Office of the State Geologist
Scott Ausbrooks, Director and State Geologist

Lawrence County Seismicity Map

About the Map

This map illustrates the location and magnitude of reported earthquakes that have occurred in Lawrence County, Arkansas from 1918 to Present. The data source for the earthquakes depicted on this map is derived from the Office of the State Geologist (OSG) earthquake catalog. The catalog has been compiled from various sources and publications and includes date, time, latitude, longitude, magnitude or intensity and depth information. Some event records may contain incomplete data due to their date and/or source. The OSG earthquake catalog is dynamic and continually updated as event parameters are modified, new events are added, and occasionally, events are deleted. The seismic areas/zones, illustrated on this map are derived from various geologic sources and publications on file at the OSG. Depicted seismic areas/zones, are for illustration purposes only and may not represent all the seismically active features within a given location or relate to the origin of the earthquakes depicted on this map.

References

Advanced National Seismic System (ANSS) earthquake database web page: URL: http://earthquake.usgs.gov/monitoring/anss/

Branner, G.C., and J.M. Hansell, 1937, Earthquake risks in Arkansas: Arkansas Geological Survey (AGS) Information Circular 4, 16 p, 1 plate.

Center for Earthquake Research and Information (CERI) - New Madrid Earthquake Catalog: URL: http://folkworm.ceri.memphis.edu/catalogs/html/cat_nm.html

Langenheim, V.E., and T. G. Hildenbrand (1997), Commerce geophysical lineament – it's source, geometry, and relation to the Reelfoot Rift and New Madrid seismic zone, GSA Bulletin, V. 109, n. 5, p.580-595.

National Center for Earthquake Engineering Research (NCEER) – earthquake catalog for the central and eastern United States, 1627-1985. URL: http://folkworm.ceri.memphis.edu/catalogs/html/cat_nceer.html

Nuttli, O.W., 1979, The seismicity of the central United States, in geology in the siting of nuclear power plants: Geological Society of America, Reviews in Engineering Geology, Volume 4, p. 67-93.

St. Louis University (SLU) Earthquake Center web page: URL: http://www.eas.slu.edu/eqc/

Stover, C.W., B.G. Reagor, and S.T. Algermissen, 1979, Seismicity map of the state of Arkansas: USGS Map MF-1154, 1 map.

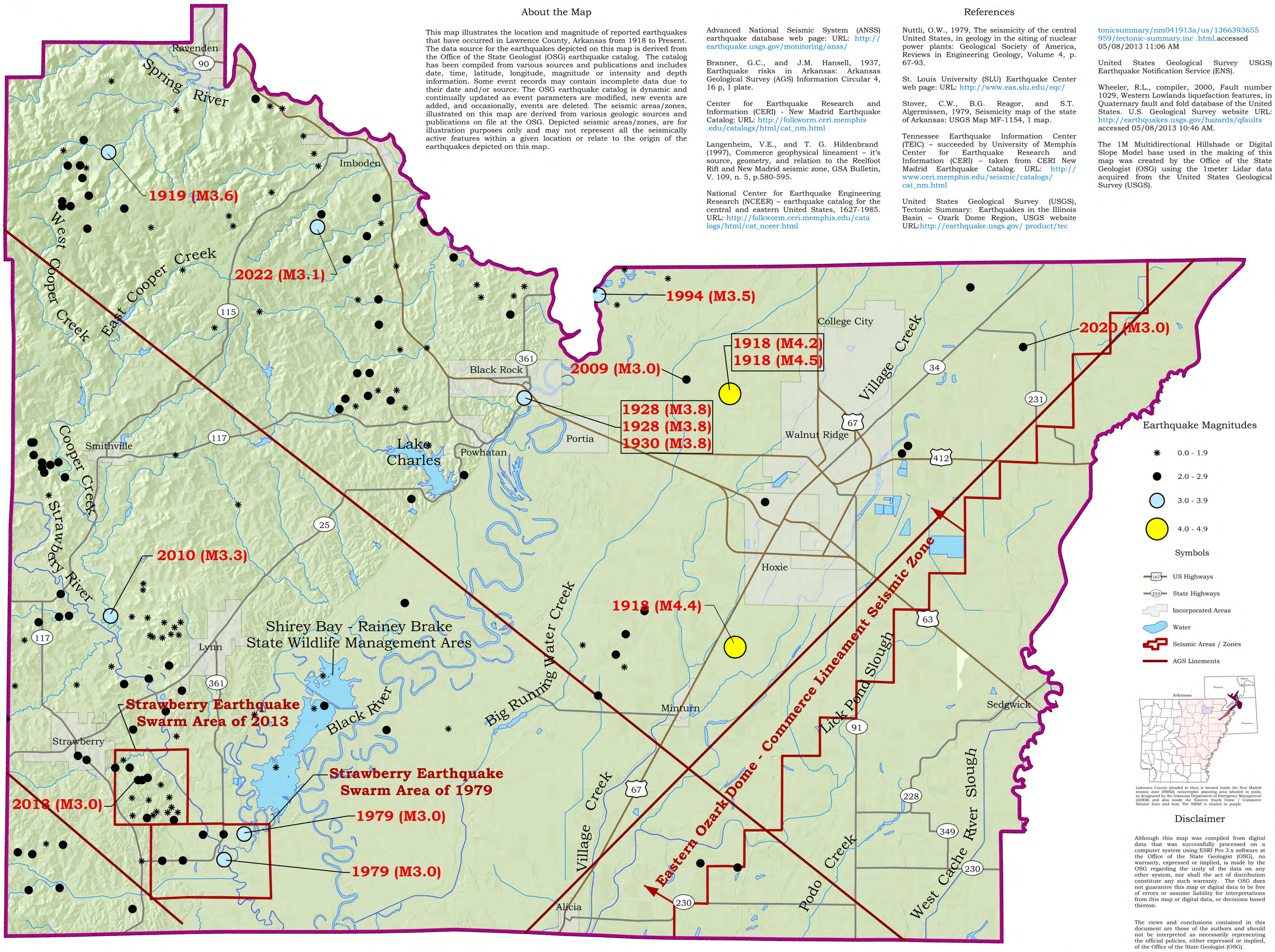
Tennessee Earthquake Information Center (TEIC) – succeeded by University of Memphis Center for Earthquake Research and Information (CERI) – taken from CERI New Madrid Earthquake Catalog. URL: http://www.ceri.memphis.edu/seismic/catalogs/cat_nm.html

United States Geological Survey (USGS), Tectonic Summary: Earthquakes in the Illinois Basin – Ozark Dome Region, USGS website URL:http://earthquake.usgs.gov/ product/tectonicsummary/nm041913a/us/1366393655959/tectonic-summary.inc .html.accessed 05/08/2013 11:06 AM

United States Geological Survey USGS) Earthquake Notification Service (ENS).

Wheeler, R.L., compiler, 2000, Fault number 1029, Western Lowlands liquefaction features, in Quaternary fault and fold database of the United States. U.S. Geological Survey website URL: http://earthquakes.usgs.gov/hazards/qfaults accessed 05/08/2013 10:46 AM.

The 1M Multidirectional Hillshade or Digital Slope Model base used in the making of this map was created by the Office of the State Geologist (OSG) using the 1meter Lidar data acquired from the United States Geological Survey (USGS).



Earthquake Magnitudes

- 0.0 - 1.9
- 2.0 - 2.9
- 3.0 - 3.9
- 4.0 - 4.9

Symbols

- US Highways
- State Highways
- Incorporated Areas
- Water
- Seismic Areas / Zones
- AGS Linements

Lawrence County (shaded in blue) is located inside the New Madrid seismic zone (NMSZ) catastrophic planning area (shaded in pink), as designated by the Arkansas Department of Emergency Management (ADEM) and also inside the Eastern Ozark Dome / Commerce Seismic Zone (red box). The NMSZ is shaded in purple.

Disclaimer

Although this map was compiled from digital data that was successfully processed on a computer system using ESRI Pro 3.x software at the Office of the State Geologist (OSG), no warranty, expressed or implied, is made by the OSG regarding the unity of the data on any other system, nor shall the act of distribution constitute any such warranty. The OSG does not guarantee this map or digital data to be free of errors or assume liability for interpretations from this map or digital data, or decisions based thereon.

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Office of the State Geologist (OSG).

Scale

2 1 0 2 4 6 8 10 Miles

2 1 0 2 4 6 8 10 Kilometers

N

Scott M. Ausbrooks
David H. Johnston
2013

Revised Date:	Scale:	Digital Compilation:	Updated:
18 July 2025	1 : 75,000	Jerry W. Clark	