Pacific Northwest Earthquakes and Schools

The earthquakes that are common in the Pacific Northwest have caused injuries, loss of life and serious damage to buildings, including schools.

1949 earthquake: Castle Rock, Washington

On April 13th, 1949, the senior class president at Castle Rock High School was a killed by falling bricks when a 7.1 magnitude earthquake struck Washington. Eight lives were lost statewide, and many schools were condemned as a result of the guake damage. April 29, 1965 Washington between Seattle and Tacoma Magnitude 6.5

1993 earthquake: Scotts Mill, Oregon

On March 25, 1993, at 5:34 in the morning, a 5.6 magnitude earthquake produced shaking that was felt from Roseburg to Seattle. The earthquake was centered near Scotts Mill, but much of the damage from the shaking occurred many miles away. At Molalla High School, bricks fell from the building facade and crashed onto the front steps of the school. Fortunately, the school was closed for spring break so there were no injuries. But the damage was so severe that the building was condemned and demolished.

1995 seismic improvements: Portland, Oregon

In 1995, Portland voters supported a bond measure that funded seismic improvements for many schools. Those improvements included strengthening brick facades and parapets that were similar to those that fell in the Scotts Mill and Puget Sound earthquakes.

2001 Nisqually Earthquake

February 28, 2001 6.8 magnitude

What's next for the Northwest?

Scientists believe that the Pacific Northwest is due for another earthquake, a different type that also will be much larger than those of 1949 and 1993. Shifting of the "plates" that make up the earth's crust now is understood to produce "subduction zone" earthquakes. The Cascadia Subduction Zone stretches along the Pacific Coast from British Columbia to Northern California; it produced an earthquake on January 26, 1700, with an estimated magnitude of approximately 9.

Geologic evidence shows that these earthquakes occur periodically over periods of hundreds of years.

Occurrence and Relative Size of Cascadia Subduction Zone Megathrust Earthquakes Offshore Landslide Turbidite Mass XXL XL Т Μ Average Research-indicated radiocarbon age of CSZ event (most recent in January 1700) Average offshore landslide turbidite mass used as a proxy for landslide size. Source: Oregon Department of Geology and Mineral Industries



NORTH AMERICAN PLATE

Planning for the inevitable

Oregon building codes were revised in 1995 to reflect the potential for large earthquakes in our region. But many public and private buildings- including schools- were built earlier and would need substantial structural improvements in order to meet current standards.

Looking forward in PPS

Portland Public Schools is working to revise its Long-Range Facilities Plan, with discussion to include the need for seismic improvements to schools. Learn more about the process and add your thoughts to the discussion by visiting the PPS website at www.pps.net.



