

EARTHQUAKE ACTIVITY IN THE YELLOWSTONE REGION

Preliminary Epicenters

July 1 – September 30, 2025

Prepared by the University of Utah Seismograph Stations and funded by
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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 (yyymmdd) 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.
- 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).

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July 1 – September 30, 2025

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During the three-month period July 1 through September 30, 2025, the University of Utah Seismograph Stations (UUSS) located 229 earthquakes within the Yellowstone region (Figure 1). The total includes 3 earthquakes in the magnitude 3 range and 14 earthquakes in the magnitude 2 range. The largest event to occur during this period was a magnitude 3.7 earthquake on August 19. Three earthquakes were 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 2025). 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

M _L 3.7	August 19	11:14 MDT	9.5 mi NW of Norris Geyser Basin, YNP
M _L 3.3	September 28	01:29 MDT	9 mi NW of Norris Geyser Basin, YNP
M _L 3.1	September 28	01:38 MDT	9.1 mi NW of Norris Geyser Basin, YNP

Notable Swarm Seismicity

During the report period, there were three 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 25 earthquakes ($0.6 \leq M \leq 3.7$) occurred about 9.2 mi NW of Norris Geyser Basin, YNP from August 19th – 23rd.
- B. A swarm of 10 earthquakes ($0.3 \leq M \leq 2.0$) occurred about 8.0 mi SE of Madison Junction, YNP from August 30th – 31st.
- C. A swarm of 17 earthquakes ($0.6 \leq M \leq 3.3$) occurred about 7.8 mi NW of Norris Geyser Basin, YNP from September 27th – 29th.

These swarms are labeled in Figure 1.

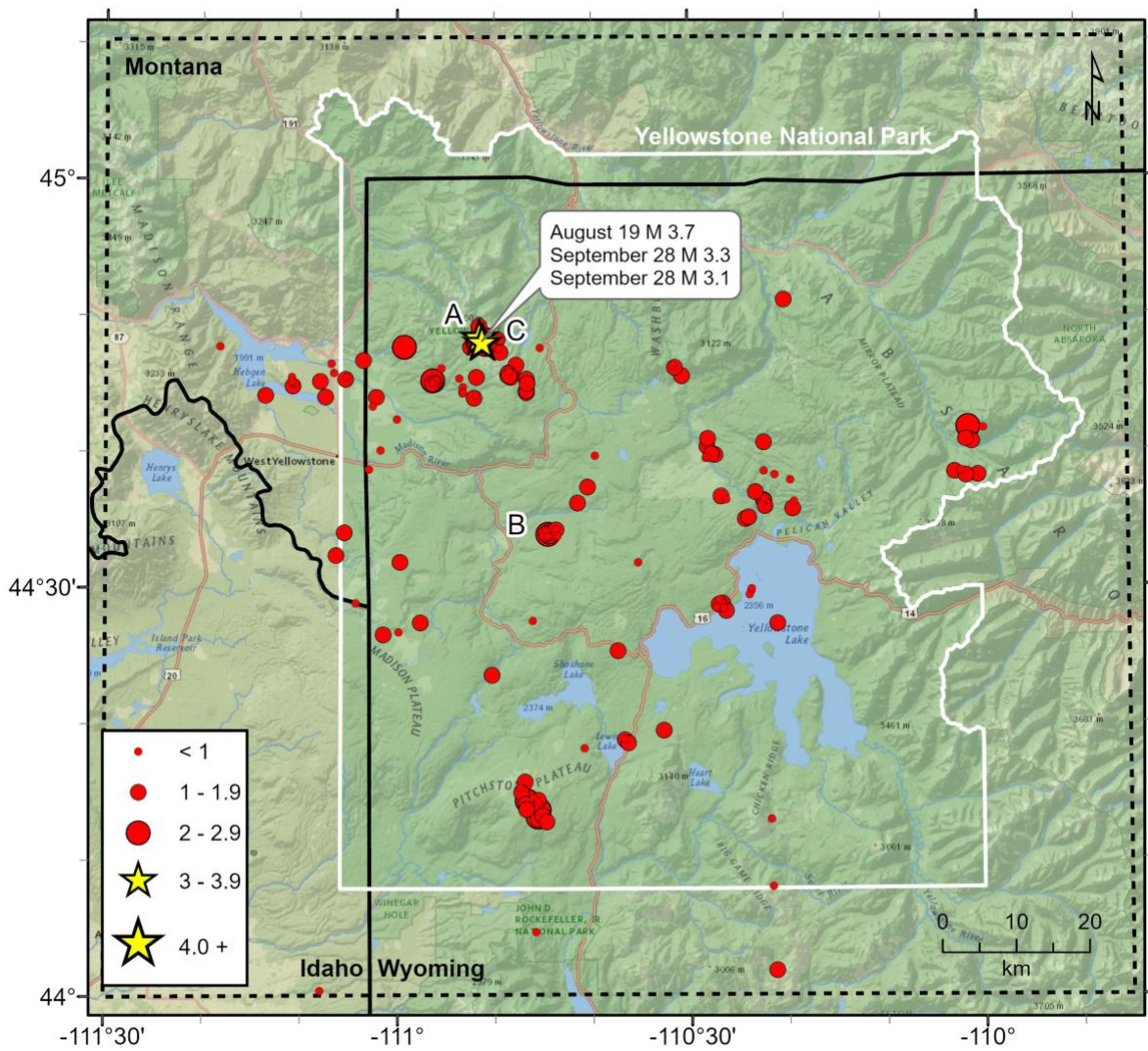


Figure 1. Epicenters of earthquakes located by the University of Utah Seismograph Stations, July 1, 2025, through September 30, 2025. Earthquake swarms (labeled A–C) are discussed in the text.

Table 1
EARTHQUAKES FELT IN THE YELLOWSTONE REGION
July 1, 2025 to September 30, 2025

Date	Time†	Felt Information‡	Latitude	Longitude	Magnitude§
January 29 January 28	00:59 UTC 17:59 MST	Yellowstone. Felt (V) at Yellowstone National Park, WY.	44° 45.94'	110° 46.26'	M _L 3.7
June 4	20:50 UTC 14:50 MDT	Yellowstone. Felt (III) at West Yellowstone, MT.	44° 46.74'	111° 08.63'	M _W 2.7
August 19	11:14 MDT 17:14 UTC	Yellowstone. Felt (III) at Yellowstone National Park, WY.	44° 46.83'	110° 43.31'	M _L 3.7
September 28	01:29 MDT 07:29 UTC	Yellowstone. Felt (II) at Yellowstone National Park, WY.	44° 47.78'	110° 45.94'	M _L 3.4
September 28	01:38 MDT 07:38 UTC	Yellowstone. Felt (III) at Yellowstone National Park, WY.	44° 47.25'	110° 45.94'	M _L 3.5

† 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 September 30, 2025

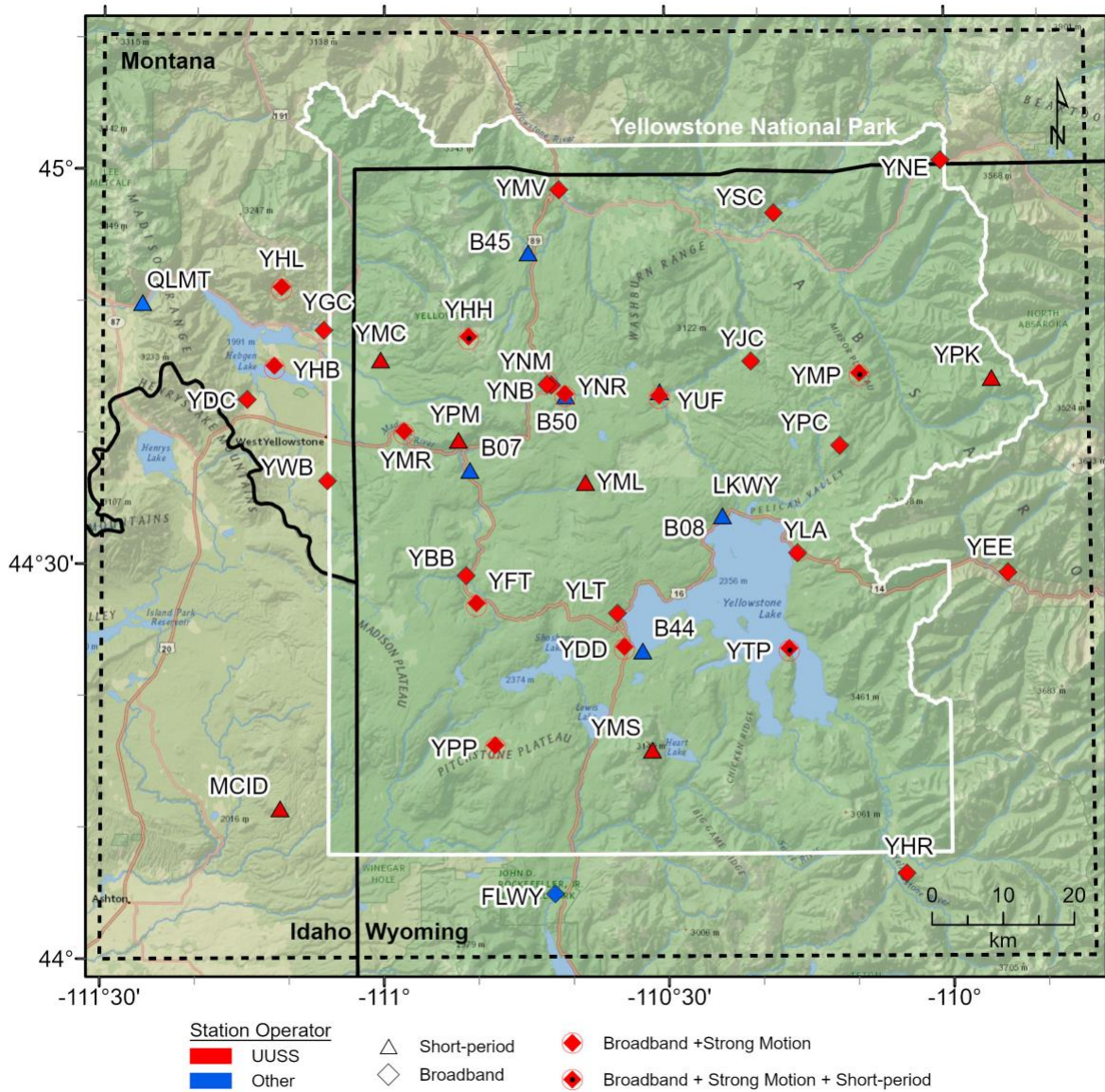


Figure 2. Seismograph stations of the Yellowstone Seismic Network as of September 30, 2025.

Table 2. Earthquakes in the Yellowstone Region: July 1–September 30, 2025

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
250701	14:16:42.87	44°41.61'	109°59.78'	8.6	0.8	11	107	7	0.19
250703	02:58:11.88	44°25.39'	110°37.42'	3.8	1.5	10	92	3	0.11
250707	08:42:03.42	44°00.47'	111°07.97'	15.0	0.7	10	183	21	0.14
250707	17:56:37.24	44°43.32'	111°02.55'	7.0	0.9W	18	66	5	0.14
250708	13:13:23.31	44°38.13'	110°01.58'	13.9	1.3	9	101	14	0.07
250710	09:24:04.68	44°14.61'	110°46.08'	4.3	0.9W	14	127	4	0.19
250711	04:38:28.28	44°13.22'	110°45.65'	4.4	2.7W	31	73	7	0.17
250711	04:46:58.13	44°13.77'	110°45.79'	2.5	1.7W	19	100	6	0.17
250711	05:31:50.43	44°12.86'	110°44.76'	2.1	1.0	12	87	8	0.18
250711	05:32:22.91	44°13.03'	110°45.66'	2.1	1.1	12	88	7	0.27
250711	05:34:14.60	44°13.31'	110°45.16'	1.9	1.0	10	107	7	0.12
250712	08:04:51.50	44°38.17'	110°00.36'	14.2	1.4	14	120	13	0.20
250713	05:42:07.66	44°40.62'	110°00.96'	13.4	1.6	10	106	10	0.17
250713	06:27:03.17	44°47.67'	110°59.30'	6.0	2.1W	30	132	4	0.14
250713	11:16:44.63	44°38.50'	110°02.09'	14.3	0.8	9	99	13	0.12
250713	11:22:24.23	44°38.44'	110°02.21'	14.7	0.9	8	99	14	0.15
250713	20:04:17.86	44°38.42'	110°02.76'	14.6	1.7	14	97	14	0.15
250714	00:37:00.20	44°40.80'	110°01.59'	12.7	1.1	8	158	10	0.17
250717	06:35:55.61	44°13.02'	110°21.79'	9.6	0.5	12	180	14	0.11
250717	09:32:08.13	44°15.01'	110°47.33'	3.0	1.2	13	191	3	0.13
250717	11:43:37.19	44°15.34'	110°47.44'	3.5	0.7	9	211	2	0.08
250717	19:49:59.08	44°14.40'	110°46.76'	2.5	2.4W	23	179	4	0.14
250718	14:50:49.34	44°38.26'	110°21.26'	6.2	0.6	9	152	9	0.09
250719	04:27:59.64	44°47.95'	110°51.56'	7.2	0.9	15	142	12	0.10
250719	11:58:39.91	44°34.13'	110°44.69'	2.0	0.6	12	107	9	0.24
250719	12:53:02.36	44°34.30'	110°43.74'	7.1	0.8W	20	65	8	0.14
250721	03:10:29.69	44°45.01'	110°56.12'	8.2	0.9W	23	107	6	0.15
250721	10:41:45.90	44°45.16'	111°07.94'	9.9	1.2W	18	91	5	0.10
250721	10:42:42.55	44°36.30'	110°19.28'	2.2	0.8	8	92	8	0.10
250722	08:45:51.65	44°47.79'	110°51.27'	6.3*	0.9W	28	123	13	0.15
250722	09:01:30.87	44°40.10'	111°01.76'	5.2	0.8W	13	79	5	0.10
250723	04:11:14.20	44°13.72'	110°45.54'	4.6	2.2W	24	85	6	0.18
250723	12:45:24.99	44°37.40'	110°40.48'	4.9	1.8W	21	72	3	0.17
250723	22:05:55.52	44°19.55'	110°32.74'	6.9	1.3	9	98	7	0.06
250724	12:36:30.25	44°14.45'	110°45.61'	2.8	1.8W	13	180	5	0.14
250724	12:39:06.17	44°14.26'	110°45.63'	2.2	0.8	8	223	5	0.11
250725	07:34:58.19	44°15.79'	110°46.97'	2.2	1.2W	18	95	2	0.17
250725	13:58:35.97	44°44.97'	110°56.40'	8.8	1.2W	16	106	5	0.09
250727	08:28:08.30	44°40.35'	110°28.18'	4.7	1.5W	25	72	6	0.15
250728	11:39:44.43	44°13.77'	110°46.83'	3.4	1.0	11	85	5	0.25
250728	17:43:20.64	44°44.95'	110°56.22'	10.2	1.5W	15	106	6	0.09
250729	11:19:09.10	44°46.35'	110°47.80'	8.3	1.4W	20	103	8	0.13
250729	13:49:06.00	44°44.02'	111°07.40'	12.0	1.1W	18	75	6	0.10
250730	09:07:15.97	44°45.26'	110°55.97'	8.4	0.8W	21	109	6	0.15
250730	09:10:40.10	44°45.21'	110°56.37'	11.9	2.8W	41	67	5	0.19

Table 2. Earthquakes in the Yellowstone Region: July 1–September 30, 2025

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
250730	09:32:24.10	44°45.04'	110°56.17'	8.2	1.5W	26	107	6	0.16
250730	09:35:36.94	44°45.05'	110°56.34'	8.5	0.5W	13	107	5	0.10
250730	10:13:32.76	44°44.97'	110°56.34'	8.5	1.5W	23	106	5	0.14
250730	10:31:52.57	44°45.17'	110°56.21'	8.4	0.9W	19	108	6	0.11
250730	21:17:56.29	44°39.61'	110°28.26'	2.3	-0.0	9	109	7	0.28
250731	01:51:40.08	44°45.13'	110°56.41'	8.2	0.9W	13	107	5	0.08
250731	13:13:29.80	44°45.32'	110°46.73'	5.5	1.4W	25	89	7	0.17
250802	05:34:34.70	44°33.79'	110°43.60'	7.7	0.6W	14	87	8	0.17
250802	21:40:24.97	44°45.00'	110°46.67'	4.7	1.2W	22	79	6	0.18
250803	04:12:55.02	44°01.94'	110°21.32'	16.0	1.5W	16	135	23	0.13
250803	07:14:25.24	44°45.02'	111°10.48'	7.2	0.7W	16	84	2	0.13
250803	15:21:27.07	44°44.82'	111°10.77'	8.1	1.4W	16	63	1	0.14
250804	10:12:23.08	44°44.46'	110°46.73'	8.0	1.3W	17	83	6	0.16
250804	13:32:49.41	44°44.43'	110°46.78'	6.8	1.7W	33	77	6	0.19
250805	02:27:52.65	44°39.74'	110°27.38'	3.9	1.4W	22	116	7	0.15
250805	02:58:08.62	44°39.78'	110°27.73'	4.8	1.3	17	97	7	0.15
250805	18:55:52.04	44°44.33'	110°46.74'	4.9	1.5W	28	77	6	0.20
250806	02:06:28.71	44°46.11'	110°55.48'	7.7	0.9	22	104	7	0.15
250807	00:41:58.69	44°39.48'	110°28.30'	2.5	0.8	9	161	7	0.19
250807	03:05:10.52	44°28.89'	111°04.30'	12.0	0.5	16	137	14	0.16
250807	08:32:35.21	44°36.45'	110°26.24'	5.8	0.5	15	105	6	0.10
250807	09:18:00.88	44°18.25'	110°40.89'	6.1	0.6	15	112	10	0.22
250807	22:43:40.50	44°36.22'	110°41.51'	3.6*	1.5W	9	149	12	0.17
250808	07:00:05.63	44°47.93'	110°51.59'	8.3	0.5	22	111	12	0.16
250808	12:04:58.09	44°29.75'	110°23.74'	2.5	0.7	12	91	7	0.09
250809	09:48:46.43	44°29.48'	110°23.90'	2.1	0.5	10	77	8	0.23
250809	09:49:06.57	44°29.91'	110°23.69'	2.6	-0.5	10	124	7	0.16
250809	15:46:14.22	44°31.86'	110°35.33'	4.3	0.5	10	99	9	0.13
250810	13:28:59.72	44°47.99'	110°51.43'	9.3	1.7W	27	111	13	0.14
250812	07:35:26.92	44°32.40'	111°06.31'	13.2	1.1W	16	141	7	0.12
250813	03:24:08.58	44°34.07'	111°05.47'	7.1	1.0W	18	134	4	0.11
250813	03:46:18.62	44°44.00'	111°02.18'	6.8	1.1W	18	77	4	0.10
250814	20:06:37.06	44°48.06'	110°51.70'	8.3	1.5W	19	112	12	0.12
250815	08:50:57.48	44°27.59'	110°46.15'	3.7	0.7	9	74	5	0.07
250815	11:56:47.28	44°48.24'	110°51.47'	10.2	1.9W	30	69	13	0.15
250819	00:13:37.88	44°45.24'	110°56.26'	8.2	0.8W	25	98	5	0.18
250819	15:48:17.60	44°46.14'	110°31.47'	5.3	1.0W	11	125	6	0.07
250819	17:14:53.02	44°48.47'	110°51.58'	11.6	3.7W	42	37	13	0.17
250819	17:25:19.13	44°48.06'	110°51.34'	6.8	1.1	16	111	13	0.12
250819	17:27:26.48	44°48.26'	110°51.11'	11.2	2.1W	30	112	13	0.17
250819	17:36:54.84	44°47.81'	110°51.04'	11.5	1.2W	18	110	13	0.14
250819	19:00:18.49	44°48.21'	110°51.03'	11.4	2.6W	36	36	13	0.18
250819	19:17:55.23	44°48.03'	110°51.83'	7.4	0.9W	20	112	12	0.17
250819	19:46:16.95	44°48.05'	110°51.08'	8.6	1.9W	28	110	13	0.13
250819	21:31:00.60	44°47.86'	110°51.14'	8.2	1.1W	18	110	13	0.12

Table 2. Earthquakes in the Yellowstone Region: July 1–September 30, 2025

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
250820	00:07:34.15	44°47.90'	110°51.24'	8.4	1.6W	19	110	13	0.13
250820	02:00:25.08	44°48.11'	110°51.98'	8.2	0.8W	22	113	12	0.13
250820	11:29:07.20	44°48.17'	110°51.44'	8.2	0.8	18	112	13	0.12
250820	11:50:04.96	44°48.01'	110°51.43'	9.6	0.6	14	111	13	0.10
250820	12:01:07.15	44°48.01'	110°51.97'	8.1	1.0W	16	112	12	0.13
250820	12:10:37.77	44°48.21'	110°51.13'	10.3	2.2W	38	112	13	0.17
250820	12:53:41.23	44°47.86'	110°50.97'	7.8	0.8W	19	109	13	0.11
250820	18:55:47.92	44°47.82'	110°50.83'	5.5*	0.9	14	109	13	0.17
250820	19:18:11.88	44°47.84'	110°51.19'	8.0	1.4W	22	110	13	0.16
250821	05:33:38.84	44°48.15'	110°51.20'	9.7	1.2W	25	112	13	0.15
250821	06:16:40.84	44°47.94'	110°51.17'	8.0	0.9W	27	110	13	0.15
250821	08:16:17.65	44°48.17'	110°51.26'	8.4	1.2W	19	112	13	0.13
250821	08:30:01.16	44°48.05'	110°52.30'	8.0	0.6	15	113	12	0.10
250821	08:56:27.40	44°48.23'	110°51.38'	8.1	0.6W	16	112	13	0.15
250821	15:04:24.08	44°35.77'	110°19.42'	5.5	1.6W	17	90	7	0.15
250822	04:03:14.80	44°43.93'	110°52.11'	9.1	1.1	11	155	8	0.13
250822	10:19:45.91	44°48.14'	110°51.42'	8.0	0.9	20	112	13	0.15
250823	18:33:41.68	44°47.92'	110°52.35'	7.2	0.7	11	112	11	0.13
250823	20:28:10.26	44°48.14'	110°51.55'	8.4	0.8	16	112	13	0.09
250824	01:39:08.93	44°45.37'	110°53.64'	9.6	0.8W	17	98	9	0.10
250824	05:08:34.57	44°51.09'	110°20.22'	13.5	1.5W	20	76	10	0.21
250824	08:15:24.14	44°44.28'	110°53.30'	11.8	0.8W	17	91	9	0.07
250824	08:23:11.99	44°44.41'	110°53.34'	10.8	0.8W	17	93	9	0.11
250824	09:06:13.49	44°44.30'	110°53.23'	11.4	0.7W	19	91	9	0.09
250824	17:12:54.44	44°44.73'	110°53.28'	11.6	0.8W	14	97	9	0.09
250824	21:24:30.01	44°28.53'	110°27.30'	2.2	0.6	12	93	10	0.18
250824	21:27:05.16	44°28.30'	110°26.30'	2.0	1.4W	15	98	10	0.21
250824	21:27:08.94	44°28.84'	110°26.68'	3.0	1.7W	12	133	9	0.16
250824	21:29:20.30	44°28.77'	110°27.04'	3.0	1.0W	12	91	10	0.18
250824	21:37:23.03	44°28.74'	110°27.13'	2.9	0.7	13	136	10	0.19
250824	23:44:27.81	44°29.13'	110°26.99'	2.2	0.2	11	88	9	0.20
250824	23:44:39.65	44°28.47'	110°26.52'	2.3	0.6	10	95	10	0.22
250825	11:13:12.26	44°26.58'	111°01.47'	8.0	1.0W	14	126	15	0.23
250826	11:14:47.75	44°48.00'	110°52.04'	8.9	0.3W	18	113	12	0.10
250826	11:15:05.76	44°47.90'	110°52.02'	8.9	1.4W	24	111	12	0.12
250827	02:49:04.86	44°35.03'	110°24.29'	4.9	1.8W	19	78	2	0.08
250827	03:19:08.61	44°35.15'	110°23.95'	4.5	1.5W	17	80	2	0.10
250827	05:47:32.19	44°48.11'	110°51.75'	9.9	2.3W	38	65	12	0.13
250827	06:12:34.33	44°08.09'	110°21.64'	8.6*	0.5	13	188	28	0.17
250828	07:02:24.49	44°48.19'	110°50.96'	9.8	2.3W	35	67	13	0.13
250828	10:54:37.15	44°38.70'	111°02.94'	4.2	0.6	11	124	7	0.09
250829	17:26:37.16	44°49.20'	110°51.61'	6.9	1.0W	16	210	4	0.06
250829	18:02:25.29	44°27.38'	110°21.05'	4.5	1.0W	10	97	9	0.07
250830	13:03:01.42	44°33.80'	110°44.63'	2.4	0.3	8	130	9	0.21
250830	14:59:25.56	44°33.85'	110°44.39'	7.3	1.1W	21	68	9	0.20

Table 2. Earthquakes in the Yellowstone Region: July 1–September 30, 2025

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
250830	15:04:34.39	44°33.79'	110°44.48'	4.9	1.3W	21	68	9	0.18
250830	16:00:40.07	44°33.98'	110°44.73'	6.7	1.0W	17	69	9	0.17
250830	16:09:39.51	44°34.01'	110°44.26'	5.6	1.8W	30	52	9	0.16
250830	16:34:35.45	44°34.26'	110°43.74'	8.2	1.0W	11	100	8	0.16
250830	16:39:00.53	44°34.07'	110°44.50'	7.5	1.7W	27	54	9	0.14
250830	16:39:19.57	44°33.94'	110°44.56'	7.6	2.0W	22	67	9	0.16
250830	23:50:44.56	44°34.18'	110°44.21'	8.6	1.3W	15	72	8	0.16
250831	08:13:15.35	44°48.27'	110°50.85'	6.5	1.4W	27	111	2	0.15
250831	09:50:12.97	44°39.69'	110°39.71'	6.3	0.1	17	103	6	0.12
250831	11:10:41.43	44°33.79'	110°44.48'	6.3	0.6W	13	86	9	0.13
250831	14:14:31.69	44°47.96'	110°52.16'	6.5	1.6W	30	112	2	0.17
250901	02:10:14.62	44°47.91'	110°51.14'	4.7	1.1W	17	142	1	0.19
250901	07:36:59.89	44°47.95'	110°51.08'	5.2	0.6W	17	110	1	0.13
250901	09:37:36.75	44°48.03'	110°51.13'	5.4	1.7W	25	110	1	0.16
250901	11:43:03.38	44°48.01'	110°50.57'	4.1	0.9W	20	110	1	0.14
250901	14:56:42.77	44°45.17'	111°10.85'	7.4	0.7W	17	81	1	0.11
250901	22:26:19.69	44°45.48'	111°10.88'	7.5	0.8W	13	149	1	0.13
250902	05:55:54.45	44°48.00'	110°51.19'	4.9	1.3W	23	110	1	0.16
250902	11:02:19.50	44°48.11'	110°51.02'	7.1	0.8W	18	111	1	0.15
250903	02:24:03.51	44°47.97'	110°50.95'	4.6	1.0W	20	110	1	0.17
250903	15:50:16.61	44°48.17'	110°50.85'	5.4	1.7W	27	111	2	0.15
250904	06:13:04.88	44°47.68'	110°50.75'	5.1	1.0W	30	107	1	0.19
250904	16:59:51.66	44°48.28'	110°52.08'	5.8	1.5W	25	114	2	0.14
250905	06:08:44.56	44°44.13'	111°13.58'	4.7	1.0W	19	103	3	0.18
250906	02:12:44.51	44°40.69'	110°01.14'	13.6	1.8W	12	103	10	0.20
250906	05:39:04.16	44°45.00'	111°10.65'	9.9	0.9W	29	63	1	0.21
250906	06:08:03.62	44°26.76'	110°59.91'	4.4*	0.7W	12	152	13	0.18
250907	09:48:39.98	44°23.61'	110°50.32'	2.6	1.6W	12	88	6	0.10
250908	14:28:45.64	44°04.78'	110°45.89'	9.6	0.9	11	80	5	0.11
250908	21:16:24.69	44°41.69'	110°01.33'	13.3	2.0W	15	94	9	0.15
250909	11:35:11.53	44°47.79'	110°51.85'	4.3	0.2	19	111	1	0.16
250909	17:12:19.62	44°47.94'	110°50.91'	4.9	0.6W	16	109	1	0.14
250910	06:45:11.34	44°47.94'	110°50.70'	4.1	0.3W	10	139	1	0.09
250910	08:20:11.15	44°46.70'	111°03.50'	9.7	1.1W	20	103	4	0.08
250910	11:03:37.07	44°47.71'	111°18.26'	9.6	0.6W	18	125	10	0.17
250911	13:26:56.22	44°48.00'	110°51.04'	6.0	2.1W	31	79	1	0.16
250912	04:06:53.03	44°40.63'	110°22.36'	4.4	1.3W	19	82	9	0.10
250912	09:15:00.44	44°48.24'	110°51.10'	5.1	-0.2	18	112	2	0.17
250912	09:47:57.04	44°45.78'	111°06.53'	11.7	0.8W	21	71	4	0.15
250912	15:46:19.39	44°45.80'	110°48.49'	4.8	1.4W	20	82	4	0.17
250912	16:08:28.98	44°45.55'	110°48.49'	4.1	1.0W	17	93	5	0.17
250912	17:07:24.61	44°45.45'	110°48.36'	4.6	1.1W	24	80	5	0.18
250912	17:11:04.33	44°45.58'	110°48.64'	5.0	1.4W	24	81	4	0.17
250912	23:16:05.79	44°45.89'	110°48.19'	7.9	1.8W	32	73	5	0.19
250913	22:40:26.08	44°37.87'	110°19.67'	5.3	0.5	14	86	9	0.15

Table 2. Earthquakes in the Yellowstone Region: July 1–September 30, 2025

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
250914	04:58:13.00	44°45.75'	110°48.61'	4.5	1.1W	24	81	4	0.15
250914	09:42:19.44	44°47.81'	110°51.20'	4.8	1.5W	25	109	1	0.15
250914	13:55:23.93	44°36.69'	110°26.78'	4.8	1.1W	12	102	6	0.11
250914	17:51:25.03	44°33.87'	110°43.95'	5.8	0.7	8	157	8	0.16
250914	19:56:23.58	44°45.89'	110°48.52'	4.4	0.7	14	96	4	0.09
250914	20:46:21.50	44°46.46'	111°06.79'	8.8	0.6W	14	78	2	0.11
250915	01:41:43.89	44°31.90'	110°59.75'	15.4	1.1W	21	113	12	0.17
250915	05:26:48.40	44°47.75'	110°50.95'	4.7	0.2	14	108	1	0.11
250916	08:46:05.42	44°46.30'	110°31.64'	5.1	0.8	23	137	6	0.22
250916	11:01:08.49	44°47.60'	110°45.35'	2.2	0.8W	14	100	8	0.12
250916	22:46:19.50	44°45.53'	110°30.76'	6.1	1.2W	18	85	5	0.18
250918	05:12:55.47	44°47.94'	110°51.13'	4.2	0.2	14	110	1	0.14
250919	05:07:30.53	44°35.87'	110°21.98'	4.1	0.6	10	109	5	0.07
250919	05:43:05.37	44°36.41'	110°22.42'	5.1	1.9W	31	43	5	0.18
250919	05:45:12.46	44°36.34'	110°22.37'	4.1	1.2W	13	70	5	0.08
250919	05:46:10.50	44°37.00'	110°23.24'	2.0	1.1W	10	104	6	0.09
250919	06:25:55.26	44°36.53'	110°22.33'	2.9	0.9W	14	70	5	0.09
250919	06:41:19.86	44°35.97'	110°22.26'	5.0	1.2W	14	70	4	0.09
250919	22:04:48.67	44°38.54'	110°22.38'	6.8	-0.1	8	111	9	0.14
250919	23:20:10.91	44°27.46'	110°57.67'	7.3	1.3W	16	174	9	0.15
250920	18:42:17.76	44°18.86'	110°36.73'	6.2	1.8W	19	67	9	0.18
250920	18:44:40.85	44°18.94'	110°36.72'	5.2	0.7W	14	101	9	0.16
250920	18:48:05.76	44°18.64'	110°36.39'	6.2	1.2W	15	62	8	0.22
250923	10:45:22.69	44°48.23'	110°49.75'	5.7	1.5W	24	109	2	0.15
250923	17:01:29.08	44°42.37'	111°00.05'	8.0	0.5W	11	103	5	0.13
250924	15:44:12.02	44°48.31'	110°50.06'	5.1	0.8W	13	110	2	0.17
250924	21:12:00.75	44°40.92'	110°28.11'	6.4	1.0W	10	94	5	0.12
250925	18:57:59.26	44°47.65'	110°52.49'	5.0	1.7W	26	111	2	0.18
250926	16:03:48.89	44°44.13'	110°51.91'	4.6	0.6W	15	83	6	0.15
250927	19:04:29.45	44°47.95'	110°51.04'	4.6	1.4W	19	110	1	0.19
250928	07:29:53.77	44°48.08'	110°51.18'	7.8	3.3W	39	111	1	0.20
250928	07:32:59.57	44°47.71'	110°51.31'	4.8	0.6	24	109	1	0.17
250928	07:35:36.55	44°47.82'	110°51.34'	4.8	1.0W	29	109	1	0.18
250928	07:37:43.87	44°47.61'	110°51.10'	4.8	1.1W	28	108	1	0.19
250928	07:38:13.16	44°47.68'	110°51.05'	4.8	1.5W	31	108	1	0.19
250928	07:38:39.27	44°48.11'	110°51.30'	7.8	3.1W	39	36	2	0.18
250928	07:51:54.99	44°47.85'	110°51.30'	4.7	1.5W	22	110	1	0.14
250928	08:46:19.68	44°47.82'	110°51.06'	4.7	0.6	26	110	1	0.17
250928	11:57:02.76	44°14.15'	110°46.87'	6.9	1.0	16	78	4	0.34
250928	20:18:43.43	44°47.69'	110°51.12'	4.1	0.9W	23	108	1	0.15
250928	20:50:15.73	44°47.52'	110°49.61'	4.5	0.7W	16	104	2	0.17
250928	21:34:01.40	44°47.29'	110°49.44'	4.3	1.1W	15	103	2	0.13
250928	22:59:52.62	44°45.46'	110°51.88'	4.7	1.7W	29	85	4	0.13
250928	23:05:29.98	44°47.71'	110°51.21'	4.8	1.4W	22	109	1	0.15
250929	01:00:18.22	44°47.81'	110°51.28'	4.3	1.4W	18	109	1	0.14

Table 2. Earthquakes in the Yellowstone Region: July 1–September 30, 2025

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
250929	13:32:54.83	44°47.93'	110°50.91'	4.2	0.7	11	109	1	0.14
250929	14:35:04.87	44°47.88'	110°50.93'	4.9	2.2W	29	79	1	0.16
250930	22:15:12.04	44°45.32'	111°05.34'	9.6	1.4W	23	68	5	0.17
250930	22:23:10.98	44°45.50'	111°05.23'	9.5	0.9W	18	99	4	0.16

number of earthquakes = 229

* indicates poor depth control

W indicates Wood-Anderson data used for magnitude calculation

Table 3
UNIVERSITY OF UTAH YELLOWSTONE SEISMIC NETWORK
Operating Seismograph Stations
September 30, 2025

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	EarthScope
B207*	Madisn207bwy2007, Yellowstone, WY	EH[ZEN]	3	PB	44° 37.14'	110° 50.91'	2182	IESE-S2	Q330	Digital	EarthScope
B208*	Lakejn208bwy2008, Yellowstone, WY	EH[ZEN]	3	PB	44° 33.61'	110° 24.09'	2406	IESE-S2	Q330	Digital	EarthScope
B944*	Grantt944bwy2008, Yellowstone, WY	EH[ZEN]	3	PB	44° 23.38'	110° 32.63'	2365	IESE-S2	Q330	Digital	EarthScope
B945*	Panthr944swy2008, Yellowstone, WY	EH[ZEN]	3	PB	44° 53.64'	110° 44.65'	2249	IESE-S2	Q330	Digital	EarthScope
B950*	Norris950bwy2013, Yellowstone, WY	EH[ZEN]	3	PB	44° 42.77'	110° 40.71'	2328	IESE-S2	Q330	Digital	EarthScope
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
YBB	Biscuit Basin (YNP), WY	HH[ZEN]	3	WY	44° 29.15'	110° 51.31'	2221	Trillium 120	Centaur	Digital	USGS
		HDF[1,2,3]	3					Chaparral			
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	USGS
		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	Centaur	Digital	USGS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		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
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	HH[ZEN]	3	WY	44° 30.76’	110° 16.12’	2580	Trillium 120	Centaur	Digital	USGS
YLT	Little Thumb Creek (YNP), WY	HH[ZEN]	3	WY	44° 26.25’	110° 35.28’	2439	Trillium 120	Centaur	Digital	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	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			
YPC	Pelican Cone (YNP), WY	HH[ZEN]	3	WY	44° 38.88’	110° 11.55’	2932	Trillium 120	Centaur	Digital	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			
YSC	Slough Creek (YNP), WY	HH[ZEN]	3	WY	44° 56.58’	110° 18.40’	1930	Trillium 120	Centaur	Digital	USGS
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: 176 data channels from 48 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.fdsn.org/seed_manual/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 <<<https://www.fdsn.org/networks/>>> 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 (EarthScope Consortium)
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	Kinematics 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	Kinematics FBA-23 accelerometer
EpiSensor	Kinematics 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	Kinematics Altus Series K2 (19-bit resolution field digitizer)
Etna	Kinematics 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	Kinematics 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
EarthScope	EarthScope Consortium
NSF	National Science Foundation

Network Changes During July 1–September 30, 2025

July 28 th	Station YBB installed.
July 29 th	Station YLA upgraded to 3-component broadband (analog removed).
July 31 st	Station YSC installed.
August 1 st	Station YHL Centaur digitizer installed (replaced Q330).
August 25 th	Station YPC upgraded to 3-component broadband (analog removed).
August 26 th	Station YNR Centaur digitizer installed (replaced Q330).
August 30 th	Station YLT upgraded to 3-component broadband (analog removed).