

# Bring Earthquake Early Warning to Utah

A new monitoring technology is available that can send alerts before strong ground shaking from large earthquakes.

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## Earthquakes are a big risk in Utah.

- About 1,500 earthquakes happen in Utah each year.
- There is an almost 50% chance of a large earthquake (M6.75+) occurring along the Wasatch front in the next 50 years.
- Utah has the fourth highest seismic risk among U.S. states with an annualized earthquake loss estimate of \$367 million.

	National Ranking	Regional <sup>2</sup> Ranking
Annualized Earthquake Loss	4	1
Annualized Earthquake Loss Ratios	4	1
Estimates of Debris	4	1
Displaced Households	4	1
Annualized Shelter Requirements	4	1
Annualized Casualties	4	1

<sup>1</sup> Data from FEMA P-366 HAZUS Estimated Annualized Earthquake Losses for the United States (2023).  
<sup>2</sup> FEMA's Rocky Mountain Basin and Range seismic region includes: MT, ID, WY, NV, UT, CO, AZ, and NM.

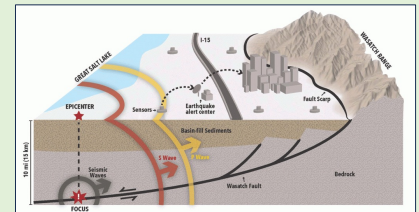
## How can earthquake early warning help?

- Earthquake early warning systems can provide alerts seconds to tens of seconds before strong shaking from an earthquake begins.
- The alerts are timely enough for trains to be slowed, safety controls at critical facilities to be activated, students to take cover under their desks, elevators to stop at the nearest floor, and so on, potentially saving lives and reducing economic damage.



## Is earthquake early warning feasible in Utah?

- Yes! In 2022, the State of Utah appropriated \$150,000 to study the feasibility of earthquake early warning in Utah.
- Funding was distributed to the three primary agencies in the Utah Earthquake Program – the Utah Division of Emergency Management, the Utah Geological Survey, and the University of Utah Seismograph Stations. Their report was released on November 3, 2023.



## What is the next step?

- The United States Geological Survey (USGS) currently operates an earthquake early warning system known as ShakeAlert in California, Oregon, and Washington.
- New USGS funding of \$0.5–1.0 million is needed to create a formal **Implementation Plan** to bring ShakeAlert to Utah.

