

Nearly 200,000 people exposed to California's volcanic hazard zones each day, report says

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Nearly 200,000 people live, work or pass through one of California's volcanic hazard zones on a daily basis, and there's a 16 percent chance of an eruption in the state within the next 30 years.

That's according to the U.S. Geological Survey, which looked at the threats volcanoes pose to the state's people, resources and infrastructure for a new report issued Monday.

While Californians widely recognize the damaging potential of earthquakes, wildfires and tsunamis, researchers say, far fewer consider the risks of volcanic eruptions, "despite the fact that they occur in the state about as frequently as the largest earthquakes on the San Andreas Fault."

The chance of a 6.7 magnitude or higher earthquake unfolding on the fault is at 22 percent in the next 30 years, per the report, compared to the 16 percent chance of a volcanic [eruption](#) over that same time.

At least 10 such eruptions have occurred over the past 1,000 years, researchers found, with the most recent one occurring at Northern California's Lassen Peak from 1914-1917.

Lassen is one of eight volcanic areas identified in California, seven of which are considered "active" because they have molten rock—or magma—beneath, researchers say. Those areas largely dot Northern California and include Mount Shasta, Medicine Lake volcano, Clear Lake volcanic field, the Long Valley volcanic region, Coso [volcanic field](#) and Salton Buttes, per the report.

Mount Shasta has the largest number of people at risk, with a daily population of nearly 104,000. The state's volcanic hazard zones together cover 22,000 square miles including 17 counties with 14 cities.

An eruption could pose manifold threats to California's infrastructure, researchers found: At least three major California utilities seem to have [power lines](#) passing through hazard zones, with only "a fine dusting of volcanic ash" on the lines needed to cause "widespread disruption."

Several hydroelectric plants are located in the zones, too, data show. Volcanic debris in water can later muck up the metallic components of such facilities, researchers say, just as volcanic ash can do to aircraft engines overhead.

The next step in reducing California's volcanic risk will require closer looks at each site's vulnerabilities, the report says, while communities, scientists and local governments draw up mitigation plans.

More information: Margaret Mangan et al. California's exposure to volcanic hazards, (2019). [DOI: 10.3133/sir20185159](https://doi.org/10.3133/sir20185159)

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