Earthquake Epicenters of West Virginia

1824 through 2023

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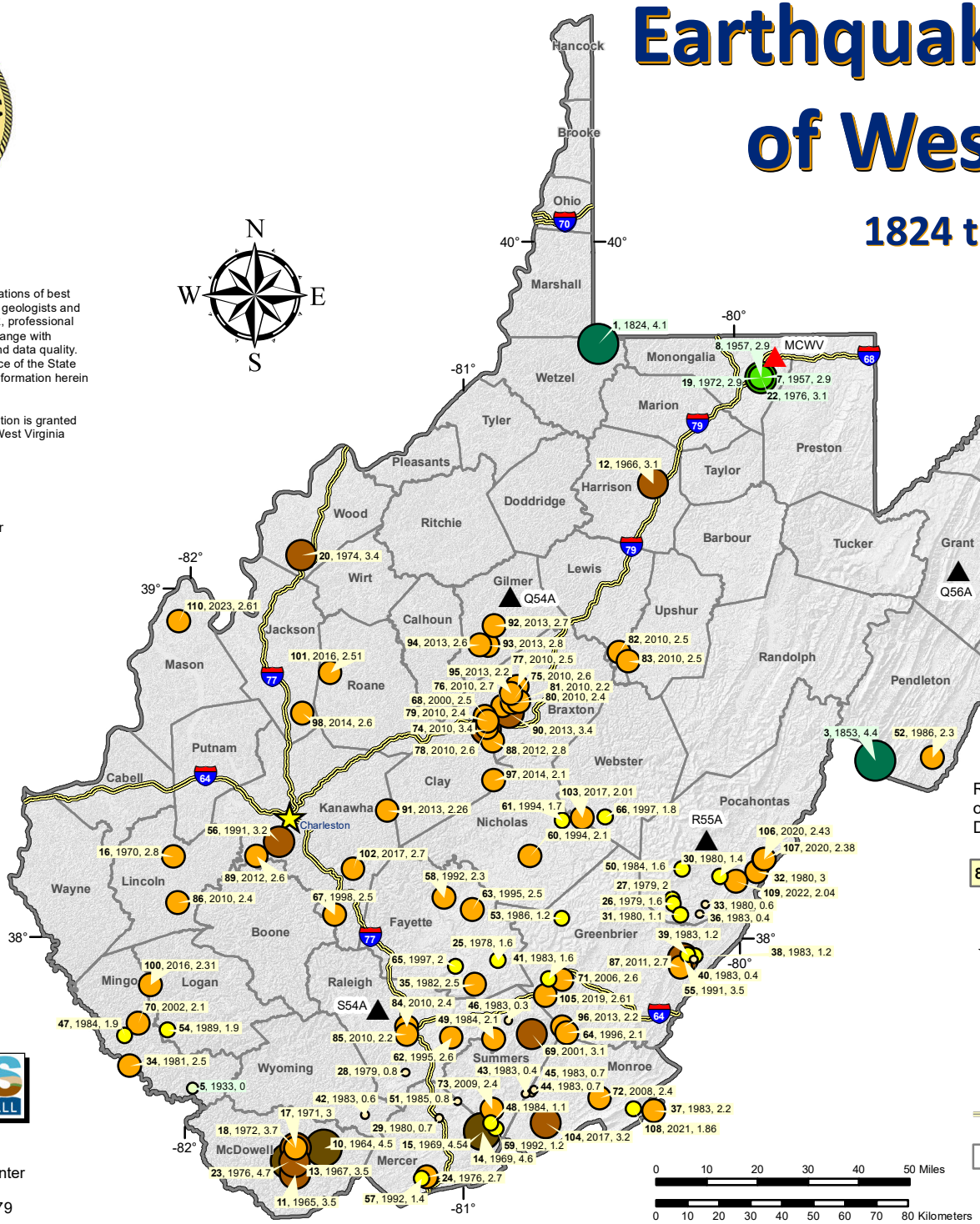
Map Date: 3/10/2023
Earthquake Data: 2/17/2023
Projection: Transverse Mercator
Horizontal Datum: NAD 1983
Map scale for full 8.5" x 11" display: 1:2,000,000



Legend

Recorded instrumental and reported historic (non-instrumental or felt) earthquake epicenters and magnitudes for West Virginia. Data were compiled from several earthquake catalog sources.

87, 2011, 2.7 — Labels show event number in **bold** followed by year and magnitude. Use event number to reference attached table.

- Charleston
- **Seismic Station** US National Seismic Network (e.g., US, IRIS)
- **Seismic Station** USArray, Central and Eastern US Network (CEUSN-N4)
- Interstate Highways
- Counties

Earthquake Epicenters

Instrumental Magnitude	Historic Magnitude
0.0 - 0.9	0.0 - 0.9
1.0 - 1.9	1.0 - 1.9
2.0 - 2.9	2.0 - 2.9
3.0 - 3.9	3.0 - 3.9
4.0 - 4.9	4.0 - 4.9

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Morgantown, WV 26508-8079
Phone: (304) 594-2331
www.wvgs.wvnet.edu

Map Num	Time (event ID)	County	UTC Year	UTC Month	UTC Day	UTC Hour	UTC Minute	UTC Seconds	Latitude	Longitude	Magnitude	Magnitude Type	Recorded	MMI	Event URL
1	1824-07-15T16:20:00	Wetzel	1824	07	15	16	20	00	39.70000	-80.50000	4.1	mb	Historic	4.0	<NULL>
2	1846-10-19T02:00:00	Jefferson	1846	10	19	02	00	00	39.30000	-77.90000	2.7	<NULL>	Historic	3	<NULL>
3	1853-05-02T14:20:00	Pendleton	1853	05	02	14	20	00	38.50000	-79.50000	4.4	<NULL>	Historic	5	<NULL>
4	1909-04-02T07:25:00	Berkeley	1909	04	02	07	25	00	39.40000	-78.00000	3.6	mb	Historic	5	<NULL>
5	1933-06-15T01:14:36.8	Mingo	1933	06	15	01	14	36.8	37.56800	-81.97300	0.0	<NULL>	Historic	<NULL>	<NULL>
6	1935-11-01T08:30:00	Hardy	1935	11	01	08	30	00	38.90000	-78.90000	3.3	<NULL>	Historic	4	<NULL>
7	1957-03-07T21:05:09	Monongalia	1957	03	07	21	05	09	39.60000	-79.90000	2.9	mb	Historic	3	<NULL>
8	1957-03-13T21:00:41	Monongalia	1957	03	13	21	00	41	39.60000	-79.90000	2.9	mb	Historic	3	<NULL>
9	1963-10-10T00:00:00	Morgan	1963	10	10	00	00	00	39.65500	-78.19700	3.6	<NULL>	Historic	<NULL>	<NULL>
10	1964-11-25T02:50:05	McDowell	1964	11	25	02	50	05	37.40000	-81.50000	4.5	mb	Instrumental	<NULL>	<NULL>
11	1965-04-26T15:26:19.7	McDowell	1965	04	26	15	26	19.7	37.32500	-81.60200	3.5	mblg	Instrumental	<NULL>	<NULL>
12	1966-09-28T00:00:00	Harrison	1966	09	28	00	00	00	39.30000	-80.30000	3.1	<NULL>	Instrumental	4	<NULL>
13	1967-12-16T12:23:33.4	McDowell	1967	12	16	12	23	33.4	37.36000	-81.60400	3.5	mb	Instrumental	<NULL>	<NULL>
14	1969-11-20T01:00:09.3	Mercer	1969	11	20	01	00	09.3	37.44900	-80.93200	4.6	mblg	Instrumental	6	<NULL>
15	1969-11-20T01:00:10.700Z	Mercer	1969	11	20	01	00	10.700	37.449000	-80.932000	4.54	mw	Instrumental	5	https://earthquake.usgs.gov/earthquakes/eventpage/ushis3082/
16	1970-08-11T06:14:25.5	Lincoln	1970	08	11	06	14	25.5	38.23000	-82.05000	2.8	mblg	Instrumental	4	<NULL>
17	1971-04-01T05:05:11	McDowell	1971	04	01	05	05	11	37.40000	-81.60000	3.0	mb	Instrumental	0	<NULL>
18	1972-01-09T23:24:29	McDowell	1972	01	09	23	24	29	37.40000	-81.60000	3.7	mblg	Instrumental	0	<NULL>
19	1972-09-12T15:17:13.7	Monongalia	1972	09	12	15	17	13.7	39.60000	-79.90000	2.9	mb	Historic	3	<NULL>
20	1974-10-20T15:13:55.100Z	Wood	1974	10	20	15	13	55.100	39.095000	-81.593000	3.40	lg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp00008g9/
21	1976-01-30T18:58:49.800Z	Morgan	1976	01	30	18	58	49.800	39.683000	-78.170000	2.80	lg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp0000eu9/
22	1976-05-06T18:46:08.1	Monongalia	1976	05	06	18	46	08.1	39.60000	-79.90000	3.1	mb	Historic	4	<NULL>
23	1976-06-19T05:54:13.900Z	McDowell	1976	06	19	05	54	13.900	37.362000	-81.624000	4.70	mb	Instrumental	6	https://earthquake.usgs.gov/earthquakes/eventpage/usp0000gyg/
24	1976-07-03T20:53:45.08	Mercer	1976	07	03	20	53	45.08	37.32000	-81.13000	2.7	mblg	Instrumental	<NULL>	<NULL>
25	1978-08-14T04:50:05.4	Fayette	1978	08	14	04	50	05.4	37.93900	-80.87400	1.6	mc	Instrumental	<NULL>	<NULL>
26	1979-09-16T09:39:22.6	Pocahontas	1979	09	16	09	39	22.6	38.09900	-80.24000	1.6	mc	Instrumental	<NULL>	<NULL>
27	1979-09-19T00:45:57.4	Pocahontas	1979	09	19	00	45	57.4	38.11000	-80.24300	2.0	mc	Instrumental	<NULL>	<NULL>
28	1979-10-31T08:32:47.3	Raleigh	1979	10	31	08	32	47.3	37.61700	-81.20700	0.8	mc	Instrumental	<NULL>	<NULL>
29	1980-04-10T22:33:15.7	Mercer	1980	04	10	22	33	15.7	37.48700	-81.08600	0.7	mc	Instrumental	<NULL>	<NULL>
30	1980-09-21T10:02:46.3	Pocahontas	1980	09	21	10	02	46.3	38.17500	-80.07000	1.4	mc	Instrumental	<NULL>	<NULL>
31	1980-10-16T03:48:07.6	Pocahontas	1980	10	16	03	48	07.6	38.06600	-80.21500	1.1	mc	Instrumental	<NULL>	<NULL>
32	1980-11-05T21:48:14.2	Pocahontas	1980	11	05	21	48	14.2	38.18800	-79.93600	3.0	ml	Instrumental	<NULL>	<NULL>
33	1980-11-25T07:44:04	Pocahontas	1980	11	25	07	44	04	38.09500	-80.12300	0.6	md	Instrumental	<NULL>	<NULL>
34	1981-11-30T17:33:11	Mingo	1981	11	30	17	33	11	37.63000	-82.20000	2.5	mc	Instrumental	<NULL>	<NULL>
35	1982-06-23T16:17:34.1	Fayette	1982	06	23	16	17	34.1	37.87000	-80.95700	2.5	md	Instrumental	<NULL>	<NULL>
36	1983-01-21T05:33:20.4	Pocahontas	1983	01	21	05	33	20.4	38.06700	-80.14400	0.4	md	Instrumental	<NULL>	<NULL>
37	1983-05-26T01:04:44.8	Monroe	1983	05	26	01	04	44.8	37.50600	-80.31600	2.2	md	Instrumental	<NULL>	<NULL>
38	1983-06-10T00:18:40.4	Greenbrier	1983	06	10	00	18	40.4	37.94800	-80.16300	1.2	md	Instrumental	<NULL>	<NULL>
39	1983-06-10T00:24:57	Greenbrier	1983	06	10	00	24	57	37.95100	-80.18900	1.2	md	Instrumental	<NULL>	<NULL>
40	1983-06-10T00:31:08.3	Greenbrier	1983	06	10	00	31	08.3	37.93800	-80.16800	0.4	md	Instrumental	<NULL>	<NULL>
41	1983-07-20T04:41:40.9	Greenbrier	1983	07	20	04	41	40.9	37.88500	-80.69100	1.6	md	Instrumental	<NULL>	<NULL>
42	1983-07-25T03:27:00.2	Wyoming	1983	07	25	03	27	00.2	37.49600	-81.35200	0.6	md	Instrumental	<NULL>	<NULL>
43	1983-11-13T16:51:06.7	Summers	1983	11	13	16	51	06.7	37.55600	-80.77500	0.4	md	Instrumental	<NULL>	<NULL>
44	1983-11-13T17:50:50.1	Monroe	1983	11	13	17	50	50.1	37.55900	-80.75300	0.7	md	Instrumental	<NULL>	<NULL>
45	1983-11-25T16:27:47.8	Monroe	1983	11	25	16	27	47.8	37.56800	-80.74500	0.7	md	Instrumental	<NULL>	<NULL>
46	1983-12-23T10:51:21.9	Summers	1983	12	23	10	51	21.9	37.76600	-80.83700	0.3	md	Instrumental	<NULL>	<NULL>
47	1984-02-02T05:10:19.7	Mingo	1984	02	02	05	10	19.7	37.71700	-82.21800	1.9	md	Instrumental	<NULL>	<NULL>
48	1984-03-11T04:01:38.9	Summers	1984	03	11	04	01	38.9	37.47400	-80.90000	1.1	md	Instrumental	<NULL>	<NULL>
49	1984-10-09T05:33:31.5	Summers	1984	10	09	05	33	31.5	37.71300	-80.89100	2.1	md	Instrumental	<NULL>	<NULL>
50	1984-12-21T13:12:21.9	Pocahontas	1984	12	21	13	12	21.9	38.19800	-80.20800	1.6	md	Instrumental	<NULL>	<NULL>
51	1985-06-14T07:57:10.2	Mercer	1985	06	14	07	57	10.2	37.53400	-81.02000	0.8	md	Instrumental	<NULL>	<NULL>
52	1986-02-26T21:53:20.8	Pendleton	1986	02	26	21	53	20.8	38.50700	-79.29200	2.3	md	Instrumental	<NULL>	<NULL>
53	1986-12-20T08:13:12.8	Greenbrier	1986	12	20	08	13	12.8	38.05800	-80.64300	1.2	md	Instrumental	<NULL>	<NULL>
54	1989-03-19T10:07:55.8	Logan	1989	03	19	10	07	55.8	37.73500	-82.06400	1.9	md	Instrumental	<NULL>	<NULL>
55	1991-04-22T01:01:20.270Z	Greenbrier	1991	04	22	01	01	20.270	37.941000	-80.207000	3.50	mblg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp0004qn8/
56	1991-06-28T18:34:51.920Z	Kanawha	1991	06	28	18	34	51.920	38.276000	-81.668000	3.20	mblg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp0004thc/
57	1992-03-29T20:16:48.2	Mercer	1992	03	29	20	16	48.2	37.31400	-81.14900	1.4	md	Instrumental	<NULL>	<NULL>
58	1992-05-06T21:20:23.9	Fayette	1992	05	06	21	20	23.9	38.11800	-81.06900	2.3	md	Instrumental	<NULL>	<NULL>
59	1992-11-24T02:26:50.7	Summers	1992	11	24	02	26	50.7	37.45700	-80.88400	1.2	md	Instrumental	<NULL>	<NULL>
60	1994-02-04T07:40:32.4	Nicholas	1994	02	04	07	40	32.4	38.23600	-80.75900	2.1	md	Instrumental	<NULL>	<NULL>

Map Num	Time (event ID)	County	UTC Year	UTC Month	UTC Day	UTC Hour	UTC Minute	UTC Seconds	Latitude	Longitude	Magnitude	Magnitude Type	Recorded	MMI	Event URL
61	1994-06-19T08:36:41.3	Nicholas	1994	06	19	08	36	41.3	38.33900	-80.64000	1.7	md	Instrumental	<NULL>	<NULL>
62	1995-11-15T10:29:24.8	Raleigh	1995	11	15	10	29	24.8	37.71700	-81.04300	2.6	md	Instrumental	<NULL>	<NULL>
63	1995-12-28T23:48:30.4	Fayette	1995	12	28	23	48	30.4	38.08400	-80.96800	2.5	md	Instrumental	<NULL>	<NULL>
64	1996-08-11T09:11:21.3	Greenbrier	1996	08	11	09	11	21.3	37.73100	-80.62800	2.1	mc	Instrumental	<NULL>	<NULL>
65	1997-02-22T14:32:33.1	Fayette	1997	02	22	14	32	33.1	37.92100	-81.02700	2.0	mc	Instrumental	<NULL>	<NULL>
66	1997-03-15T05:56:36.4	Webster	1997	03	15	05	56	36.4	38.34700	-80.48400	1.8	md	Instrumental	<NULL>	<NULL>
67	1998-10-02T10:01:06.9	Kanawha	1998	10	02	10	01	06.9	38.06800	-81.46600	2.5	md	Instrumental	<NULL>	<NULL>
68	2000-10-16T17:56:13.8	Braxton	2000	10	16	17	56	13.8	38.63600	-80.92000	2.5	md	Instrumental	<NULL>	<NULL>
69	2001-12-04T21:15:13.9	Summers	2001	12	04	21	15	13.9	37.72600	-80.75200	3.1	mb	Instrumental	<NULL>	<NULL>
70	2002-03-27T08:25:03.3	Mingo	2002	03	27	08	25	03.3	37.75300	-82.17100	2.1	md	Instrumental	<NULL>	<NULL>
71	2006-07-11T12:01:43.100Z	Greenbrier	2006	07	11	12	01	43.100	37.882167	-80.641333	2.60	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se606219/
72	2008-01-29T01:04:20.700Z	Monroe	2008	01	29	01	04	20.700	37.544833	-80.509833	2.40	mlg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se606830/
73	2009-04-11T18:11:09.070Z	Summers	2009	04	11	18	11	09.070	37.513333	-80.895667	2.40	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se607139/
74	2010-04-04T09:19:14.010Z	Braxton	2010	04	04	09	19	14.010	38.599000	-80.916167	3.40	mlg	Instrumental	5	https://earthquake.usgs.gov/earthquakes/eventpage/se608185/
75	2010-04-29T01:36:21.260Z	Braxton	2010	04	29	01	36	21.260	38.685667	-80.814833	2.60	mlg	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se608194/
76	2010-04-29T12:38:53.430Z	Braxton	2010	04	29	12	38	53.430	38.664833	-80.856167	2.70	mlg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se608196/
77	2010-04-29T23:26:39.470Z	Braxton	2010	04	29	23	26	39.470	38.722000	-80.803000	2.50	mblg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/usp000hc39/
78	2010-05-07T10:26:03.540Z	Braxton	2010	05	07	10	26	03.540	38.602333	-80.912167	2.60	mlg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se608197/
79	2010-05-08T03:03:00.620Z	Braxton	2010	05	08	03	03	00.620	38.623000	-80.911333	2.40	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se608198/
80	2010-07-24T09:15:44.130Z	Braxton	2010	07	24	09	15	44.130	38.675333	-80.820167	2.40	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se608209/
81	2010-07-25T03:48:35.550Z	Braxton	2010	07	25	03	48	35.550	38.679167	-80.797167	2.20	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se608210/
82	2010-08-15T04:38:47.380Z	Lewis	2010	08	15	04	38	47.380	38.818333	-80.429833	2.50	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se608213/
83	2010-08-21T03:16:21.990Z	Upshur	2010	08	21	03	16	21.990	38.792500	-80.397667	2.50	md	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se608214/
84	2010-08-26T04:22:15.190Z	Raleigh	2010	08	26	04	22	15.190	37.748333	-81.204667	2.40	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se608215/
85	2010-08-26T04:24:55.390Z	Raleigh	2010	08	26	04	24	55.390	37.727333	-81.204333	2.20	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se608216/
86	2010-09-13T15:08:46.470Z	Lincoln	2010	09	13	15	08	46.470	38.099833	-82.034000	2.40	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se608218/
87	2011-08-25T05:59:13.760Z	Greenbrier	2011	08	25	05	59	13.760	37.916000	-80.215333	2.70	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se609219/
88	2012-01-10T19:38:58.660Z	Braxton	2012	01	10	19	38	58.660	38.566833	-80.893833	2.80	mlg	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se609646/
89	2012-03-16T15:05:53.570Z	Kanawha	2012	03	16	15	05	53.570	38.234000	-81.748000	2.60	mblg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/usp000jgbk/
90	2013-03-31T14:01:24.030Z	Braxton	2013	03	31	14	01	24.030	38.645000	-80.833167	3.40	mw	Instrumental	5	https://earthquake.usgs.gov/earthquakes/eventpage/se610164/
91	2013-05-29T21:06:11.100Z	Kanawha	2013	05	29	21	06	11.100	38.365333	-81.275667	2.26	ml	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/ld60041041/
92	2013-07-20T11:38:46.180Z	Gilmer	2013	07	20	11	38	46.180	38.895667	-80.887000	2.70	mlg	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se610199/
93	2013-07-30T06:09:04.850Z	Gilmer	2013	07	30	06	09	04.850	38.839333	-80.908667	2.80	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se610203/
94	2013-08-16T11:02:21.040Z	Gilmer	2013	08	16	11	02	21.040	38.841500	-80.938667	2.60	mlg	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se610207/
95	2013-10-13T09:20:58.550Z	Braxton	2013	10	13	09	20	58.550	38.701167	-80.824167	2.20	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se610225/
96	2013-10-19T08:41:57.430Z	Greenbrier	2013	10	19	08	41	57.430	37.747667	-80.643333	2.20	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se610227/
97	2014-04-14T17:44:27.380Z	Clay	2014	04	14	17	44	27.380	38.453000	-80.889500	2.10	ml	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/ld60066331/
98	2014-06-06T22:15:40.790Z	Jackson	2014	06	06	22	15	40.790	38.643833	-81.585500	2.60	md	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se610630/
99	2016-01-17T19:12:49.050Z	Jefferson	2016	01	17	19	12	49.050	39.319333	-77.828333	3.03	ml	Instrumental	1	https://earthquake.usgs.gov/earthquakes/eventpage/ld60108801/
100	2016-08-06T12:39:14.210Z	Mingo	2016	08	06	12	39	14.210	37.863000	-82.128833	2.31	md	Instrumental	1	https://earthquake.usgs.gov/earthquakes/eventpage/se60029113/
101	2016-12-01T01:27:04.780Z	Roane	2016	12	01	01	27	04.780	38.760833	-81.485333	2.51	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se60032413/
102	2017-06-21T08:01:32.720Z	Kanawha	2017	06	21	08	01	32.720	38.199500	-81.398500	2.70	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se60172362/
103	2017-08-13T06:52:15.080Z	Webster	2017	08	13	06	52	15.080	38.345833	-80.568500	2.01	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se60042903/
104	2017-09-13T17:33:10.930Z	Monroe	2017	09	13	17	33	10.930	37.472833	-80.703000	3.20	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se60179327/
105	2019-03-04T07:41:54.780Z	Greenbrier	2019	03	04	07	41	54.780	37.838167	-80.704167	2.61	md	Instrumental	2	https://earthquake.usgs.gov/earthquakes/eventpage/se60076828/
106	2020-07-29T00:36:35.820Z	Pocahontas	2020	07	29	00	36	35.820	38.222333	-79.911500	2.43	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se60322771/
107	2020-07-30T05:57:13.780Z	Pocahontas	2020	07	30	05	57	13.780	38.222000	-79.908333	2.38	md	Instrumental	4	https://earthquake.usgs.gov/earthquakes/eventpage/se60323026/
108	2021-12-07T10:06:15.620Z	Monroe	2021	12	07	10	06	15.620	37.512000	-80.388500	1.86	md	Instrumental	2	https://earthquake.usgs.gov/earthquakes/eventpage/se60139853/
109	2022-08-10T00:36:34.020Z	Pocahontas	2022	08	10	00	36	34.020	38.160667	-80.013167	2.04	md	Instrumental	2	https://earthquake.usgs.gov/earthquakes/eventpage/se60158843/
110	2023-02-17T21:54:05.740Z	Mason	2023	02	17	21	54	05.740	38.903170	-82.040340	2.61	md	Instrumental	3	https://earthquake.usgs.gov/earthquakes/eventpage/se60500438/

Data as of 3/7/2023. For a more detailed listing, please download the West Virginia Earthquake spreadsheet/workbook from http://www.wvgs.wvnet.edu/www/earthquakes/seismic.html.

If you view this map and data as a PDF, you can click any of the blue hyperlinked text to view further infromation on a website.

Some definition of terms are provided with this map. Please consult the West Virginia Earthquake Catalog 202208.xlsx spreadsheet/workbook for complete definitions.

WVGES GEOLOGY UNDERLIES IT ALL

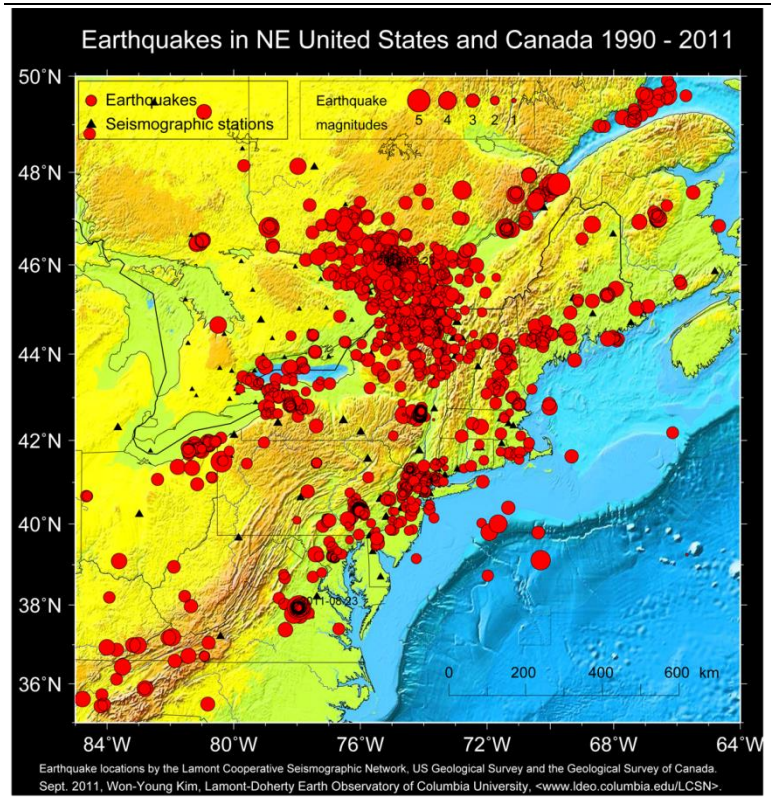
Some Definitions and Explanations:

• **County**: the name of the county where the epicenter was located, derived from spatial selection.
• Dates and times are in Coordinated Universal Time (UTC) for Year, Month, Day, Hours (HH), Minutes (MM) and Seconds (SS). (For Eastern Standard Time, the offset is - 5 hours).
• **Magnitude (Mag)**: Magnitude numbers indicative of an earthquake's relative size and is the measured maximum motion as recorded by a seismograph. The numbers are pulled from various sources; the primary source whenever possible.
• **Recorded**: refers to the means by which magnitudes were recorded: if they were reported as "felt" (Historical) or recorded via scientific instrumentation (Instrumental) as retrieved from Source1 or Source2.
• **Latitude** and **Longitude** values are expressed in decimal degrees for the northern and western hemispheres, respectively.
• **MMI**: The Modified Mercalli Intensity scale for epicenter intensity, usually designated with Roman numerals. Visit USGS at https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale for further information.
• **MagnitudeType**: Magnitude type code; the method used in measuring magnitudes (e.g., *Mb* for "body-wave", *Mc* for "coda amplitude", *Md* for "coda duration").

For other or more detailed earthquake and seismological definitions, please visit the USGS (https://earthquake.usgs.gov/learn/glossary/).

Sources (Source1 and Source2):

• USGS ENS – United States Geological Survey, Earthquake Hazards (A Primary Source)
• VTSO – Virginia Tech Seismological Observatory (A Secondary Source)
• ANSS – Advanced National Seismic System
• CERI – Center for Earthquake Research and Information
• LDEO – Lamont-Doherty Earth Observatory
• Wheeler I-2737 – Wheeler, Russell L., *Earthquakes In and Near the Northeastern United States, 1638-1998* (Used only as reference here)



Northeastern United States and southeastern Canadian earthquakes from 1990 to 2011.
Image courtesy of the Lamont-Doherty Earth Observatory (Won-Young Kim)
of Columbia University, New York. Used by permission.

West Virginia Geological and Economic Survey
https://www.wvgs.wvnet.edu/