



Enrichment

The New Madrid Fault

Of all the states, California faces the highest risk of earthquakes. This is due, in part, to a major break in Earth's crust that runs through the state for approximately 1,050 km. This fracture, the San Andreas Fault, was responsible for the killer San Francisco earthquake in 1906 and countless others since.

Along Another Fault

A series of three earthquakes between December 16, 1811, and February 7, 1812, took place not in California, but in Missouri, along a quake zone called the New Madrid Fault. All three have been estimated to have measured 8.0 or above on the Richter scale, making them among the largest American earthquakes ever. Tremors were felt as far east as Boston. After-shocks continued for more than a year. Besides devastating 7,800 to 13,000 km² of land, the earthquake caused the Mississippi River to reverse its direction temporarily and begin to flow upstream. The earthquake also caused the Mississippi to permanently change its course and create lakes and islands where there hadn't been any before.

The New Madrid Fault is 70 km wide, 300 km long, and located near New Madrid, Missouri.

It runs primarily through Missouri, Arkansas, Kentucky, and Tennessee. If an earthquake happened, it could affect up to 17 states surrounding the fault zone. For a long time, geologists thought that a New Madrid earthquake was likely to happen only every 1,000 years or so.

Risk Managment

Unfortunately, earthquakes can and do happen anytime, anywhere. Scientists are still unable to predict them, so they're constantly working on ways to prepare for an earthquake and to minimize the damage to lives and property. In the fall of 2000, representatives from 26 earthquake-prone states met at the first-ever National Earthquake Risk Management Conference. They discussed, among other things, the New Madrid Fault and the need to make people aware that earthquakes don't just happen in California.

Scientists predict that a New Madrid earthquake could result in \$20 billion in damages. And with increased land development and urban sprawl hitting all the communities located on the New Madrid Fault, it's likely the human cost would be very high, too.

1. Where could you find information on earthquake preparedness? Is this something you and your family need to think about? Give at least two reasons.

2. When the New Madrid earthquakes of 1811–1812 hit, there were very few people or buildings in the area. Now scientists predict that a similar earthquake would cause damage from St. Louis to Memphis, causing billions of dollars in property damage and the loss of hundreds of lives. What effect would a New Madrid earthquake have on the land itself?

3. List some safety measures your school could take to prepare for an earthquake.
