



Earthquake Epicenters of West Virginia

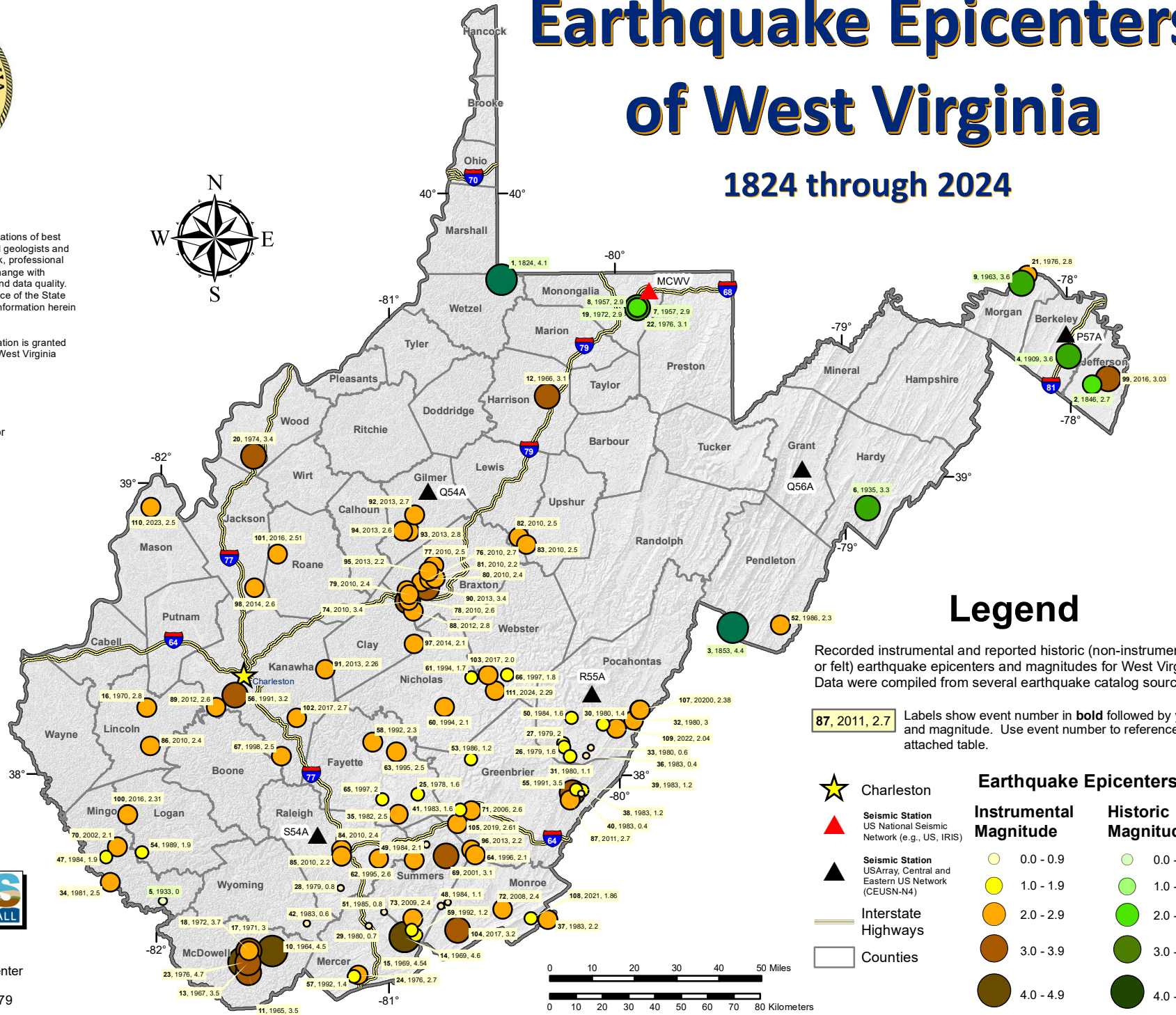
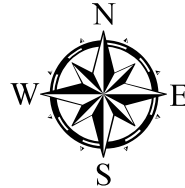
1824 through 2024

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Map Date: 2/23/2024
Earthquake Data: 2/16/2024
Projection: Transverse Mercator
Horizontal Datum: NAD 1983
Map scale for full 8.5" x 11" display: 1:2,000,000



Legend

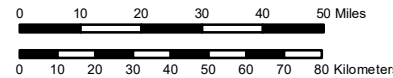
Recorded instrumental and reported historic (non-instrumental or felt) earthquake epicenters and magnitudes for West Virginia. Data were compiled from several earthquake catalog sources.

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

	Charleston	Earthquake Epicenters	
	Seismic Station US National Seismic Network (e.g., US, IRIIS)	Instrumental Magnitude	Historic Magnitude
	Seismic Station USArray, Central and Eastern US Network (CEUSN-N4)	0.0 - 0.9	0.0 - 0.9
	Interstate Highways	1.0 - 1.9	1.0 - 1.9
	Counties	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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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	mb	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	mb	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	mb	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	mb	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	mb	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	mb	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	mb	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/se609219/
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	2023-02-17T21:54:06.190	Mason	2023	02	17	21	54	06.190	38.917000	-82.043000	2.50	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se60500438/
111	2024-02-10T10:24:49.840Z	Nicholas	2024	02	10	10	24	49.840	38.2983333	-80.5381667	2.29	md	Instrumental	<NULL>	https://earthquake.usgs.gov/earthquakes/eventpage/se60501603/

Data as of 2/16/2024. 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 information on a website.

Some definition of terms are provided with this map. Please consult the West Virginia Earthquake Catalog 202402.xlsx spreadsheet/workbook for complete definitions.



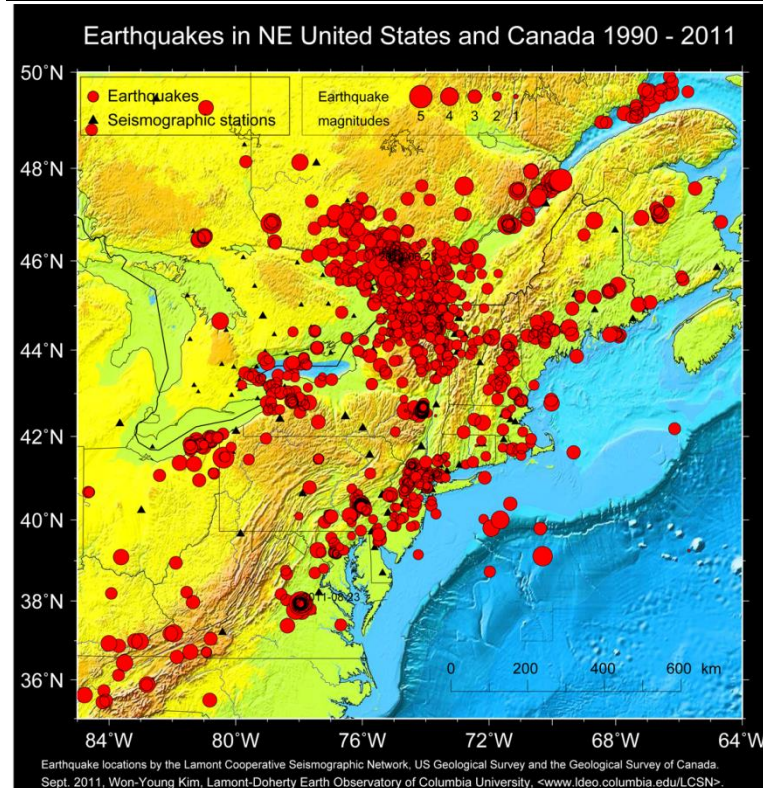
Some Definitions and Explanations:

- **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](#)
- CERl – [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/>