

Newly Found Fault Line In California May Explain Overdue San Andreas Earthquake

Rhodi Lee, Tech Times, 10-10-16

Geologists have discovered a new fault line in Southern California that runs parallel to the San Andreas Fault.

Scientists explained that the Salton Trough Fault, which was found along the eastern edge of the Salton Sea, was previously undiscovered because it is underwater, making imaging difficult. Its discovery could shed light on why a large earthquake expected to occur in the area is far overdue.

The San Andreas Fault, which runs through California, is the longest in the state. Its southern portion normally ruptures every 175 to 200 years, producing magnitude 7 earthquakes, but scientists are puzzled why no major earthquake has occurred over the past 300 years.

The newly discovered fault line may be helping absorb the strain from San Andreas, which could help explain why a major earthquake is long overdue. Further research, though, would be needed to better understand the interaction between the Salton Trough Fault and the San Andreas Fault and the danger this fault line poses.

"From a seismological hazards perspective, the presence of this structure could alter the current understanding of stress transfer and rupture dynamics in the region, as well as community fault models and ground-motion simulations on the southern San Andreas Fault (SSAF)," researchers wrote in their study revealing the new fault line.

The announcement of the new fault line followed a series of nearly 200 small earthquakes at Salton Sea, which raised concerns about the "Big One," a hypothetical magnitude 8 or greater earthquake that is expected to happen along the San Andreas Fault.

If it happens, the quake will produce massive damage, particularly in highly populated and urban areas like Los Angeles, Palm Springs and San Francisco. The likelihood that California will experience a mega earthquake soon is high enough that members of the U.S. Congress have acknowledged a need for an early warning system that can improve chances of survival.

Authorities issued a warning after the swarm as the U.S. Geological Survey acknowledged the likelihood of a magnitude 7 or greater earthquake being triggered on the southern San Andreas fault line.

"Any time there is significant seismic activity in the vicinity of the San Andreas fault, we seismologists get nervous because we recognize that the probability of having a large earthquake goes up," said director of the Southern California Earthquake Center Thomas Jordan.

Valerie Sahakian, from the U.S. Geological Survey, who is one of the authors of the study that was published in the Bulletin of the Seismological Society of America, said that the newly discovered fault has no link to the recent earthquake swarm and that the timing of the fault line's announcement is just coincidental.