EARTHQUAKE ACTIVITY IN THE YELLOWSTONE REGION

Preliminary Epicenters

October 1 – December 31, 2024

Prepared by the University of Utah Seismograph Stations and funded by
the U.S. Geological Survey (Cooperative Agreement No. G21AC10068)

March 20, 2025

Foreword and Data Explanation

This report contains an epicenter map (Figure 1) and listings of earthquakes (Tables 1 and 2) detected and located in the Yellowstone region (lat. 44° 00′ – 45° 10′ N, long. 109° 45′ – 111° 30′ W). The computer program HYPOINVERSE-2000 (F. W. Klein, 2012, U.S. Geological Survey Open-File Report 02-171 revised) was used to process the earthquake data. This report also includes maps and a table of operating seismograph stations in the University of Utah's Yellowstone seismic network (Figure 2, Table 3).

The earthquake listing in Table 2 is estimated to be systematically complete above magnitude 1.5 within Yellowstone. *These data are preliminary—both the locations and magnitudes in this table are subject to revision.*

The following data are listed for each earthquake in Table 2:

- Date (yymmdd) and origin time in Coordinated Universal Time (UTC). To convert to local time, subtract seven hours for Mountain Standard Time (MST) and six hours for Mountain Daylight Time (MDT). During the report period, local time was MDT through 02:00 (2:00 a.m.) on November 3 and MST thereafter.

- Earthquake location coordinates in degrees and minutes of north latitude and west longitude, and depth in kilometers below sea level. Note that prior to October 1, 2012, the earthquake depths in these quarterly reports were computed relative to a datum of 2000 m above sea level.

- "*" indicates poor depth resolution: no recording stations within 10 km or twice the depth.

- MAG, the computed Richter local magnitude (M_L) for each earthquake. "W" indicates that peak amplitude measurements from Wood-Anderson records were used. Otherwise, the estimate is calculated from signal durations and is more correctly identified as coda magnitude (M_C). The notation "--" indicates that a reliable magnitude estimate could not be made.

- NO, the number of P and S readings used in the solution.

- GAP, the largest azimuthal separation in degrees between recording stations used in the solution.

- DMN, the epicentral distance in kilometers to the closest station.

- RMS, the weighted root-mean-square of the travel-time residuals in seconds:

$$RMS = \left(\frac{\sum_i (W_i R_i)^2}{\sum_i (W_i)^2} \right)^{\frac{1}{2}}$$

where: R_i is the observed minus the computed arrival time for the i-th P or S reading, and W_i is the relative weight given to the i-th P or S arrival time (0.0 for no weight through 1.0 for full weight).

EARTHQUAKE ACTIVITY IN THE YELLOWSTONE REGION
October 1 – December 31, 2025

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During the three-month period October 1 through December 31, 2025, the University of Utah Seismograph Stations (UUSS) located 284 earthquakes within the Yellowstone region (Figure 1). The total includes 10 earthquakes in the magnitude 2 range. The largest event to occur during this period was a magnitude 2.7 earthquake on December 15. One earthquake was reported felt in the region during the report period (see Table 1, a cumulative tabulation of earthquakes that were felt in the Yellowstone region during 2024). Additional information on earthquakes within the Yellowstone region is available from the University of Utah Seismograph Stations.

Online Information

A complete copy of this report, including maps and the earthquake catalog, is available on the UUSS web site at *https://quake.utah.edu/earthquake-center/quarterly-seismicity-reports*.

For earthquakes of magnitude 3 and larger in the Yellowstone region, the U. S. Geological Survey automatically posts a Community Internet Intensity Map (CIIM) on its "Did You Feel It?" web page at http://earthquake.usgs.gov/earthquakes/dyfi/. We encourage anyone who feels an earthquake to report their observations on this interactive web site; felt information is available by zip code on the CIIM site or can be obtained from UUSS directly.

Earthquakes of Magnitude 3.0 or Larger

None

Notable Swarm Seismicity

During the report period, there were two earthquake swarms in the Yellowstone region. For reporting purposes, we use the Mogi definition [Mogi, 1963] of a swarm and require each swarm to have ten or more earthquakes. Note that typically, around 50% of Yellowstone earthquakes occur as part of a seismic swarm [Farrell et al., 2009].

A. A swarm of 18 earthquakes ($-0.4 \leq M \leq 1.7$) occurred about 6.4 mi N of West Yellowstone, MT from October 4th – 9th.
B. A swarm of 43 earthquakes ($-1.0 \leq M \leq 1.6$) occurred about 10.4 mi NE of West Yellowstone, MT from November 26th – 29th.

These swarms are labeled in Figure 1.

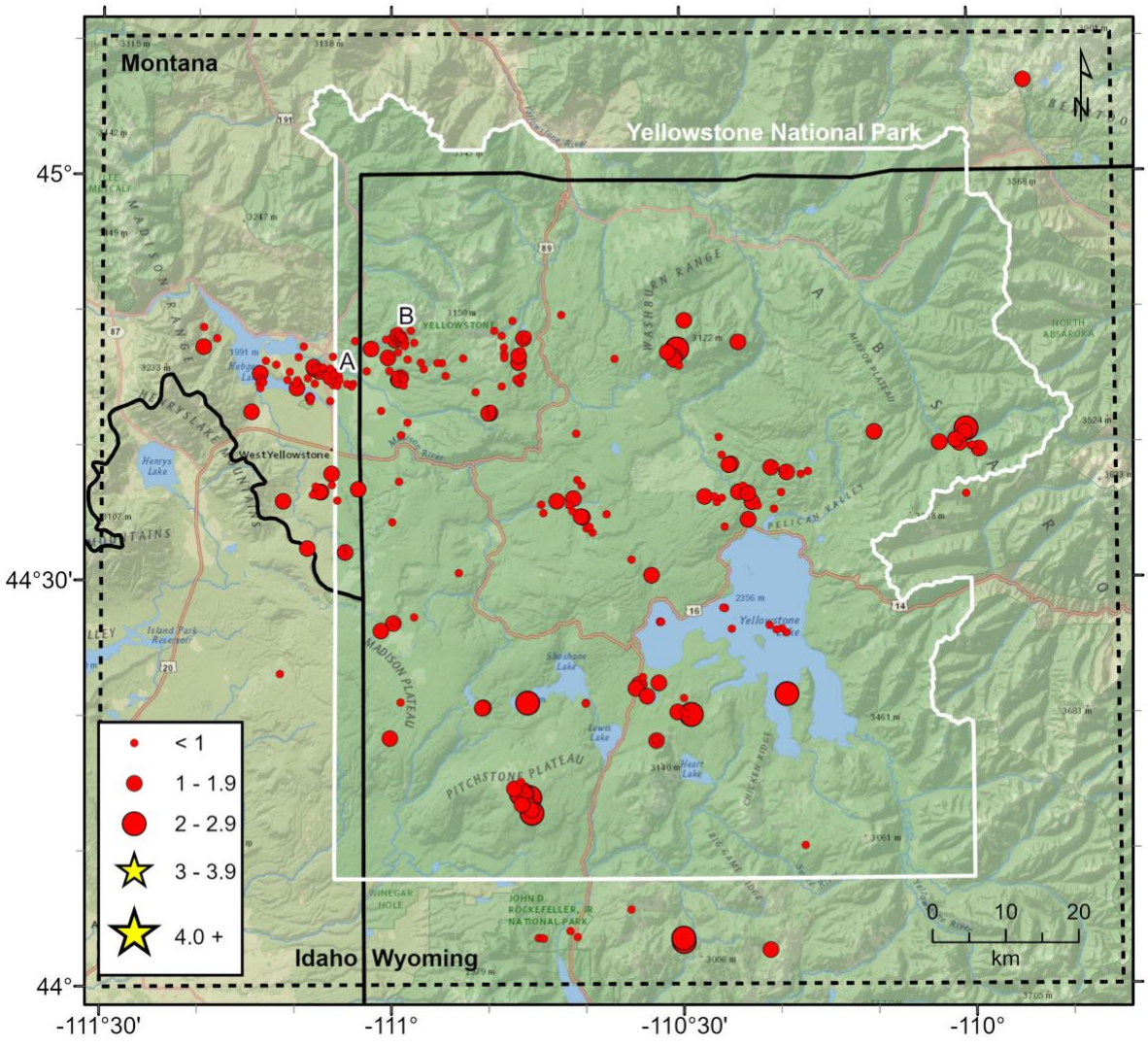

Figure 1. Epicenters of earthquakes located by the University of Utah Seismograph Stations, October 1, 2024, through December 31, 2024. The earthquake swarms (labeled A-B) are discussed in the text.

Table 1

EARTHQUAKES FELT IN THE YELLOWSTONE REGION
January 1, 2024, to December 31, 2024

Date	Time†	Felt Information‡	Latitude	Longitude	Magnitude§
January 01	07:41 MST 14:41 UTC	Yellowstone. Felt (II) at Yellowstone National Park.	44º 35.37'	110º 45.07'	M_L 3.1
January 03 January 04	17:10 MST 00:10 UTC	Yellowstone. Felt (III) at Yellowstone National Park.	44º 35.13'	110º 44.76'	M_L 3.3
April 23	03:30 MDT 09:30 UTC	Yellowstone. Felt (III) at Yellowstone National Park.	44º 48.25′	111º 04.00′	M_L 3.0
April 23	04:15 MDT 10:15 UTC	Yellowstone. Felt (II) at Yellowstone National Park.	44º 47.70′	111º 03.74′	M_L 2.7
June 10 June 11	21:29 MDT 03:29 UTC	Yellowstone. Felt (III) at Yellowstone National Park.	44º 39.56′	110º 25.67′	M_L 2.5
July 20	01:34 MDT 07:34 UTC	Yellowstone. Felt (III) at Yellowstone National Park.	44º 41.36′	111º 08.17′	M_L 2.7
December 08 December 09	22:31 MST 05:31 UTC	Yellowstone. Felt (III) at Yellowstone National Park.	44º 20.10′	110º 29.10′	M_L 2.6

† Times are listed both as Local Time—Mountain Standard Time (MST) or Mountain Daylight Time (MDT)—and as Coordinated Universal Time (UTC).
? Indicates on-line reports that appear questionable given the distance from the source
‡ *CIIM* indicates the availability of a Community Internet Intensity Map (http://earthquake.usgs.gov/earthquakes/dyfi), compiled by the U.S. Geological Survey (USGS); *ShakeMap* indicates the availability of computer-generated maps of ground-shaking (*https://quake.utah.edu*), produced by the University of Utah Seismograph Stations (UUSS). Roman numerals correspond to the Modified Mercalli intensity scale. Unless otherwise indicated, felt information is from the USGS (1) CIIM reports and/or (2) PDE Monthly (or) Weekly Listing Files (http://earthquake.usgs.gov/data/pde.php).
§ Richter local magnitude (M_L) or coda magnitude (M_C) determined by UUSS. If labeled "NEIC," data are from the National Earthquake Information Center of the USGS.

Yellowstone Seismic Network
December 31, 2024

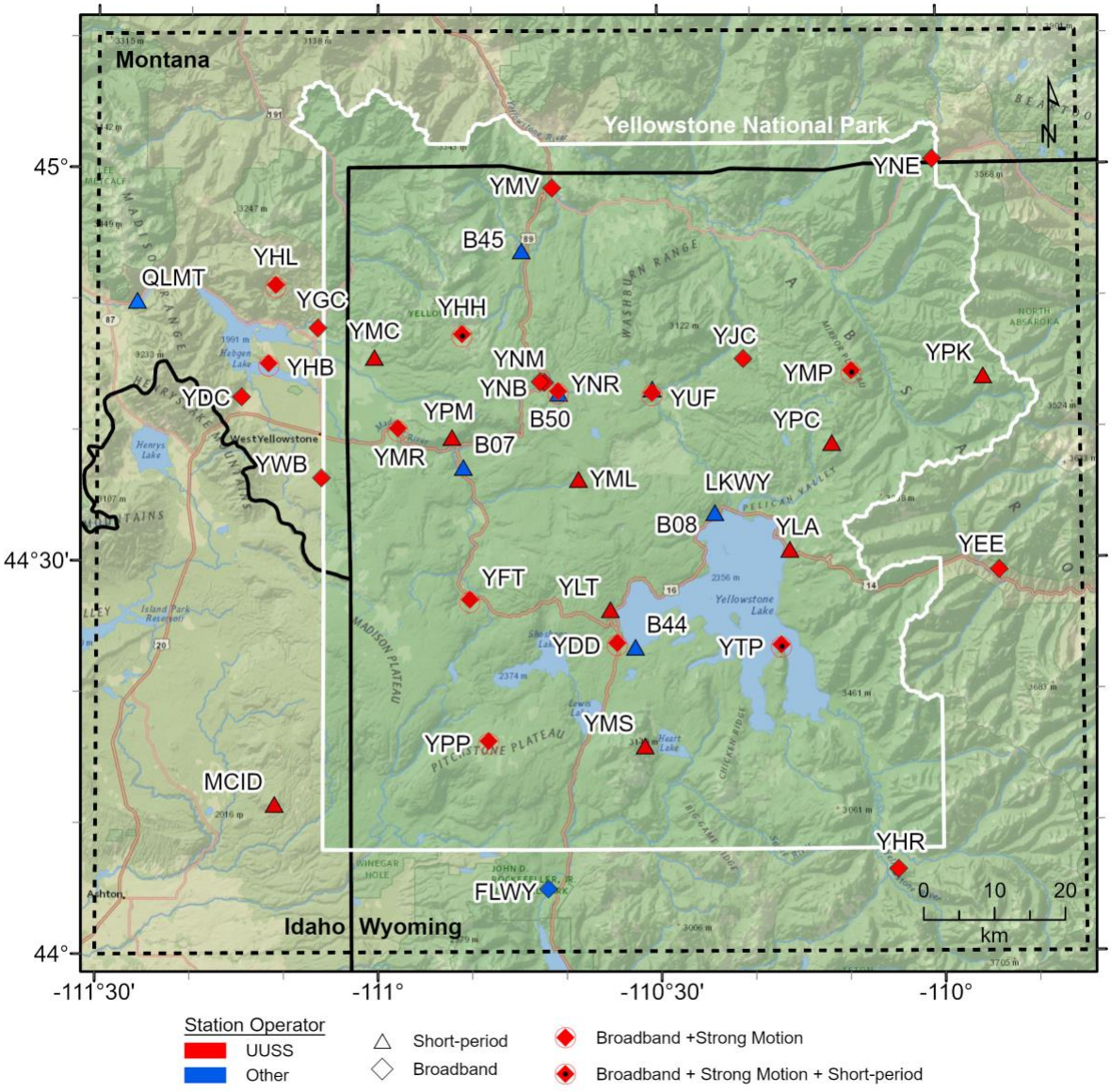

Figure 2. Seismograph stations of the Yellowstone Seismic Network as of December 31, 2024.

Table 2. Earthquakes in the Yellowstone Region: October 1–December 31, 2024

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
241001	03:22:01.63	44º47.57’	110º24.05’	4.8	1.0	20	100	6	0.21
241001	03:54:28.44	44º27.31’	110º57.68’	4.4	0.8W	14	111	10	0.14
241003	04:50:04.51	44º37.91’	111º06.21’	7.8	1.8W	25	121	3	0.16
241003	18:20:35.26	44º26.09’	110º19.25’	9.5	0.9	17	69	6	0.16
241003	18:20:41.48	44º26.64’	110º20.98’	2.4	0.9	9	111	8	0.14
241003	18:26:56.48	44º26.39’	110º19.71’	8.3	0.8	15	103	6	0.16
241004	00:22:55.57	44º45.67’	111º06.36’	12.4	0.3	12	81	4	0.10
241004	00:42:51.63	44º47.74’	110º46.25’	2.2	0.8	9	107	6	0.12
241004	01:51:55.68	44º45.13’	111º06.13’	10.9	1.5W	22	61	5	0.12
241004	01:52:43.08	44º45.05’	111º06.35’	10.7	1.1W	19	78	5	0.11
241004	04:46:08.54	44º46.08’	110º54.77’	7.4	0.8W	19	103	5	0.12
241004	07:01:20.77	44º47.71’	111º03.79’	10.9	0.2	13	148	3	0.09
241004	12:23:58.58	44º46.35’	110º58.34’	6.4	0.8W	16	141	3	0.11
241004	12:35:25.31	44º26.30’	110º20.27’	6.6	0.5	9	107	7	0.07
241005	11:18:03.34	44º45.62’	111º07.52’	10.2	0.8W	19	76	4	0.16
241005	21:06:22.40	44º44.46’	111º06.07’	10.4	0.0	10	178	6	0.16
241006	09:38:59.37	44º46.98’	110º46.56’	4.9	0.0	11	210	6	0.13
241006	09:55:25.17	44º46.60’	110º46.80’	4.8	1.1W	29	93	6	0.15
241006	11:33:07.75	44º33.96’	110º39.52’	5.4	0.8	8	193	5	0.04
241006	14:06:11.62	44º45.68’	111º08.03’	11.1	1.7W	19	82	4	0.12
241006	21:17:48.73	44º45.58’	111º07.91’	11.1	0.2	11	79	5	0.10
241006	21:51:21.32	44º45.47’	111º07.49’	10.1	1.7W	26	74	5	0.16
241006	22:02:33.06	44º45.80’	111º07.82’	10.4	0.8W	16	131	4	0.15
241007	05:31:44.65	44º45.77’	111º07.87’	10.8	0.6W	16	82	4	0.11
241007	08:59:27.51	44º45.22’	111º06.04’	10.3	-0.4	15	83	5	0.18
241007	11:09:21.59	44º45.80’	111º08.08’	11.4	1.2W	18	84	4	0.11
241007	13:58:22.82	44º45.66’	111º07.57’	10.1	0.5	18	77	4	0.19
241007	19:33:05.22	44º45.28’	111º05.82’	11.1	0.8W	17	88	5	0.17
241007	19:39:46.85	44º45.16’	111º05.79’	11.2	0.3	12	87	5	0.16
241008	19:48:01.41	44º44.55’	111º03.99’	8.5	0.8	17	95	5	0.18
241008	19:48:23.08	44º44.36’	111º04.14’	8.2	0.6	18	90	5	0.16
241009	12:43:39.68	44º45.48’	111º02.60’	9.5	0.4	16	170	3	0.19
241009	14:57:09.27	44º40.24’	110º01.58’	12.6	1.1	9	103	11	0.24
241010	02:34:13.57	44º44.87’	110º59.31’	9.1	1.7W	32	90	2	0.18
241010	02:55:17.79	44º44.87’	110º58.68’	8.8	0.0	17	119	3	0.18
241010	02:55:29.83	44º45.02’	110º59.05’	8.8	1.3W	22	97	2	0.17
241010	03:54:05.62	44º44.84’	110º59.21’	9.2	1.0W	23	91	2	0.17
241012	13:05:03.31	44º48.73’	111º19.48’	8.6	0.3	17	144	9	0.17
241013	01:50:13.31	44º32.10’	111º04.80’	14.3	1.2	24	134	8	0.17
241013	01:50:50.16	44º32.09’	111º05.17’	13.9	0.6	19	136	8	0.15
241013	17:01:19.18	44º47.82’	110º46.15’	4.1	0.6	21	97	7	0.18
241013	17:01:35.09	44º47.89’	110º46.31’	4.2	1.5W	23	96	6	0.18
241013	17:03:57.40	44º48.11’	110º45.91’	2.1	0.9	11	218	7	0.21
241014	15:57:59.73	44º32.33’	111º05.12’	14.8	0.9	23	136	8	0.20
241014	17:41:52.42	44º46.55’	111º06.07’	10.6	0.6	19	122	8	0.16

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DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
241015	15:33:06.11	44º30.37’	110º33.14’	4.6	1.8W	28	55	8	0.13
241018	21:56:14.30	44º35.11’	110º41.30’	6.1	0.4	11	162	4	0.19
241019	11:01:04.07	44º44.24’	111º09.81’	13.6	1.3W	16	82	3	0.13
241019	15:26:28.40	44º35.76’	110º22.71’	4.3	1.2	14	129	4	0.15
241021	19:10:34.94	44º38.29’	110º20.74’	3.4	1.4W	9	157	9	0.10
241022	05:28:40.34	44º46.74’	110º48.31’	3.8	0.9	11	180	4	0.06
241022	14:11:11.53	44º45.13’	110º54.39’	7.6	0.2	18	97	6	0.13
241023	15:02:16.30	44º42.46’	110º49.58’	2.1	0.3	8	104	7	0.05
241023	15:03:53.55	44º42.49’	110º49.58’	2.1	0.7W	8	103	7	0.06
241023	22:14:25.53	44º18.15’	110º32.72’	4.5	1.3	15	97	4	0.11
241023	22:43:06.19	44º18.07’	110º32.66’	4.6	0.9	14	99	4	0.08
241024	00:51:53.52	44º42.39’	110º49.78’	4.9	1.8W	31	57	6	0.13
241024	05:52:49.18	44º42.35’	110º49.79’	5.6	0.8W	18	94	6	0.14
241024	07:54:58.83	44º18.22’	110º32.80’	4.4	0.4	12	97	5	0.11
241024	08:44:42.47	44º46.48’	111º00.38’	8.6	1.8W	22	106	2	0.11
241024	09:09:42.01	44º46.58’	111º00.24’	8.3	0.2	16	142	2	0.10
241025	03:32:03.89	44º42.70’	110º49.67’	2.1	0.1	11	98	7	0.09
241025	03:44:46.31	44º42.37’	110º49.93’	5.6	1.7W	33	56	6	0.14
241026	01:43:05.78	44º40.79’	110º00.60’	12.4	1.8	16	107	9	0.19
241026	10:49:16.68	44º47.13’	111º02.13’	9.5	1.4W	27	110	4	0.16
241028	17:33:48.18	44º42.48’	111º14.52’	4.3	1.2W	21	138	0	0.22
241029	12:32:54.14	44º46.45’	110º48.31’	4.9	0.8W	14	172	4	0.13
241030	17:04:40.36	44º42.64’	110º49.73’	2.1	0.5	12	98	7	0.10
241030	21:14:15.84	44º42.25’	110º49.65’	3.6	0.5	8	107	6	0.04
241031	13:01:23.57	44º21.55’	110º19.25’	6.9	2.0W	29	80	5	0.20
241101	12:23:06.05	44º38.57’	110º24.85’	4.5	1.6W	11	150	9	0.04
241101	19:25:30.24	44º47.24’	110º48.35’	4.9	0.8	12	204	4	0.11
241101	23:20:32.50	44º35.88’	111º11.22’	8.3	1.0	23	145	7	0.17
241102	02:27:06.85	44º38.50’	110º25.08’	4.7	1.2W	15	117	9	0.13
241103	09:44:14.97	44º34.73’	110º40.41’	1.4	1.0	18	113	4	0.31
241103	09:44:29.43	44º34.68’	110º40.25’	6.7	1.2	18	114	4	0.19
241103	09:44:44.20	44º35.55’	110º41.63’	3.0	0.5	12	86	4	0.32
241103	09:45:31.86	44º34.89’	110º37.76’	10.7	0.5	9	136	3	0.17
241103	09:50:44.10	44º33.85’	110º39.86’	5.4	0.9	8	192	5	0.05
241103	09:52:09.45	44º33.54’	110º39.22’	-0.3	0.8	12	125	5	0.23
241106	23:08:13.78	44º45.47’	111º07.71’	6.7	0.5	9	111	5	0.11
241107	00:10:15.73	44º44.69’	110º46.86’	2.2	0.0	11	159	7	0.09
241107	04:29:53.44	44º44.80’	110º47.00’	5.8	0.7W	19	157	6	0.17
241107	16:07:28.13	44º13.47’	110º46.59’	0.9	1.0	15	73	6	0.24
241107	16:07:35.86	44º14.64’	110º47.37’	5.4	1.8W	18	66	3	0.29
241107	16:16:55.80	44º13.99’	110º45.78’	4.6	2.4W	28	62	5	0.24
241107	18:14:56.90	44º13.08’	110º45.61’	2.6	1.4	21	95	7	0.13
241107	18:15:04.28	44º12.82’	110º45.55’	2.5	2.2W	15	96	7	0.17
241107	19:18:25.63	44º14.24’	110º46.64’	3.3	2.0W	24	79	4	0.23
241107	19:28:37.09	44º13.38’	110º45.88’	2.7	1.9W	28	66	6	0.15

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DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
241108	14:25:35.33	44º43.28’	111º06.36’	12.6	0.9W	20	77	8	0.15
241108	18:18:23.96	44º36.57’	111º07.46’	5.3	1.1W	27	102	2	0.20
241111	12:41:26.44	44º18.36’	111º00.18’	12.0	1.0	11	118	16	0.11
241111	14:23:33.56	44º47.30’	111º09.12’	9.7	-0.3	16	120	4	0.18
241111	14:24:07.34	44º40.76’	110º59.03’	2.7	0.6	12	101	2	0.20
241111	16:03:26.88	44º36.35’	111º08.16’	5.3	0.8	11	168	3	0.15
241112	07:37:49.67	44º49.62’	110º42.37’	4.2	0.5	16	125	8	0.14
241113	14:03:16.80	44º34.45’	110º23.12’	3.5	1.0	12	118	2	0.14
241113	22:14:40.80	44º36.96’	111º07.85’	7.8	0.3	14	155	14	0.24
241113	22:14:50.61	44º36.56’	111º07.29’	8.4	1.2W	17	154	14	0.23
241114	13:31:20.71	44º44.82’	111º10.80’	7.0	0.0	15	71	1	0.13
241114	16:48:53.78	44º34.32’	110º59.94’	11.0	0.6	19	95	9	0.19
241115	08:59:49.07	44º46.37’	110º36.86’	1.9	0.8	15	179	8	0.11
241116	05:39:55.32	44º44.88’	110º47.06’	2.1	-0.3	12	162	7	0.12
241116	06:46:31.74	44º44.94’	110º46.75’	5.8	0.6W	13	166	6	0.08
241117	23:55:17.49	44º38.39’	110º20.29’	4.2	0.7	11	86	10	0.15
241117	23:55:46.51	44º36.45’	110º19.69’	5.3	0.4	5	160	7	0.31
241118	20:46:28.65	44º22.02’	110º34.81’	1.7	1.7	12	114	3	0.17
241118	20:46:53.72	44º22.32’	110º34.49’	2.0	1.9W	18	114	3	0.15
241119	14:32:26.22	44º46.11’	110º46.83’	5.1	1.4W	28	85	6	0.17
241120	05:18:03.93	44º45.84’	110º30.18’	3.0	0.2	8	205	5	0.15
241120	23:05:47.10	44º21.43’	110º33.64’	2.2	0.9	15	122	4	0.16
241121	13:40:47.14	44º47.07’	110º30.39’	2.0	2.1W	21	91	7	0.22
241121	15:56:03.57	44º46.84’	110º31.37’	2.0*	1.2	13	275	14	0.19
241121	15:57:34.95	44º46.51’	110º30.65’	3.0	1.8W	29	88	6	0.16
241121	16:31:21.09	44º46.30’	110º30.69’	4.0	1.7W	23	126	6	0.15
241122	21:51:13.95	45º06.76’	109º54.13’	15.9	1.7	20	155	14	0.13
241123	05:03:54.20	44º37.42’	110º40.79’	5.0	0.3	13	65	4	0.14
241123	13:41:40.05	44º45.22’	110º59.61’	8.1	0.1	16	125	1	0.14
241124	08:11:25.82	44º49.19’	110º29.64’	6.2	1.7W	19	102	11	0.14
241124	11:27:25.00	44º26.30’	111º01.11’	4.1*	0.9W	13	155	15	0.22
241124	11:27:59.86	44º26.85’	110º59.82’	3.2*	1.2	15	151	13	0.24
241124	11:43:00.88	44º26.89’	110º59.61’	4.6*	0.5	15	151	13	0.24
241126	05:05:26.40	44º15.15’	110º46.69’	3.8	0.3	11	116	3	0.23
241126	05:16:03.59	44º14.56’	110º46.18’	1.8	0.7	8	158	4	0.19
241126	07:30:42.28	44º47.66’	110º59.19’	8.4	-0.3	13	181	4	0.15
241126	07:34:43.17	44º47.77’	110º59.04’	8.2	-0.2	17	162	4	0.16
241126	08:12:48.57	44º47.90’	110º59.34’	8.7	-0.6	13	164	5	0.10
241126	08:13:28.18	44º47.81’	111º00.55’	1.3	-0.6	6	160	4	0.27
241126	08:16:57.27	44º47.78’	110º59.58’	8.8	0.8W	23	117	4	0.17
241126	08:18:37.11	44º48.23’	110º58.99’	7.6	-0.4	13	170	5	0.17
241126	08:19:50.52	44º47.71’	110º59.34’	8.4	0.5	24	116	4	0.16
241126	09:27:48.45	44º47.92’	110º59.01’	8.9	0.0	17	165	5	0.10
241126	09:28:01.57	44º48.11’	110º58.82’	7.2	-0.3	11	169	5	0.11
241126	09:28:23.22	44º47.98’	110º58.92’	7.7	0.0	8	188	5	0.12

Table 2. Earthquakes in the Yellowstone Region: October 1–December 31, 2024

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
241126	10:00:34.71	44º47.92’	110º59.13’	8.2	0.6	16	165	5	0.20
241126	10:05:19.30	44º47.98’	110º59.08’	7.8	-0.7	12	165	5	0.13
241126	10:06:39.24	44º47.87’	110º58.67’	8.7	-0.9	9	164	5	0.09
241126	11:11:19.08	44º45.20’	111º05.67’	10.3	0.3	17	89	5	0.13
241126	11:50:23.49	44º45.12’	111º05.49’	9.6	-0.1	15	90	5	0.16
241126	11:54:18.95	44º44.82’	111º05.90’	8.3	-0.1	17	82	5	0.15
241126	12:46:31.08	44º44.81’	111º05.42’	9.2	-0.5	10	120	6	0.20
241126	13:20:21.93	44º44.41’	111º05.64’	9.0	0.0	10	127	6	0.13
241126	13:34:20.00	44º48.38’	110º59.24’	9.1	0.0	7	172	5	0.08
241126	13:34:24.58	44º48.23’	110º59.22’	9.6	0.4	7	169	5	0.07
241126	15:26:18.40	44º47.90’	111º18.10’	11.4	0.8	25	108	10	0.17
241126	16:35:46.37	44º47.53’	110º58.58’	6.8	-0.8	12	179	4	0.12
241126	16:54:18.88	44º47.79’	110º59.62’	9.6	1.6W	32	117	4	0.17
241126	16:54:45.45	44º47.64’	110º59.29’	8.8	0.8	26	126	4	0.17
241126	16:57:22.64	44º47.89’	110º58.80’	7.4	-0.2	16	165	5	0.17
241126	16:59:32.35	44º47.85’	110º58.84’	7.2	-0.7	13	164	5	0.14
241126	18:21:47.15	44º48.06’	110º58.93’	8.8	-0.7	9	167	5	0.07
241126	18:40:44.77	44º47.84’	110º59.13’	8.0	-0.6	15	164	5	0.18
241126	19:17:29.86	44º47.81’	110º59.01’	7.8	-0.6	14	164	5	0.20
241126	19:53:25.96	44º48.47’	110º59.30’	8.5	-0.1	8	173	6	0.09
241126	20:02:17.02	44º48.04’	110º59.61’	7.9	0.6	23	120	5	0.16
241126	20:52:48.84	44º46.42’	110º52.58’	6.0	-0.7	11	149	3	0.14
241126	21:56:34.56	44º47.58’	110º59.13’	7.9	-0.3	17	159	4	0.17
241126	22:10:46.43	44º48.13’	110º59.20’	8.4	-0.8	10	168	5	0.16
241126	22:15:52.19	44º48.09’	110º59.22’	8.5	-0.6	7	167	5	0.13
241127	00:55:48.22	44º46.12’	110º56.97’	2.3	-0.9	6	176	5	0.02
241127	02:14:42.77	44º47.90’	110º59.43’	9.1	0.7	19	118	5	0.10
241127	02:15:13.54	44º47.34’	110º58.65’	7.9	--	9	175	4	0.12
241127	02:16:17.38	44º47.86’	110º58.70’	8.8	-0.9	7	164	5	0.06
241127	02:27:00.75	44º47.98’	110º58.88’	8.9	-0.1	16	166	5	0.16
241127	07:01:12.17	44º40.38’	110º01.08’	13.4	0.9	7	106	10	0.07
241127	07:55:36.88	44º46.25’	111º13.05’	9.8	-0.7	13	182	3	0.16
241127	09:40:24.39	44º47.58’	110º57.66’	5.2	0.0	7	181	5	0.24
241127	11:49:39.00	44º47.98’	110º59.42’	9.4	0.9W	18	119	5	0.11
241127	11:50:21.09	44º48.10’	110º59.55’	9.1	0.8W	15	120	5	0.09
241127	13:03:00.74	44º48.40’	110º59.57’	8.9	0.2	15	171	5	0.09
241127	17:43:28.98	44º37.07’	111º06.18’	9.7	0.8	11	159	12	0.14
241127	17:47:08.57	44º35.93’	111º05.62’	7.1	0.2	16	128	1	0.12
241127	17:55:19.59	44º47.65’	110º58.71’	7.6	-0.9	7	161	4	0.16
241127	20:01:57.04	44º44.66’	111º13.31’	4.7	-0.8	10	173	2	0.14
241127	21:37:35.92	44º44.68’	111º09.69’	5.9	-0.1	14	97	3	0.17
241127	22:18:10.10	44º39.99’	110º01.19’	12.6	1.3	10	136	14	0.14
241128	01:56:22.53	44º44.59’	111º09.90’	5.8	-0.9	11	121	3	0.11
241128	02:40:58.87	44º44.82’	111º09.78’	5.9	-0.6	7	118	3	0.10
241128	08:13:52.62	44º35.23’	110º20.45’	5.3	0.4	12	147	5	0.10

Table 2. Earthquakes in the Yellowstone Region: October 1–December 31, 2024

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
241128	08:13:57.54	44º36.40’	110º23.14’	4.0	1.0	7	176	5	0.04
241128	08:14:15.15	44º36.56’	110º23.39’	2.0	0.5	11	127	5	0.08
241128	08:58:49.81	44º36.49’	110º24.11’	2.1	1.5W	13	121	5	0.11
241128	08:59:34.63	44º36.06’	110º25.82’	1.5	0.5	9	126	5	0.09
241128	13:17:33.33	44º35.75’	110º26.34’	2.0	0.7	7	195	5	0.11
241128	14:36:09.29	44º43.93’	110º51.30’	7.8	-0.1	11	94	6	0.08
241128	14:58:19.06	44º03.60’	110º44.92’	7.9	0.7	8	110	5	0.12
241128	16:35:34.18	44º48.34’	110º59.76’	8.9	0.3	8	170	5	0.10
241128	18:23:44.07	44º32.39’	111º08.71’	11.6	1.3W	19	154	8	0.17
241128	21:05:49.40	44º03.57’	110º44.38’	8.4	0.2	11	117	4	0.19
241128	21:19:39.87	44º03.58’	110º44.57’	8.2	0.6	14	114	4	0.14
241129	01:35:59.28	44º37.32’	110º59.23’	4.5	0.2	11	112	5	0.14
241129	03:11:10.07	44º48.48’	110º58.00’	4.7	-0.3	13	177	6	0.14
241129	09:28:41.32	44º47.64’	110º58.65’	5.2	-0.9	8	181	4	0.09
241129	09:58:33.29	44º45.50’	111º00.24’	8.2	-0.2	16	127	0	0.16
241129	10:17:13.58	44º45.12’	110º46.43’	2.1	-0.5	12	174	6	0.12
241129	10:31:53.72	44º46.88’	110º59.32’	5.3	0.4	12	148	3	0.07
241129	14:57:30.14	44º21.29’	110º29.87’	3.9	0.6	10	133	5	0.09
241129	16:28:02.56	44º44.60’	111º13.72’	5.7	0.6	18	108	3	0.13
241129	16:31:09.82	44º44.92’	110º59.56’	6.1	0.0	9	135	2	0.09
241129	19:59:16.30	44º26.92’	110º32.17’	2.6	0.2	10	128	4	0.13
241129	20:03:14.71	44º26.95’	110º32.27’	3.0	0.5	11	130	4	0.15
241129	20:31:03.78	44º26.91’	110º32.29’	2.0	0.4	12	129	4	0.17
241129	21:36:17.17	44º48.46’	110º49.34’	5.0	-0.2	13	212	3	0.18
241130	12:36:41.29	44º37.79’	110º17.65’	2.1*	0.4	9	103	11	0.20
241130	18:57:31.10	44º03.67’	110º40.91’	7.3	0.3	8	211	3	0.18
241201	00:21:32.05	44º45.96’	111º11.95’	10.3	-0.8	14	159	2	0.22
241201	12:07:01.59	44º22.85’	110º34.08’	1.9	0.3	12	112	2	0.17
241201	21:02:02.80	44º10.37’	110º17.45’	6.0*	0.0	8	253	24	0.12
241201	22:41:03.03	44º27.92’	110º25.58’	3.2*	0.5	10	113	11	0.10
241201	22:54:05.90	44º27.95’	110º25.75’	2.7*	0.0	8	115	11	0.04
241202	01:32:47.00	44º41.70’	110º58.36’	1.9	0.2	15	67	3	0.18
241202	01:45:13.17	44º44.56’	111º07.97’	10.6	-0.3	20	63	5	0.17
241202	02:32:15.71	44º35.47’	110º22.12’	3.2	0.6	18	133	4	0.14
241202	02:46:58.32	44º33.93’	110º25.55’	6.3	0.0	10	112	2	0.16
241202	15:21:22.46	44º20.95’	110º39.99’	3.8	0.9	14	105	9	0.08
241202	15:29:48.62	44º20.91’	110º39.98’	2.2	0.4	8	179	9	0.19
241202	21:23:30.31	44º30.57’	110º53.05’	2.3	0.0	8	192	8	0.13
241203	02:43:36.12	44º36.25’	110º00.54’	17.1	0.8	13	120	16	0.21
241203	07:36:08.68	44º04.12’	110º41.66’	7.8	0.2	10	186	2	0.23
241203	21:39:43.87	44º45.76’	111º07.12’	9.0	-0.3	16	75	4	0.18
241204	03:08:17.36	44º23.11’	111º11.52’	14.6	-0.1	17	177	22	0.20
241204	07:40:53.21	44º21.02’	110º59.07’	5.2*	0.6	23	112	16	0.23
241204	08:18:30.74	44º40.56’	110º26.12’	5.0	0.2	12	130	7	0.14
241204	09:42:51.73	44º40.85’	110º40.88’	7.7	0.1	13	85	4	0.11

Table 2. Earthquakes in the Yellowstone Region: October 1–December 31, 2024

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
241204	11:59:34.36	44º43.48’	111º08.56’	7.4	0.0	24	74	5	0.17
241204	13:12:06.92	44º43.64’	111º08.49’	7.7	-0.1	20	90	5	0.18
241204	15:55:23.13	44º44.53’	111º04.61’	9.0	0.0	13	92	6	0.16
241204	21:18:36.72	44º38.16’	110º19.43’	4.2	0.2	10	170	10	0.19
241205	05:57:53.33	44º44.36’	110º48.58’	6.8	-0.1	13	134	6	0.15
241205	06:02:28.36	44º31.53’	110º35.20’	2.1	0.3	10	101	10	0.11
241205	09:57:30.77	44º05.68’	110º35.39’	9.0	0.6	18	94	9	0.19
241205	11:55:18.61	44º26.38’	110º24.89’	2.7*	-0.2	8	133	12	0.09
241205	13:17:54.26	44º46.51’	111º09.64’	8.3	-0.8	13	122	4	0.16
241205	16:18:33.63	44º43.52’	111º08.35’	8.8	-0.5	14	91	5	0.16
241205	16:31:45.46	44º43.27’	111º08.43’	7.3	-0.3	15	95	6	0.11
241205	16:42:38.21	44º43.54’	111º08.60’	10.8	0.4	22	73	5	0.17
241205	18:45:28.42	44º48.09’	110º48.57’	3.2	-0.3	11	238	4	0.11
241205	21:11:30.69	44º44.22’	111º13.61’	10.3	-0.6	13	176	3	0.19
241205	21:31:26.76	44º35.61’	110º44.52’	4.9	-0.2	17	101	8	0.16
241205	21:34:40.33	44º34.99’	110º44.30’	6.3	0.6	18	68	8	0.15
241206	02:12:03.84	44º39.69’	109º59.64’	13.8	0.7	11	122	10	0.20
241206	02:15:10.52	44º39.77’	110º00.02’	13.9	0.6	10	109	10	0.19
241206	02:21:06.27	44º39.83’	109º59.87’	13.7	0.6	9	119	10	0.19
241206	02:29:00.25	44º44.42’	110º58.76’	5.2	-0.9	7	131	3	0.08
241206	08:48:02.63	44º45.63’	110º56.66’	6.3	-0.4	12	128	5	0.21
241206	11:07:09.56	44º44.78’	111º13.59’	4.5	-0.3	12	181	2	0.14
241206	11:19:33.95	44º43.49’	111º08.37’	10.3	-0.6	14	92	5	0.18
241209	05:26:52.63	44º20.15’	110º29.69’	2.1	0.6	16	130	7	0.13
241209	05:26:52.73	44º20.26’	110º30.51’	5.4	1.1	12	120	6	0.17
241209	05:27:04.84	44º20.27’	110º29.95’	2.1	0.7	15	126	7	0.17
241209	05:31:34.92	44º20.07’	110º29.11’	5.2	2.6W	27	76	9	0.21
241209	06:08:18.49	44º19.83’	110º29.71’	3.2	0.9	10	133	8	0.08
241211	09:06:57.72	44º37.01’	110º40.34’	5.1	0.7	11	68	3	0.10
241212	14:34:39.42	44º02.67’	110º21.10’	13.5	1.5	18	131	23	0.15
241212	19:25:02.00	44º46.09’	110º55.25’	9.2	0.4	17	110	6	0.10
241213	04:09:15.21	44º40.87’	110º10.01’	9.2	1.8W	9	124	7	0.04
241214	12:01:29.18	44º49.20’	110º47.45’	4.4	0.9	18	119	6	0.11
241214	21:39:45.93	44º03.31’	110º29.98’	6.1*	2.5W	33	110	16	0.20
241215	13:10:13.55	44º20.96’	110º45.98’	6.0	2.7W	25	87	9	0.20
241216	10:41:20.06	44º36.77’	111º03.46’	7.5	1.1	15	65	4	0.15
241216	17:49:02.26	44º40.05’	110º03.25’	9.1	1.9W	12	93	11	0.18
241217	15:58:36.80	44º39.24’	110º25.82’	4.6	0.5	7	137	9	0.05
241218	02:24:21.69	44º44.97’	111º08.68’	12.1	0.8	15	162	6	0.09
241218	03:58:45.21	44º20.59’	110º50.66’	7.8	1.0	10	100	9	0.20
241218	04:00:16.30	44º20.63’	110º50.53’	7.0	1.1	13	106	9	0.20
241219	04:52:46.98	44º45.43’	111º10.56’	11.2	0.8	22	176	7	0.15
241219	21:13:19.90	44º03.56’	110º30.03’	10.2	2.0W	25	109	16	0.18
241220	19:41:05.25	44º37.98’	110º16.89’	4.7*	0.9	13	113	12	0.19
241221	19:02:06.44	44º36.94’	110º23.61’	4.6	0.7	10	148	6	0.13

Table 2. Earthquakes in the Yellowstone Region: October 1–December 31, 2024

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
241222	12:01:22.22	44º45.32’	111º13.63’	12.8	1.0	18	90	11	0.12
241222	19:09:59.61	44º35.87’	110º42.91’	6.9	1.3	17	72	6	0.15
241222	21:32:26.51	44º36.17’	110º26.59’	1.4	0.6	8	148	5	0.12
241222	21:44:35.58	44º36.17’	110º27.61’	0.5	1.0	8	96	6	0.07
241223	13:00:45.47	44º47.28’	111º19.50’	11.9	1.1	15	130	10	0.09
241225	17:10:53.19	44º22.42’	110º32.44’	3.8	1.8W	16	47	2	0.10
241225	19:00:18.48	44º37.93’	110º19.09’	3.0	1.0	9	173	10	0.16
241226	07:45:34.76	44º36.06’	110º41.19’	6.5	1.8W	18	58	3	0.11
241226	14:48:19.23	44º41.05’	110º00.47’	12.0	2.0	18	118	9	0.22
241230	23:16:12.19	44º44.96’	111º13.51’	12.0	0.7	16	124	11	0.10
241231	01:24:11.54	44º39.55’	109º59.13’	14.3	1.7	17	112	10	0.21
241231	03:19:58.36	44º39.29’	109º59.40’	14.1	0.2	7	200	10	0.25
241231	13:17:39.41	44º42.55’	111º01.09’	9.6	0.5	12	111	6	0.10
241231	15:42:50.50	44º44.59’	110º46.67’	6.9	0.8	19	90	6	0.16

number of earthquakes = 284
* indicates poor depth control
W indicates Wood-Anderson data used for magnitude calculation

Table 3
UNIVERSITY OF UTAH YELLOWSTONE SEISMIC NETWORK
Operating Seismograph Stations
December 31, 2024

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
B206*	Canyon206bwy2008, Yellowstone, WY	EH[ZEN]	3	PB	44° 46.66′	110° 30.70′	2400	IESE-S2	Q330	Digital	PBO
B207*	Madisn207bwy2007, Yellowstone, WY	EH[ZEN]	3	PB	44° 37.14′	110° 50.91′	2182	IESE-S2	Q330	Digital	PBO
B208*	Lakejn208bwy2008, Yellowstone, WY	EH[ZEN]	3	PB	44° 33.61′	110° 24.09′	2406	IESE-S2	Q330	Digital	PBO
B944*	Grantt944bwy2008, Yellowstone, WY	EH[ZEN]	3	PB	44° 23.38′	110° 32.63′	2365	IESE-S2	Q330	Digital	PBO
B945*	Panthr944swy2008, Yellowstone, WY	EH[ZEN]	3	PB	44° 53.64′	110° 44.65′	2249	IESE-S2	Q330	Digital	PBO
B950*	Norris950bwy2013, Yellowstone, WY	EH[ZEN]	3	PB	44° 42.77′	110° 40.71′	2328	IESE-S2	Q330	Digital	PBO
FLWY*	Flagg Ranch, WY	BH[ZEN]	3	IW	44° 04.96′	110° 41.96′	2078	3ESP	RT-130	Digital	ANSS
IMW*	Indian Meadows, WY	BH[ZEN]	3	IW	43° 53.58′	110° 56.58′	2670	3ESP	RT-130	Digital	ANSS
LKWY*	Lake, WY	BH[ZEN]	3	US	44° 33.91′	110° 24.00′	2424	STS-2	Q330	Digital	USGS
LOHW*	National Elk Refuge, WY	BH[ZEN]	3	IW	43° 36.76′	110° 36.30′	2245	3ESP	RT-130	Digital	ANSS
MCID	Moose Creek, ID	EHZ	1	WY	44° 11.45′	111° 11.03′	2137	L4C	PSN	Analog	USGS
MOOW*	Moose Ponds, WY	BH[ZEN]	3	IW	43° 44.92′	110° 44.69′	2128	3ESP	RT-130	Digital	ANSS
QLMT*	Earthquake Lake, MT	EHZ	1	MB	44° 49.84′	111° 25.80′	2064	L4C	-	Analog	MBMT
REDW*	Red-Top Meadows, WY	BH[ZEN]	3	IW	43° 21.74′	110° 51.18′	2322	3ESP	RT-130	Digital	ANSS
SNOW*	Snow King Mountain, WY	BH[ZEN]	3	IW	43° 27.75′	110° 45.31′	2390	3ESP	RT-130	Digital	ANSS
TPAW*	Teton Pass, WY	BH[ZEN]	3	IW	43° 29.41′	110° 57.04′	2512	3ESP	RT-130	Digital	ANSS
TPMT*	Teepe Creek, MT	EHZ	1	MB	44° 43.79′	111° 39.94′	2518	L4C	-	Analog	MBMT
YDC	Denny Creek, MT	HH[ZEN]	3	WY	44° 42.51′	111° 14.60′	2025	Trillium 120	Centaur	Digital	USGS
YDD	Grant Junction, Yellowstone, WY	HH[ZEN]	3	WY	44° 24.00′	110° 34.80′	2400	STS-2	Q330	Digital	NSF
		EN[ZEN]	3					Episensor			
YEE	East Entrance (YNP), WY	HH[ZEN]	3	WY	44° 29.12′	109° 53.81′	2270	Compact PH	Centaur	Digital	USGS
YFT	Old Faithful (YNP), WY	HH[ZEN]	3	WY	44° 27.05′	110° 50.24′	2292	Compact	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			
YGC	Grayling Creek, MT	HH[ZEN]	3	WY	44° 47.77′	111° 06.45′	2075	Trillium 120	Centaur	Digital	USGS
YHB	Horse Butte, MT	HH[ZEN]	3	WY	44° 45.07′	111° 11.71′	2157	Compact	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			
YHH	Holmes Hill (YNP), WY	EHZ	1	WY	44° 47.30′	110° 51.03′	2717	S13	PSN	Analog	USGS
		HH[ZEN]	3					Trillium 120	Centaur	Digital	
		EN[ZEN]	3					Titan			
YHL	Hebgen Lake, MT	HH[ZEN]	3	WY	44° 51.05′	111° 10.98′	2691	Trillium 120	Q330	Digital	USGS
		EN[ZEN]	3					Titan			
YHR	Hawk's Rest, WY	HH[ZEN]	3	WY	44° 06.36′	110° 04.90′	2976	Trillium 120	Q330	Digital	USGS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
YJC	Joseph′s Coat (YNP), WY	HH[ZEN]	3	WY	44° 45.33′	110° 20.95′	2684	Trillium 120	Centaur	Digital	USGS
YLA	Lake Butte (YNP), WY	EHZ	1	WY	44° 30.76′	110° 16.12′	2580	L4C	PSN	Analog	USGS
YLT	Little Thumb Creek (YNP), WY	EHZ	1	WY	44° 26.25′	110° 35.28′	2439	L4C	PSN	Analog	USGS
YMC	Maple Creek (YNP), WY	EH[ZEN]	3	WY	44° 45.53′	111° 00.41′	2073	S13	PSN	Analog	USGS
YML	Mary Lake (YNP), WY	EH[ZEN]	3	WY	44° 36.20′	110° 38.63′	2653	S13	PSN	Analog	USGS
YMP	Mirror Plateau (YNP), WY	EHZ	1	WY	44° 44.38′	110° 09.40′	2774	S13	PSN	Analog	USGS
		HH[ZEN]	3					Trillium 120	Q330	Digital	
		EN[ZEN]	3					Titan			
YMR	Madison River (YNP), WY	HH[ZEN]	3	WY	44° 40.12′	110° 57.90′	2149	Trillium 120	Q330	Digital	USGS
		EN[ZEN]	3					Titan			
YMS	Mount Sheridan (YNP), WY	EHZ	1	WY	44° 15.84′	110° 31.67′	3106	L4C	PSN	Analog	USGS
YMV	Mammoth Vault (YNP), WY	HH[ZEN]	3	WY	44° 58.42′	110° 41.33′	1829	Trillium 120	Centaur	Digital	USGS
YNB	Norris Basin (YNP), WY	HH[ZEN]	3	WY	44° 43.64′	110° 42.67′	2307	Trillium 120	Centaur	Digital	USGS
		HDF[1,2,3]	3					InfraBSU			
YNE	Northeast Entrance (YNP), WY	HH[ZEN]	3	WY	45° 00.46′	110° 00.48′	2343	Compact	Centaur	Digital	USGS
YNM	Norris Museum (YNP), WY	HH[ZEN]	3	WY	44° 43.59′	110° 42.22′	2311	Trillium 240	Centaur	Digital	USGS
YNR	Norris Junction (YNP), WY	HH[ZEN]	3	WY	44° 42.93′	110° 40.75′	2336	Trillium 120	Q330	Digital	USGS
		EN[ZEN]	3					Titan			
YPC	Pelican Cone (YNP), WY	EHZ	1	WY	44° 38.88′	110° 11.55′	2932	L4C	PSN	Analog	USGS
YPK	Parker Peak (YNP), WY	EH[ZEN]	3	WY	44° 43.91′	109° 55.32′	2897	L4C	PSN	Analog	USGS
YPM	Purple Mountain (YNP), WY	EHZ	1	WY	44° 39.43′	110° 52.12′	2582	L4C	PSN	Analog	USGS
YPP	Pitchstone Plateau (YNP), WY	HH[ZEN]	3	WY	44° 16.26′	110° 48.27′	2707	Trillium 120	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			
YTP	The Promontory (YNP), WY	EHZ	1	WY	44° 23.51′	110° 17.10′	2384	L4	PSN	Analog	USGS
		HH[ZEN]	3					Trillium 120	Centaur	Digital	
		EN[ZEN]	3					Titan			
YUF	Upper Falls (YNP), WY	HH[ZEN]	3	WY	44° 42.76′	110° 30.71′	2394	Trillium 120	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			
YWB	West Boundary (YNP), WY	HH[ZEN]	3	WY	44° 36.35′	111° 06.05′	2310	Trillium 120	Centaur	Digital	USGS

* Station operated by another agency and recorded as part of the Yellowstone Seismic Network
Network Statistics: 163 data channels from 46 stations were being recorded at the end of this report period

EXPLANATION OF TABLE

UURSN Code: Station code formerly used in routine processing. Owing to software limitations, the station code may not be the same code used by the original operator. For multi-component stations, the vertical, east-west, and north-south high gain (low gain) components are identified by an appended Z(V), E(L), and N(M), respectively, in UUSS phase files.

Location: General description of station location. YNP = Yellowstone National Park.

SEED Station: The SEED (Standard for the Exchange of Earthquake Data) station code used by the original operator.

SEED Channel: The SEED format uses three letters to name seismic channels. See <<http://www.iris.edu/manuals/SEEDManual_V2.4.pdf>> for information about the SEED channel naming convention. Relevant sections are reproduced below. In the SEED convention, each letter describes one aspect of the instrumentation and its digitization. The first letter specifies the general sampling rate and the response band of the instrument. Band codes used in this table include:

Band Code	Band Type	Sample Rate	Corner Period
E	Extremely short period	≥ 80 Hertz	< 10 seconds
H	High broadband	≥ 80 Hertz	≥ 10 seconds
B	Broadband	≥ 10 to < 80 Hertz	≥10 seconds
S	Short period	≥ 10 to < 80 Hertz	< 10 seconds

The second letter specifies the family to which the sensor belongs. Sensor families used in this table are:

Instrument Code	Description
H	High gain seismometer
L	Low gain seismometer
N	Accelerometer

The third letter specifies the physical configuration of the members of a multiple axis instrument package. Channel orientations used in this table are:

Z E N Traditional (Vertical, East-West, North-South)

Number of Channels: Total number of waveform channels recorded.

Network Code: The FDSN (Federation of Digital Seismographic Networks) registered network code. See <<http://www.iris.edu/dms/nodes/dmc/services/network_codes>> for information about registered seismograph network codes. Network codes referenced in this table:

Network Code	Network name; Network operator or responsible organization
IE	Idaho National Laboratory Seismic Network
IU	IRIS/USGS Network; USGS Albuquerque Seismological Laboratory
IW	Intermountain West Network, U.S. Geological Survey

MB	Montana Regional Seismic Network; Montana Bureau of Mines and Geology
PB	Plate Boundary Observatory
UU	University of Utah Regional Network; University of Utah
US	US National Network; USGS National Earthquake Information Center
WY	Yellowstone Wyoming Seismic Network; University of Utah

Latitude, Longitude: Sensor location in degrees and decimal minutes; North latitude, West longitude.

Elevation: Sensor altitude in meters above sea level.

Sensor	**Description**
L4, L4C	Mark Products L4 or L4C short-period seismometer
S13, 18300	Geotech S13 or 18300 short-period seismometer
Ranger	Kinemetrics Ranger short-period seismometer
40T	Guralp CMG-40T broadband seismometer
3T	Guralp CMG-3T broadband seismometer
3ESP	Guralp CMG-3ESP broadband seismometer
STS-2	Streckheisen STS-2 broadband seismometer
FBA23	Kinemetrics FBA-23 accelerometer
EpiSensor	Kinemetrics EpiSensor accelerometer
Applied Mems	Applied Mems accelerometer
PA-23	Geotech PA-23 accelerometer
Compact	Nanometrics Compact broadband seismometer
Compact PH	Nanometrics Compact Posthole broadband seismometer
Trillium 120	Nanometrics Trillium 120 broadband seismometer
Trillium 240	Nanometrics Trillium 240 broadband seismometer
Titan	Nanometrics Titan accelerometer
Observer	Refraction Technology (REF TEK) Model 151 Observer broadband seismometer
IESE-S2	Institute of Earth Science and Engineering S-2 model borehole seismometer

Digitizer	**Description**
K2	Kinemetrics Altus Series K2 (19-bit resolution field digitizer)
Etna	Kinemetrics Altus Series Etna (18-bit resolution field digitizer)
72A-07	Refraction Technology (REF TEK) model 72A-07 (24-bit field digitizer)
72A-08	Refraction Technology (REF TEK) model 72A-08 (24-bit field digitizer)
ANSS-130	Refraction Technology (REF TEK) model 130-ANSS/02 (24-bit resolution field digitizer)
RT-130	Refraction Technology (REF TEK) model RT-130 (24-bit resolution field digitizer)
Q330	Quanterra, Inc Q330 digitizer (24-bit resolution field digitizer)
SMART-24	Geotech SMART-24 digitizer (24-bit resolution field digitizer)
PSN	PSN-ADC-SERIAL version III (16-bit resolution field digitizer)
Basalt	Kinemetrics Basalt (24-bit resolution field digitizer)
Taurus	Nanometrics Taurus (24-bit resolution field digitizer)
Centaur	Nanometrics Centaur (24-bit resolution field digitizer)

Telemetry	Description
Analog	Data transmission is analog along part of the transmission pathway
Digital	Data are converted to digital form at the station site
None	On-site recording system

Sponsor (or Operator for stations marked by * in preceding columns)

USGS	U.S. Geological Survey
Utah	State of Utah
ANSS	Advanced National Seismic System
INL	Idaho National Laboratory
MBMT	Montana Bureau of Mines and Geology
PBO	Plate Boundary Observatory
NSF	National Science Foundation

Network Changes During October 1–December 31, 2024

None.