collaboration among federal, Indigenous, Tribal, state, provincial, territorial, and local partners to advance public safety. Both systems share science, algorithms, real-time data, and public safety information. For example, an earthquake that is large enough to produce significant shaking in many parts of British Columbia and the US West Coast will be detected by both EEW systems. Alerts may be delivered on both sides of the border by each country's EEW system. People near the border may receive multiple alerts triggered by either or both EEW systems. **The key is to take a protective action immediately, regardless of where the alert originated.**

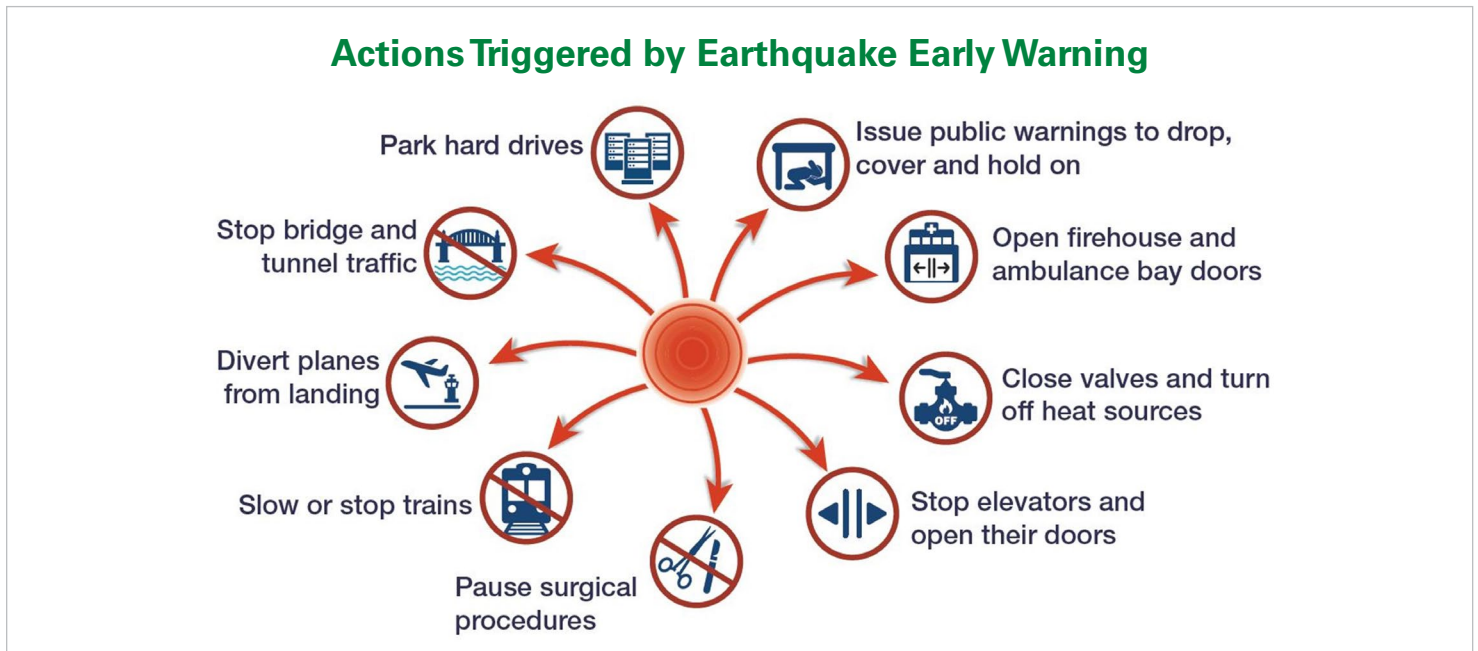
## About ShakeAlert® on the US West Coast

The ShakeAlert EEW System operates in the states of California, Oregon, and Washington, as well as 146 Tribal Nations, and is managed by the United States Geological Survey. The ShakeAlert System protects people and infrastructure by delivering alerts to cell phones and triggering automated actions. Alerts delivered to phones can be received on both iOS and Android operating systems. Look [here](#) to learn more about how to receive ShakeAlert-powered alerts in the US on your cell phone.



## About Earthquake Early Warning in Canada

Working with federal, Indigenous, provincial, and territorial organizations, Canada has developed a national EEW system for at-risk regions of the country: western British Columbia, eastern Ontario, and southern Quebec. Canada's EEW system will alert the public through the National Public Alerting System, via compatible wireless devices, radio, and cable and satellite television. The Canadian EEW system will also directly alert the system's technical partners, such as operators of critical infrastructure (e.g., transportation, healthcare, utilities) to trigger actions that enhance safety, such as those shown in the graphic below.



For more information about the Canadian EEW system, look [here](#) or scan the QR code.