Portland Fireplace & Chimney Outlines Quake Risk in Brick Chimneys

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PORTLAND, OR - November 02, 2026 -
Older brick chimneys built without steel reinforcement, especially those with worn mortar, are the most vulnerable to earthquake damage, according to a Federal Emergency Management Agency recovery advisory. Louis Lee, owner of Portland Fireplace & Chimney and a former president of the Oregon Chimney Sweeps Association, is urging Portland-Vancouver homeowners to have older masonry chimneys evaluated following the statewide Great Oregon ShakeOut earthquake drill on Oct. 15.

FEMA issued the advisory in 2015 after its assessment teams found more than 100 damaged brick chimneys following the 2014 South Napa earthquake in California. Portland Fireplace & Chimney has inspected, repaired, and rebuilt chimneys since 2007. Lee is certified by the Chimney Safety Institute of America, the national certifying body for chimney sweeps, and is a member and instructor with the National Chimney Sweep Guild.

The Cascadia Subduction Zone, the boundary between two tectonic plates off the Pacific Northwest coast, last ruptured on Jan. 26, 1700. A 2025 U.S. Geological Survey fact sheet puts the chance of another magnitude 9 earthquake there at 10% to 15% within the next 50 years. The same fact sheet estimates a 6%

chance of a magnitude 6.5 or larger earthquake in the Portland or northern Willamette Valley region over the same period.

According to Lee, warning signs a homeowner can spot in the yard include crumbling mortar joints, cracks running through the brick itself, loose bricks near the top, and a chimney that has begun to lean or pull away from the wall of the house. The more serious damage often sits out of sight, he said, in attic brickwork or in cracked flue tiles, the clay liner sections inside the channel that carries smoke out of the house. The Chimney Safety Institute of America lists seismic events among the triggers for a Level 2 inspection, which adds a video camera scan of the full flue. Portland Fireplace & Chimney runs a camera through every flue it inspects.

The FEMA advisory also found that a damaged chimney rebuilt exactly as it stood remains vulnerable to future earthquakes, and it describes repairing an older unreinforced chimney to modern seismic standards as generally not feasible. The advisory's options start with removing the chimney down to the roofline and go as far as replacing the firebox, the masonry box where the fire burns, and the chimney with light-frame construction and a metal flue. Building permits are required for that work, the advisory says.

When a homeowner chooses to keep a masonry chimney, Portland Fireplace & Chimney says its Oregon rebuilds include vertical steel reinforcing bar, a grouted core in which the hollow center is filled solid, anchors that tie the chimney to the home's framing, and steel straps at the roofline. The company also handles the permits and inspections.

Lee put the decision in plain terms: "Fresh mortar makes an old chimney look solid from the street, but it doesn't put any steel inside it. Depending on what we find, the right answer might be capping the chimney at the roof, taking it out altogether, or rebuilding it to current code with reinforcement. That takes an evaluation, because you can't make the call from the yard. Waiting until after an earthquake to decide is how bricks end up through a ceiling."

Lee added that many homeowners who have bolted their houses to their foundations in a seismic retrofit have never had their chimneys evaluated because that work does not address the masonry above the roof.

Homeowners can schedule a chimney inspection by calling (503) 758-4710 or visiting portlandfireplaceandchimney.com. They can also learn more about the company's work.

About Portland Fireplace & Chimney

Portland Fireplace & Chimney was founded in 2007 and serves the Portland, OR, and Vancouver, WA, metro area from offices in both cities. Its crews inspect, sweep, repair, reline, and rebuild chimneys, restore historic masonry, and install fireplaces, inserts, and stoves for wood, gas, pellet, and electric fuel. The company's sweeps are CSIA certified, and the company is EPA Lead-Safe Renovation certified and licensed in Oregon (CCB #202488) and Washington (PORTLFI852C5). Portland Fireplace & Chimney is located at 11124 NE Halsey, Suite 465, Portland, OR 97220, and can be reached at (503) 758-4710 or https://portlandfireplaceandchimney.com.

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Portland Fireplace and Chimney Inc.

Portland Fireplace and Chimney has served the greater Portland?Vancouver metro since 2007. Family-owned and CSIA-certified, we handle chimney inspections, cleaning, repair, and fireplace installation with education-first service.

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