

Submitter: Chris Goldfinger

On Behalf Of:

Committee: Senate Committee On Energy and Environment

Measure: SB1567

The future occurrence of a Great earthquake in Cascadia of Magnitude 8-9.2 is not a theory, it's a certainty. This is the subject of much of my research, and has been known for over two decades now. In the science community there simply is no doubt. The last such event was 322 years ago, and was a magnitude 9 that delivered a damaging tsunami all along the coast of the Pacific Northwest, as told in Native American oral histories, and also did damage in Japan. The average repeat time for these events at the latitude of Portland is ~ 340 years, about the same as the time since the last one. The probability in the next 50 years is about 22%, which is higher than it sounds. The 2011 M 9.0 Tohoku earthquake in NE Japan took place when their probability was also about 20% in 50 years. I was there that day, on March 11, and rode through that earthquake. One of the most obvious failures, of many, was the damage to oil storage tanks in bays all along the coast. Japan is a much more resilient country in terms of earthquakes, and yet the scene of ruptured burning tanks floating in bays along the NE Japan coast was repeated many times. Our situation in Oregon is that we have zero mandated improvements to structures of any type, other than for new construction. This applies to all structures including oil storage tanks along Portland's rivers. During a major earthquake, liquefaction at the sites is a near certainty, and strong shaking up to 0.5 g is expected. The tank farms will not survive. Structural failure due to shearing and liquefaction will result in the tanks and their contents winding up in the rivers, possibly burning, and certainly spilling their contents into the Willamette River, and then into the Columbia. In addition to the obvious loss of a primary energy source, this will likely result in a massive environmental disaster on top of the severe damage from the earthquake itself. SB 1567 takes some of the first steps toward resiliency in the face of the coming earthquake. I strongly support this measure that so clearly needed.

Respectfully,

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