

Location Option Details

1. Florida

- ▶ Florida has the smallest number of earthquakes in the United States.
- ▶ Florida is the U.S. location where hurricanes are most frequent.
- ▶ Of the six deadliest hurricanes to hit the continental U.S., three have hit Florida.
- ▶ Between 1900 and 1995, Florida experienced both the most major (24) and the most overall (57) hurricanes of any state in the United States.
- ▶ About half the hurricanes to strike southern Florida are major ones.
- ▶ No point in Florida is more than 100 miles from the coast; therefore, all areas are at risk of hurricane damage.
- ▶ From July 1995 through June 1996, Florida experienced 35 tornadoes, 32 floods, and three hurricanes.
- ▶ In February 1998, devastating tornadoes swept through central Florida, killing at least 43 people and destroying many homes and other buildings.
- ▶ In 2004, four hurricanes and one tropical storm hit Florida. This was the first time Florida encountered four hurricanes in one season since 1851.



The pre-Hurricane Charley aerial photo on the left was taken several days following the passage of 2001's Tropical Storm Gabrielle. Note the two relatively small breaches in the central part of the island. On August 13, 2004, Hurricane Charley carved the 450-m-wide breach that is shown in the right photo. From U.S. Geological Survey.

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Location Option Details

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2. California

- ▶ California is the state with the most damaging earthquakes.
- ▶ Giant earthquakes on faults, such as the San Andreas, tend to occur every few hundred years; therefore, an earthquake like the one in 1906 (magnitude 7.8) is not likely to occur in northern California for at least 100 years.
- ▶ In 1990 the U.S. Geological Survey reported a 67 percent chance that one or more earthquakes of magnitude 7 or greater will occur in the San Francisco Bay area before the year 2020.
- ▶ Northern California is one of the major flood-prone areas in the United States.
- ▶ From July 1995 through June 1996, California experienced 39 floods.
- ▶ Heavy rain storms affected Southern California from December 2004 through February 2005. Over 16.97 inches of rain fell in Los Angeles over a 15-day period. In all, over 20 people were killed in the storms from a combination of floods, avalanches, landslides and weather-related car-accidents, including ten people killed by landslides when the hillside above La Conchita, in Ventura County, gave way on January 10, 2005 burying over a dozen homes underneath feet of mud.

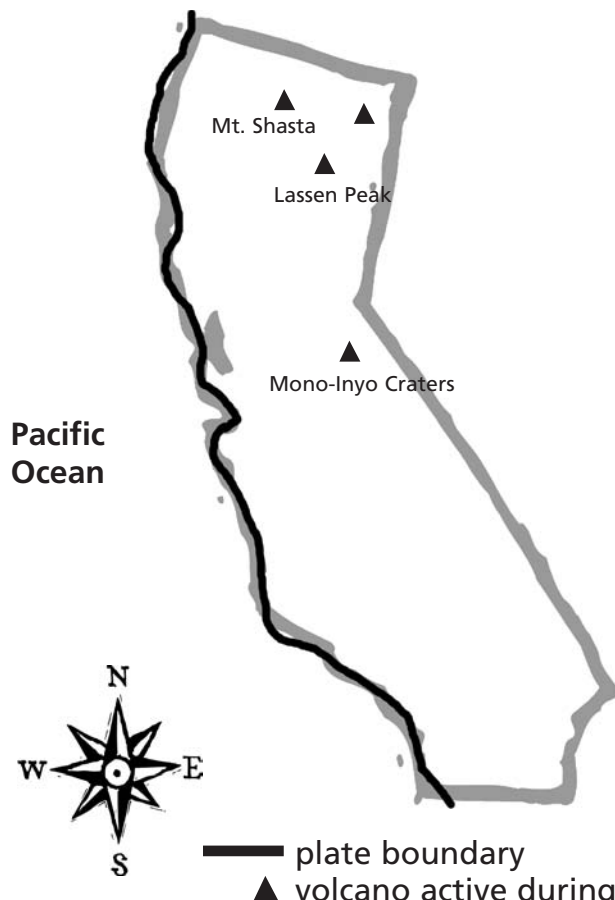


Photo by Robert L. Schuster, U.S. Geological Survey: La Conchita, CA, 1995.

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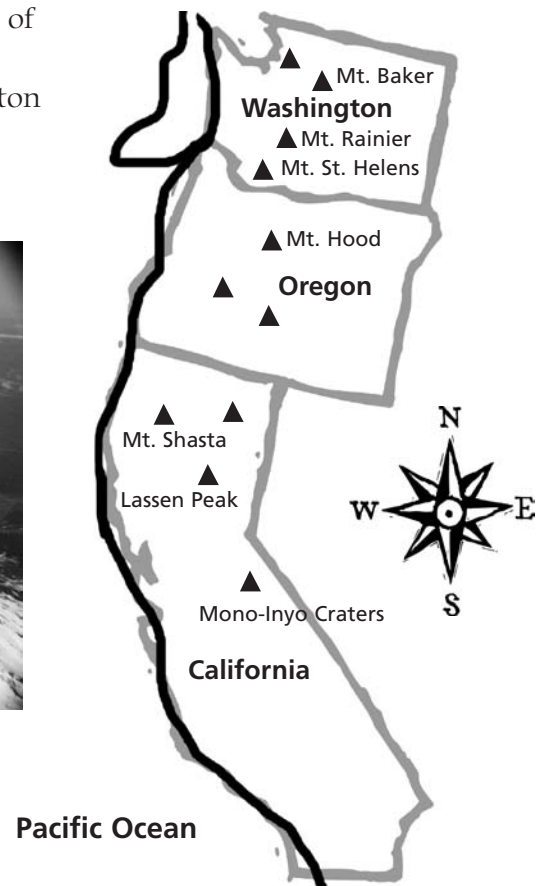
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3. Cascade Mountain Range: Washington, Oregon, and Northern California

- ▶ This area is susceptible to earthquakes and volcanic eruptions.
- ▶ There are five active or potentially active volcanoes in the Washington state area of the Cascade Range. These volcanoes have erupted approximately five times in the past 200 years.
- ▶ In Washington, Mt. St. Helens and Mt. Rainier are active volcanoes that have erupted as recently as 2005 and the 1840s, respectively.
- ▶ Although the eruptions in the Cascade Range (which average 1–2 times every 100 years) are less frequent than those that occur in Hawaii, they are more destructive because of their violently explosive nature and their proximity to population centers.
- ▶ Earthquakes generated in the Cascadia subduction zone present a significant hazard to urban areas of the Pacific Northwest.
- ▶ Great earthquakes have occurred in this area as recently as 300 years ago.
- ▶ It has been suggested that an earthquake with a magnitude of 9 could someday hit the region, though others claim that there has been a reduction in earthquake hazards in part of the Cascade area.
- ▶ From July 1995 through June 1996, Washington experienced approximately 30 floods and Oregon experienced approximately five floods.



March 8, 2005: Aerial view of Mount St. Helens with plume, as seen from the west. From U.S. Geological Survey.



- plate boundary
- ▲ volcano active during past 2,000 years

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Location Option Details

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4. Lower Mississippi River Valley

- ▶ The Mississippi Valley is an earthquake region and a flood-prone area.
- ▶ This region has had more earthquakes than any other part of the United States east of the Rocky Mountains.
- ▶ Earthquakes in the central or eastern parts of the United States affect larger areas than earthquakes of similar magnitude in the western United States.
- ▶ The probability of a moderate earthquake (magnitude 6 or 7) occurring in the New Madrid seismic zone of the Mississippi Valley within the next 50 years is higher than 90 percent.
- ▶ Local actions taken to reduce negative effects from earthquakes include public awareness and education, multi-state planning, intensified research of the New Madrid seismic zone, a volunteer earthquake advisory council, mapping of earthquake hazards, and the construction of buildings to ensure seismic safety.
- ▶ The Mississippi River has often flooded its banks, causing significant destruction in the floodplain areas.
- ▶ During the 1993 flood of the Mississippi River, approximately 50,000 homes were damaged and about 54,000 people were evacuated.
- ▶ From July 1995 through June 1996, the Lower Mississippi River Valley experienced approximately 40 tornadoes, 66 floods, and three hurricanes.



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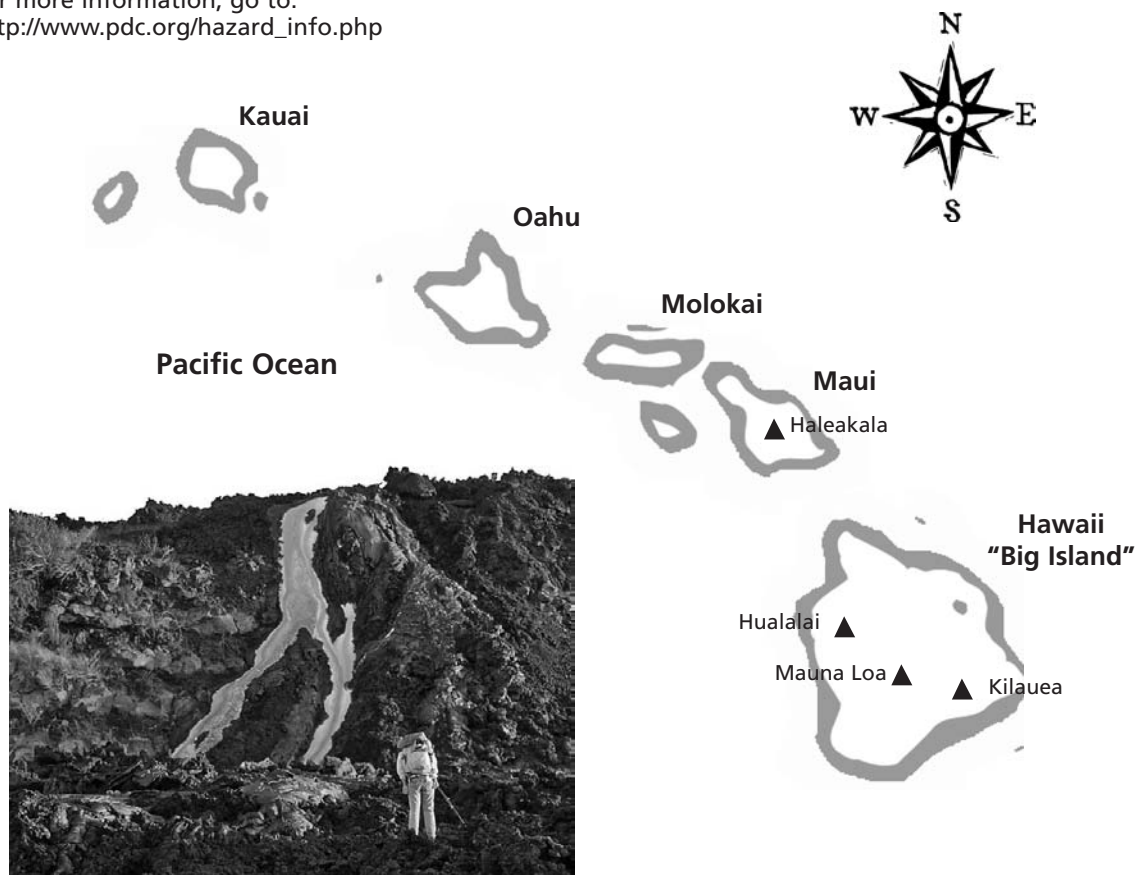
Location Option Details

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5. Hawaii

- ▶ The Hawaiian Islands are the site of much volcanic activity; however, the eruptions are typically nonexplosive.
- ▶ There is no clear end in sight to the Kilauea volcanic eruption that began in 1983; it may continue for years or even decades.
- ▶ On Hawaii's Big Island, the Mauna Loa volcano has erupted 15 times since 1900.
- ▶ Hawaii leads the world in eruptions producing lava flows.
- ▶ The inhabitants of the Hawaiian Islands also must be prepared for tsunamis, which are large water waves caused by seismic activity and often result in significant damage to coastal communities.
- ▶ From July 1995 through June 1996, Hawaii experienced six floods.

For more information, go to:
http://www.pdc.org/hazard_info.php



Lava flow from Kilauea. May 2004 from the U.S. Geological Survey.

▲ volcano active during past 2,000 years