

More than 5,000 earthquakes hit northwest Nevada

11 August 2015, by Sally Ho

Seismologists studying a year-long swarm of thousands of mostly minor earthquakes in northwest Nevada say they could be the precursor for a "big one," although speculation that they're related to a series of extinct volcanoes can't be ruled out.

The University of Nevada's Reno Nevada Seismological Laboratory announced Tuesday that there have been 5,610 earthquakes in a swarm that started in July 2014 in the Sheldon National Wildlife Refuge near the Oregon border.

More than 200 have registered at a magnitude of 3 or greater, which is enough to be felt by ranchers and residents nearby. The largest one hit on Nov. 6 with a magnitude of 4.7, although there's also been a recent flare-up since mid-July.

"It's kind of unusual that it has lasted so long," said Ken Smith, a seismologist.

It's been a topic of discussion whether or not those quakes stem from the extinct volcanoes in the Sheldon refuge collectively known as the High Rock Caldera, which is at least 15 million years old.

That hasn't been conclusively ruled out yet, but Smith said there's no direct evidence of volcanic activity driving the earthquakes. To rule it out would require more seismic and geodetic measurements.

Such a repetition of small earthquakes is often associated with [volcanic activity](#), but the latest ones point to a fairly typical tectonic sequence that is characteristic of the western Great Basin region.

"From analysis of the data to date, the activity appears to be primarily associated with a fault, or faults, dipping steeply to the southeast and striking north-northeast," Smith said.

A swarm of thousands of little earthquakes could also lead to a big one.

Three magnitude 7.0 earthquakes each century and one magnitude 6.0 or larger each decade are expected in Nevada. The last "big one" was the Dixie Valley/Fairview Peak event east of Fallon that hit in 1954 with two [magnitude 7](#) earthquakes that came four minutes apart.

Nevada is the third most seismically active state in the country behind California and Alaska.

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