



UNIVERSITY OF OREGON



## Support Investment in ShakeAlert® Earthquake Early Warning System

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*An investment of \$7.5 million in the 2020 session means Oregon would make the ShakeAlert earthquake warning system available to the public by 2021.*

### **The impact of earthquakes:**

Earthquakes pose a state and national threat, especially in Oregon and along the West Coast. The Federal Emergency Management Agency (FEMA) estimates the average annualized loss from earthquakes to be **\$6.1 billion, 73% of which (\$4.5 billion)** comes from Washington, Oregon, and California.

In the next 50 years, there is a **7 to 12% chance that a magnitude 9+ megathrust** earthquake will impact the entire Pacific Northwest and a **37% chance that a magnitude 8 to 9 megathrust** earthquake will impact Southern Oregon and northern California in that timeframe.

### **What is ShakeAlert?**

ShakeAlert is an earthquake early warning system that detects significant earthquakes so quickly that alerts can reach many people before shaking arrives. ShakeAlert is not earthquake prediction, rather a ShakeAlert indicates that an earthquake has begun and shaking is imminent. Oregonians only benefit from the life safety and economic recovery benefits of the warning system if the system is publicly available, which can only be accomplished once Oregon has more seismic sensors in the ground.

### **Does 30 seconds matter?**

Yes. 30 seconds can save lives and protect infrastructure from failure or destruction. Utilities, hospitals, transportation systems, and educational environments could power down equipment and protect critical operations. **Here are some examples:** Individuals can get under a protective table or desk before shaking arrives, fire stations can open firehouse doors before electricity goes out allowing immediate deployment of emergency vehicles, power generating utilities can secure moving turbines so that they are not damaged, water utilities can use valves to preserve drinking water, and hospitals can power up generators after shaking stops to continue to care for patients.

### **Who operates ShakeAlert?**

ShakeAlert is administered by the U.S. Geological Survey, with collaboration from the Pacific Northwest Seismic Network (PNSN) — cooperatively operated by the University of Oregon and the University of Washington — Caltech, and University of California Berkeley. The ShakeAlert system uses all three West Coast state’s seismic networks, which includes more than 800 seismometer stations. Eventually, the network will expand to 1,675 sensors.

### **How ShakeAlert is funded?**

ShakeAlert is funded by a combination of federal and state dollars. The federal government, and the states of Washington and California have been funding ShakeAlert for years. The FY 2019 congressional spending package allocates **\$12.9 million to ShakeAlert** for continued development associated with earthquake sensors buildout and system infrastructure.

### **Why Oregon Needs Funding Now**

In order for Oregon to participate in the public rollout of ShakeAlert, it **must reach target “station density” in urban and rural areas to meet federal (USGS) standards**. Right now, Oregon’s seismic sensor network is **only about 50% complete**.

### **Oregon is falling behind its West Coast states in the Pacific Northwest Seismic Network:**

- The State of Washington has invested \$500,000 a year to support PNSN operations with an additional \$1 million to ShakeAlert for the 2019-2021 biennium for sensors and public education/outreach.
- The State of California invests \$1.2 million a year to support seismic arrays, contributed an additional \$10 million in 2017, and the California Governor's 2018-2019 budget included \$15.75 million in general fund support to complete station buildout.

The metropolitan areas in California are leading the way; the California system is already live (as of October 2019), providing public alerts to all residents and visitors of California. Washington plans on testing public alerting in FY2020.

### **The 2020 session request**

A capital investment of approximately **\$7.5 million** would build upon a previous investment by the State of Oregon in 2015 and fully build out the network so ShakeAlert could be brought to the public within the next two years.

### **Want more information?**

Visit [www.myshakealert.org](http://www.myshakealert.org)