

2016 M7.1 Iniskin, Alaska, Earthquake: Points to Ponder

Magnitude alone does not determine whether an earthquake is fatal

- ✦ The Iniskin earthquake occurred 78 miles below the surface. Depth effectively adds a buffer between the earthquake and people, lessening the potential impact of the shaking.
- ✦ Smaller earthquakes located at the surface can be far more damaging. The 2011 earthquake in Christchurch, New Zealand, killed 153 people even though the magnitude was 6.3. It was shallow and happened under the city center.

Earthquake-resilient construction saves lives

- ✦ The population affected by the Iniskin earthquake generally reside in structures built in accordance with seismic building codes or using construction techniques that are resistant to earthquake shaking, and no lives were lost.
- ✦ Compare this to the February 6, 2016, magnitude 6.4 Taiwan earthquake, where poor construction techniques and the lack of enforced seismic building codes led to the collapse of an apartment building that killed 115 people.

Local geology can dramatically enhance shaking

- ✦ Although Anchorage and Mat-Su were more than 150 miles from the Iniskin earthquake, the shaking was stronger and lasted longer than predicted. Cook Inlet, which is underlain by very thick deposits of silt, sand, and gravel, “rang like a bell” and focused shaking in the direction of Anchorage.

Gas lines can be a damage multiplier

- ✦ Natural gas lines in Southcentral Alaska have long been recognized as a significant earthquake risk.
- ✦ The Iniskin earthquake illustrates the need for proactive efforts to mitigate this risk.

About the Earthquake

Date and Time: January 24, 2016, 1:30:30 am

Location: N 59.658°, W 153.452° (Iniskin Peninsula, 60 miles west of Homer)

Area of Effect: Moderate to strong shaking felt from Dillingham to Kodiak, the Kenai Peninsula, Anchorage, and the Mat-Su Valley

Fatalities: 0

Damage: Gas leaks in Kenai resulted in one house fire and evacuation of residents from about 20 homes. The earthquake damaged Kalifornsky Beach Road and caused power outages affecting more than 10,000 homes across Southcentral Alaska. Goods were knocked from shelves in Anchorage, some home foundations were damaged, and Romig Middle School gym and library were damaged and had to be closed off.



House fire in Kenai caused by leaks from earthquake-damaged gas lines. (Photo credit: Kenai Fire Department)