

EARTHQUAKE HISTORY OF Kentucky

EARTHQUAKES centered within the borders of Kentucky have caused only moderate damage. Eighteen shocks of intensity V or greater have been reported since 1779. Most of the activity has occurred in the western portion of the state, near the New Madrid seismic zone. The series of catastrophic earthquakes at New Madrid, Missouri, in 1811-1812, dominates the seismic history of the middle Mississippi Valley, this being reflected in the western areas designated as seismic risk zones 2 and 3.

As early as 1779 an earthquake was reported felt in northern Kentucky. No further details were available on this event. Meager reports of another earthquake in the northern and eastern portions of Kentucky indicated an occurrence during the spring of 1791 or 1792.

Reports of chimneys being knocked down in many places in Kentucky resulted from the 1811-1812 earthquakes at New Madrid, Missouri. A detailed record of 1,874 tremors from the initial shock of December 16, 1811, through March 15, 1812, was kept by Mr. Jared Brooks at Louisville, Kentucky. Shocks continued to occur at fre-

quent intervals for at least two years, thus the total number of shocks was much greater. It is not unlikely that between 2,000 and 3,000 tremors were felt in Kentucky in 1811 and 1812. Reelfoot Lake, a small portion of which extends into Kentucky, is a present-day reminder of the great forces associated with these earthquakes.

A number of moderate earthquakes occurred within the state over the next one hundred years. Houses shook and plaster was cracked in parts of northern Kentucky on November 20, 1834. Sounds like distant thunder were also reported. Similar effects were noted on December 27, 1841, near the town of Hickman. The Mississippi River was greatly agitated although no wind was reported.

A severe shock was reported at Columbus, Kentucky, on March 12, 1878. A section of the bluff along the Mississippi River caved in. On October 26, 1915, an earthquake at Mayfield was reported to have shaken pictures from walls. All of these events are rated as intensity V on the Modified Mercalli Scale.

A sharp earthquake with an epicenter near the mouth of the Ohio River occurred on December 7, 1915. Buildings were strongly shaken, windows and dishes rattled, and loose objects were shaken in western Kentucky and adjoining regions (intensity V-VI). The total felt area covered 60,000 square miles.

Hickman, the site of the 1841 earthquake, experienced another strong shock on December 18, 1916. Reports indicated bricks were shaken from chimneys at Hickman and New Madrid, Missouri (intensity VI-VII).

An earthquake near the point of the December 1915 event occurred on March 2, 1924. No damage was reported and the felt area was much less, about 15,000 square miles.

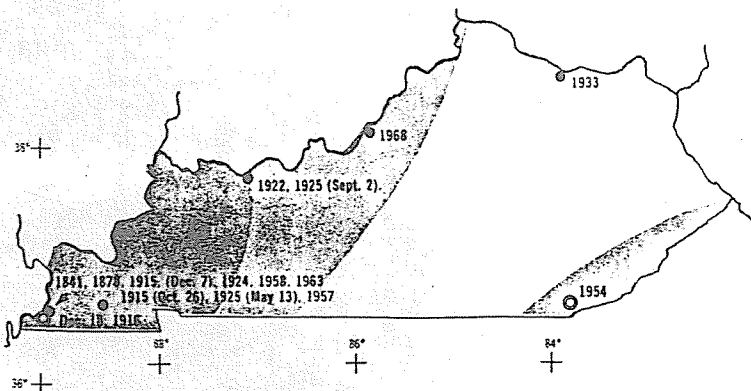
A broad area of Kentucky, Illinois, Indiana, and Tennessee, estimated at about 75,000 square miles, was affected by an earthquake on September 2, 1925. It was apparently centered near Henderson, where some landslides were noted. At Louisville, about 100 miles distant, a chimney fell and a house reportedly sank.

On January 1, 1954, slight damage (intensity VI) resulted from an earthquake near Middlesboro. The tremor caused general alarm among the population. The felt area extended into Tennessee, North Carolina, and Virginia.

Seven other earthquakes, all with intensity V effects, are plotted on the accompanying map. The epicentral areas and dates: Western Kentucky, March 23, 1922; near Mayfield, May 13, 1925, felt over approximately 3,000 square miles; Maysville, May 28, 1933, felt in adjoining portions of Ohio; Paducah, March 26, 1957; vicinity of the Illinois-Kentucky-Missouri border, January 27, 1958, and August 2, 1963; and near Louisville, December 11, 1968.

The earthquake of November 9, 1958, centered in southern Illinois, caused widespread damage over nearby areas of Indiana, Kentucky, and Missouri. Considerable masonry damage was sustained at the City Building at Henderson, Kentucky, about 50 miles east-southeast of the epicenter. Intensity VII damage was also reported from Poole, Smith Mills, and Uniontown.

Kentucky



● Intensity V, Cracked Plaster
○ Intensity V, Fair Plaster,
Damaged Chimneys

ZONE 0 No reasonable expectation of earthquake damage.
ZONE 1 Minor earthquake damage can be expected.
ZONE 2 Moderate damage can be expected.
ZONE 3 Major destructive earthquake may occur.

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