

September 29, 2025

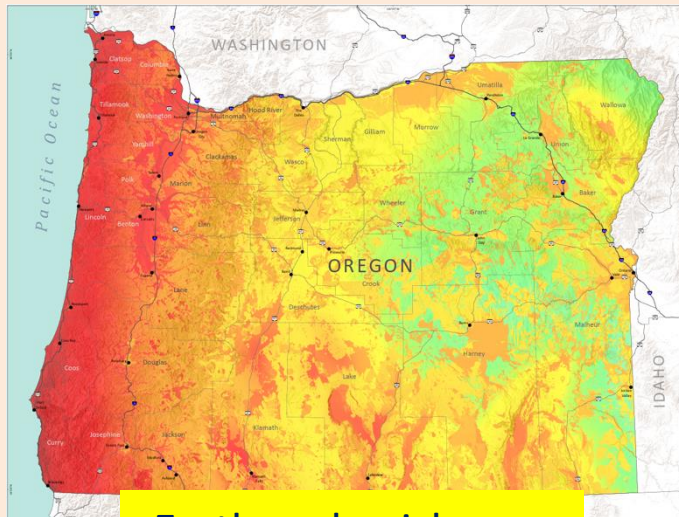
Wildfire as an Islanding Hazard in Oregon

Jonathan Fink, Professor of Geology, PSU + UBC

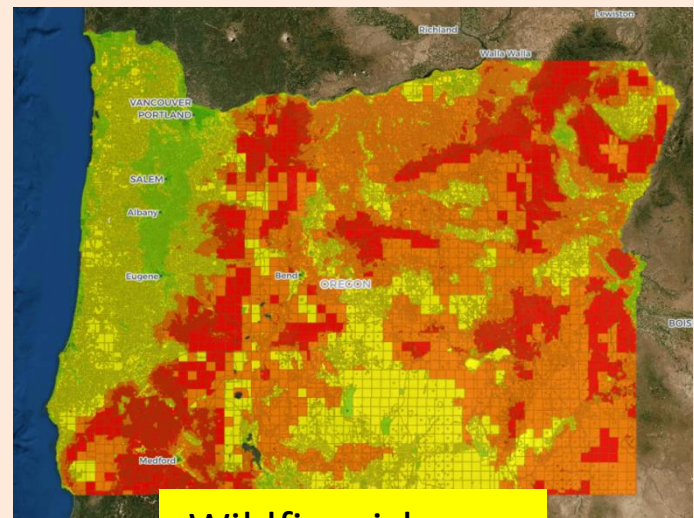
- Career focused on geologic and climate hazards
- Volcanologist at Mount St. Helens: 1980s, 90s
- First Vice President for Research at PSU: 2010-2016
- Ran PSU's "Digital City Testbed Center" about urban risks: 2018-2023
- Cascadia Wildfire Working Group (~120 webinars): 2019-today
- Chaired U.S. National Academies' Wildfire Study Group: 2024
- Represented universities on Governor Kotek's "Fire 35" Taskforce: 2024
- Fire 35 recommendations led to HB 3940 creating Large Wildfire Fund

Islanding Risks: Earthquake vs. Wildfire

- Current islanding discussions emphasize earthquakes/transportation but overlook wildfire's similar impacts.
- Cascadia earthquake: severs roads, bridges, communications — islanding mostly west of the Cascades.
- Wildfire: blocks highways, rail, and power over a much larger portion of Oregon (west, central, southern, eastern).
- Labor Day 2020 fires: wake-up call to urban wildfire dangers in Oregon.



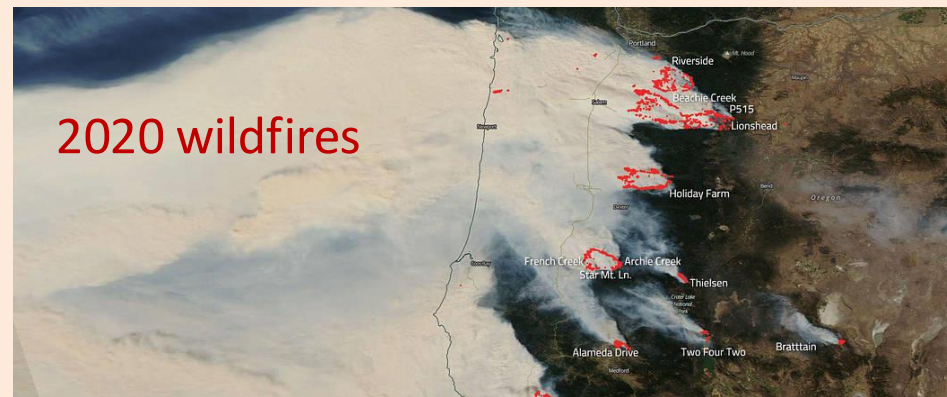
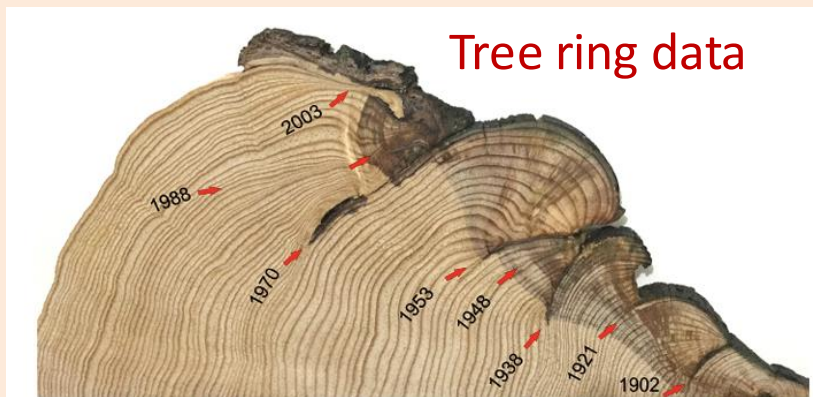
Earthquake risk map



Wildfire risk map

Climate Change and Urban Conflagration Risk

- Historically: catastrophic west-side fires every 200–600 years.
- Climate change → hotter, drier summers, longer fire seasons, more high-danger days.
- Urban wildfire risk in 2025 like earthquake risk in 2015: scientists know about it, the public and politicians don't reflect it.
- Urban areas at risk: Portland (Forest Park), Bend, Ashland/Medford, Sisters/Detroit, coastal towns.
- Climate change causes higher risk of simultaneous (compound) hazards.

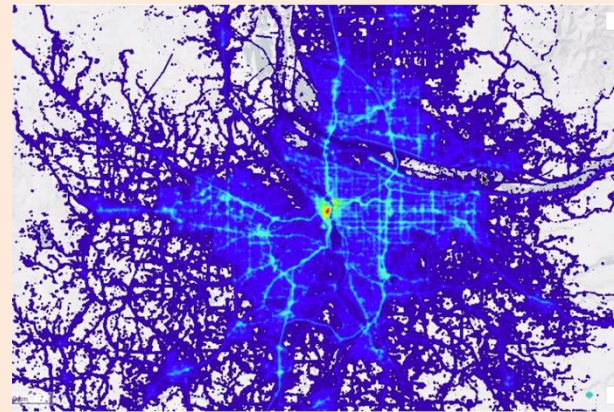


Evacuation and Community Isolation

- Wildfires can overwhelm evacuation routes in minutes to hours.
- Southern Oregon: I-5 and Hwy 97 chokepoints.
- Central Oregon: Bend/Sisters area has limited escape routes.
- Coastal towns: vulnerable to double isolation from quake/tsunami/landslide plus wildfire.
- Different from earthquakes: wildfires can trap residents and block aid simultaneously.



Paradise, California

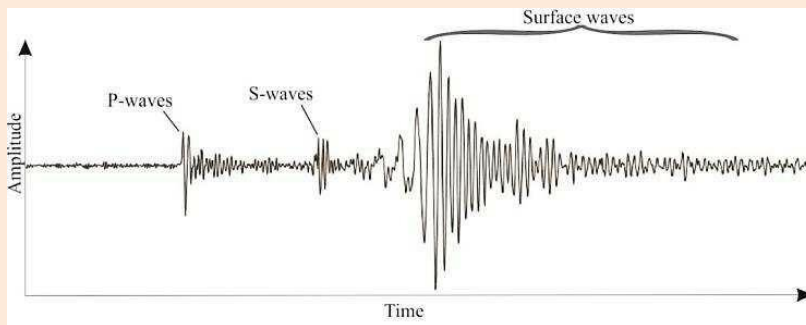


Portland traffic forecast

Warning Time: Earthquake vs. Wildfire

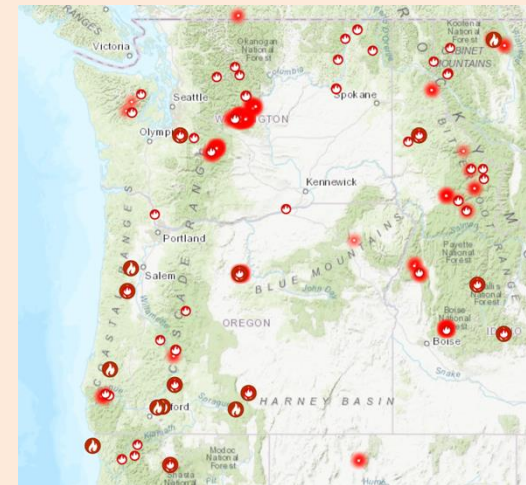
- Earthquake: essentially no warning (seconds at best).
- Wildfire: red flag warnings, east-wind alerts give hours to days lead time.
- Policy implication: use wildfire warning windows to pre-stage resources, protect evacuation corridors, notify vulnerable and reduce isolation risk.

Earthquake



Seconds to minute

Wildfire



Hours to days

Path Forward for Legislature

- Recognize wildfire islanding risk is equally serious as seismic islanding.
- Integrate wildfire into statewide Cascadia resilience planning.
- Prioritize corridor hardening, evacuation redundancy, pre-staging during forecast windows, and coordination of federal/state/municipal firefighting.
- 90% of Oregon's fuel supply, at risk in Portland CEI Hub, is threatened BOTH by Cascadia earthquake AND by wildfire in Forest Park.
- Wildfire islanding threatens every district statewide.
- Fund prevention and education, not just response.
- Fire 35 found mitigation funding sidelined because budgets consumed by emergency response and ODOT needs.

