

DISASTER AWARENESS: HOW TO PLAN AROUND EARTHQUAKE FAULTS



The Town of Mammoth Lakes, CA, in the eastern sierra region of California, is surrounded by earthquake faults. In addition, Mammoth Mountain is an actual active volcano on the rim of the Long Valley Caldera.

This caldera is one of the most seismically active regions of California. In 1980, Mammoth Lakes experienced 81 tremors of magnitudes 4.0 to 6.3 in just three days. While there were no fatalities, nine people sustained injuries and damages were reported to cost over \$1.5 million. How can urban planners, environmental non-profits, and engineers prepare and plan for disaster mitigation in order to avoid fatalities, injuries, and costly damages in the future?

In the Town of Mammoth Lakes General Plan, adopted in 2007, policies have been provided to help avoid the dangers associated with seismic activity.

These include:

- Restricting development in areas with steep slopes;
- Requiring geotechnical evaluations and implementing mitigation measures prior to developing in areas of potential geologic or seismic hazards;
- Minimizing soil erosion and slope instability by amending Municipal Codes to include advances in construction techniques;
- Informing residents and businesses regarding earthquake preparedness and response by coordinating with other agencies to promote public education efforts.

In addition to these development policies, the Town of Mammoth Lakes, CA strictly adheres to the California Building Code, which requires specific tests for any masonry that is used in the construction and architecture design of new buildings. Mammoth Lakes, CA has also adopted an Emergency Operations Plan which outlines the Town's response to many different contemporary emergency situations including wild fires, avalanches, transportation accidents, and hazardous material incidents, among others. This plan specifically follows the Response Plan for Volcano Hazards in the Long Valley Caldera and Mono Craters Region, California developed by the United States Geological Survey (USGA).

The USGA has installed a network of sensors in the area to detect subtle activity. The Town of Mammoth Lakes Police Department is responsible for building a working relationship with the USGS and monitoring the volcanic and seismic activity of the Caldera in order to organize a response in the case of an emergency. An earthquake of magnitude 5 will automatically trigger volcanic warning Yellow (Eruption watch).

Source: <http://www.globalsiteplans.com/environmental-design/disaster-awareness-how-to-plan-around-earthquake-faults-lessons-from-mammoth-lakes-ca/>