

Earthquake swarms prompt emergency declaration in Brawley

Rong-Gong Lin II and Shelby Grad, Los Angeles Times, 8-30-12

Earthquake swarms continued Wednesday in Imperial County as the city of Brawley declared an emergency to deal with the damage.

The swarm that began Sunday morning showed signs of slowing down Wednesday, with fewer quakes reported by the U.S. Geological Survey than on recent days. The magnitude of the quakes is also declining.

There was scattered damage around Brawley, but officials have not yet compiled a full estimate of the costs. The Brawley City Council on Tuesday declared a local emergency, according to the Imperial Valley Press.

More than 400 earthquakes greater than magnitude 1.0 have been recorded in Imperial County since Saturday evening, said U.S. Geological Survey geophysicist Elizabeth Cochran. The largest were a 5.3 and a 5.5 about midday Sunday.

Scientists say the reason is not fully understood, but there is a clue: Earthquake faults work much differently south of the Salton Sea than they do closer to Los Angeles.

Take, for instance, the San Andreas fault as it runs through Los Angeles County. It's a fault where, generally speaking, two plates of the Earth's crust are grinding past each other. The Pacific plate is moving to the northwest, while the North American plate is pushing to the southeast.

South of the Salton Sea, the fault dynamic changes. The Pacific and North American plates start to pull away from each other, Cochran told The Times from her Pasadena office. (That movement is what created the Gulf of California, which separates Baja California from the rest of Mexico.)

So Imperial County is caught between these two types of faults in what is called the "Brawley Seismic Zone," which can lead to an earthquake swarm, Cochran said.

The last major swarm was in 2005, Cochran said, when the largest magnitude was a 5.1. The largest swarm before last weekend's occurred in 1981, when the biggest quake topped out at 5.8. Before that, there were swarms in the 1960s and 1970s.

Brawley school officials told the Imperial Valley Press that Palmer Auditorium, a performance facility it manages with a local arts group, has been shut down after an inspection.

"We were told by engineers it needs to be shut down because there were huge structural damages," school Supt. Hasmik Danielian told the paper.

Crews would have a better idea of the total damage caused by the quakes in the coming days, said Maria Peinado, a spokeswoman for the Imperial County Public Health Department, but so far the list of affected structures includes about 20 mobile homes shifted from their foundations.

The earthquakes also caused "cosmetic" damage to at least three buildings dating to the 1930s in downtown Brawley, said Capt. Jesse Zendejas of the Brawley Fire Department.

A few displaced residents spent Sunday night at an American Red Cross shelter at the Imperial Valley College gymnasium, Peinado said.