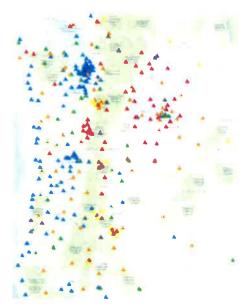


# **About The PNSN**

The Pacific Northwest Seismic Network (PNSN) provides information about earthquakes to emergency responders, the press, and public. The PNSN works to reduce risk by monitoring ground motion and distributing information, primarily through pnsn.org. Beginning in 1969 with five seismic stations, the network has expanded to over 400 stations throughout Washington (WA) and Oregon (OR). This makes the PNSN the second largest seismic network in the US.

The PNSN is a cooperative project between the University of Washington (UW), the University of Oregon (UO), and the US Geological Survey (USGS). The PNSN is headquartered at UW in the Earth and Space Sciences Department and has staff in Richland WA, Vancouver WA, and Eugene OR at UO in the Department of Earth Science. Primary support for the PNSN comes from the USGS, the State of Washington, the State of Oregon, and the US Department of Energy.

To learn more, visit pnsn.org or email pnsn@uw.edu.



The PNSN's monitoring stations. Each station has sensors that measure ground motion.

# PNW Earthquakes

# Crustal Earthquakes

Caused By: Movement along shallow faults within the North American tectonic plate caused by compressional, extensional, or transform stress. How often? Recurrence time varies by fault; in general, hundreds to thousands of years. Where? Throughout WA and OR.

#### Volcanic Earthquakes

Caused By: Movement of magma near volcanoes. How often? There is variation throughout the Cascade Range. Increasing frequency and magnitude may precede volcanic unrest. Where? Within 10 km (6 mi) of volcanoes.

### Subduction Zone Earthquakes

Caused By: Slip on the plate boundary between the North American Plate and the subducting Juan de Fuca Plate.

How often? M8+ roughly every 300–500 years.

Where? Offshore, from northern CA to Vancouver Island, BC.

### Deep Earthquakes

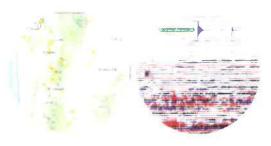
Caused By: Movement on faults within the subducting Juan de Fuca plate.
How often? Approximately every 30–50 years.
Where? At depths greater than 40 km
(25 mi) under the I-5 corridor.

# **PNSN Data & Products**

#### Recent Earthquakes

A map of recent earthquakes is available at pnsn.org/earthquakes/recent.

The map is updated with waveforms and technical data within minutes of an event.

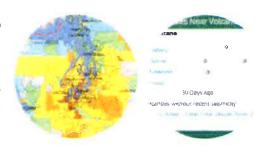


#### Real-Time Waveforms

Near real-time waveform displays from our seismic instruments are available at pnsn.org/seismograms, 24 hours a day, and are updated every 2 minutes.

#### Did You Feel It?

The USGS displays human reports of shaking on maps.
Report your earthquake experience and see the map of shaking reports.

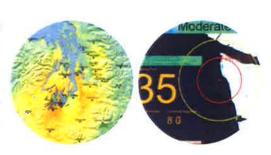


## **Volcanic Seismicity**

Updates on earthquake activity at Washington's and Oregon's active volcanoes can be found at pnsn.org/volcanoes.

# ShakeMap

The USGS measures shaking intensity. The map portrays the geographic extent and amount of shaking for post-earthquake situational awareness.



## Earthquake Early Warning (ShakeAlert)

Real-time detection and measurement of earthquakes provides seconds to minutes of warning. This program is being developed by the USGS with the support of UW, UO, Caltech, and UC Berkeley.

#### Outreach

Educational programs for school groups, the press, and public groups are hosted at the Seismology Lab. The Jatest scientific information on earthquakes, volcanoes and the hazards they pose are covered in these programs.



#### Tremor Map

Tremor locations are displayed on an interactive map on pnsn.org/tremor. Tremors are too slight to feel and related to slow slip that can last up to multiple weeks.



# Outdoor Installation Examples



