ShakeAlert™

Protecting Washington Schools from Damaging Earthquakes

Partners in Emergency Preparedness – April 4, 2024

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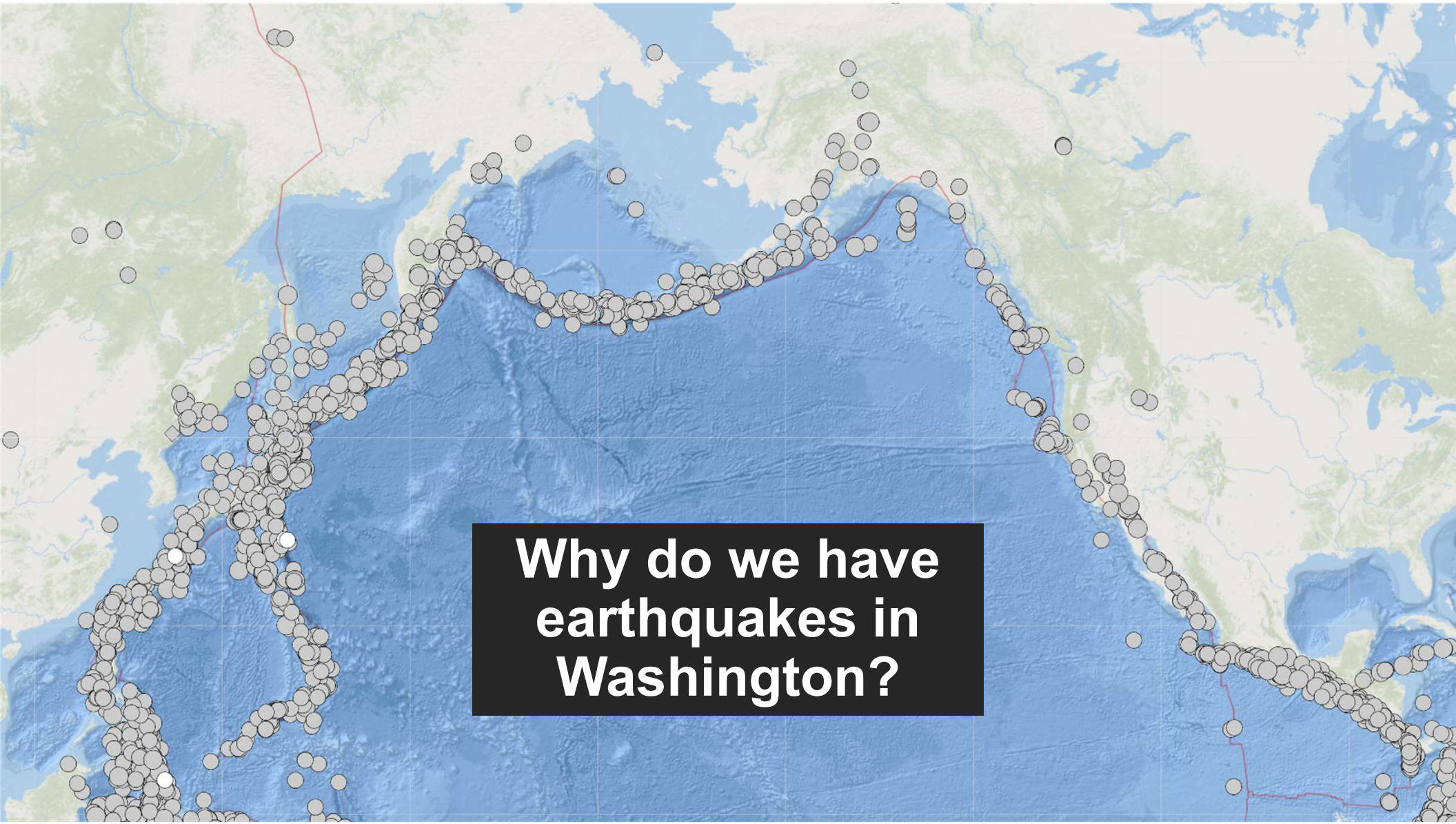
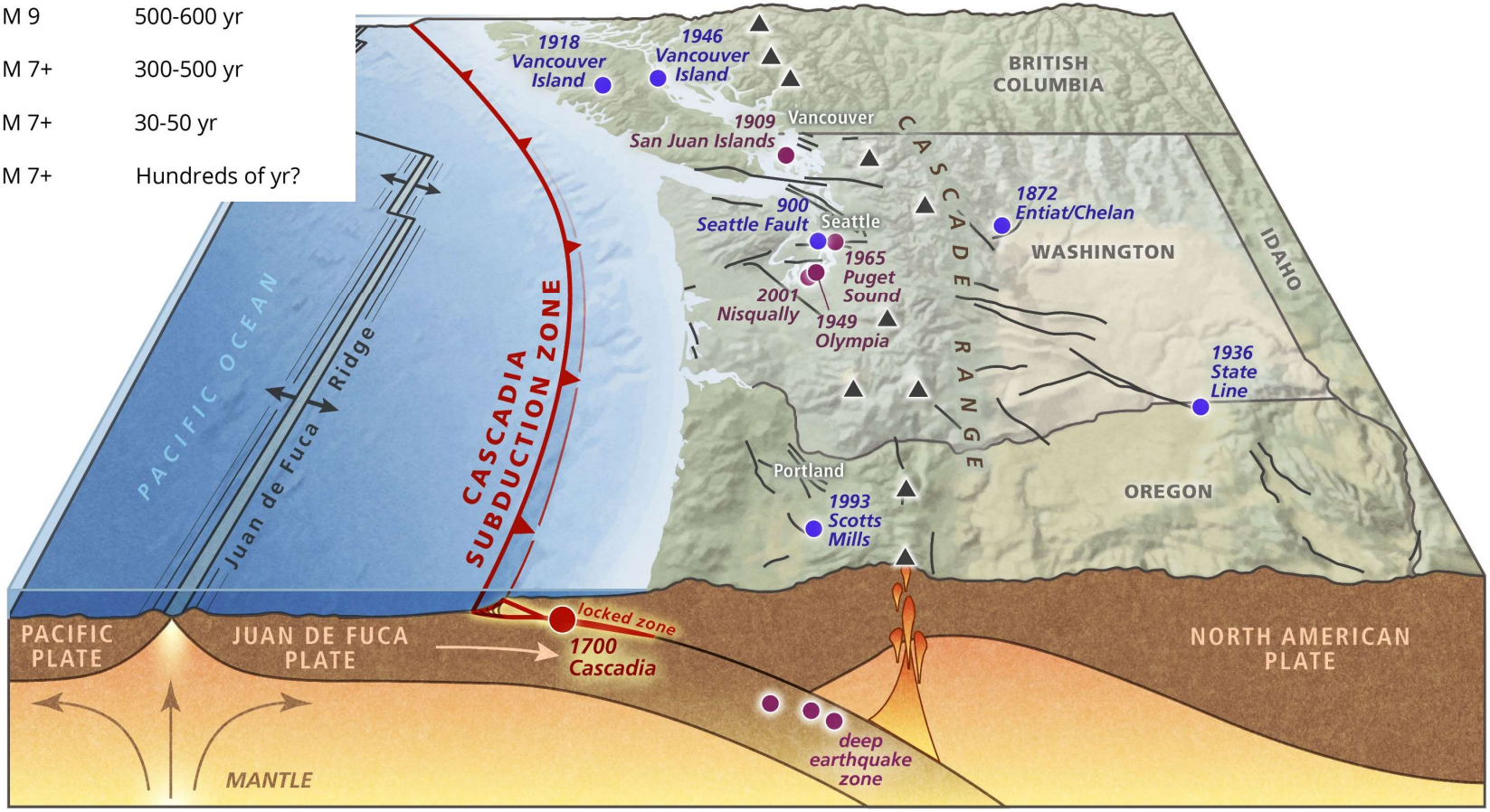
University of Washington – Pacific Northwest Seismic Network

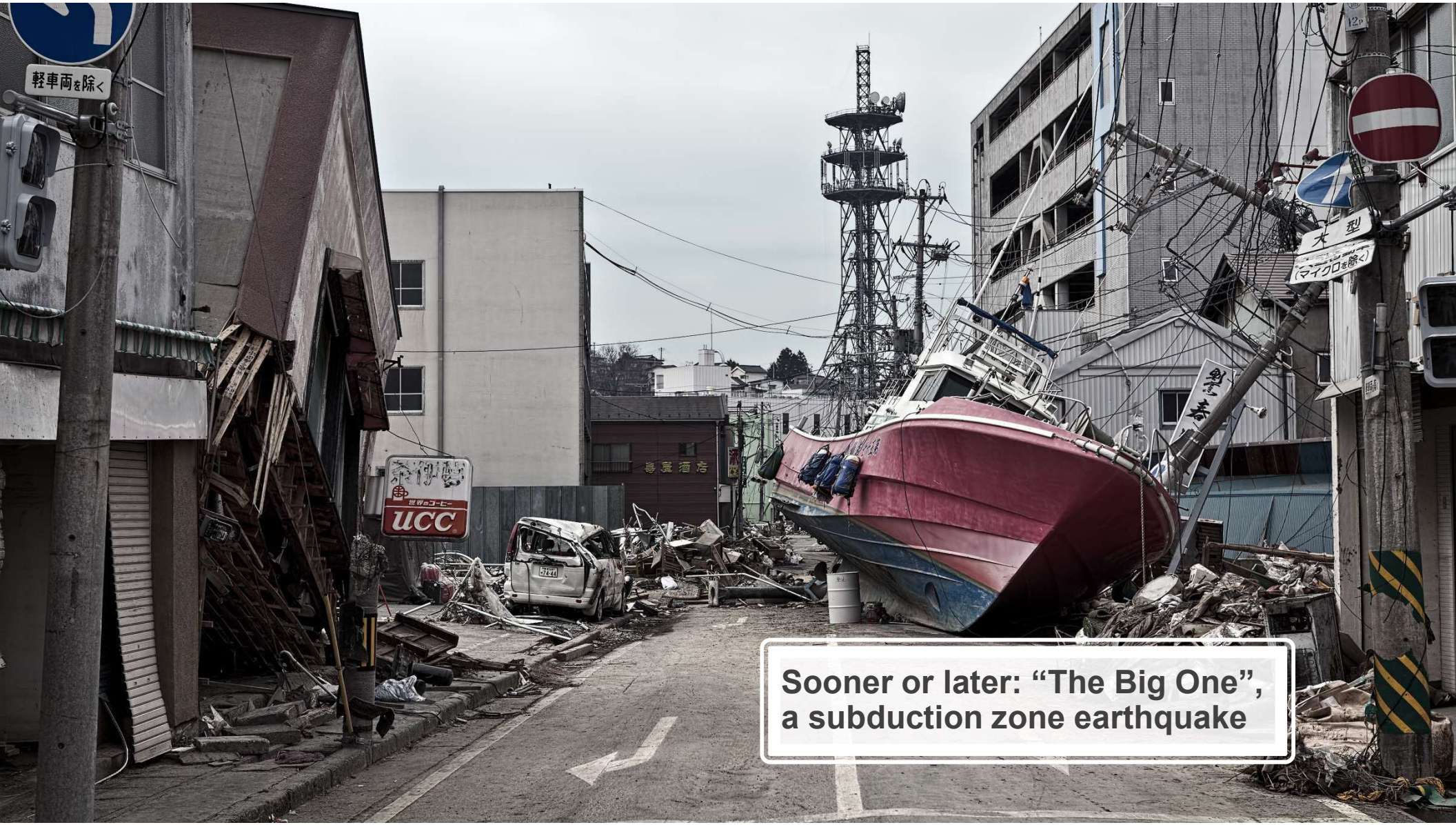

Why do we have earthquakes in Washington?

There are 3 kinds of earthquakes that affect us

Source	Max. Size	Recurrence
Subduction Zone	M 9	500-600 yr
	M 7+	300-500 yr
Deep Juan de Fuca plate	M 7+	30-50 yr
Crustal Faults	M 7+	Hundreds of yr?



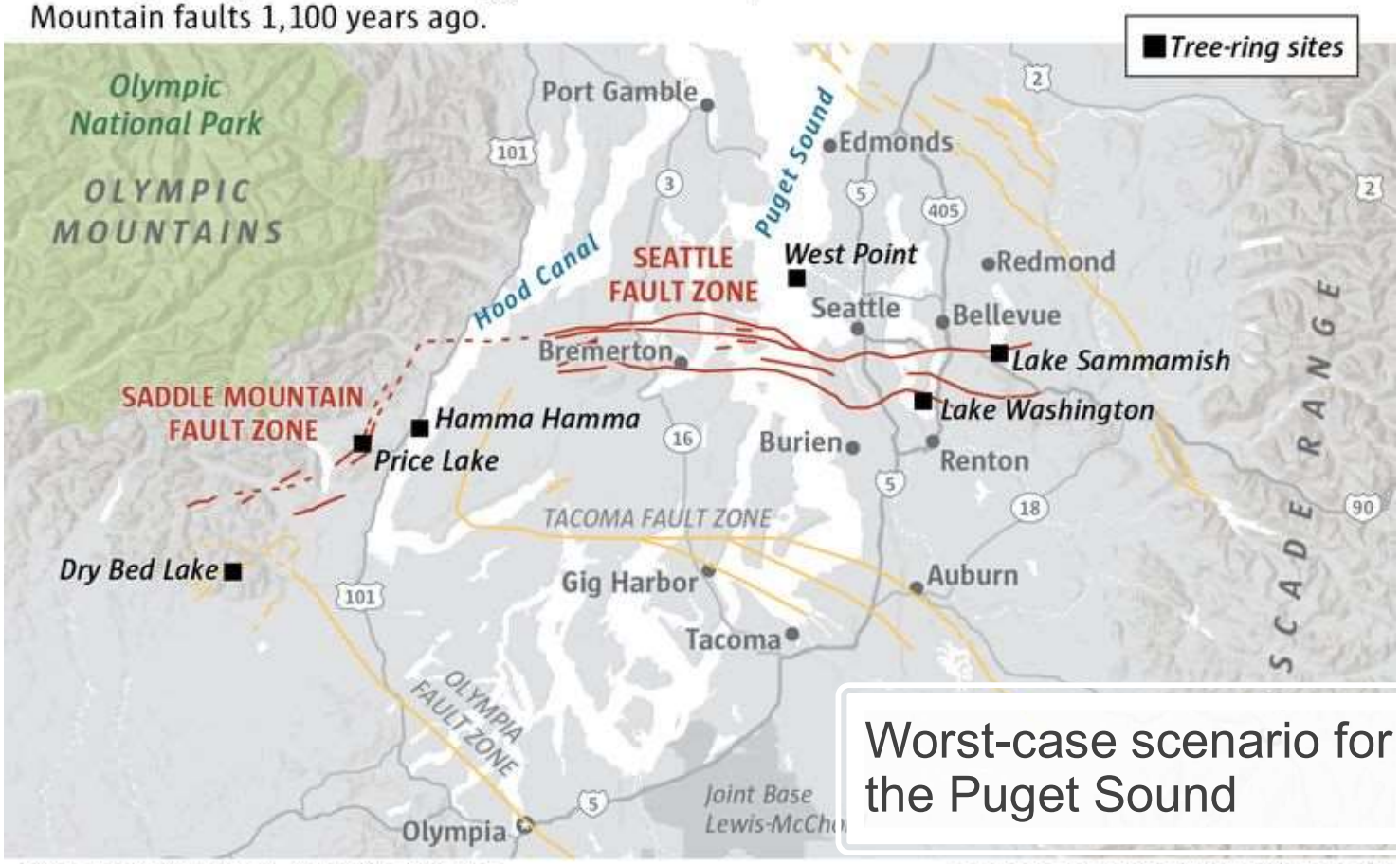

Most likely: an earthquake like Nisqually 2001
FENIX
FENIX UNDERGROUND
CAUTION



Sooner or later: "The Big One", a subduction zone earthquake

An ancient, one-two earthquake punch raises the stakes for future seismic scenarios in the Puget Sound region

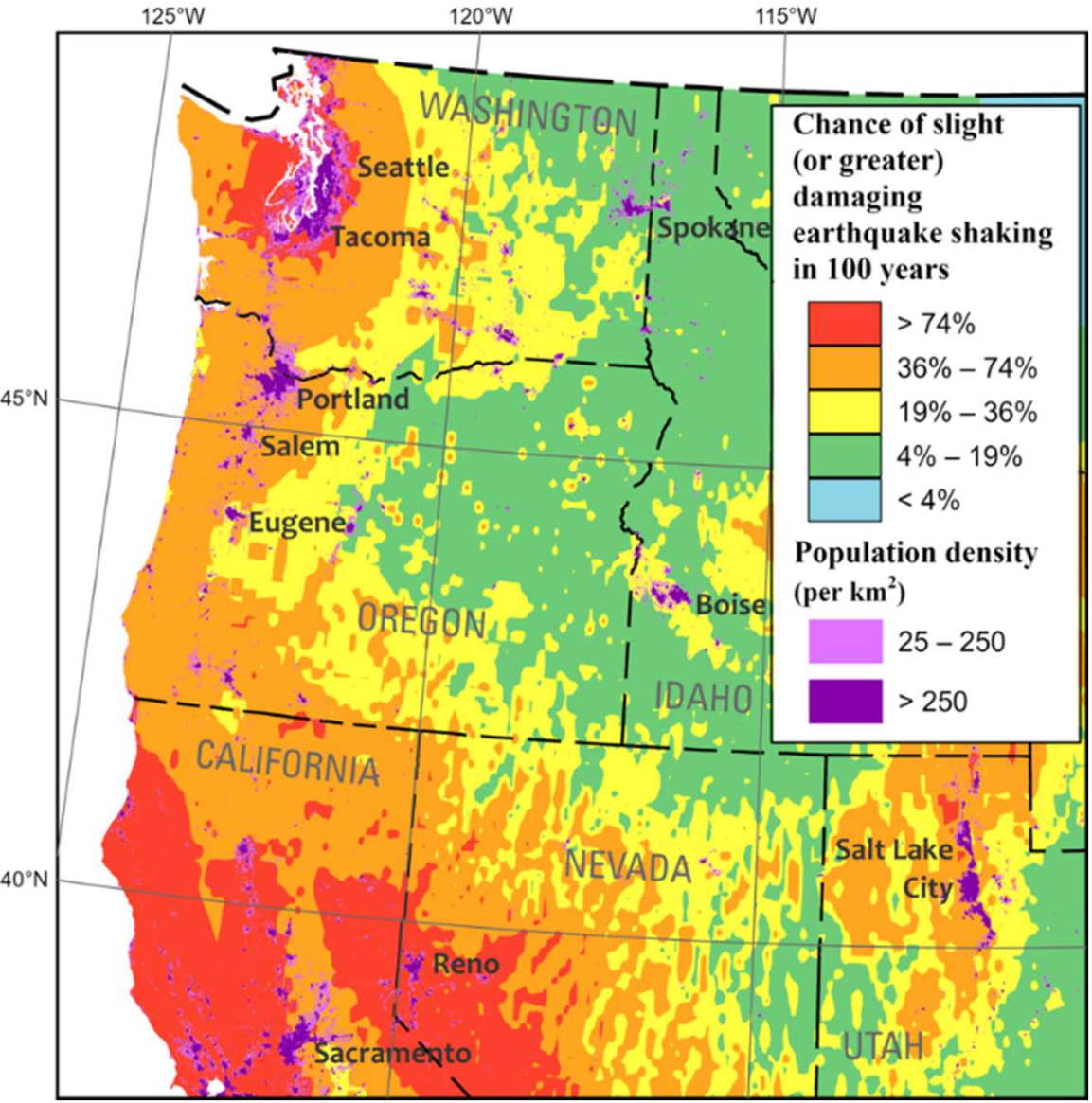
Tree-ring dating from six sites suggests linked earthquakes occurred on the Seattle and Saddle Mountain faults 1,100 years ago.



Worst-case scenario for the Puget Sound

Sources: Esri, Bryan Black, University of Arizona

MARK NOWLIN / THE SEATTLE TIMES



High hazard
+
Large population
=
High risk

Our job at the PNSN is to monitor earthquakes in WA and OR

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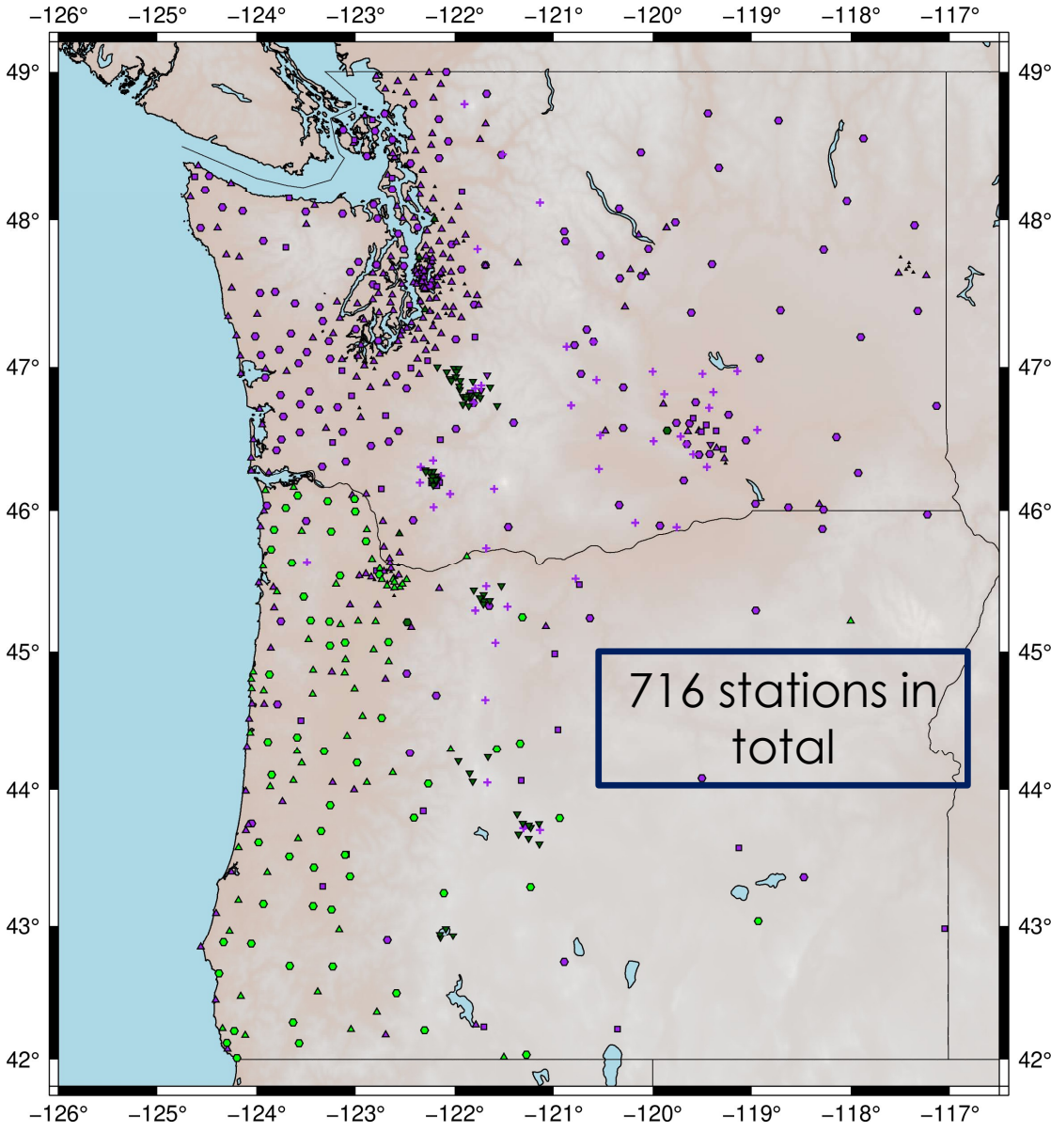
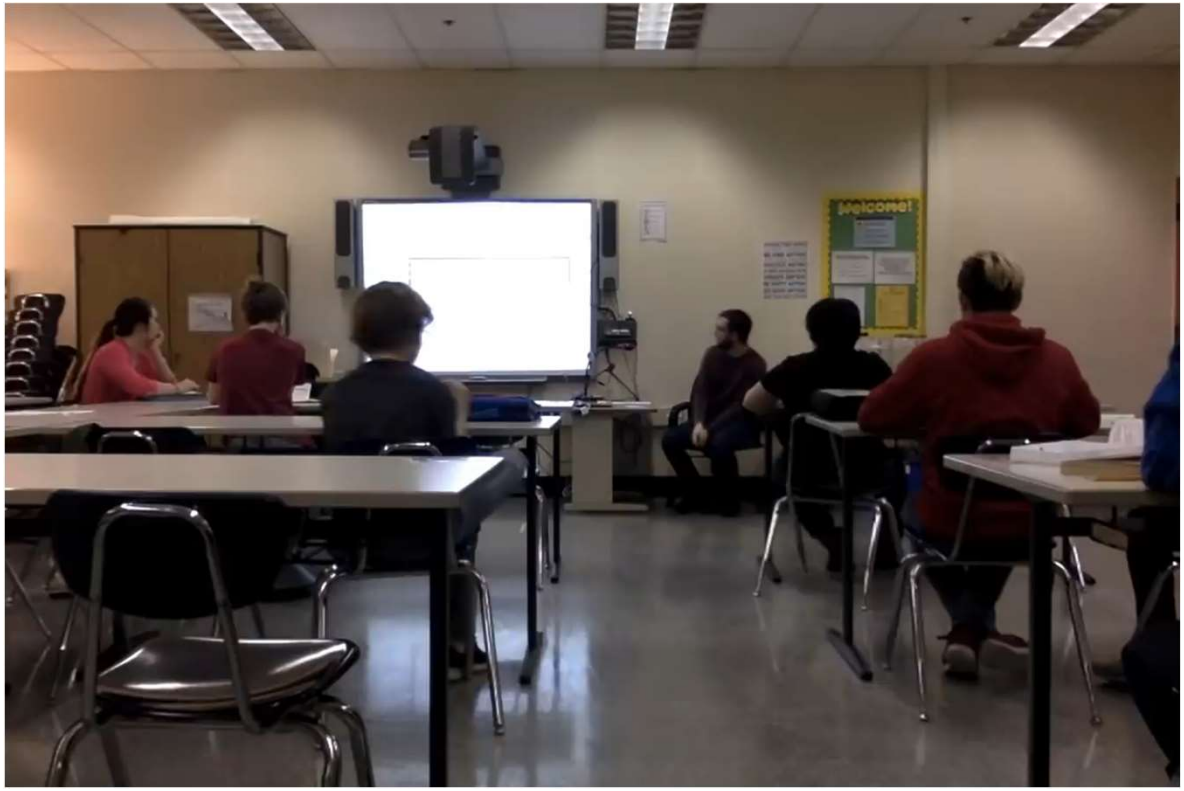
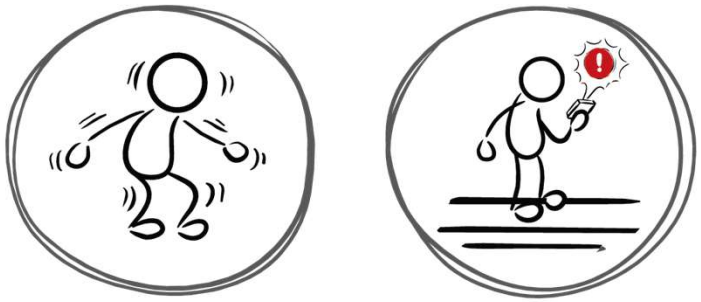
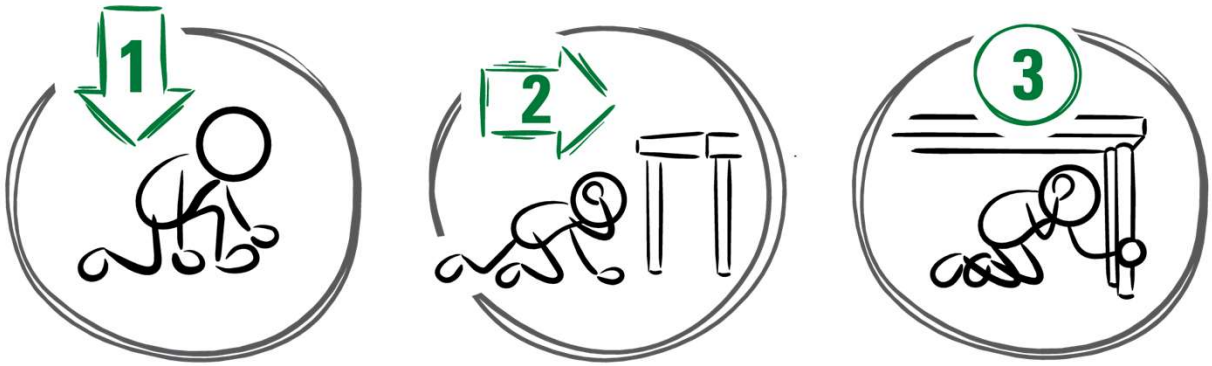


What is it like to be in an earthquake?





If you FEEL SHAKING or GET AN ALERT...



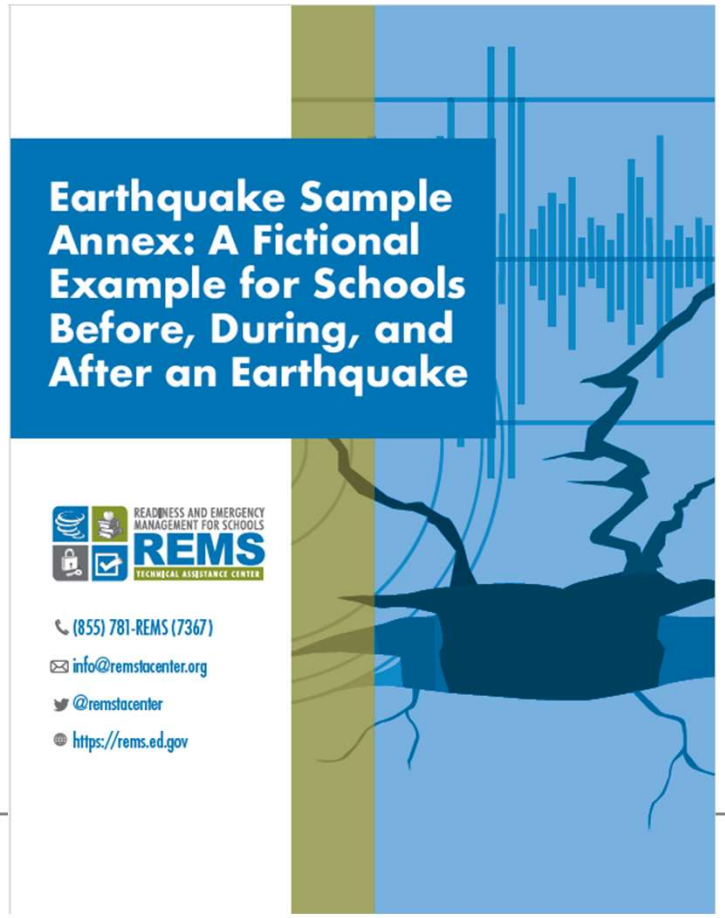
DROP! **COVER!** **HOLD ON!**

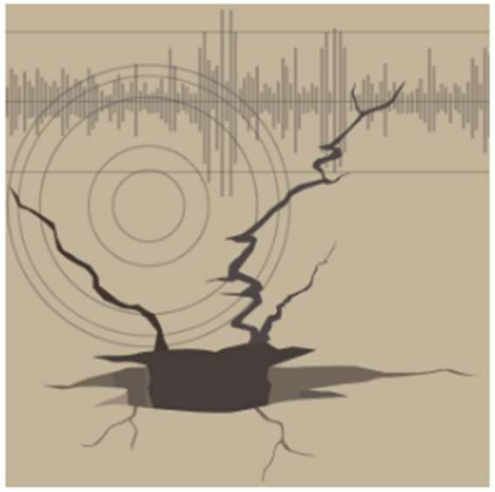
ShakeAlert™

USGS 08.2021

REMS provides valuable earthquake preparedness information for schools

READINESS AND EMERGENCY MANAGEMENT FOR SCHOOLS
REMS
TECHNICAL ASSISTANCE CENTER





Access resources on planning for earthquakes:

- Sample Annex
- Great ShakeOut Earthquake Drills
- Live and Virtual Training by Request
- Earthquake Preparedness for K-12 Schools and School Districts Online Course

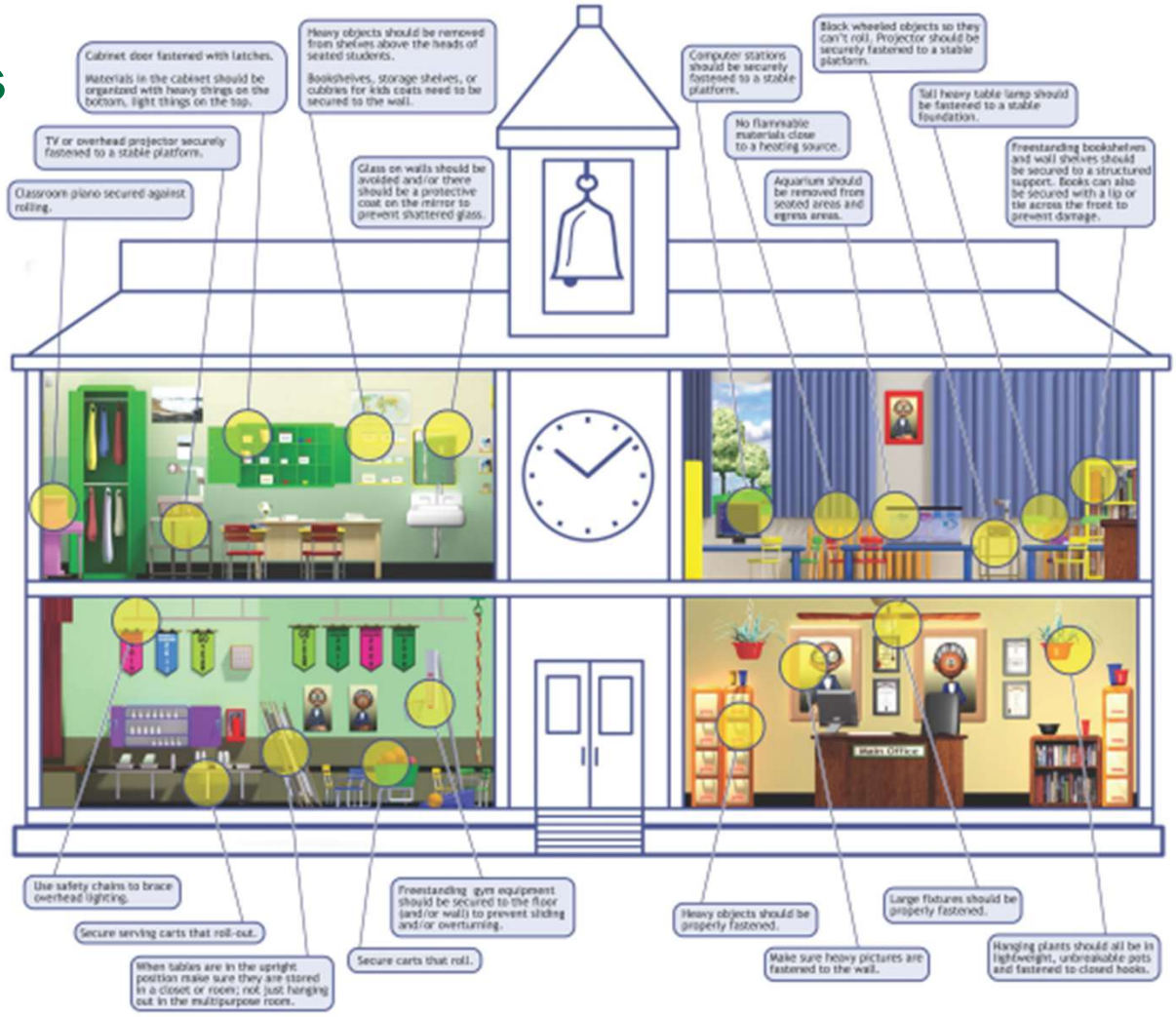
PNSN
Pacific Northwest Seismic Network

ShakeAlert™

FEMA has school hazard hunt resources

Earthquake School Hazard Hunt

Recommendations for reducing earthquake hazards in your school.



PNSN Pacific Northwest Seismic Network

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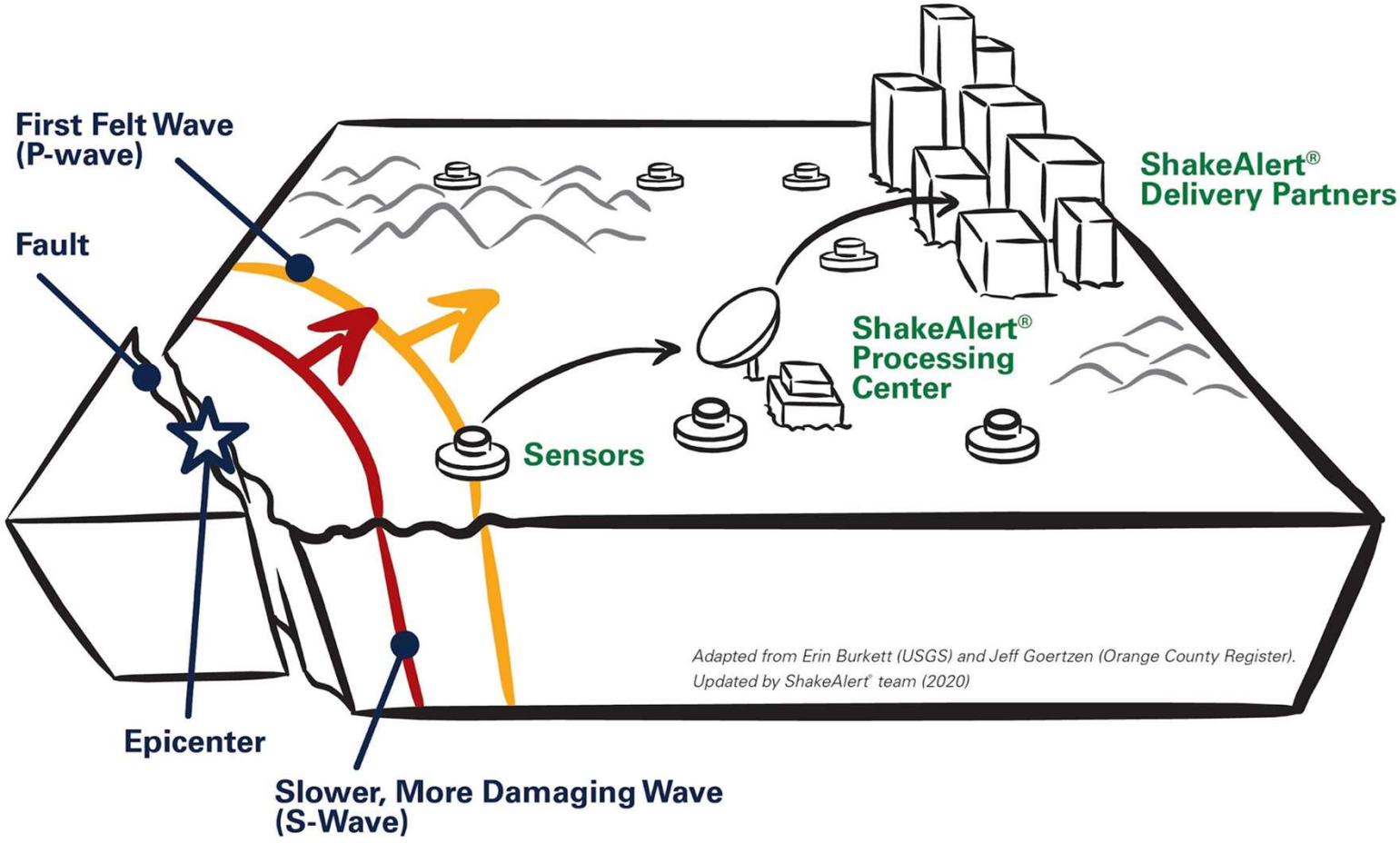
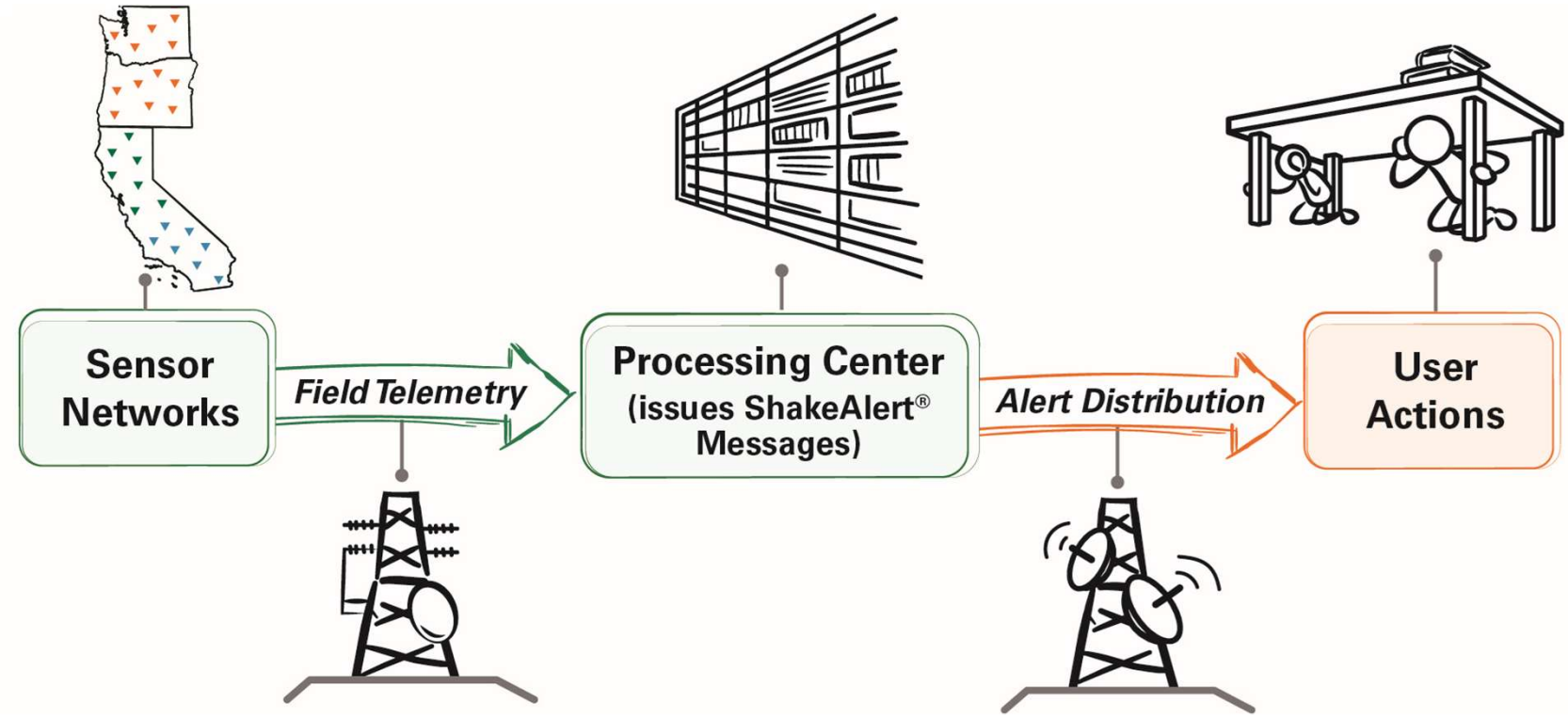
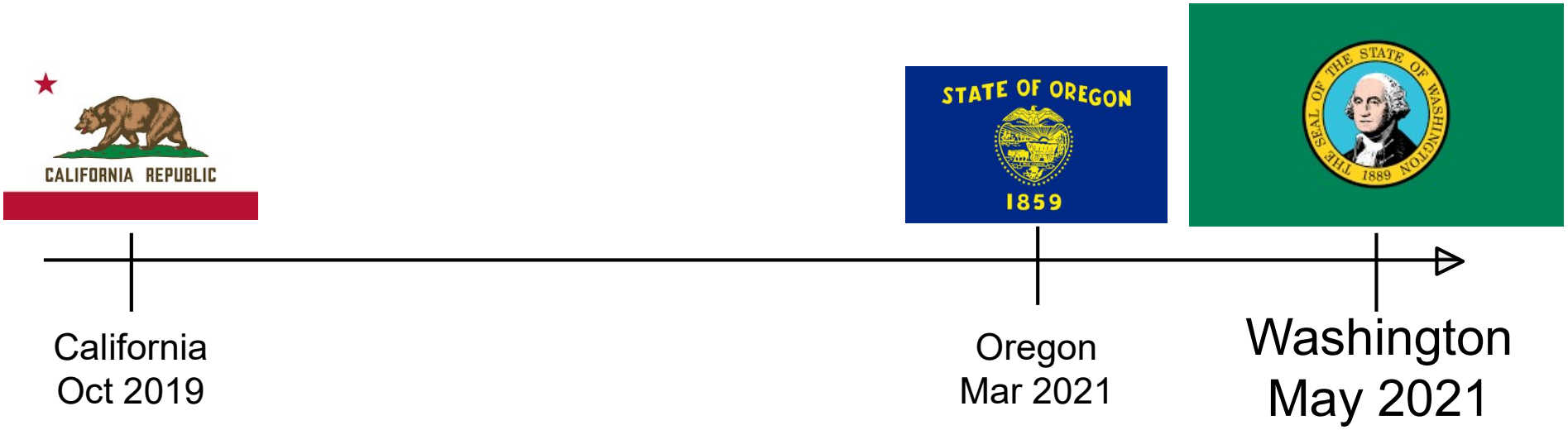
ShakeAlert Earthquake Early Warning can protect people in schools



How earthquake data turns into protective actions



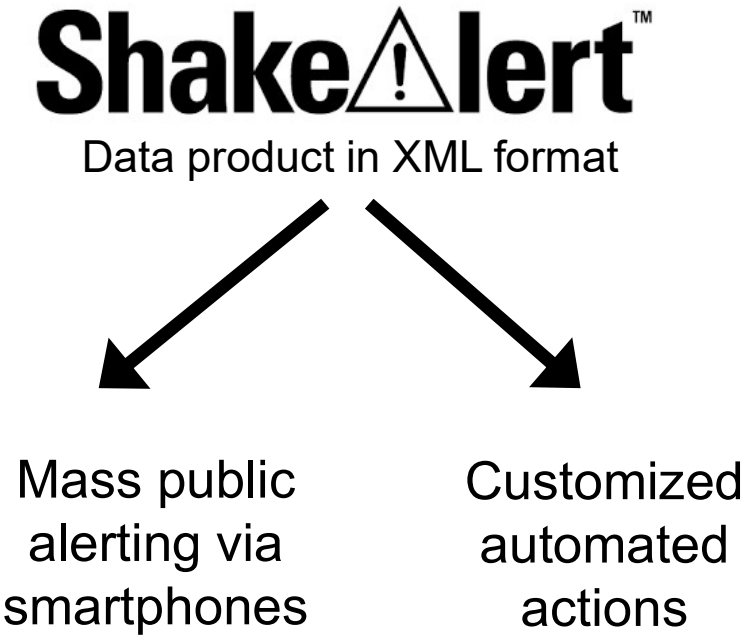
ShakeAlert is now live across the West Coast



On **May 4, 2021,** Washington launched ShakeAlert alerting for the public**.**

There are currently no mandates in Washington to make use of earthquake early warning systems.

How does ShakeAlert get out into the world?



How to get ShakeAlert-powered alerts on your phone

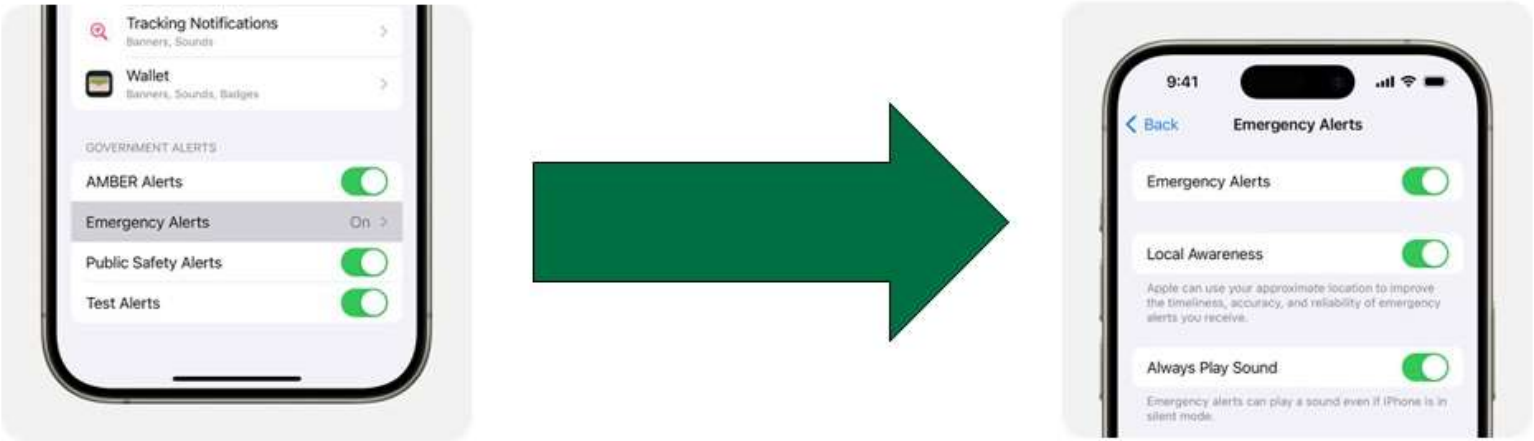
Download the MyShake app on iOS or Android phones
- Make sure location services are enabled, or enter in your "Home Base"
- This is the only ShakeAlert-powered app currently available in Washington

Use built-in earthquake alerts on the **Android OS**
Get alerts through the **Wireless Emergency Alert (WEA)** system
- Note: these alerts are slower and only are sent for larger earthquakes

How to Receive Earthquake Early Warning Alerts on Your Phone

Wireless Emergency Alerts on iPhones

- Go to Settings > Notifications and scroll to the bottom of the screen
- Tap Emergency Alerts, then turn on Emergency Alerts and Local Awareness to maximize alert delivery speed and accuracy



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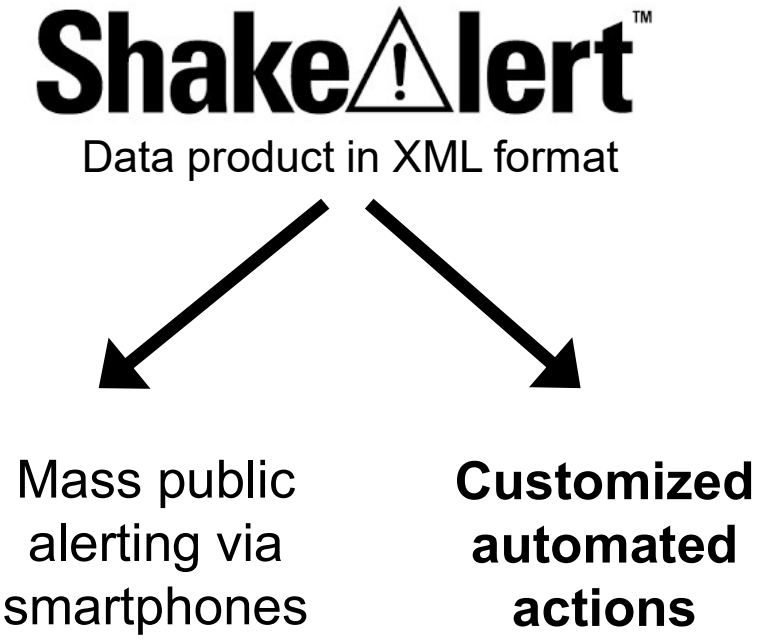
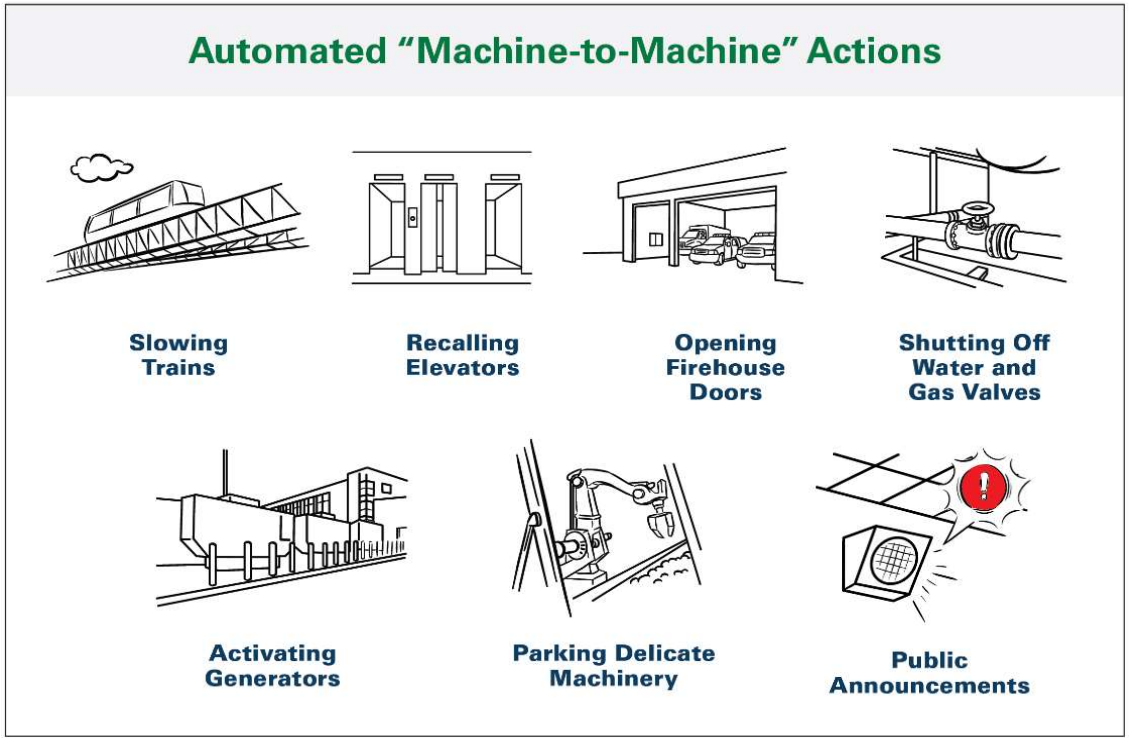


ShakeAlert™

Data product in XML format

Mass public alerting via smartphones

Customized automated actions



ShakeAlert® Earthquake Early Warning in Schools

The Challenge and the Opportunity

An earthquake in a school setting is dangerous. Strong ground motion can topple furniture, dislodge ceiling tiles, and toss students and teachers to the ground.

Stanwood-Camano is the first school district in WA to connect to ShakeAlert. Now, ShakeAlert protects nearly 5,000 staff and students across 13 buildings.

- Student and staff have **time to protect themselves**.
- **Earthquake drills** are more realistic.
- ShakeAlert is incorporated into earth science **curriculum** and reinforces learning.

Stanwood Camano School District

Choose your pathway to connect to ShakeAlert

Path 1:
Work with a licensed vendor

Path 2:
Access the ShakeAlert data feed directly and create your own alert

Either path: My job is to connect schools and other organizations to ShakeAlert

Path 1: Work with an existing ShakeAlert Technical Partner (vendor)

- Learn about the ShakeAlert Technical Partners who have experience working in your industry: https://tinyurl.com/CurrentShakeAlertPartners
- We recommend all of them
- Reach out to any or all Technical Partners, and compare quotes and product specs

Path 2: Become your own Technical Partner and connect directly to ShakeAlert servers

- Follow the ShakeAlert Licensing Pathway Step-By-Step Guide
- Develop and test your implementation
- Meet USGS standards for technical performance and training
- No cost to connect

Schools have access to high-quality educational resources

Classroom activities and lesson plans
Educational videos and animations
Tools for earthquake drills and exercises

Get started at IRIS.edu/ShakeAlert

ShakeAlert™ Because seconds matter.

A Moment to Act: ShakeAlert Earthquake Early Warning and School Safety Webinar

April 24 from 11:00am-12:30pm

Register at bit.ly/ShakeAlert-Schools

USGS science for a changing world · University of Oregon · University of Washington · Berkeley University of California · Caltech

Funding may be available for your school to implement ShakeAlert. Reach out for more details.

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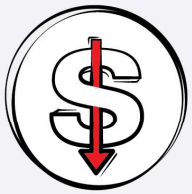
Bill Steele – wsteele@uw.edu

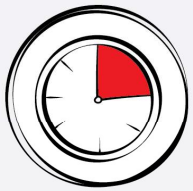
ShakeAlert™

Saves lives and minimizes injuries

Reduces earthquake damage to property and infrastructure systems



Reduces economic impacts of earthquakes



Speeds the return to normal operations and community recovery