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Portland officials detail potential havoc that would be unleashed on city by earthquake, oil spill

Updated: Feb. 11, 2022, 1:03 p.m. | Published: Feb. 10, 2022, 5:46 p.m.



Crude oil tank cars pictured at Zenith Energy's terminal in Northwest Portland. Mark Graves/The Oregonian Mark Graves



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By [Shane Dixon Kavanaugh | The Oregonian/OregonLive](#)

Portland area officials are sounding the alarm on a potential nightmare scenario in which [a major Pacific Northwest earthquake](#) triggers one of the largest oil spills in U.S. history — and seeking ways to diminish the scale of the catastrophe.

A massive earthquake that is widely expected to strike off the coast of Oregon would unleash millions of gallons of fossil fuels into the Willamette and Columbia rivers, cause deadly fires and cost billions of dollars to mitigate, [a report](#) commissioned by the city of Portland and Multnomah County and published this week shows.

Meanwhile, Oregon lawmakers took the first steps Monday to require the owners and operators of the state's main oil storage facilities — located mere miles from downtown Portland — to upgrade their aging, and sometimes decrepit, fuel tanks.

State Sen. Michael Dembrow, a Portland Democrat, [received an initial hearing](#) on a bill he introduced that would authorize the Oregon Department of Environmental Quality to more aggressively regulate fuel storage containers.

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Under the proposal, their owners by 2024 would need to assess the risks from earthquakes and propose ways to minimize likely ruptures and spills. The legislation would also require state regulators to develop an energy security plan in preparation for major natural disasters.

"We're living with a ticking time bomb," Dembrow said during a Senate Committee on Energy and Environment hearing on the bill.

About 90% of Oregon's liquid fuels are stored at what is known as the Critical Energy Infrastructure Hub in Northwest Portland. The privately owned industrial area runs along a 6-mile stretch of the Willamette River in between the Fremont Bridge and Sauvie Island.

At least 11 companies at the site, from Zenith Energy to oil giant Chevron, operate more than 600 storage tanks full of gasoline, jet fuel and diesel, report authors at ECONorthwest and Salus Resilience found.

Portland officials have been working to [crack down](#) on Zenith's fuel storage and offloading operation.

In August, the city rejected a land use designation needed by the company to renew an operating permit with state environmental regulators, claiming its fossil fuel activity [ran afoul of the city's climate and resiliency goals](#).

Other fuel tank facilities in the area may face a similar fate in the future.

Eden Dabbs, a spokeswoman with the Bureau of Planning and Sustainability, which crafted the city's climate policies, said Thursday that Portland officials would conduct an identical land use compatibility review for the remaining fuel storage companies at the time each is required to renew its state air quality permit.

A spokesman for the Oregon Department of Environmental Quality, which issues those permits, could not provide exact renewal dates for the remaining companies. But the spokesman, Harry Esteve, said the agency would only seek a city land use review in cases where a facility sought a significant change in its operations.

A magnitude 8 or 9 mega-earthquake would likely cause soil in the area to liquify and cause the release of up to 194 million gallons of stored fuel, according to the study. That would dramatically exceed the 134 million gallons released into the Gulf of Mexico in 2010 after the Deepwater Horizon oil spill, which remains the largest to occur in the U.S.

“The fuel releases are likely to cause explosions and fires,” wrote the researchers. “If the fire spreads to other properties there are very large threats to human life, safety, physical structures and natural resources.”

An estimated 1,000 waterfront properties in Oregon and Washington could be damaged by the massive oil spill, according to the report. The ecological devastation could stretch nearly 100 miles west to Astoria and the mouth of the Columbia River.

All told, a massive earthquake would cause a minimum of \$2.6 billion in damage, including clean-up costs, property repairs and environmental remediation.

Researchers noted the storage area was built decades before the region’s earthquake risk was determined. Some fuel tanks are more than 100 years old. Many were built at least 50 years ago.

“We know these things are pretty old, the average tank age for the data that we do have is 1954, which is well before any of the seismic standards we have today,” Laura Marshall, a project manager for ECONorthwest, said during a press conference Monday that detailed the report’s findings.

Dembrow, who also spoke at the press conference, urged immediate action.

“Government needs to step up to make sure that these fuel tanks are in position to withstand the worst effects of this shaking and liquefaction to protect life and environment,” he said. “Right now, the necessary oversight is fragmented or outright lacking.”

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