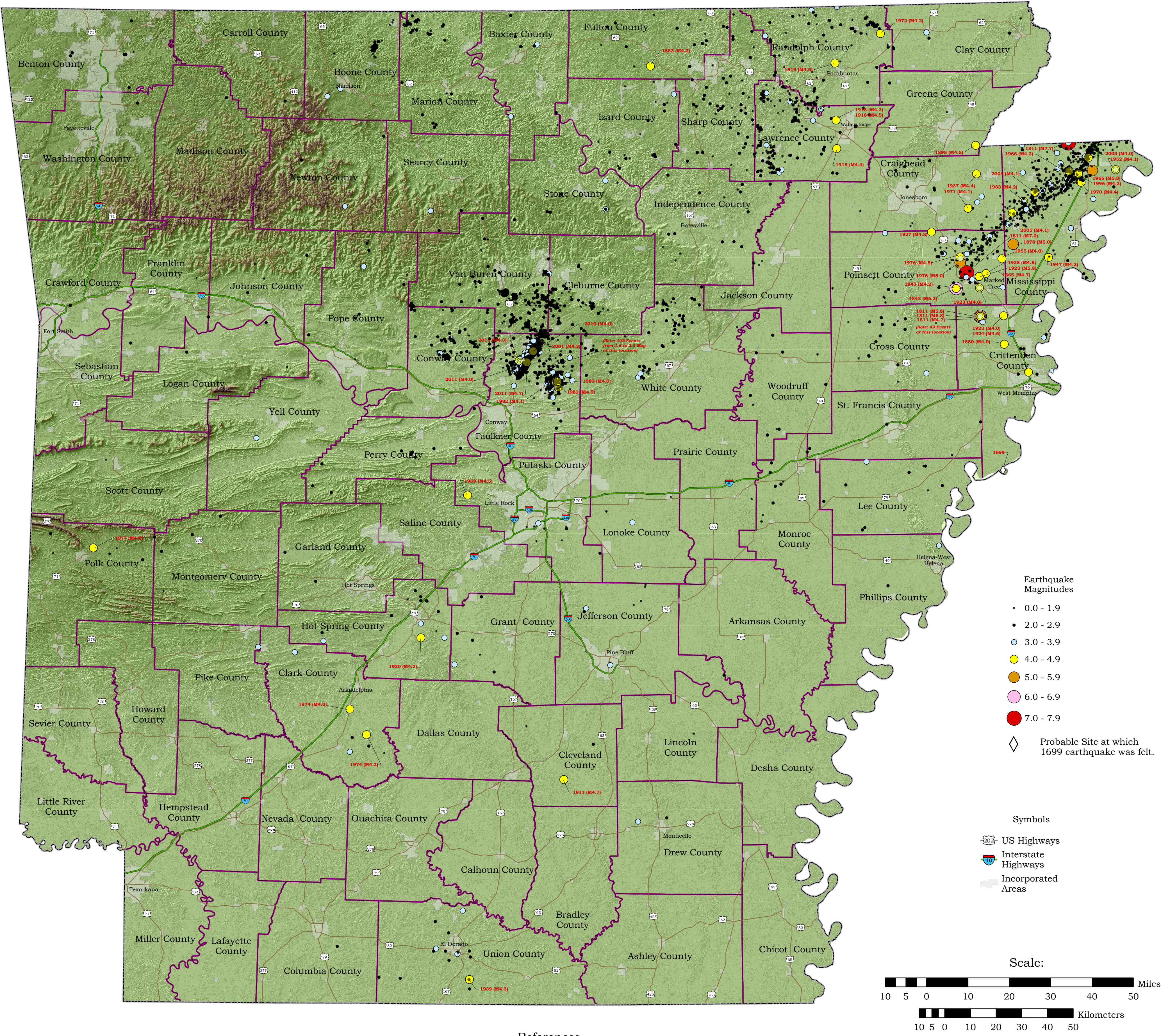




Three Centuries of Earthquakes In Arkansas From 1699 through 2023



References

Advanced National Seismic System (ANSS) earthquake database web page: URL:

Arkansas Gazette newspaper (Ceased publication in 1991).

Bakun, W.H. and R.C. Hopper, 2004, Catalog of significant historical earthquakes in the Central United States: U.S. Geological Survey Open-File Report 2004-1086, 142 p.

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://folk.worm.ceri.memphis.edu/catalogs/html/cat_nm.html

Cox, R. T., 1991, Possible triggering of earthquakes by underground waste disposal in the El Dorado, Arkansas area: Seismological Research Letters, V. 62, N. 2, p.113-122.

Haar, L. C., J.B. Fletcher, and C.S. Mueller, 1984, The 1982 Enola, Arkansas swarm and scaling of ground motion in the eastern United States: Bulletin of the Seismological Society of America V. 74, N. 6, p. 2463-2482.

Jackson, K.C., 1979, Earthquakes and earthquake history of Arkansas, Arkansas Geological Commission (AGC) Information Circular 26, 70 p.

Johnston¹, A.C. and E.S. Schweig, 1996, The enigma of the New Madrid earthquakes of 1811-1812, Annual Review of Earth and Planetary Sciences, p. 339-394.

Johnston², A.C. and A. Metzger, 1982, TEIC Special Report # 8: The central Arkansas earthquake swarm parts 1 & 2, Tennessee Earthquake Information Center.

Metzger, A., oral communications with John David McFarland, 1989, Center for Earthquake Research and Information (CERI), University of Memphis.

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

National Earthquake Information Center (NEIC) - Preliminary Determination of Epicenters (PDE) earthquake catalog for M2.5 and greater U.S. earthquakes and M4.5 and greater Worldwide earthquakes. URL: <http://earthquake.usgs.gov/earthquakes/eqarchives/epic/>

Nuttl, 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.

Oklahoma Geological Survey (OGS) URL: <http://www.ogs.ou.edu/homepage.php>

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

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) Earthquake Notification Service (ENS).

The basemap was acquired at the Spatial Analysis Laboratory, University of Arkansas at Monticello. The feature class data was acquired at <http://www.geostor.arkansas.gov>

About the Map

This map illustrates the location and magnitude of reported earthquakes that have occurred in Arkansas from 1699 to 2019. The data source for the earthquakes depicted on this map was derived from the Arkansas Geological Survey (AGS) earthquake catalog. This 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 AGS earthquake catalog is dynamic and continually updated as event parameters are modified, new events are added and occasionally events are deleted.

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