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Why Volcanic Risk is Increasing in the United States

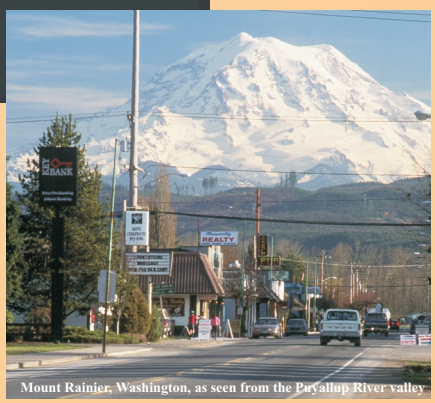
Growing population pressure in the western United States and expanding global air traffic over active volcanic regions are increasing our vulnerability to volcanic hazards. More than 50 volcanoes in the U.S. have erupted one or more times in the past 200 years. Future eruptions are certain and could lead to loss of life and severe economic disruption from ashfall over wide areas, damaged transportation routes, and destruction of inhabited areas.

1992 eruption of Mount Spurr, Alaska

Volcanic ash erupted from Alaska's explosive volcanoes is a threat to aircraft traversing the North Pacific. When highly abrasive ash is encountered by today's high performance jet aircraft, engines and other critical components may be damaged or fail. Ash can travel thousands of miles downwind from a volcano and cannot be detected by approaching aircraft. More than 10,000 people and millions of dollars in cargo fly across the North Pacific region each day, and the area's aviation traffic is increasing about ten percent a year.

1984 eruption of Mauna Loa Volcano, Hawaii, with lights of Hilo in foreground

During the 1984 eruption of Mauna Loa Volcano, Hawaii, lava flows threatened the coastal city of Hilo. Since 1843 the volcano has erupted 33 times; lava flows from one of these eruptions on the volcano's northeast flank covered areas that are now within Hilo's city limits. Eruptions from the volcano's southwest flank, however, present a greater threat to life and property because newly developed residential areas lie immediately downslope of potential vents.



Mount Rainier, Washington, as seen from the Puyallup River valley

Eruptions and massive landslides at Mount Rainier, Washington, have generated many large volcanic mudflows during the past few thousand years. These flows swept tens of miles downvalley from the volcano, depositing layers of rock, mud, and other debris. As recently as 500 years ago a large mudflow traveled more than 35 miles down the Puyallup River valley. Today, several rapidly growing communities are being built on its deposit and are at risk from future mudflow.

Reducing Volcanic Risk in the U.S.