

# **EARTHQUAKE ACTIVITY IN THE UTAH REGION**

Preliminary Epicenters

October 1 – December 31, 2023

Prepared by the University of Utah Seismograph Stations and funded by  
the U.S. Geological Survey (Cooperative Agreement No. G20AP00036) and  
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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 Utah region (lat. 36° 45' – 42° 30' N, long. 108° 45' – 114° 15' 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 regional/urban seismic network (Figures 2 and 3, Table 3).

The earthquake listing in Table 2 is estimated to be systematically complete above magnitude 1.5 within the Intermountain Seismic Belt in Utah and above magnitude 2.0 to 2.5 elsewhere in the state. *These data are preliminary—both the locations and magnitudes in this table are subject to revision. The catalog may include some man-made seismic events not yet identified.*

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

- Date (yymmdd) and origin time in Universal Coordinated 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 5 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 1500 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 UTAH REGION October 1 – December 31, 2023

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During the three-month period October 1, 2023, through December 31, 2023, the University of Utah Seismograph Stations (UUSS) located 348 earthquakes within the Utah region (Figure 1). The total includes three earthquakes in the magnitude 3 range and 42 earthquakes in the magnitude 2 range. Earthquakes of magnitude 3.0 or larger (plotted as stars and specifically labeled on Figure 1) are listed below. Three earthquakes were reported felt during the report period (see Table 1, a cumulative tabulation of earthquakes during 2023 that were either felt in the Utah region or for which a ShakeMap was produced, or both). Additional information on earthquakes within the Utah 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 <http://www.quake.utah.edu/earthquake-center/quarterly-seismicity-reports>.

*Note:* On October 1, 2012, UUSS began using the ANSS Quake Monitoring System (AQMS) software package for data acquisition and data processing. The primary effect on the data reported herein comes from computing the earthquake locations with a newer version of the computer program HYPOINVERSE-2000 (F. W. Klein, 2012, U.S. Geological Survey Open-File Report 02-171 revised) and a revised and expanded set of velocity models. As implemented at UUSS, this new version of the location program accounts for station elevation differences more accurately and reports focal depths relative to sea level instead of the 1500 m elevation datum used previously.

ShakeMaps—computer maps of the ground shaking produced by an earthquake—are automatically produced by UUSS for earthquakes of magnitude 3 and larger within a 75-mile wide zone along the I-15 corridor and magnitude 3.5 and larger elsewhere in the Utah region. These magnitude thresholds have changed with time as the network of strong-motion stations in the state has expanded. The ShakeMaps are accessible on the UUSS web page at <http://www.quake.utah.edu>. Earthquakes for which ShakeMaps are available are indicated in Table 1.

For earthquakes of magnitude 3 and larger in the Utah 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 <sub>L</sub> 3.2	November 2	04:45 MDT	3 mi N of Richfield, UT
M <sub>L</sub> 3.3	November 25	09:20 MST	18 mi W of Evanston, WY
M <sub>L</sub> 3.9	December 1	00:16 MST	17 mi S of Cedar City, UT

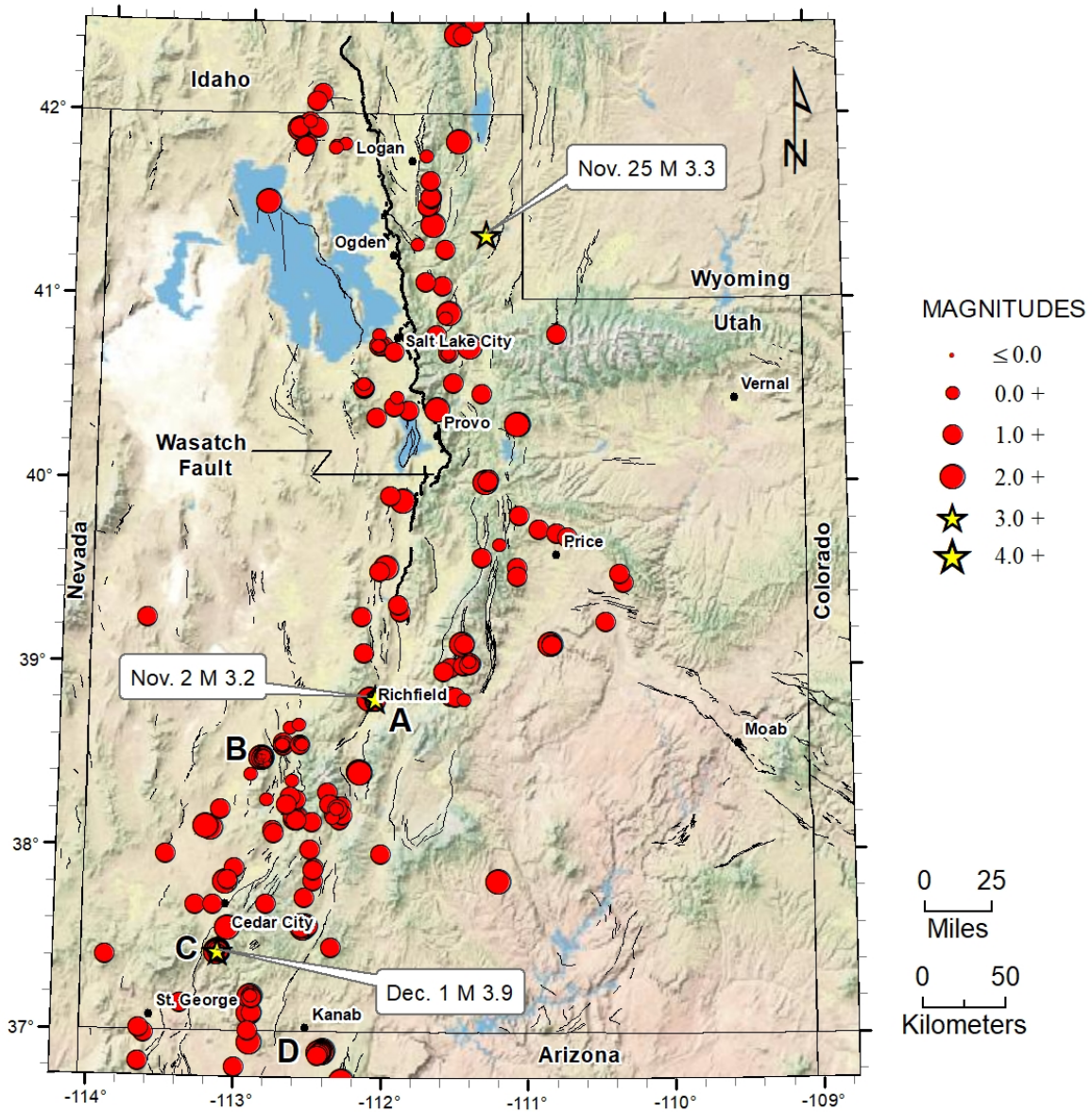
## Other Notable Seismicity

During the report period, there were four notable spatial clusters of natural earthquake activity. For reporting purposes, we define a cluster as ten or more earthquakes occurring within a 10-km (6-mile) radius during the report period.

- A. A cluster of 13 earthquakes ( $0.9 \leq M \leq 3.2$ ) occurred about 3 mi N of Richfield, UT. 13 of these events, including a magnitude 3.2 shock, occurred between November 1 and November 2.
- B. A cluster of 119 earthquakes ( $-0.9 \leq M \leq 2.6$ ) occurred about 12 mi NE of Milford, UT. 12 of these events, including a magnitude 2.6 shock, occurred on October 21.
- C. A cluster of 23 earthquakes ( $0.7 \leq M \leq 3.9$ ) occurred about 17 mi S of Cedar City, UT. Eight of these events, including a magnitude 3.9 shock, occurred between December 1 and December 2.
- D. A cluster of 12 earthquakes ( $1.6 \leq M \leq 2.2$ ) occurred about 7 mi ESE of Fredonia, AZ. Seven of these events, including a magnitude 2.2 shock, occurred between November 17 and November 20.

In Figure 1, the locally clustered seismic events within a radius of approximately 30 miles of Price, together with a localized cluster about 50 miles to its southwest, are associated with known areas of underground coal mining and are interpreted to be mining-related. These events include a total of 15 located shocks ( $0.8 \leq M \leq 1.7$ ) that occurred during the report period.

# Seismicity of the Utah Region October 1, 2023 – December 31, 2023



**Figure 1.** Earthquake epicenters, located by the University of Utah Seismograph Stations, superimposed on a map of Quaternary (geologically young) faults (black lines) compiled by the Utah Geological Survey. The Wasatch fault is shown in bold. Earthquakes of magnitude 3.0 and larger are labeled by local date and size. The earthquake clusters labeled A–D are discussed in the text.

**Table 1**  
**EARTHQUAKES FELT AND/OR GENERATING A SHAKEMAP IN THE UTAH REGION**  
**January 1, 2023, to December 31, 2023**

<b>Date and Time†</b>	<b>Felt Information‡</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Magnitude§</b>
2023-01-02 06:37:09 MST 2023-01-02 13:37:09 UTC	<a href="#">DYFI</a>	41° 48.41'	111° 55.28'	M <sub>L</sub> 2.5
2023-01-02 22:50:12 MST 2023-01-03 05:50:12 UTC	<a href="#">DYFI</a>	41° 48.35'	111° 55.52'	M <sub>L</sub> 2.8
2023-01-03 02:38:12 MDT 2023-01-03 09:38:12 UTC	<a href="#">DYFI</a>	41° 47.86'	111° 55.30'	M <sub>L</sub> 2.7
2023-01-03 14:44:30 MDT 2023-01-03 21:44:30 UTC	<a href="#">DYFI</a> <a href="#">ShakeMap</a>	41° 47.66'	111° 55.21'	M <sub>L</sub> 3.2
2023-01-10 21:50:15 MDT 2023-01-11 04:50:15 UTC	<a href="#">DYFI</a>	40° 55.51'	111° 37.49'	M <sub>L</sub> 2.9
2023-01-24 22:13:32 MDT 2023-01-25 05:13:32 UTC	<a href="#">DYFI</a>	41° 30.00'	112° 10.31'	M <sub>L</sub> 2.8
2023-01-30 20:57:50 MST 2023-01-31 03:57:50 UTC	<a href="#">DYFI</a>	41° 29.92'	112° 11.20'	M <sub>L</sub> 2.9
2023-02-16 02:07:35 MST 2023-02-16 09:07:35 UTC	<a href="#">DYFI</a> <a href="#">ShakeMap</a>	41° 30.42'	112° 10.57'	M <sub>L</sub> 3.2
2023-06-21 11:50:16 MDT 2023-01-31 17:50:16 UTC	<a href="#">DYFI</a>	40° 43.28'	112° 03.91'	M <sub>L</sub> 2.5
2023-08-30 18:11:18 MDT 2023-08-31 00:11:18 UTC	<a href="#">DYFI</a> <a href="#">ShakeMap</a>	41° 23.33'	111° 39.05'	M <sub>L</sub> 3.7
2023-11-02 04:45:21MDT 2023-11-02 10:45:21 UTC	<a href="#">DYFI</a> <a href="#">ShakeMap</a>	38° 48.82'	112° 03.84'	M <sub>L</sub> 3.2
2023-11-27 23:38:50 MST 2023-11-28 06:38:50 UTC	<a href="#">DYFI</a>	37° 05.81'	112° 54.02'	M <sub>L</sub> 2.9
2023-12-01 00:16:47 MST 2023-12-01 07:16:47 UTC	<a href="#">DYFI</a> <a href="#">ShakeMap</a>	37° 25.97'	113° 07.15'	M <sub>L</sub> 3.9

† Times are listed both as Local Time—Mountain Standard Time (MST) or Mountain Daylight Time (MDT)—and as Universal Coordinated Time (UTC).

‡ *DYFI* indicates the availability of a Community Internet Intensity Map (<https://earthquake.usgs.gov/earthquakes/dyfi>), compiled by the U.S. Geological Survey (USGS); *ShakeMap* indicates the availability of computer-generated maps of ground-shaking produced by the University of Utah Seismograph Stations (UUSS) and displayed by USGS at <https://earthquake.usgs.gov/earthquakes/shakemap>.

§ Moment magnitude ( $M_w$ ), Richter local magnitude ( $M_L$ ), and coda magnitude ( $M_c$ ) determined by UUSS. If labeled “NEIC,” data are from the National Earthquake Information Center of the USGS.

# Utah Regional/Urban Seismic Network December 31, 2023

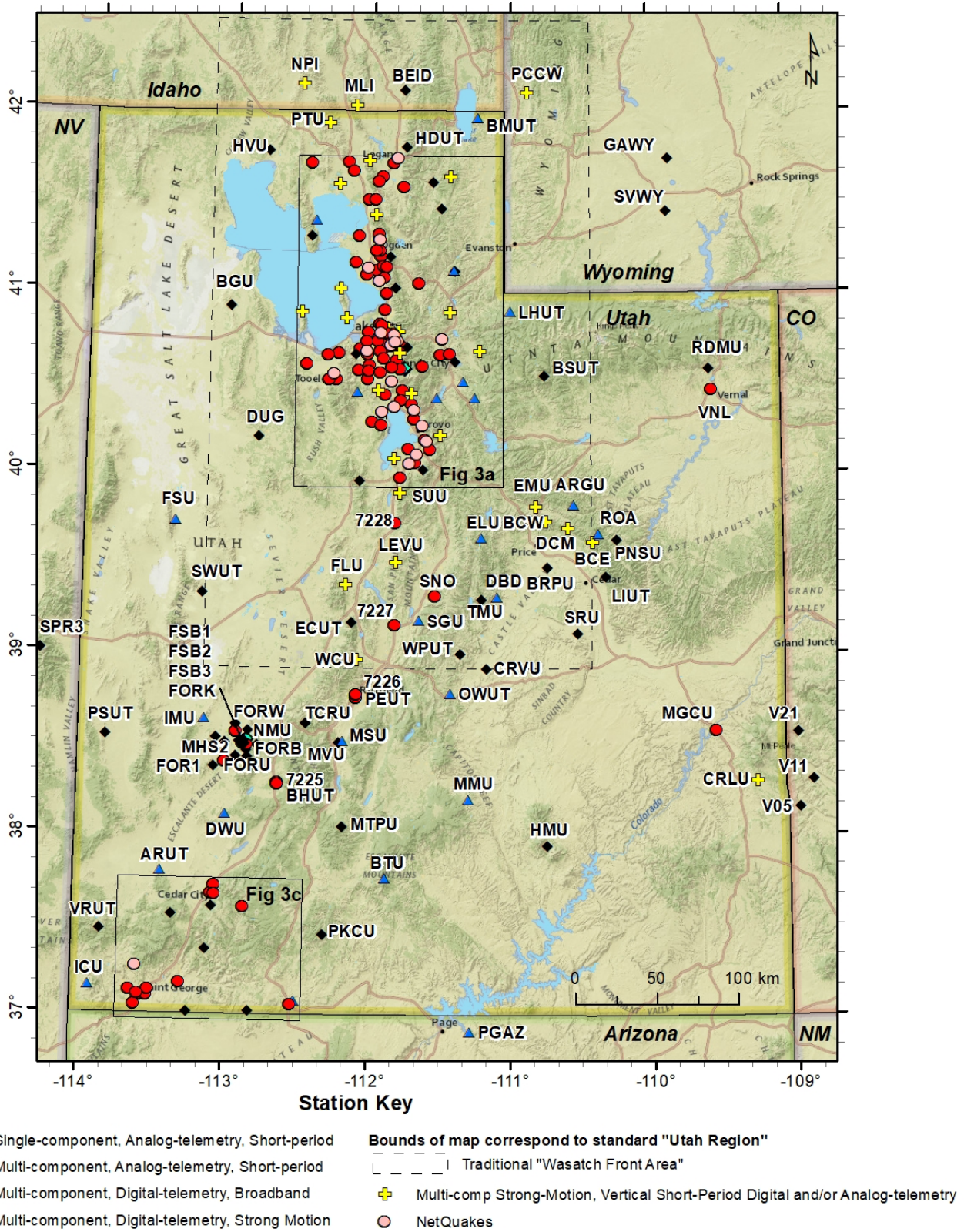


Figure 2



# Utah Urban Seismic Network (December 31, 2023)

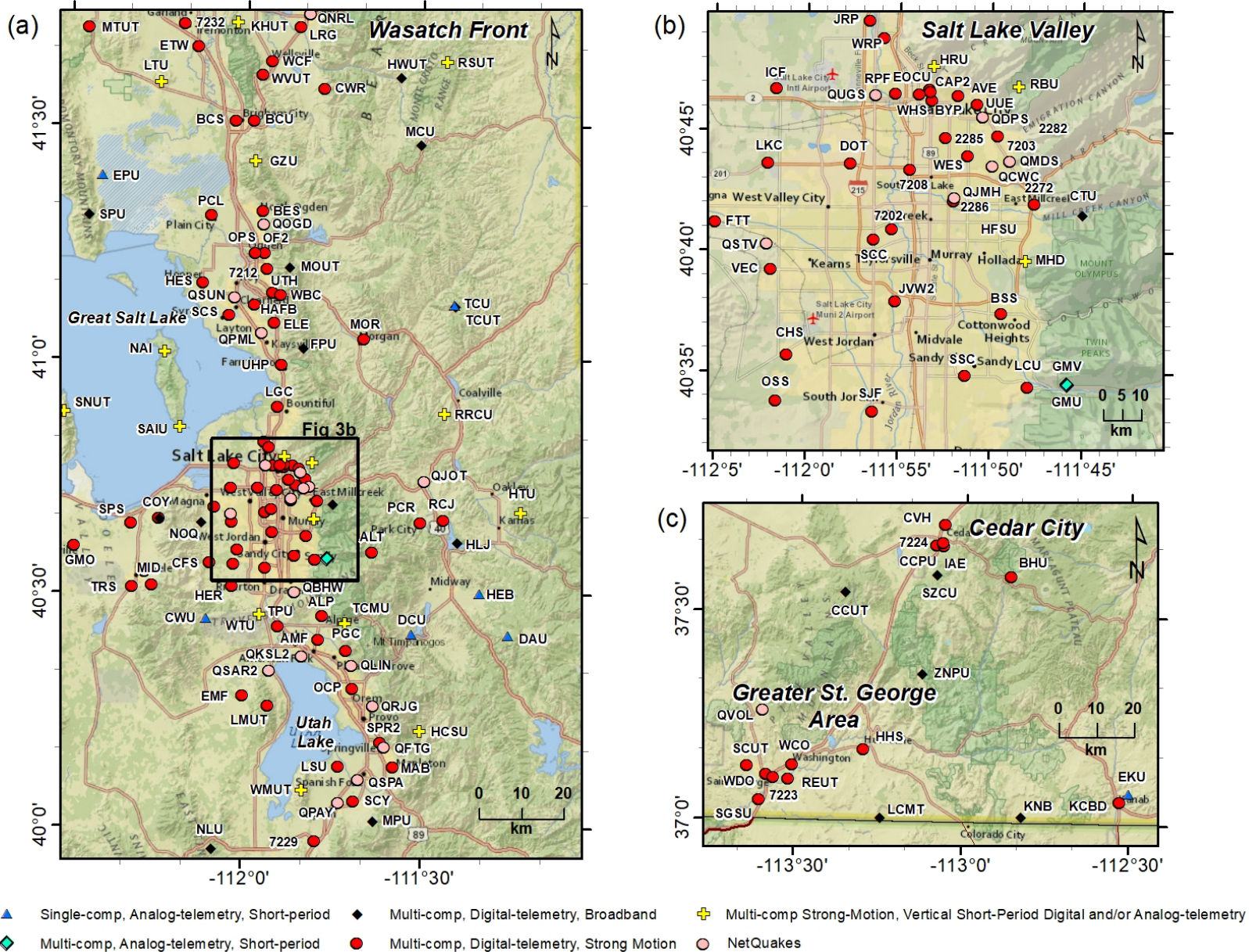


Figure 3

**Table 2. Earthquakes in the Utah Region: October 1–December 31, 2023**

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
231001	17:52:12.82	41° 50.86'	111° 30.36'	6.4*	2.5W	32	71	22	0.18
231002	11:14:00.27	39° 29.92'	110° 21.54'	-1.8	1.6	13	126	9	0.07
231003	08:10:24.77	39° 30.48'	112° 02.47'	3.0*	1.0	12	103	18	0.15
231004	09:54:08.77	39° 01.12'	111° 24.79'	-0.6	0.9W	5	156	5	0.03
231005	08:23:43.67	39° 29.22'	111° 04.88'	3.8*	1.2	10	114	20	0.17
231005	14:45:21.28	38° 04.83'	112° 45.25'	2.5*	1.2	14	107	22	0.18
231006	04:50:17.43	38° 14.15'	112° 40.25'	5.8*	1.0	13	219	26	0.08
231006	06:54:05.41	39° 41.93'	110° 43.49'	-2.8	1.3	10	146	4	0.08
231006	14:12:19.35	37° 59.48'	112° 30.16'	3.6*	1.7W	20	73	29	0.26
231006	17:02:46.45	37° 11.34'	112° 53.54'	21.4	2.1W	19	86	20	0.12
231007	17:10:23.26	37° 41.69'	112° 47.98'	11.5	1.6W	20	68	12	0.12
231007	18:55:42.41	42° 25.75'	111° 28.86'	6.7*	1.6W	7	162	49	0.09
231007	19:44:50.42	39° 27.19'	110° 19.98'	-1.0	1.7W	15	147	3	0.15
231007	21:28:13.35	41° 29.88'	111° 43.60'	10.5	1.5W	27	64	10	0.12
231008	04:25:46.32	39° 35.07'	111° 19.77'	10.9	1.6W	21	87	12	0.17
231008	08:47:25.09	39° 39.50'	111° 12.26'	3.7	0.8	15	231	2	0.14
231009	03:27:56.99	39° 14.29'	110° 27.59'	13.7	1.2W	15	90	15	0.12
231009	08:47:01.56	40° 47.82'	112° 03.75'	6.9	0.8	12	119	12	0.08
231009	08:58:59.03	38° 18.28'	112° 23.24'	9.7*	1.5W	20	92	29	0.10
231009	10:07:44.62	41° 46.24'	111° 44.13'	13.0	0.7	15	162	7	0.10
231009	12:58:54.58	40° 28.71'	111° 20.00'	11.7*	1.1	19	87	24	0.19
231011	14:17:45.75	39° 15.51'	112° 09.94'	8.6*	1.6W	14	145	76	0.21
231012	15:13:38.36	38° 29.30'	112° 50.63'	-0.2	-0.7	11	177	3	0.04
231012	15:55:26.59	38° 29.21'	112° 50.63'	-0.2	0.6	15	154	3	0.05
231012	18:30:08.47	41° 38.24'	111° 42.66'	15.2	1.3	10	127	9	0.08
231012	19:32:22.20	37° 00.52'	113° 38.77'	4.0*	1.9W	10	214	29	0.04
231012	21:56:41.16	40° 32.11'	111° 32.04'	3.4*	1.2	21	127	20	0.11
231013	12:29:26.63	38° 29.70'	112° 50.21'	0.2	-0.2	11	173	3	0.07
231013	12:30:17.14	38° 29.69'	112° 50.22'	-0.4	-0.4	12	174	3	0.06
231014	12:00:10.64	38° 08.47'	112° 29.53'	3.4*	1.2	16	79	29	0.24
231014	13:34:33.88	38° 13.70'	112° 18.87'	8.4*	1.6W	11	107	24	0.14
231015	04:45:59.18	38° 29.71'	112° 50.55'	0.0	--	13	142	2	0.06
231015	05:01:21.27	38° 29.83'	112° 50.81'	0.1	--	11	255	2	0.04
231015	05:01:47.57	38° 29.84'	112° 50.97'	-0.1	--	11	251	2	0.03
231015	05:09:29.09	38° 29.70'	112° 50.50'	0.2	--	12	263	2	0.11
231015	05:17:04.77	38° 29.85'	112° 51.00'	-0.1	--	8	250	2	0.01
231015	05:36:45.77	38° 29.64'	112° 50.51'	0.2	--	9	162	3	0.04
231015	05:42:21.19	38° 29.72'	112° 50.50'	0.1	-0.6	14	141	1	0.05
231015	05:49:51.14	38° 29.78'	112° 50.56'	-0.1	-0.1	15	140	1	0.09
231015	05:50:40.26	38° 29.92'	112° 51.11'	-0.1	-0.1	9	232	2	0.02
231015	06:28:10.48	39° 03.71'	112° 08.85'	10.7	1.6W	20	108	12	0.17
231015	15:47:38.59	40° 24.42'	111° 57.20'	11.9	1.0	21	111	5	0.15
231016	23:01:17.92	37° 25.86'	113° 07.27'	9.7	1.7W	17	61	8	0.13
231017	01:27:25.52	37° 26.00'	113° 07.29'	10.1	1.5W	15	62	9	0.11

**Table 2. Earthquakes in the Utah Region: October 1–December 31, 2023**

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
231017	04:23:00.08	37° 25.93'	113° 06.97'	9.5	1.3W	17	95	8	0.09
231017	06:12:55.48	37° 25.94'	113° 07.26'	10.6	2.1W	24	53	8	0.14
231017	11:25:30.61	38° 39.13'	112° 39.00'	0.7*	0.9	15	200	18	0.06
231017	15:20:57.40	40° 23.51'	111° 38.68'	10.5	2.0W	33	46	6	0.20
231018	13:48:26.06	42° 03.96'	112° 32.01'	3.2	1.3	6	154	9	0.07
231018	13:48:50.93	41° 15.80'	111° 35.73'	12.2	1.3	7	124	23	0.06
231019	15:12:55.71	37° 41.13'	113° 16.73'	-0.3*	1.3W	17	70	17	0.29
231021	02:46:06.39	38° 25.00'	112° 10.32'	3.0*	2.3W	28	70	11	0.21
231021	05:00:55.67	38° 29.67'	112° 50.42'	-0.2	1.1	17	104	1	0.08
231021	05:02:13.76	38° 29.60'	112° 50.54'	0.1	-0.8	12	194	3	0.05
231021	05:02:42.78	38° 29.57'	112° 50.51'	-0.1	-0.2	18	194	1	0.07
231021	05:16:59.77	38° 29.36'	112° 50.74'	-0.3	2.6W	40	49	1	0.17
231021	05:19:46.03	38° 29.68'	112° 50.54'	-0.2	0.2	21	103	1	0.07
231021	05:20:20.27	38° 29.64'	112° 50.55'	-0.2	0.1	18	102	1	0.07
231021	05:22:15.93	38° 29.46'	112° 50.37'	0.1	-0.2	18	99	3	0.06
231021	05:22:56.09	38° 29.41'	112° 50.49'	-1.3	2.1W	28	58	1	0.20
231021	05:28:34.85	38° 29.62'	112° 50.49'	-0.2	0.6	22	92	1	0.08
231021	08:09:47.59	38° 29.60'	112° 50.53'	-0.3	-0.7	17	101	1	0.05
231021	08:14:33.84	38° 59.95'	111° 26.97'	-0.6	1.2W	11	101	8	0.08
231021	08:47:59.49	41° 49.38'	112° 23.45'	1.9*	0.9	18	82	13	0.15
231021	13:55:43.60	38° 29.41'	112° 50.47'	-0.4	-0.4	12	98	3	0.07
231021	15:28:36.15	41° 05.19'	111° 44.23'	9.1	1.3	18	67	7	0.06
231021	16:33:39.74	38° 29.39'	112° 50.52'	0.2	-0.4	11	98	1	0.05
231021	16:46:13.50	40° 48.35'	110° 47.89'	9.3*	1.5	13	189	19	0.17
231022	00:23:06.77	40° 44.19'	112° 03.79'	9.4	1.0	17	64	5	0.12
231022	18:26:57.98	37° 43.91'	112° 32.04'	-3.3*	1.6W	8	266	58	0.13
231023	05:42:14.71	38° 28.20'	112° 50.46'	0.2	-0.6	8	197	4	0.05
231023	20:25:13.89	38° 05.73'	112° 45.64'	0.9*	1.3	17	104	21	0.15
231023	21:38:11.82	38° 10.88'	112° 20.25'	5.3*	1.6W	9	123	21	0.15
231024	06:58:44.04	38° 58.02'	111° 35.38'	21.8	1.2W	11	81	20	0.08
231024	07:36:35.20	38° 29.62'	112° 50.22'	-0.2	0.6	18	95	2	0.09
231024	09:31:49.48	37° 33.81'	112° 32.25'	4.3*	2.6W	26	96	29	0.30
231024	10:17:02.73	37° 34.38'	112° 30.45'	2.9*	1.8W	19	186	31	0.17
231024	11:27:23.56	37° 33.82'	112° 33.02'	16.1	1.6W	14	171	28	0.17
231024	14:55:04.47	37° 34.46'	112° 31.79'	1.9*	2.1W	26	95	29	0.18
231025	22:50:16.02	40° 44.06'	112° 02.14'	7.1	1.5W	28	40	5	0.11
231026	09:25:21.26	37° 35.30'	112° 34.23'	9.3*	1.7	7	167	26	0.14
231027	06:57:29.48	40° 00.31'	111° 17.30'	14.8	1.7W	33	80	29	0.25
231027	07:03:23.74	40° 42.13'	111° 57.28'	10.9	1.0	22	74	3	0.14
231027	08:00:38.45	37° 24.23'	113° 53.37'	7.3	1.2W	9	197	7	0.06
231027	11:15:06.10	40° 00.79'	111° 16.86'	14.4*	1.3W	21	71	30	0.10
231028	17:18:21.95	37° 48.59'	113° 04.57'	6.4*	2.3W	19	96	24	0.25
231029	07:44:22.98	37° 49.34'	113° 03.85'	2.0*	1.6	11	171	12	0.21
231029	12:15:41.53	39° 59.85'	111° 17.91'	13.9*	2.4W	37	92	29	0.16

**Table 2. Earthquakes in the Utah Region: October 1–December 31, 2023**

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
231029	12:18:00.32	40° 00.29'	111° 17.37'	1.8*	1.5W	20	79	29	0.13
231029	12:30:29.21	40° 00.24'	111° 17.36'	6.4*	1.1	13	97	29	0.20
231030	10:17:38.73	38° 33.31'	112° 42.88'	0.7	0.1	15	150	10	0.13
231101	00:21:13.12	38° 48.19'	112° 03.93'	12.5	1.5	15	125	4	0.19
231101	08:10:25.36	38° 48.25'	112° 03.48'	6.6*	1.6W	28	59	18	0.21
231101	08:22:01.15	38° 48.20'	112° 04.00'	6.8*	1.6W	33	58	18	0.15
231101	08:26:58.05	38° 48.18'	112° 03.79'	8.4*	1.2	21	59	18	0.10
231101	08:33:49.40	38° 48.46'	112° 04.09'	9.8	1.5W	22	58	18	0.13
231101	08:34:30.83	38° 48.41'	112° 04.91'	12.3	0.9	7	159	3	0.04
231101	08:42:50.57	38° 48.40'	112° 03.82'	7.6*	1.8W	28	59	18	0.17
231101	08:53:11.13	38° 48.41'	112° 03.62'	7.6*	1.7W	32	59	18	0.17
231101	09:12:56.01	40° 23.06'	111° 50.70'	4.2*	1.4	29	80	11	0.23
231101	11:37:38.88	38° 48.10'	112° 03.53'	5.2*	1.4W	21	61	18	0.12
231102	03:42:41.16	38° 48.72'	111° 26.78'	13.1	0.9W	16	80	4	0.14
231102	09:14:26.26	37° 25.72'	113° 06.34'	9.6	1.5W	9	186	8	0.09
231102	10:31:16.38	37° 25.82'	113° 07.11'	10.0	2.1W	22	78	8	0.13
231102	10:45:21.29	38° 48.82'	112° 03.84'	11.6	3.2W	40	59	5	0.20
231102	11:01:01.17	38° 48.87'	112° 06.32'	8.6	2.0W	28	63	5	0.20
231102	12:11:48.48	38° 48.45'	112° 03.51'	6.1*	1.5W	22	59	18	0.20
231102	13:14:38.43	38° 48.78'	112° 03.63'	10.7	1.7W	19	59	17	0.16
231103	13:24:01.61	37° 33.72'	113° 03.25'	10.1	2.0W	24	73	5	0.15
231103	15:18:55.02	37° 27.54'	112° 20.89'	11.2*	1.8W	19	109	50	0.15
231103	21:54:03.86	38° 15.83'	112° 36.26'	9.8*	1.5W	22	102	28	0.20
231104	13:25:20.90	41° 48.72'	112° 23.89'	0.3*	0.7	10	121	14	0.10
231104	21:46:05.48	42° 26.02'	111° 31.51'	8.4*	2.0W	18	112	41	0.23
231105	08:06:06.53	39° 31.90'	111° 04.76'	3.1*	1.5	8	115	16	0.08
231105	08:24:44.79	40° 31.54'	112° 10.37'	4.6	0.8	15	92	7	0.16
231106	08:30:41.21	37° 57.64'	113° 29.36'	-3.3*	1.6W	14	87	20	0.21
231106	17:56:48.18	41° 30.78'	112° 52.29'	10.8*	2.2W	35	127	31	0.14
231107	04:31:34.82	38° 21.73'	112° 37.80'	7.3*	0.8	10	242	20	0.05
231107	09:50:07.24	40° 30.20'	112° 10.05'	0.3	1.3	16	144	8	0.19
231107	10:27:41.89	40° 30.50'	112° 10.20'	0.2	1.0	11	171	7	0.12
231107	10:28:31.90	40° 30.44'	112° 10.48'	1.9	1.2	7	142	7	0.06
231107	13:27:55.13	38° 10.74'	112° 17.11'	6.6*	1.4	10	114	18	0.21
231107	17:00:37.09	39° 43.27'	110° 48.34'	-3.4	1.6	8	187	6	0.20
231108	18:20:20.97	37° 11.43'	112° 53.54'	19.9	0.9	10	167	20	0.11
231109	03:07:15.48	37° 09.03'	113° 22.22'	15.4	1.2	14	114	13	0.13
231109	09:01:18.26	38° 34.19'	112° 41.96'	8.8	1.5W	28	64	12	0.16
231109	09:01:30.72	38° 33.16'	112° 41.90'	7.3	1.2	16	155	10	0.05
231109	09:02:07.24	38° 33.45'	112° 42.22'	7.4	0.0	16	159	10	0.08
231109	09:02:22.23	38° 33.34'	112° 41.97'	7.8	0.5	17	157	11	0.05
231109	09:03:51.49	38° 33.36'	112° 41.80'	7.3	0.8	16	157	11	0.06
231109	09:04:10.90	38° 33.58'	112° 42.02'	6.8	0.0	14	160	11	0.04
231109	09:05:06.90	38° 33.09'	112° 41.92'	7.2	0.8	21	74	10	0.07

**Table 2. Earthquakes in the Utah Region: October 1–December 31, 2023**

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
231109	14:50:23.71	38° 12.42'	113° 07.33'	10.6	1.0	10	189	16	0.09
231109	20:23:44.52	41° 32.34'	111° 42.19'	11.0	1.4	17	75	8	0.08
231109	20:23:48.98	41° 32.94'	111° 42.05'	11.1	1.4	10	99	8	0.11
231109	20:25:45.29	41° 32.54'	111° 42.46'	10.4	1.4	24	72	8	0.12
231110	02:54:35.39	38° 29.66'	112° 49.61'	0.1	--	11	212	4	0.10
231110	02:54:37.01	38° 29.65'	112° 50.00'	0.1	0.0	12	204	3	0.11
231110	03:21:21.74	38° 29.79'	112° 50.12'	-0.1	0.5	16	110	3	0.12
231111	05:11:50.76	40° 18.72'	111° 04.43'	10.9*	2.7W	40	60	36	0.21
231111	13:53:22.98	40° 18.84'	111° 04.83'	12.0*	2.7W	39	60	37	0.21
231111	17:24:22.24	39° 06.93'	111° 27.73'	4.8*	2.6W	20	50	16	0.19
231113	02:00:05.90	38° 28.91'	112° 50.94'	-0.1	-0.9	11	196	3	0.04
231113	07:52:11.64	39° 17.32'	111° 53.85'	12.9	1.5W	18	81	25	0.13
231113	21:19:43.84	38° 28.82'	112° 50.75'	2.6	0.4	16	108	3	0.06
231114	08:08:16.94	38° 06.25'	113° 11.05'	3.0*	2.0W	27	90	16	0.15
231115	09:14:08.20	36° 53.21'	112° 24.96'	20.5	1.8	11	178	19	0.13
231115	23:28:18.67	38° 28.28'	112° 50.56'	1.1	0.1	16	123	4	0.05
231116	03:19:02.82	42° 29.75'	111° 23.69'	3.4*	1.8W	11	129	38	0.19
231116	12:15:51.88	40° 44.05'	112° 04.29'	9.2	0.3	10	110	10	0.12
231116	14:50:04.39	38° 16.60'	112° 38.57'	5.2*	1.1	19	97	24	0.10
231117	00:40:17.72	41° 03.77'	111° 36.91'	9.0	1.3	17	72	5	0.13
231117	01:28:43.61	40° 44.02'	112° 03.81'	7.1	0.7	10	101	6	0.09
231117	08:30:58.01	39° 07.03'	110° 50.30'	14.1	1.4	11	142	27	0.13
231117	11:06:17.06	36° 53.73'	112° 23.79'	17.4	2.2W	15	140	19	0.16
231117	11:21:57.49	40° 27.27'	111° 55.79'	7.1	0.6	11	153	2	0.09
231117	13:13:38.07	40° 42.01'	111° 34.51'	6.2*	0.8W	12	126	15	0.11
231117	14:14:35.24	40° 43.73'	112° 04.27'	9.2	0.7	12	97	9	0.08
231117	14:50:43.72	39° 06.68'	110° 50.43'	16.8	1.2W	13	144	27	0.18
231117	20:57:33.46	37° 10.80'	112° 53.23'	20.1	1.2	8	182	19	0.11
231117	21:13:13.62	38° 29.54'	112° 50.27'	-0.3	-0.1	14	102	3	0.05
231117	21:13:30.66	38° 29.71'	112° 50.26'	-0.4	0.1	14	107	3	0.10
231117	21:39:23.70	38° 29.52'	112° 50.18'	0.1	-0.2	18	103	3	0.07
231117	23:18:13.34	39° 07.09'	110° 50.69'	17.6	2.0W	23	66	28	0.18
231118	07:20:59.68	36° 53.71'	112° 24.11'	16.9*	1.9W	10	206	40	0.19
231118	07:37:08.16	36° 53.43'	112° 24.91'	15.8*	1.9W	13	204	39	0.22
231118	16:37:02.99	40° 41.85'	111° 34.18'	1.3*	0.4	8	112	13	0.14
231118	18:19:49.64	38° 28.70'	112° 50.46'	0.2	0.0	16	116	3	0.06
231118	18:34:59.43	38° 28.85'	112° 50.39'	0.2	0.4	12	113	3	0.08
231118	18:44:28.50	36° 53.15'	112° 24.93'	17.5*	1.9W	12	203	39	0.18
231118	19:38:23.44	36° 52.82'	112° 25.43'	21.9	1.7W	10	202	39	0.16
231118	20:49:06.47	37° 49.20'	112° 28.86'	3.5*	1.9W	16	195	42	0.19
231118	20:49:54.53	40° 42.14'	111° 34.17'	6.5*	1.0W	15	101	14	0.19
231118	22:57:59.80	38° 28.86'	112° 50.22'	0.1	0.9	14	200	3	0.05
231118	23:15:48.15	38° 28.73'	112° 50.54'	0.1	0.1	16	113	3	0.07
231118	23:25:12.13	38° 28.75'	112° 50.68'	0.9	-0.6	7	117	3	0.01

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DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
231118	23:25:20.54	38° 28.68'	112° 50.57'	0.3	-0.5	8	116	3	0.01
231118	23:42:50.33	38° 28.69'	112° 50.33'	0.2	-0.2	8	203	3	0.03
231119	01:58:56.92	36° 53.46'	112° 24.26'	16.4*	1.9W	13	185	40	0.20
231119	11:42:35.34	41° 50.23'	112° 36.24'	2.8*	1.4	21	125	16	0.15
231120	01:48:18.30	41° 54.72'	112° 39.33'	6.4*	2.2W	22	168	18	0.09
231120	11:05:18.89	36° 53.30'	112° 24.15'	20.1	2.0W	10	201	20	0.07
231120	11:54:33.96	39° 07.02'	111° 27.01'	-0.7*	1.5W	10	105	15	0.12
231120	20:21:06.52	37° 49.39'	111° 12.17'	5.9*	2.0W	7	210	43	0.09
231121	12:36:26.37	38° 09.78'	112° 36.13'	2.8*	2.8W	37	61	35	0.22
231121	17:40:42.94	41° 49.41'	112° 36.94'	1.4*	1.4	16	122	14	0.23
231121	23:38:39.58	38° 29.64'	112° 50.17'	-0.2	0.1	17	106	2	0.07
231121	23:38:52.83	38° 29.54'	112° 50.35'	2.5	0.1	12	101	1	0.08
231121	23:39:30.00	38° 29.70'	112° 50.19'	-0.4	0.7	18	107	2	0.08
231121	23:39:40.27	38° 29.56'	112° 50.20'	0.0	0.5	18	104	2	0.09
231121	23:40:15.90	38° 29.61'	112° 50.17'	-0.4	1.0	25	96	2	0.11
231121	23:40:21.15	38° 29.65'	112° 50.22'	-0.3	1.2	12	159	2	0.05
231121	23:48:11.67	38° 29.53'	112° 50.26'	0.5	-0.5	15	102	2	0.06
231122	01:00:50.54	41° 55.20'	112° 39.55'	3.5*	1.1	10	172	18	0.22
231122	06:55:46.17	38° 29.62'	112° 50.15'	0.1	-0.5	10	121	3	0.07
231122	11:54:36.52	41° 55.05'	112° 39.73'	6.2*	1.2	10	172	18	0.10
231122	12:29:26.18	41° 55.00'	112° 39.12'	5.3*	1.2	10	169	18	0.09
231122	17:08:04.61	41° 55.22'	112° 39.74'	3.8*	1.0	12	174	18	0.09
231123	12:28:16.93	41° 54.93'	112° 38.95'	2.8*	1.4	9	167	18	0.07
231123	18:32:12.71	41° 49.02'	112° 36.53'	1.8*	1.1	10	117	14	0.21
231124	07:05:32.48	40° 47.74'	111° 39.32'	10.8	1.2	31	67	13	0.15
231124	09:39:08.50	38° 09.06'	112° 35.85'	3.6*	1.1	18	154	35	0.17
231124	11:51:25.89	36° 56.46'	112° 53.69'	26.0	2.0W	16	149	11	0.21
231125	16:20:04.97	41° 20.68'	111° 17.89'	-3.4*	3.3W	41	47	22	0.17
231126	09:31:43.65	40° 30.22'	112° 10.45'	2.4	1.9W	38	45	7	0.20
231126	09:59:49.57	38° 29.50'	112° 50.26'	0.1	-0.2	12	101	3	0.06
231126	21:31:54.57	38° 29.39'	112° 50.51'	0.2	1.4W	25	58	1	0.10
231126	21:32:54.62	38° 29.32'	112° 50.40'	0.4	0.3	15	101	1	0.07
231126	21:33:16.59	38° 29.45'	112° 50.39'	0.5	1.2	19	98	1	0.08
231126	21:33:46.59	38° 29.47'	112° 50.52'	0.9	-0.7	15	98	3	0.07
231126	22:47:20.64	36° 49.69'	113° 38.87'	7.0*	1.9W	13	189	41	0.13
231127	06:36:23.29	38° 29.17'	112° 50.56'	0.2	-0.6	11	102	3	0.04
231127	09:58:10.21	38° 59.22'	111° 32.73'	22.0	1.4W	25	72	16	0.14
231127	10:54:25.03	38° 29.26'	112° 50.50'	0.2	0.1	14	101	1	0.09
231127	10:54:53.68	38° 29.19'	112° 50.64'	0.1	-0.6	10	132	3	0.03
231127	10:55:22.05	38° 29.14'	112° 50.61'	-0.2	-0.6	12	103	1	0.04
231127	11:53:14.09	38° 29.23'	112° 50.62'	0.0	-0.3	15	101	1	0.06
231127	12:19:58.88	38° 29.34'	112° 50.44'	-0.3	0.8	19	100	1	0.09
231127	12:30:27.51	38° 29.39'	112° 50.48'	0.1	0.5	20	98	1	0.07
231127	12:42:57.79	38° 29.15'	112° 50.54'	-0.2	0.0	14	194	1	0.05

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231127	12:43:22.59	38° 28.98'	112° 51.15'	-0.2	-0.3	13	182	1	0.10
231127	12:43:46.13	38° 29.30'	112° 50.66'	-0.1	-0.5	13	191	1	0.07
231127	12:46:00.82	38° 29.16'	112° 50.59'	-0.2	0.1	14	103	1	0.05
231127	12:46:11.19	38° 29.16'	112° 50.60'	0.1	0.1	14	102	1	0.05
231127	13:11:45.71	38° 29.22'	112° 50.41'	1.5	0.2	15	103	1	0.10
231127	13:11:55.51	38° 29.19'	112° 50.54'	-0.2	-0.2	13	102	1	0.06
231127	13:47:08.91	38° 29.14'	112° 50.60'	-0.2	0.6	15	103	1	0.10
231127	13:49:54.26	38° 29.43'	112° 50.56'	0.3	0.6	14	97	1	0.05
231127	15:05:39.32	38° 29.17'	112° 50.54'	0.1	0.3	13	103	3	0.05
231127	15:08:11.55	38° 29.16'	112° 50.55'	0.2	0.2	19	103	1	0.07
231127	15:09:32.24	38° 29.08'	112° 50.66'	0.1	-0.7	11	103	3	0.04
231127	15:09:56.57	38° 29.22'	112° 50.57'	0.4	0.6	16	101	1	0.06
231127	15:09:56.59	38° 29.05'	112° 50.59'	0.1	0.6	19	105	1	0.10
231127	15:20:05.87	38° 29.16'	112° 50.58'	0.1	-0.2	14	103	1	0.05
231127	15:32:04.29	38° 29.14'	112° 50.54'	-0.2	-0.4	13	104	3	0.06
231127	16:53:14.46	38° 29.21'	112° 50.47'	0.1	0.5	15	103	1	0.07
231127	17:53:36.01	38° 29.32'	112° 50.47'	0.8	0.6	14	100	1	0.07
231127	18:00:23.30	38° 29.44'	112° 50.43'	-0.1	0.6	17	98	1	0.08
231127	18:07:55.05	38° 29.46'	112° 50.43'	0.0	0.9	20	97	1	0.09
231128	06:38:50.32	37° 05.81'	112° 54.02'	16.1	2.9W	27	110	11	0.27
231128	10:15:46.03	37° 05.82'	112° 52.97'	20.5	1.7W	13	119	10	0.10
231128	20:24:40.32	38° 15.69'	112° 48.11'	7.3*	0.8	9	182	18	0.10
231129	10:30:36.36	38° 28.56'	112° 50.75'	0.0	-0.1	12	113	2	0.05
231129	18:13:51.01	41° 23.79'	111° 40.98'	9.9*	2.3W	34	111	22	0.16
231129	22:48:09.19	38° 13.89'	112° 17.28'	5.1*	1.5W	13	102	23	0.22
231130	00:12:40.44	38° 29.56'	112° 50.39'	0.2	-0.7	12	206	3	0.06
231130	02:11:59.15	38° 29.50'	112° 50.67'	0.0	0.8	19	94	1	0.08
231130	10:50:46.64	38° 33.79'	112° 34.09'	5.9*	0.7	10	175	12	0.06
231130	22:58:14.14	38° 28.99'	112° 51.12'	3.7	0.9	23	99	1	0.06
231201	07:16:47.49	37° 25.97'	113° 07.15'	11.4	3.9W	33	78	9	0.18
231201	07:29:12.19	37° 26.08'	113° 07.06'	10.6	1.7W	17	95	9	0.09
231201	08:09:17.64	38° 29.38'	112° 50.70'	0.7	-0.7	17	97	2	0.05
231201	08:27:19.66	37° 26.18'	113° 07.20'	12.4	2.6W	27	77	9	0.16
231201	10:21:35.88	37° 25.71'	113° 06.84'	10.3	1.2W	15	100	8	0.07
231201	11:12:18.32	37° 26.07'	113° 07.29'	11.3	1.8W	20	94	9	0.11
231201	21:25:22.60	37° 25.75'	113° 07.17'	10.7	1.8W	23	95	8	0.14
231202	03:40:26.62	37° 26.12'	113° 06.75'	10.2	1.5W	18	99	9	0.10
231202	10:34:06.51	38° 06.88'	113° 13.04'	2.6*	2.0W	28	92	19	0.18
231202	13:02:38.01	38° 49.82'	111° 30.65'	9.9	1.2W	12	89	9	0.14
231202	18:39:53.79	37° 26.08'	113° 07.46'	11.0	1.2W	10	97	9	0.05
231203	06:53:34.11	39° 53.52'	111° 53.18'	5.6*	2.6W	13	97	18	0.17
231203	16:09:36.28	38° 29.58'	112° 50.11'	-0.2	1.2W	13	105	2	0.06
231203	19:10:58.96	38° 09.13'	112° 18.01'	5.9*	1.5W	12	126	16	0.24
231203	20:09:34.52	38° 29.40'	112° 50.34'	0.1	-0.4	12	99	3	0.03

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231204	04:30:12.84	37° 41.33'	113° 09.63'	4.3	1.2W	11	82	7	0.23
231205	11:34:20.81	39° 00.57'	111° 24.21'	-0.6	1.1W	8	100	4	0.05
231206	03:57:56.38	39° 00.93'	111° 24.48'	-0.8	1.1W	9	77	5	0.11
231206	15:47:53.40	40° 44.10'	111° 25.03'	10.5	2.0W	29	101	17	0.19
231207	01:07:42.53	37° 25.96'	113° 06.98'	10.2	1.2W	13	135	9	0.09
231207	20:44:04.56	38° 33.67'	112° 34.75'	5.2*	0.9	9	152	13	0.08
231208	01:06:10.77	37° 25.87'	113° 07.42'	11.2	2.1W	23	95	8	0.13
231208	02:46:28.86	38° 34.18'	112° 34.61'	6.4	0.8	16	168	12	0.05
231208	10:41:48.39	39° 31.65'	111° 59.70'	1.6*	2.9W	36	63	16	0.18
231208	11:44:09.37	37° 25.97'	113° 07.49'	10.9	2.0W	23	77	9	0.15
231208	18:26:56.02	37° 25.93'	113° 07.32'	10.1	1.6W	19	95	8	0.10
231208	18:35:16.92	37° 25.99'	113° 07.33'	10.2	1.8W	23	94	9	0.12
231209	06:56:16.48	38° 40.11'	112° 35.45'	0.8*	0.7	12	149	14	0.08
231209	21:52:38.32	38° 34.27'	112° 34.77'	5.3*	0.9	12	159	12	0.03
231211	01:31:53.20	41° 57.29'	112° 34.93'	5.5*	0.9	11	217	22	0.13
231211	14:00:21.16	40° 53.25'	111° 35.59'	9.6	0.9W	23	77	13	0.13
231211	20:55:17.21	37° 53.19'	113° 01.14'	9.5*	1.9W	18	110	24	0.14
231211	21:02:26.20	37° 25.68'	113° 07.55'	10.3	2.0W	21	94	8	0.14
231212	21:23:22.27	38° 12.74'	112° 19.06'	5.3*	1.1	12	162	22	0.24
231212	22:03:51.16	38° 14.17'	112° 22.20'	8.2*	1.2	13	265	42	0.17
231213	12:44:27.09	39° 55.03'	111° 58.65'	6.9	1.3	8	97	9	0.12
231213	20:58:18.09	38° 29.08'	112° 50.74'	1.9	0.3	17	102	3	0.06
231213	22:10:43.42	38° 28.91'	112° 50.64'	0.4	0.5	15	108	3	0.08
231214	04:20:12.18	38° 29.11'	112° 50.27'	2.0	-0.4	15	199	3	0.06
231214	05:29:48.06	38° 29.03'	112° 50.66'	2.2	-0.6	16	104	3	0.07
231214	08:00:29.24	38° 28.93'	112° 50.67'	1.2	1.0	24	72	3	0.12
231214	08:16:16.19	38° 28.90'	112° 50.75'	1.9	-0.4	17	107	3	0.05
231214	08:23:55.38	41° 29.97'	111° 42.45'	10.4	1.6W	30	60	11	0.15
231214	08:56:01.59	38° 29.03'	112° 50.72'	1.9	0.5	17	104	3	0.07
231214	09:05:04.75	38° 28.99'	112° 50.67'	0.7	0.8	23	72	3	0.12
231214	09:14:53.44	38° 28.94'	112° 50.75'	1.6	0.3	19	105	3	0.07
231214	09:18:08.40	38° 28.99'	112° 50.55'	-0.2	-0.3	19	107	3	0.08
231214	09:30:48.62	38° 28.88'	112° 50.56'	-0.2	-0.1	20	110	3	0.10
231214	09:32:53.36	38° 29.02'	112° 50.58'	0.7	-0.2	18	106	3	0.10
231214	09:33:27.04	38° 28.99'	112° 50.56'	-0.2	-0.3	16	107	3	0.08
231214	09:36:49.60	38° 28.93'	112° 50.52'	0.1	0.8	26	109	3	0.12
231214	09:38:55.66	38° 28.92'	112° 50.58'	0.9	-0.5	17	109	3	0.09
231214	09:39:12.47	38° 29.06'	112° 50.10'	0.2	-0.4	21	112	3	0.34
231214	09:42:55.12	38° 28.89'	112° 50.55'	0.1	-0.2	19	109	3	0.09
231214	09:44:27.07	38° 28.90'	112° 50.54'	0.5	-0.6	13	122	3	0.05
231214	09:44:55.79	38° 28.94'	112° 50.60'	0.0	-0.4	15	123	3	0.06
231214	09:48:28.43	38° 29.05'	112° 50.52'	1.4	0.4	19	106	3	0.07
231214	09:55:19.12	38° 29.09'	112° 50.56'	1.6	-0.3	15	105	3	0.10
231214	11:59:11.59	38° 28.97'	112° 50.66'	1.7	-0.1	15	106	3	0.05
231214	12:09:48.46	38° 28.96'	112° 50.57'	0.4	0.7	23	108	3	0.11



**Table 2. Earthquakes in the Utah Region: October 1–December 31, 2023**

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
231214	12:15:06.50	38° 29.14'	112° 50.64'	1.4	-0.1	18	103	3	0.10
231214	23:27:43.49	40° 20.72'	112° 04.52'	2.1*	1.4	22	77	11	0.20
231214	23:41:48.90	38° 59.96'	111° 27.25'	-3.4	1.1W	6	162	8	0.22
231215	03:29:41.02	39° 00.38'	111° 24.82'	-1.6	1.1W	7	157	5	0.02
231215	08:57:11.92	37° 11.29'	112° 53.01'	20.6	1.9W	17	85	20	0.10
231215	09:27:17.02	38° 12.87'	112° 19.26'	3.6*	0.8	13	161	23	0.24
231215	14:14:21.38	41° 55.33'	112° 31.69'	1.3*	1.0	17	197	17	0.19
231215	21:08:28.40	37° 25.83'	113° 07.24'	10.5	2.3W	25	75	8	0.19
231216	11:44:48.82	39° 19.65'	111° 54.69'	12.5	1.3	17	79	22	0.20
231217	03:11:15.37	38° 49.92'	111° 32.38'	3.3*	1.2W	19	94	12	0.17
231219	09:26:04.23	38° 10.39'	112° 37.14'	-0.9*	1.7W	20	144	34	0.21
231220	22:05:03.45	42° 06.60'	112° 29.77'	3.1	1.3	17	129	5	0.14
231221	03:09:48.74	39° 14.43'	113° 39.84'	4.7*	1.9W	12	210	42	0.28
231221	07:46:09.78	38° 24.64'	112° 10.01'	-2.0*	2.1W	22	71	11	0.12
231221	08:05:36.59	36° 53.20'	112° 25.33'	18.6*	2.0W	12	183	38	0.16
231221	15:57:42.46	41° 49.82'	112° 19.56'	0.6*	0.7	15	74	11	0.16
231222	17:15:06.35	36° 48.19'	112° 59.80'	20.5	1.8W	12	194	28	0.14
231222	17:46:10.75	41° 17.40'	111° 47.70'	14.2	0.6	13	136	12	0.08
231222	20:28:16.95	38° 23.90'	112° 54.89'	8.4	0.0	16	179	8	0.06
231222	23:47:05.79	40° 55.07'	111° 34.06'	9.3	2.0W	37	72	12	0.14
231223	00:55:42.35	37° 25.91'	113° 07.35'	10.9	2.2W	22	95	8	0.15
231225	10:52:10.04	37° 00.16'	112° 54.52'	20.8	1.3W	13	135	8	0.12
231226	06:38:26.27	39° 44.47'	110° 55.48'	-3.2*	1.7	16	162	12	0.22
231226	13:59:31.69	37° 58.11'	112° 01.11'	12.5	1.8W	13	135	17	0.14
231226	17:49:18.65	36° 52.55'	112° 26.06'	20.2	1.9	10	182	38	0.13
231226	18:11:27.54	38° 28.64'	112° 50.89'	0.1	-0.6	13	135	2	0.06
231226	18:11:49.32	38° 28.67'	112° 50.87'	-0.3	-0.7	13	135	2	0.05
231227	08:47:03.69	41° 57.16'	112° 34.84'	-0.5*	1.6	18	152	21	0.08
231227	16:19:50.47	36° 52.16'	112° 25.92'	24.4	1.6	6	213	38	0.03
231227	22:22:15.38	38° 29.61'	112° 50.45'	-0.2	-0.3	14	110	3	0.06
231229	20:24:23.69	38° 09.80'	112° 21.11'	3.6*	0.9	12	158	20	0.12
231230	02:40:19.77	36° 58.94'	113° 36.71'	13.6*	1.9W	15	174	33	0.23
231230	04:31:41.09	37° 52.76'	112° 28.70'	4.7*	1.5	17	87	31	0.29
231230	05:37:44.39	39° 48.92'	111° 03.77'	5.8*	1.2	13	205	21	0.18
231230	05:50:15.52	36° 53.30'	112° 24.94'	19.3	1.9	13	179	19	0.15
231231	02:57:09.28	37° 53.39'	112° 28.54'	5.8*	1.8W	22	87	31	0.15
231231	18:10:57.88	38° 27.47'	112° 47.96'	2.3	-0.1	16	168	5	0.05
231231	19:09:45.62	38° 27.13'	112° 48.53'	4.2	0.0	18	168	5	0.06

number of earthquakes = 348

\* indicates poor depth control

M indicates moment magnitude

W indicates Wood-Anderson data used for magnitude calculation

**Table 3**  
**UNIVERSITY OF UTAH REGIONAL/URBAN SEISMIC NETWORK**  
**Operating Seismograph Stations**  
**December 31, 2023**

<b>SEED Station</b>	<b>Location</b>	<b>SEED Channel</b>	<b>No. of Channels</b>	<b>Network Code</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Elevation (meters)</b>	<b>Sensor</b>	<b>Digitizer</b>	<b>Telemetry</b>	<b>Sponsor</b>
2272	Eastwood Elementary School Salt Lake City, UT	HN[ZEN]	3	NP	40° 41.98'	111° 47.62'	1515	EpiSensor	Basalt	Digital	NSMP, ANSS
2285	Liberty Park Salt Lake City, UT	HN[ZEN]	3	NP	40° 44.70'	111° 52.49'	1298	EpiSensor	Basalt	Digital	NSMP, ANSS
2286	Roosevelt Elementary School Salt Lake City, UT	HN[ZEN]	3	NP	40° 42.08'	111° 52.01'	1314	EpiSensor	Basalt	Digital	NSMP, ANSS
7202	Meadowbrook Golf Course Murray, UT	HN[ZEN]	3	NP	40° 40.93'	111° 55.36'	1293	EpiSensor	Basalt	Digital	NSMP, ANSS
7203	Bonneville Golf Course Salt Lake City, UT	HN[ZEN]	3	NP	40° 44.81'	111° 49.63'	1457	EpiSensor	Basalt	Digital	NSMP, ANSS
7208	SR 201/I-80 Bridge Array, Salt Lake City, UT	EN[ZEN]	3	NP	40° 43.38'	111° 54.43'	1291	EpiSensor	K2	Digital	NSMP, ANSS
7212	Annex Bldg., Weber State University, Ogden, UT	HN[ZEN]	3	NP	41° 11.75'	111° 56.50'	1422	EpiSensor	Basalt	Digital	NSMP, ANSS
7223	Dixie State College St. George, UT	HN[ZEN]	3	NP	37° 06.02'	113° 33.94'	815	EpiSensor	Etna	Digital	NSMP, ANSS
7224	Southern Utah University Cedar City, UT	HN[ZEN]	3	NP	37° 40.35'	113° 04.29'	1782	EpiSensor	Basalt	Digital	NSMP, ANSS
7225	City Maintenance Yard Beaver, UT	HN[ZEN]	3	NP	38° 17.01'	112° 38.32'	1808	EpiSensor	Etna	Digital	NSMP, ANSS
7226	UDOT IT Radio Shop Richfield, UT	HN[ZEN]	3	NP	38° 45.43'	112° 05.26'	1616	FBA23	Basalt	Digital	NSMP, ANSS
7227	City Maintenance Yard Gunnison, UT	HN[ZEN]	3	NP	39° 09.35'	111° 49.17'	1568	EpiSensor	Basalt	Digital	NSMP, ANSS
7228	Juab School District Nephi, UT	HN[ZEN]	3	NP	39° 43.27'	111° 49.49'	1576	EpiSensor	Basalt	Digital	NSMP, ANSS
7229	City Maintenance Shop Santaquin, UT	HN[ZEN]	3	NP	39° 58.35'	111° 47.58'	1520	EpiSensor	Etna	Digital	NSMP, ANSS
7232	City Parks & Recreation Office Tremonton, UT	HN[ZEN]	3	NP	41° 43.13'	112° 10.91'	1320	EpiSensor	Etna2	Digital	NSMP, ANSS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
AHID	Auburn, ID	BH[ZEN]	3	US	42° 45.92'	111° 06.02'	1960	*	*	Digital	USGS
ALP	Alpine Fire Station, Alpine, UT	EN[ZEN]	3	UU	40° 27.26'	111° 46.61'	1510	EpiSensor	Etna2	Digital	ANSS
ALT	Alta City Offices, Alta, UT	EN[ZEN]	3	UU	40° 35.42'	111° 38.25'	2635	EpiSensor	Etna2	Digital	ANSS
AMF	Tri-Cities Golf Course American Fork, UT	EN[ZEN]	3	UU	40° 24.11'	111° 47.27'	1445	EpiSensor	Basalt	Digital	ANSS
ANMO	Albuquerque, NM	BH[ZEN]	3	IU	34° 57.01'	106° 27.61'	1743	*	*	Digital	USGS
ARGU	Argyle Ridge, UT	EHZ	1	UU	39° 49.37'	110° 32.62'	2828	S13	PSN	Analog	Utah
ARUT	Antelope Range, UT	EHZ	1	UU	37° 47.28'	113° 26.42'	1646	L4C	PSN	Analog	Utah
AVE	Avenues, Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.47'	111° 51.83'	1387	EpiSensor	Etna2	Digital	ANSS
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
BCE	Book Cliffs East, UT	EHZ	1	UU	39° 36.79'	110° 24.51'	2666	L4C	Basalt	Digital	Utah
		EN[ZEN]	3					EpiSensor			
BCS	Brigham City Maintenance Shop Brigham City, UT	EN[ZEN]	3	UU	41° 30.71'	112° 01.98'	1303	EpiSensor	Etna2	Digital	ANSS
BCU	Brigham City, UT	EN[ZEN]	3	UU	41° 30.74'	111° 58.93'	1676	EpiSensor	Etna2	Digital	ANSS
BCW	Book Cliffs West, UT	EHZ	1	UU	39° 43.82'	110° 44.55'	2614	L4C	Basalt	Digital	Utah
		EN[ZEN]	3					EpiSensor			
BEID	Bear River, ID	HN[ZEN]	3	UU	42° 07.00'	111° 46.97'	1864	Trillium 120	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			
BES	Bates Elementary School Ogden, UT	EN[ZEN]	3	UU	41° 19.10'	111° 57.26'	1455	EpiSensor	K2	Digital	ANSS
BGMT	Barton Gulch, MT	EHZ	1	MB	45° 14.00'	112° 02.43'	2172	*	*	Analog	MBMT
BGU	Big Grassy Mountain, UT	EN[ZEN]	3	UU	40° 55.53'	113° 01.79'	1640	EpiSensor	Q330	Digital	ANSS
		HH[ZEN]	3					Trillium 120			
BHU	Blowhard Mountain, UT	EH[ZEN]	3	UU	37° 35.63'	112° 51.72'	3250	S13	PSN	Analog	Utah
BHUT	Beaver High School, UT	EN[ZEN]	3	UU	38° 16.61'	112° 38.42'	1799	PA-23	SMART-24	Digital	Utah
BMUT	Black Mountain, UT	EHZ	1	UU	41° 57.49'	111° 14.05'	2243	S13	PSN	Analog	USGS
BOZ	Bozeman, MT	BH[ZEN]	3	US	45° 38.82'	111° 37.78'	1589	*	*	Digital	USGS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
BRPU	Butcher Ranch, Price, UT	HH[ZEN]	3	UU	39° 28.38'	110° 44.40'	1687	Trillium 240	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			
BSS	Butlerville Substation Salt Lake City, UT	EN[ZEN]	3	UU	40° 37.45'	111° 49.37'	1411	EpiSensor	Etna2	Digital	ANSS
BSUT	Blindstream Canyon, Hanna, UT	HH[ZEN]	3	UU	40° 32.19'	110° 45.67'	3211	Trillium 120	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			
BTU	Barney Top, UT	EHZ	1	UU	37° 45.34'	111° 52.46'	3235	S13	PSN	Analog	Utah
BW06	Boulder, WY	BH[ZEN]	3	US	42° 46.00'	109° 33.50'	2224	*	*	Digital	USGS
BYP	Brigham Young Park Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.26'	111° 53.23'	1323	EpiSensor	Etna2	Digital	ANSS
BZMT	Bozeman Pass, MT	EHZ	1	MB	45° 38.89'	110° 47.80'	1905	*	*	Analog	MBMT
CAP2	Utah Capitol Maint. Facility, Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.78'	111° 53.34'	1381	EpiSensor	Etna2	Digital	ANSS
CCPU	Cedar City Park, UT	EN[ZEN]	3	UU	38° 16.61'	112° 38.42'	1799	PA-23	SMART-24	Digital	Utah
CCUT	Cedar City, UT	HH[ZEN]	3	UU	37° 33.04'	113° 21.77'	2124	STS-2	Centaur	Digital	USGS
		EN[ZEN]	3					R147			
CFS	Copperton Fire Station, Copperton, UT	EN[ZEN]	3	UU	40° 33.96'	112° 05.61'	1654	EpiSensor	Etna2	Digital	ANSS
CHS	Copper Hills High School, West Jordan, UT	EN[ZEN]	3	UU	40° 35.68'	112° 01.03'	1460	EpiSensor	Etna2	Digital	ANSS
CMI	Centennial Mountains, ID	EHZ	1	RC	44° 30.99'	111° 37.05'	2267	L4C	*	Analog	BYU-I
COMI	Craters of the Moon, ID	EHZ	1	IE	43° 27.72'	113° 35.64'	1890	*	*	Digital	INL
COY	Coyote Canyon, Tooele Valley, UT	EN[ZEN]	3	UU	40° 39.56'	112° 14.34'	1572	EpiSensor	Etna2	Digital	ANSS
CRLU	Curley Ranch, La Sal, UT	EHZ	1	UU	38° 17.50'	109° 15.64'	2035	L4C	Basalt	Digital	Utah, USGS
		EN[ZEN]	3					EpiSensor			
CRMT	Chrome Mountain, MT	EHZ	1	MGB	45° 27.35'	110° 08.41'	2941	*	*	Analog	MBMT
CTU	Camp Tracy, UT	HH[ZEN]	3	UU	40° 41.55'	111° 45.02'	1731	Titan	Centaur	Digital	USGS
		EN[ZEN]	3					Trillium 120			
CVH	Canyon View High School, Cedar City, UT	EN[ZEN]	3	UU	37° 42.91'	113° 03.85'	1724	PA-23	SMART-24	Digital	Utah
CVRU	Castle Valley Ranch, Emery, UT	HH[ZEN]	3	UU	38° 55.06'	111° 10.30'	1912	STS-2	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			
CWR	Coldwater Ranch, Paradise, UT	EN[ZEN]	3	UU	41° 34.90'	111° 46.89'	1837	EpiSensor	Etna2	Digital	ANSS
CWU	Camp Williams, UT	EHZ	1	UU	40° 26.75'	112° 06.13'	1945	L4C	PSN	Analog	USGS
DAU	Daniels Canyon, UT	EHZ	1	UU	40° 24.75'	111° 15.35'	2771	S13	PSN	Analog	USGS
DBD	Des Bee Dove, UT	EHZ	1	UU	39° 18.82'	111° 05.55'	2265	L4C	PSN	Analog	Utah
DCM	Dugout Coal Mine, UT	EHZ	1	UU	39° 41.70'	110° 35.00'	2537	L4C	Basalt	Digital	Utah
		EN[ZEN]	3					EpiSensor			

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
DCU	Deer Creek Reservoir, UT	EHZ	1	UU	40° 24.82'	111° 31.61'	1829	L4C	PSN	Analog	USGS
DOT	Utah Dept. of Transportation Region II Offices, Salt Lake City, UT	EN[ZEN]	3	UU	40° 43.61'	111° 57.65'	1282	EpiSensor	Etna2	Digital	ANSS
DUG	Dugway, UT	BH[ZEN]	3	US	40° 11.70'	112° 48.80'	1477	STS-2	Q330	Digital	USGS
DVCI	Devils Canyon, ID	HH[ZEN]	3	IE	44° 22.99'	114° 02.31'	1997	Trillium 120	Q330	Digital	INL
DWU	Dry Willow, UT	EHZ	1	UU	38° 06.32'	112° 59.85'	2270	S13	PSN	Analog	Utah
ECRI	Eagle Creek, ID	EHZ	1	IE	43° 03.24'	111° 22.26'	2086	*	*	Digital	INL
ECUT	Ebbs Canyon, Scipio, UT	HH[ZEN]	3	UU	39° 10.30'	112° 07.99'	2136	Trillium 120	Centaur	Digital	Utah
EKU	East Kanab, UT	EHZ	1	UU	37° 04.48'	112° 29.81'	1829	S13	PSN	Analog	Utah
ELE	East Layton Elementary School, East Layton, UT	EN[ZEN]	3	UU	41° 04.84'	111° 55.09'	1444	EpiSensor	Etna2	Digital	ANSS
ELK	Elko, NV	BH[ZEN]	3	US	40° 44.69'	115° 14.33'	2210	*	*	Digital	USGS
ELU	Electric Lake, UT	EHZ	1	UU	39° 38.41'	111° 12.23'	2970	L4C	PSN	Analog	Utah
EMF	Eagle Mountain Gas Tap, UT	EN[ZEN]	3	UU	40° 16.89'	111° 59.92'	1487	EpiSensor	Etna2	Digital	ANSS
EMU	Emma Park, UT	EH[ZEN]	3	UU	39° 48.84'	110° 48.92'	2268	S13	PSN	Analog	USGS
		EN[ZEN]	3					FBA23	K2	Digital	Utah
EOCU	EOC, State Capitol Campus, Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.62'	111° 53.95'	1356	EpiSensor	Basalt	Digital	Utah
EPU	East Promontory, UT	EHZ	1	UU	41° 23.49'	112° 24.53'	1436	L4C	Obsidian	Digital	USGS
ETW	Elwood Town Hall, Elwood, UT	EN[ZEN]	3	UU	41° 40.15'	112° 08.53'	1305	EpiSensor	Etna2	Digital	ANSS
FLU	Fool's Peak, UT	EHZ	1	UU	39° 22.69'	112° 10.29'	1951	18300	Basalt	Digital	USGS
		EN[ZEN]	3								
FLWY	Flagg Ranch, WY	BH[Z12]	3	IW	44° 04.96'	110° 41.96'	2078	3ESP	RT-130	Digital	ANSS
FOR1	Milford Southwest, UT	HH[ZEN]	3	UU	38° 22.13'	113° 05.63'	1642	Trillium 120	Centaur	Digital	Utah
FOR2	Blundell East, UT	HH[ZEN]	3	UU	38° 29.70'	112° 52.34'	1760	Trillium 120	Centaur	Digital	Utah
FOR5	SW Antelope Mountain, UT	HH[ZEN]	3	UU	38° 34.18'	112° 51.27'	1742	Trillium 120	Centaur	Digital	Utah
FOR6	FORGE, UT	HH[ZEN]	3	UU	38° 29.39'	112° 47.25'	2421	Trillium 120	Centaur	Digital	Utah
FOR7	FORGE, UT	HH[ZEN]	3	UU	38° 25.24'	112° 51.16'	1964	Trillium 120	Centaur	Digital	Utah
FOR8	FORGE, UT	HH[ZEN]	3	UU	38° 31.72'	113° 04.68'	1654	Trillium 120	Centaur	Digital	Utah
FORB	Blundell, Power Plant, UT	EN[ZEN]	3	UU	38° 29.41'	112° 51.30'	1845	EpiSensor	Basalt	Digital	Utah
FORK	Blundell, UT	EH[Z12]	3	UU	38° 30.07'	112° 53.19'	1408	Omni-2400	Obsidian	Digital	Utah
		GH[Z12]	3								
		EN[Z12]	3								
		GN[Z12]	3								
FORU	South Mineral Mountains, UT	HH[ZEN]	3	UU	38° 27.53'	112° 51.68'	1840	40T	ANSS-130	Digital	Utah
FORW	Milford Wind Farm, UT	EN[ZEN]	3	UU	38° 33.76'	112° 56.21'	1516	EpiSensor	Obsidian	Digital	Utah
FPU	Francis Peak, UT	HH[ZEN]	3	UU	41° 01.58'	111° 50.21'	2816	Trillium 120	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
FSB1	FORGE surface borehole 1, UT	DN[Z12]	3	UU	38° 29.10'	112° 53.48'	1697	Titan	Centaur	Digital	Utah
		EN[Z12]	3					Compact			
		HH[Z12]	3								
FSB2	FORGE surface borehole 2, UT	DN[Z12]	3	UU	38° 30.44'	112° 54.98'	1587	Titan	Centaur	Digital	Utah
		EN[Z12]	3					Compact			
		HH[Z12]	3								
FSB3	FORGE surface borehole 3, UT	DN[Z12]	3	UU	38° 30.80'	112° 52.84'	1701	Titan	Centaur	Digital	Utah
		EN[Z12]	3					Compact			
		HH[Z12]	3								
FSB4	FORGE surface borehole 4, UT	HH[Z12]	3	UU	38° 25.54'	112° 56.02'	1578	Compact	Centaur	Digital	Utah
FSB5	FORGE surface borehole 5, UT	HH[Z12]	3	UU	38° 30.19'	113° 00.83'	1474	Compact	Centaur	Digital	Utah
FSB6	FORGE surface borehole 6, UT	HH[Z12]	3	UU	38° 36.12'	112° 56.47'	1462	Compact	Centaur	Digital	Utah
FSU	Fish Springs, UT	EHZ	1	UU	39° 43.35'	113° 23.48'	1487	18300	PSN	Analog	Utah
FTT	Fire Training Tower, Magna, UT	EN[ZEN]	3	UU	40° 41.16'	112° 04.99'	1381	EpiSensor	Etna2	Digital	ANSS
GAWY	Genesis Alkali Granger, WY	HH[ZEN]	3	UU	41° 44.43'	109° 51.13'	2011	Trillium 120	Centaur	Digital	Utah
GBI	Big Grassy Butte, ID	HH[ZEN]	3	IE	43° 59.22'	112° 03.78'	1541	*	*	Digital	INL
GCAZ	Grand Canyon, AZ	EHZ	1	AR	36° 03.51'	112° 11.02'	2072	*	*	Analog	NAU
GMO	Grantsville Maintenance Office, Grantsville, UT	EN[ZEN]	3	UU	40° 36.04'	112° 28.48'	1320	EpiSensor	Etna2	Digital	ANSS
GMU	Granite Mountain, UT	EH[ZEN]	3	UU	40° 34.53'	111° 45.79'	1829	S13	PSN	Analog	USGS
GRII	Grays Lake, ID	EHZ	1	IE	42° 56.28'	111° 25.32'	2207	*	*	Digital	INL
GZU	Grizzly Peak, UT	EH[ZEN]	3	UU	41° 25.53'	111° 58.50'	2646	S13	Obsidian	Digital	USGS
		EN[ZEN]	3					EpiSensor			
HAFB	Hill Air Force Base, Hill AFB, UT	EN[ZEN]	3	UU	41° 07.07'	111° 58.55'	1471	EpiSensor	Etna2	Digital	Utah
HCSU	Hobble Creek, Springville, UT	EHZ	1	UU	40° 12.40'	111° 30.14'	1789	L4C	Basalt	Digital	Utah, USGS
		EN[ZEN]	3					EpiSensor			
HDUT	Hyde Park, UT	HH[ZEN]	3	UU	41° 48.19'	111° 45.96'	1846	Trillium 120	Centaur	Digital	USGS
		EN[ZEN]	3					Titan			
HEB	Heber, UT	EHZ	1	UU	40° 30.09'	111° 20.15'	1925	S13	PSN	Analog	Utah
HER	Herriman Fire Station Herriman, UT	EN[ZEN]	3	UU	40° 30.94'	112° 01.85'	1502	EpiSensor	Etna2	Digital	ANSS
HES	Hooper Elementary School Hooper, UT	EN[ZEN]	3	UU	41° 09.89'	112° 07.30'	1292	EpiSensor	K2	Digital	ANSS
HHAI	Hell's Half Acre, ID	HH[Z12]	3	IE	43° 17.70'	112° 22.74'	1371	*	*	Digital	INL
HHS	Hurricane High School, UT	EN[ZEN]	3	UU	37° 10.43'	113° 17.74'	987	EpiSensor	Etna2	Digital	Utah
HLID	Hailey, ID	BH[ZEN]	3	US	43° 33.75'	114° 24.83'	1772	*	*	Digital	USGS
HLJ	Hailstone, UT	HH[ZEN]	3	UU	40° 36.64'	111° 24.05'	1931	Trillium 120	Centaur	Digital	Utah
		EN[ZEN]	3					EpiSensor			

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
HMU	Henry Mountain, UT	HH[ZEN]	3	UU	37° 56.28'	110° 44.51'	2430	Trillium 120	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			
HRU	Hogsback Ridge, UT	EHZ	1	UU	40° 47.67'	111° 53.14'	1620	L4C	PSN	Analog	USGS
		EN[ZEN]	3					EpiSensor	Obsidian	Digital	ANSS
HTU	Hoyt, UT	EHZ	1	UU	40° 40.52'	111° 13.21'	2576	L4C	PSN	Analog	USGS
		EHZ	1					EpiSensor	Basalt	Digital	
		EN[ZEN]	3								
HVU	Hansel Valley, UT	HH[ZEN]	3	UU	41° 46.78'	112° 46.50'	1609	Trillium 120	Q330	Digital	USGS
		EN[ZEN]	3					EpiSensor			
HWUT	Hardware Ranch, UT	BH[ZEN]	3	US	41° 36.41'	111° 33.91'	1830	*	*	Digital	USGS
IAE	Cedar City, Iron County Adult Education, UT	EN[ZEN]	3	UU	37° 39.91'	113° 40.02'	1807	EpiSensor	Etna2	Digital	Utah
ICF	International Center Fire Station, Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.69'	112° 01.72'	1281	EpiSensor	Etna2	Digital	ANSS
ICU	Indian Springs Canyon, UT	EHZ	1	UU	37° 08.98'	113° 55.41'	1451	S13	PSN	Analog	Utah
IMU	Iron Mountain, UT	EHZ	1	UU	38° 37.99'	113° 09.50'	1833	L4C	PSN	Analog	Utah
IMW	Indian Meadows, WY	BH[ZEN]	3	IW	43° 53.58'	110° 56.58'	2670	3ESP	RT-130	Digital	ANSS
ISCO	Idaho Springs, CO	BH[ZEN]	3	US	39° 47.98'	105° 36.80'	2743	STS-2	Q330	Digital	ANSS
JRP	Jordan River State Park Salt Lake City, UT	EN[ZEN]	3	UU	40° 49.54'	111° 56.66'	1284	EpiSensor	Etna2	Digital	ANSS
JVW2	Murray City Parkway Golf Course, Murray, UT	EN[ZEN]	3	UU	40° 37.90'	111° 55.15'	1310	EpiSensor	Etna2	Digital	ANSS
KCBD	Kane County Bus Depot, UT	EN[ZEN]	3	UU	37° 02.15'	112° 31.59'	1470	PA-23	SMART-24	Digital	Utah
KHUT	Kindman Hollow, UT	EHZ	1	UU	41° 43.29'	112° 01.78'	1829	L4C	Basalt	Digital	ANSS
		EN[ZEN]	3					EpiSensor			
KLJ	Keetley, UT	EHZ	1	UU	40° 37.85'	111° 24.30'	1992	S13	PSN	Analog	Utah
KNB	Kanab, UT	HH[ZEN]	3	UU	37° 01.00'	112° 49.34'	1715	Trillium 120	Centaur	Digital	Utah, ANSS, LLNL
		EN[ZEN]	3					EpiSensor			
LCMT	Little Creek Mountain, UT	HH[ZEN]	3	UU	37° 00.71'	113° 14.63'	1411	Trillium 120	Centaur	Digital	Utah
		EN[ZEN]	3					EpiSensor			
LCU	Little Cottonwood, UT	EN[ZEN]	3	UU	40° 34.41'	111° 47.91'	1571	EpiSensor	Etna2	Digital	ANSS
LDJ	Lady, UT	EHZ	1	UU	40° 34.89'	111° 24.52'	2217	S13	PSN	Analog	Utah
LEVU	Levan, UT	EHZ	1	UU	39° 30.39'	111° 48.88'	1996	L4C	Basalt	Digital	USGS
		EN[ZEN]	3					EpiSensor			
LGC	Lakeside Golf Course Bountiful, UT	EN[ZEN]	3	UU	40° 54.04'	111° 54.51'	1292	EpiSensor	Etna2	Digital	ANSS
LHUT	Little Humpy Peak, UT	EHZ	1	UU	40° 53.49'	110° 59.78'	3084	S13	PSN	Analog	Utah
LIUT	Lila Canyon, UT	HH[ZEN]	3	UU	39° 25.45'	110° 19.51'	2178	Trillium 120	Centaur	Digital	Utah

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
LKC	Lee Kay Hunter Education Center Magna, UT	EN[ZEN]	3	UU	40° 43.62'	112° 02.14'	1289	EpiSensor	Etna2	Digital	ANSS
LKWY	Lake, WY	BH[ZEN]	3	US	44° 33.91'	110° 24.00'	2424	*	*	Digital	USGS
LMUT	Lake Mountain, UT	EN[ZEN]	3	UU	40° 15.69'	111° 55.69'	2330	EpiSensor	Etna2	Digital	ANSS
LOHW	National Elk Refuge, WY	BH[Z12]	3	IW	43° 36.76'	110° 36.30'	2245	3ESP	RT-130	Digital	ANSS
LRG	Logan River Golf Course Logan, UT	EN[ZEN]	3	UU	41° 42.82'	111° 51.08'	1362	EpiSensor	Etna2	Digital	ANSS
LSU	Lake Shores, UT	EN[ZEN]	3	UU	40° 07.94'	111° 43.80'	1375	EpiSensor	Etna2	Digital	ANSS
LTU	Little Mountain, UT	EHZ	1	UU	41° 35.51'	112° 14.83'	1585	L4C	PSN	Analog	USGS
		EHZ	1					EpiSensor	Basalt	Digital	
		EN[ZEN]	3								
MAB	Mapleton Ambulance Building Mapleton, UT	EN[ZEN]	3	UU	40° 07.85'	111° 34.67'	1440	EpiSensor	Etna2	Digital	ANSS
MCID	Moose Creek, ID	EHZ	1	WY	44° 11.45'	111° 11.03'	2137	L4C	PSN	Analog	USGS
MCU	Monte Cristo Peak, UT	EN[ZEN]	3	UU	41° 27.70'	111° 30.45'	2664	Titan	Centaur	Digital	USGS
		HH[ZEN]	3					Trillium 120			
MGCU	Grand County Courthouse, Moab, UT	EN[ZEN]	3	UU	38° 34.46'	109° 32.89'	1241	EpiSensor	K2	Digital	Utah
MHD	Mile High Drive, UT	EHZ	1	UU	40° 39.64'	111° 48.05'	1597	Ranger	Basalt	Digital	USGS
		EN[ZEN]	3					EpiSensor			
MHS2	Milford High School, UT	EN[ZEN]	3	UU	38° 23.97'	113° 00.78'	1529	EpiSensor	Etna2	Digital	Utah
MID	Middle Canyon, UT	EN[ZEN]	3	UU	40° 31.04'	112° 15.28'	1722	EpiSensor	Etna2	Digital	ANSS
MLI	Malad Range, ID	EHZ	1	UU	42° 01.61'	112° 07.53'	1896	L4C	Basalt	Digital	USGS
		EN[ZEN]	3					EpiSensor			
MMU	Miners Mountain, UT	EHZ	1	UU	38° 11.57'	111° 17.66'	2387	S13	PSN	Analog	Utah
MOMT	Monida, MT	EHZ	1	MB	44° 35.60'	112° 23.66'	2220	*	*	Analog	MBMT
MOOW	Moose Ponds, WY	BH[Z12]	3	IW	43° 44.92'	110° 44.69'	2128	*	*	Digital	ANSS
MOR	Morgan, UT	EN[ZEN]	3	UU	41° 02.77'	111° 39.94'	1633	Applied Mems	ANSS-130	Digital	ANSS
MOUT	Mount Ogden, UT	EN[ZEN]	3	UU	41° 11.94'	111° 52.73'	2743	Titan	Centaur	Digital	USGS
		HH[ZEN]	3					Trillium 120			
MPU	Maple Canyon, UT	EN[ZEN]	3	UU	40° 00.93'	111° 38.00'	1909	EpiSensor	Centaur	Digital	ANSS USGS
		HH[ZEN]	3					Observer			
MSU	Marysvale, UT	EHZ	1	UU	38° 30.74'	112° 10.63'	2105	18300	PSN	Analog	Utah
MTPU	Mt. Pierson, UT	EN[ZEN]	3	UU	38° 02.49'	112° 11.06'	3112	EpiSensor	Q330	Digital	Utah
		HH[ZEN]	3					Trillium 120			
MTUT	Morton Thiokol, UT	EHZ	1	UU	41° 42.55'	112° 27.28'	1373	L4C	PSN	Analog	USGS
MVCO	Mesa Verde, CO	BH[ZEN]	3	US	37° 12.62'	108° 29.92'	2170	STS-2	Q330	Digital	ANSS
MVU	Marysvale, UT	BH[ZEN]	3	LB	38° 30.22'	112° 12.74'	2240	*	*	Digital	Sandia
NAI	North Antelope Island, UT	EN[ZEN]	3	UU	41° 00.97'	112° 13.68'	1472	EpiSensor	Etna2	Digital	ANSS



SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
NLU	North Lily Mine, UT	EN[ZEN]	3	UU	39° 57.29'	112° 04.50'	2036	EpiSensor	Centaur	Digital	ANSS
		HH[ZEN]	3					Trillium 120			
NMU	North Mineral Mountain, UT	EH[ZEN]	3	UU	38° 30.99'	112° 51.00'	1853	S13	PSN	Analog	Utah
NOQ	North Oquirrh Mountains, UT	EN[ZEN]	3	UU	40° 39.16'	112° 07.26'	1628	Titan	Centaur	Digital	ANSS
		HH[ZEN]	3					Trillium 120		Digital	USGS
NPI	North Pocatello, ID	EHZ	1	UU	42° 08.84'	112° 31.10'	1640	L4C	Basalt	Digital	ANSS
		EN[ZEN]	3					EpiSensor			
O20A	White River City, CO	BH[ZEN]	3	N4	40° 08.09'	108° 14.50'	1915	STS-2	Q330	Digital	NCF
OCP	Orem City Park, Orem, UT	EN[ZEN]	3	UU	40° 17.87'	111° 41.44'	1464	EpiSensor	Etna2	Digital	ANSS
OF2	Ogden Fire Station ° 2 Ogden, UT	EN[ZEN]	3	UU	41° 13.70'	111° 56.92'	1358	EpiSensor	Etna2	Digital	ANSS
OPS	Ogden Public Safety Building, Ogden, UT	EN[ZEN]	3	UU	41° 13.72'	111° 58.54'	1317	EpiSensor	Etna2	Digital	ANSS
OSS	Oquirrh Sub Station, UT	EN[ZEN]	3	UU	40° 33.92'	112° 01.73'	1503	EpiSensor	Etna2	Digital	ANSS
OWUT	Old Woman Plateau, UT	EHZ	1	UU	38° 46.80'	111° 25.42'	2568	L4C	PSN	Analog	Utah
PCCW	Pine Creek, Cokeville, WY	EHZ	1	UU	42° 05.97'	110° 52.36'	1996	L4C	Basalt	Digital	Utah, USGS
		EN[ZEN]	3					EpiSensor			
PCL	Plain City Landfill Plain City, UT	EN[ZEN]	3	UU	41° 18.60'	112° 06.00'	1290	EpiSensor	Etna2	Digital	ANSS
PCR	Park City Recreation Center, Park City, UT	EN[ZEN]	3	UU	40° 39.25'	111° 30.19'	2100	EpiSensor	Etna2	Digital	ANSS
PEUT	Pahvant Elementary School, Richfield, UT	EN[ZEN]	3	UU	38° 46.55'	112° 05.32'	1644	PA-23	SMART-24	Digital	Utah
PGA	Page, AZ	EHZ	1	AR	36° 54.34'	111° 16.86'	1272	*	*	Analog	NAU
PGC	Pleasant Grove Creek, UT	EN[ZEN]	3	UU	40° 22.71'	111° 42.62'	1707	EpiSensor	Etna2	Digital	ANSS
PIO	Pioche, NV	HH[ZEN]	3	NN	37° 56.83'	114° 29.48'	1887	Trillium 120	Q330	Digital	UNR
PKCU	Pink Cliffs, UT	HH[ZEN]	3	UU	37° 26.63'	112° 18.66'	2834	Trillium 120	SMART-24	Digital	Utah
		EN[ZEN]	3					PA-23			
PNSU	Preston Nutter Ranch, Sunnyside, UT	HH[ZEN]	3	UU	39° 37.67'	110° 14.74'	2743	Trillium 240	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			
PRN	Pahroc, Range, NV	HH[ZEN]	3	NN	37° 24.40'	115° 03.05'	1402	Trillium 120	ANSS-130	Digital	UNR
PSUT	Pine Spring, UT	HH[ZEN]	3	UU	38° 32.02'	113° 51.28'	1999	Trillium 120	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			
PTI	Pocatello, ID	HH[ZEN]	3	IE	42° 52.20'	112° 22.21'	1670	*	*	Digital	INL
PTU	Portage, UT	EHZ	1	UU	41° 55.76'	112° 19.48'	2192	L4C	Basalt	Digital	ANSS
		EN[ZEN]	3					EpiSensor			
PV05	E. Island Mesa, Paradox Basin, CO	HH[ZEN]	3	RE	38° 08.87'	108° 50.08'	2142	*	*	Digital	USBR
PV11	Davis Mesa, Paradox Basin, CO	HH[ZEN]	3	RE	38° 17.96'	108° 52.33'	1881	*	*	Digital	USBR
PV15	Pinto Mesa, Paradox Basin, CO	HH[ZEN]	3	RE	38° 20.51'	108° 28.66'	2280	*	*	Digital	USBR

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
PV21	Cone Mountain, Paradox Basin, CO	HH[ZEN]	3	RE	38° 33.67'	108° 58.50'	2235	*	*	Digital	USBR
Q12A	Willow Creek Ranch, Ely, NV	HH[ZEN]	3	NN	39° 02.40'	114° 19.88'	1625	Trillium 120	Q330	Digital	UNR
QBHW	Bridle Trail Rd, Draper, UT	HN[ZEN]	3	UU	40° 30.23'	111° 51.35'	1400	Gsig-AC63	Gsig-GMS	Digital	ANSS
QCSP	White Pine Dr., Tooele, UT	HN[ZEN]	3	UU	40° 32.75'	112° 16.56'	1538	Gsig-AC63	Gsig-GMS	Digital	ANSS
QCWC	E 2100 S, Salt Lake City, UT	HN[ZEN]	3	UU	40° 43.54'	111° 49.94'	1373	Gsig-AC63	Gsig-GMS	Digital	ANSS
QDPS	Dept of Public Safety Univ. of Utah, Salt Lake City, UT	HN[ZEN]	3	UU	40° 45.60'	111° 50.46'	1460	Gsig-AC63	Gsig-GMS	Digital	ANSS
QFTG	N 450 E St., Springville, UT	HN[ZEN]	3	UU	40° 10.42'	111° 36.12'	1395	Gsig-AC63	Gsig-GMS	Digital	ANSS
QJHW	Red Rock Ranch, Teton County, WY	HN[ZEN]	3	UU	43° 34.99'	110° 24.65'	2169	Gsig-AC63	Gsig-GMS	Digital	ANSS
QJMH	S 900 E, Salt Lake City, UT	HN[ZEN]	3	UU	40° 42.21'	111° 51.97'	1312	Gsig-AC63	Gsig-GMS	Digital	ANSS
QJOT	Whileaway Rd., Snyderville, UT	HN[ZEN]	3	UU	40° 44.50'	111° 41.68'	1977	Gsig-AC63	Gsig-GMS	Digital	ANSS
QKSL2	Lehi, UT	HN[ZEN]	3	UU	40° 15.98'	111° 50.07'	1371	Gsig-AC63	Gsig-GMS	Digital	ANSS
QLIN	884 E 490 N, Lindon, UT	HN[ZEN]	3	UU	40° 20.83'	111° 29.63'	1538	Gsig-AC63	Gsig-GMS	Digital	ANSS
QLMT	Earthquake Lake, MT	EHZ	1	MB	44° 49.84'	111° 25.80'	2064	*	*	Analog	MBMT
QMDS	S 2600 E, Salt Lake City, UT	HN[ZEN]	3	UU	40° 43.74'	111° 48.97'	1405	Gsig-AC63	Gsig-GMS	Digital	ANSS
QNRL	E 500 N, Logan, UT	HN[ZEN]	3	UU	40° 44.44'	111° 49.49'	1407	Gsig-AC63	Gsig-GMS	Digital	ANSS
QOGD	1723 N 900 E, North Ogden, UT	HN[ZEN]	3	UU	41° 17.38'	111° 57.11'	1361	Gsig-AC63	Gsig-GMS	Digital	ANSS
QPAY	N 300 E Payson, UT	HN[ZEN]	3	UU	40° 03.18'	111° 43.70'	1404	Gsig-AC63	Gsig-GMS	Digital	ANSS
QPML	S Whitesides St., Layton, UT	HN[ZEN]	3	UU	40° 03.47'	111° 57.23'	1334	Gsig-AC63	Gsig-GMS	Digital	ANSS
QRJG	N 1450 E, Provo, UT	HN[ZEN]	3	UU	40° 15.65'	111° 37.96'	1530	Gsig-AC63	Gsig-GMS	Digital	ANSS
QSAR2	Saratoga Springs, UT	HN[ZEN]	3	UU	40° 20.17'	111° 55.43'	1420	Gsig-AC63	Gsig-GMS	Digital	ANSS
QSPA	520 S, Spanish Fork, UT	HN[ZEN]	3	UU	40° 17.47'	111° 52.95'	1413	Gsig-AC63	Gsig-GMS	Digital	ANSS
QSTV	S City Vistas Way, Kearns, UT	HN[ZEN]	3	UU	40° 40.25'	112° 02.18'	1416	Gsig-AC63	Gsig-GMS	Digital	ANSS
QSUN	1412 N 350 W, Sunset, UT	HN[ZEN]	3	UU	41° 08.04'	112° 01.97'	1373	Gsig-AC63	Gsig-GMS	Digital	ANSS
QUGS	240 N Redwood Road, SLC, UT	HN[ZEN]	3	UU	40° 46.45'	111° 56.32'	1300	Gsig-AC63	Gsig-GMS	Digital	ANSS
R11B	Troy Canyon, Currant, NV	HH[ZEN]	3	NN	38° 20.93'	115° 35.12'	1756	STS-5A	Q330	Digital	UNR
RBU	Red Butte Canyon, UT	EHZ	1	UU	40° 46.85'	111° 48.50'	1676	L4C	Basalt	Digital	USGS
		EN[ZEN]	3					EpiSensor			
RCJ	Ross Creek, UT	EN[ZEN]	3	UU	40° 39.51'	111° 26.36'	2090	Titan	Centaur	Digital	Utah
		EN[ZEN]	3					Titan			
RDMU	Red Mountain, UT	HH[ZEN]	3	UU	40° 34.25'	109° 34.17'	2087	Trillium 120	SMART-24	Digital	Utah
		EN[ZEN]	3					PA-23			
REDW	Red-Top Meadows, WY	BH[ZEN]	3	IW	43° 21.74'	110° 51.18'	2322	3ESP	RT-130	Digital	ANSS
REUT	Washington Fields, Riverside Elementary School, UT	EN[ZEN]	3	UU	37° 05.86'	113° 31.16'	791	PA-23	SMART-24	Digital	Utah
RLMT	Red Lodge, MT	BH[12Z]	3	US	45° 07.33'	109° 16.04'	2086	STS-2	Q330	Digital	ANSS
ROA	Roan Cliffs, UT	EHZ	1	UU	39° 39.69'	110° 21.88'	2962	S13	PSN	Analog	Utah
RPF	Rose Park Fire Station, Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.52'	111° 55.22'	1287	EpiSensor	Etna2	Digital	ANSS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
RRCU	Rees Ranch, Coalville, UT	EHZ	1	UU	40° 53.21'	111° 26.22'	2028	L4C	Basalt	Digital	Utah, USGS
		EN[ZEN]	3					EpiSensor			
RSUT	Red Spur, UT	EHZ	1	UU	41° 38.31'	111° 25.90'	2682	S13	Basalt	Digital	USGS
		EN[ZEN]	3					EpiSensor			
RWWY	Rawlins, WY	BH[ZEN]	3	IW	41° 41.33'	107° 12.61'	2402	3ESP	RT-130	Digital	ANSS
SAIU	South Antelope Island, UT	EHZ	1	UU	40° 51.29'	112° 10.89'	1384	L4C	PSN	Analog	USGS
		EHZ	1					EpiSensor	Basalt	Digital	
		EN[ZEN]	3								
SCC	Salt Lake Community College, SLC UT Salt Lake City, UT	EN[ZEN]	3	UU	40° 40.49'	111° 56.37'	1306	EpiSensor	Etna2	Digital	ANSS
SCS	Syracuse City Cemetery Shop Syracuse, UT	EN[ZEN]	3	UU	41° 05.73'	112° 02.81'	1321	EpiSensor	Etna2	Digital	ANSS
SCUT	Santa Clara, UT	EN[ZEN]	3	UU	37° 07.69'	113° 38.68'	837	EpiSensor	Etna2	Digital	Utah
SCY	Salem City Yard, Salem, UT	EN[ZEN]	3	UU	40° 03.47'	111° 41.14'	1386	Applied Mems	ANSS-130	Digital	ANSS
SGSU	St. George Fire Station #4, UT	EN[ZEN]	3	UU	38° 16.61'	112° 38.42'	1799	PA-23	SMART-24	Digital	Utah
SGU	Sterling, UT	EHZ	1	UU	39° 10.94'	111° 38.68'	2357	18300	PSN	Analog	USGS
SHP	Sheep Range, NV	HH[ZEN]	3	NN	36° 30.33'	115° 09.61'	1590	Trillium 120	ANSS-130	Digital	UNR
SJF	South Jordan Fire Station, South Jordan, UT	EN[ZEN]	3	UU	40° 33.37'	111° 56.34'	1356	EpiSensor	Obsidian	Digital	ANSS
SKII	Z, ID	HH[ZEN]	3	IE	43° 19.21'	111° 55.79'	2082	*	*	Digital	INL
SMAZ	Slide Mountain, AZ	EHZ	1	AR	36° 19.29'	113° 10.14'	2200	*	*	Analog	NAU
SNO	Snow College, UT	EHZ	1	UU	39° 19.18'	111° 32.33'	2503	Ranger	PSN	Analog	Utah
SNOW	Snowking Mountain, WY	BH[ZEN]	3	IW	43° 27.75'	110° 45.31'	2390	*	*	Digital	ANSS
SNUT	Stansbury North, UT	EHZ	1	UU	40° 53.10'	112° 30.52'	1652	18300	PSN	Analog	USGS
		EHZ	1					EpiSensor	Basalt	Digital	
		EN[ZEN]	3								
SPR2	Wildlife Resource Center Springville, UT	EN[ZEN]	3	UU	40° 10.95'	111° 36.69'	1382	EpiSensor	Etna2	Digital	ANSS
SPR3	Spring Creek 3, NV	HH[ZEN]	3	NN	38° 59.93'	114° 19.88'	2815	Trillium 120	RT-130	Digital	UNR
SPS	Stansbury Park Sewage Lagoon Stansbury Park, UT	EN[ZEN]	3	UU	40° 38.97'	112° 18.95'	1293	EpiSensor	Etna2	Digital	ANSS
SPU	South Promontory Point, UT	EN[ZEN]	3	UU	41° 18.52'	112° 26.95'	2086	EpiSensor	ANSS-130	Digital	ANSS
		HH[ZEN]	3					3ESP			
SRU	San Rafael Swell, UT	EHZ	1	UU	39° 06.65'	110° 31.43'	1804	S13	PSN	Analog	Utah, ANSS, IRIS
		HH[ZEN]	3					Trillium 120	ANSS-130	Digital	
		EN[ZEN]	3								
SSC	Sandy Senior Center Sandy, UT	EN[ZEN]	3	UU	40° 34.89'	111° 51.35'	1414	EpiSensor	Etna2	Digital	ANSS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
SUU	Santaquin Canyon, UT	EH[ZEN]	3	UU	39° 53.29'	111° 47.45'	2024	S13	Obsidian	Digital	USGS
		EN[ZEN]	3					EpiSensor			
SVWY	Solvay Mine, WY	HH[ZEN]	3	UU	41° 27.02'	109° 51.88'	1950	Trillium 120	Centaur	Digital	Utah
SWUT	Soap Wash, Delta, UT	EN[ZEN]	3	UU	39° 19.72'	113° 11.72'	1644	EpiSensor	Q330	Digital	Utah
		HH[ZEN]	3					Trillium 120			
SZCU	Shurtz Canyon, UT	HH[ZEN]	3	UU	37° 35.72'	113° 05.25'	2026	3T	SMART-24	Digital	Utah
		EN[ZEN]	3					PA-23			
TCMU	Timpanogos Cave Mouth, UT	EHZ	1	UU	40° 26.26'	111° 42.71'	2045	L4C	Basalt	Digital	Utah
		EN[ZEN]	3					EpiSensor			
TCRU	Three Creeks Reservoir, UT	HH[ZEN]	3	UU	38° 36.57'	112° 26.83'	2293	Trillium 120	SMART-24	Digital	Utah
		EN[ZEN]	3					PA-23			
TCU	Toone Canyon, UT	EN[ZEN]	3	UU	41° 07.04'	111° 24.47'	2269	EpiSensor	ANSS-130	Digital	ANSS
		HH[ZEN]	3					3ESP			
TCUT	Toone Canyon, UT	EHZ	1	UU	41° 07.07'	111° 24.51'	2320	L4C	PSN	Analog	USGS
TMI	Taylor Mountain, ID	EHZ	1	IE	43° 18.30'	111° 55.08'	2179	*	*	Digital	INL
TMU	Trail Mountain, UT	HH[ZEN]	3	UU	39° 17.79'	111° 12.49'	2731	Observer	ANSS-130	Digital	Utah, ANSS
		EN[ZEN]	3					EpiSensor			
TPAW	Teton Pass, WY	BH[ZEN]	3	IW	43° 29.41'	110° 57.04'	2512	3ESP	RT-130	Digital	ANSS
TPH	Tonopah, NV	BH[ZEN]	3	LB	38° 04.50'	117° 13.35'	1883	3ESP	Q330	Digital	Sandia
TPMT	Teepe Creek, MT	EHZ	1	MB	44° 43.79'	111° 39.94'	2518	*	*	Analog	MBMT
TPNV	Topopah Spring, NV	BH[ZEN]	3	US	36° 56.93'	116° 14.97'	1600	*	*	Digital	USGS
TPU	Thanksgiving Point, Lehi, UT	EN[ZEN]	3	UU	40° 25.81'	111° 54.13'	1383	EpiSensor	Etna2	Digital	ANSS
TRS	Tooele County Radio Shop, Tooele, UT	EN[ZEN]	3	UU	40° 30.83'	112° 18.63'	1568	EpiSensor	Etna2	Digital	ANSS
U15A	North Rim, AZ	BH[ZEN]	3	AE	36° 25.80'	112° 17.40'	2489	Trillium 240	Q330	Digital	AZGS
UHP	Utah Highway Patrol Farmington, UT	EN[ZEN]	3	UU	40° 59.47'	111° 53.88'	1295	EpiSensor	Etna2	Digital	ANSS
UTH	Uintah Town Hall, Uintah, UT	EN[ZEN]	3	UU	41° 08.65'	111° 55.52'	1389	EpiSensor	Etna2	Digital	ANSS
UUE	University of Utah EMCB Bldg. Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.09'	111° 50.77'	1449	EpiSensor	Etna2	Digital	ANSS
V12A	Nelson, NV	HH[ZEN]	3	NN	35° 44.00'	114° 51.07'	1098	Trillium 120	Q330	Digital	UNR
VEC	Valley Emergency Communications Center West Valley City, UT	EN[ZEN]	3	UU	40° 39.21'	112° 01.95'	1480	EpiSensor	Basalt	Digital	ANSS
VNL	Vernal, UT	EN[ZEN]	3	UU	40° 27.48'	109° 32.89'	1648	EpiSensor	Obsidian	Digital	Utah
VRUT	Veyo Road, Veyo, UT	HH[ZEN]	3	UU	37° 27.71'	113° 51.41'	1874	Trillium 120	SMART-24	Digital	Utah
		EN[ZEN]	3					PA-23			
W13A	Hualapai Mountain Park, Kingman, AZ	BH[ZEN]	3	AE	35° 06.00'	113° 53.40'	1988	3T	Q330	Digital	AZGS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
WBC	Weber Canyon, UT	EN[ZEN]	3	UU	41° 08.38'	111° 54.05'	1602	EpiSensor	Etna2	Digital	ANSS
WCF	Wellsville Fire Station, Wellsville, UT	EN[ZEN]	3	UU	41° 38.37'	111° 55.94'	1387	EpiSensor	Etna2	Digital	ANSS
WCO	Washington City Office Building, UT	EN[ZEN]	3	UU	37° 07.91'	113° 30.56'	837	EpiSensor	Etna2	Digital	Utah
WCU	Willow Creek, UT	EHZ	1	UU	38° 57.88'	112° 05.44'	2673	18300	PSN	Analog	USGS
		EHZ	1					EpiSensor	Basalt	Digital	
		EN[ZEN]	3								
WDO	Saint George, Washington County School District Office, UT	EN[ZEN]	3	UU	37° 06.46'	113° 35.19'	831	PA-23	SMART-24	Digital	Utah
WES	Westminster College Salt Lake City, UT	EN[ZEN]	3	UU	40° 43.97'	111° 51.26'	1341	EpiSensor	Etna2	Digital	ANSS
WHS	West High School, SLC UT Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.51'	111° 53.93'	1301	EpiSensor	Etna2	Digital	ANSS
WMUT	West Mountain, UT	EHZ	1	UU	40° 04.60'	111° 50.00'	1981	L4C	PSN	Analog	USGS
		EHZ	1					EpiSensor	Basalt	Digital	
		EN[ZEN]	3								
WPUT	Wasatch Plateau, UT	HH[ZEN]	3	UU	38° 59.85'	111° 21.53'	2618	Trillium 120	Taurus	Digital	Utah
WRP	Water Reclamation Plant Salt Lake City, UT	EN[ZEN]	3	UU	40° 48.82'	111° 55.87'	1286	EpiSensor	Etna2	Digital	ANSS
WTNK	7433 Soaring Heights, NV	HH[ZEN]	3	NN	36° 11.50'	115° 00.64'	676	3ESP	ANSS-130	Digital	UNR
WTU	Western Traverse Mountains, UT	EH[ZEN]	3	UU	40° 27.29'	111° 57.21'	1552	S13	PSN	Analog	USGS
		EN[ZEN]	3					EpiSensor	Etna2	Digital	
WUAZ	Wupatki, AZ	BH[ZEN]	3	US	35° 31.01'	111° 22.43'	1592	*	*	Digital	USGS
WVUT	Wellsville, UT	EHZ	1	UU	41° 36.61'	111° 57.55'	1828	L4C	PSN	Analog	USGS
YDC	Denny Creek, MT	EHZ	1	WY	44° 42.51'	111° 14.60'	2025	L4C	PSN	Analog	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	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	EHZ	1	WY	44° 47.77'	111° 06.45'	2075	L4C	PSN	Analog	USGS
YHB	Horse Butte, MT	EHZ	1	WY	44° 45.07'	111° 11.71'	2157	L4C	PSN	Analog	USGS
		HH[ZEN]	3					Compact	ANSS-130	Digital	
		EN[ZEN]	3								
YHH	Holmes Hill (YNP), WY	EHZ	1	WY	44° 47.30'	110° 51.03'	2717	S13	PSN	Analog	USGS
		HH[ZEN]	3					Trillium 120	Q330	Digital	
		EN[ZEN]	3								
YHL	Hebgen Lake, MT	HH[ZEN]	3	WY	44° 51.05'	111° 10.98'	2691	Trillium 120	Q330	Digital	USGS
		EN[ZEN]	3					Titan			

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
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	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	L4C	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, USA	HH[ZEN]	3	WY	44° 43.64'	110° 42.67'	2307	Trillium 120	Centaur	Digital	USGS
YNE	Northeast Entrance (YNP), WY	HH[ZEN]	3	WY	45° 00.46'	110° 00.48'	2343	Compact	ANSS-130	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	EHZ	1	WY	44° 16.26'	110° 48.27'	2707	S13	PSN	Analog	USGS
		HH[ZEN]	3					Trillium 120	Q330	Digital	
		EN[ZEN]	3					Titan			
YSB	Soda Butte (YNP), WY	EHZ	1	WY	44° 53.04'	110° 09.06'	2072	L4C	PSN	Analog	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	Q330	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	EHZ	1	WY	44° 36.35'	111° 06.05'	2310	L4C	PSN	Analog	USGS
ZNPU	Zion National Park, UT	HH[ZEN]	3	UU	37° 21.37'	113° 07.52'	1953	Trillium 120	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			

\* Station operated by another agency and recorded as part of University of Utah regional seismic network  
Network Statistics: 1049 data channels from 349 stations were being recorded at the end of this report period

## EXPLANATION OF TABLE

**UURSN Code:** Station code formerly used in routine processing. Because of software limitations, the station code may not be the station 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](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](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
AE	Arizona Broadband Seismic Network, Arizona Geological Survey
AR	Northern Arizona Seismic Network, Northern Arizona University
IE	Idaho National Laboratory Seismic Network

IU	IRIS/USGS Network; USGS Albuquerque Seismological Laboratory
IW	Intermountain West Network, U.S. Geological Survey
LB	Leo Brady Network; Sandia National Laboratory
MB	Montana Regional Seismic Network; Montana Bureau of Mines and Geology
NN	Western Great Basin Network; University of Nevada, Reno
NP	National Strong Motion Network; U.S. Geological Survey
PB	Plate Boundary Observatory
RE	U.S. Bureau of Reclamation Seismic Networks; U.S. Bureau of Reclamation, Denver Federal Center
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.

<b>Sensor</b>	<b>Description</b>
L4, L4C	Mark Products L4 or L4C short-period seismometer
S13, 18300	Geotech S13 or 18300 short-period seismometer
Ranger	Kinometrics 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
STS-5A	Streckheisen STS-5A broadband seismometer
FBA23	Kinometrics FBA-23 accelerometer
EpiSensor	Kinometrics EpiSensor accelerometer
Applied Mems	Applied Mems accelerometer
PA-23	Geotech PA-23 accelerometer
Compact	Nanometrics Compact 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
R147	Refraction Technology (REF TEK) Model 147 accelerometer
IESE-S2	Institute of Earth Science and Engineering S-2 model borehole seismometer
Gsig-AC63	Geosig-AC63 NetQuakes accelerometer
Omni-2400	Geospace OMNI-2400
Silicon-ULN	Silicon Audio Ultra Low Noise

<b>Digitizer</b>	<b>Description</b>
K2	Kinometrics Altus Series K2 (19-bit resolution field digitizer)
Etna	Kinometrics 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	Kinometrics Basalt (24-bit resolution field digitizer)
Taurus	Nanometrics Taurus (24-bit resolution field digitizer)
Gsig-GMS	Geosig-GMS NetQuakes (24-bit resolution field digitizer)
Centaur	Nanometrics Centaur (24-bit resolution field digitizer)
Obsidian	Kinometrics Obsidian (24-bit resolution field digitizer)
Etna2	Kinometrics Etna 2 (24-bit resolution field digitizer)

<b>Telemetry</b>	<b>Description</b>
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
USBR	U.S. Bureau of Reclamation
LLNL	Lawrence Livermore National Laboratory
Sandia	Sandia National Laboratory
BYU-I	Brigham Young University, Idaho (formerly Ricks College)
MBMT	Montana Bureau of Mines and Geology
NSMP	National Strong Motion Project, U.S. Geological Survey
UNR	University of Nevada, Reno
AZGS	Arizona Geological Survey
NAU	Northern Arizona University
NSF	National Science Foundation
PBO	Plate Boundary Observatory

**NETWORK CHANGES DURING OCTOBER 1–DECEMBER 31, 2023**

- October 17 IAE EN[ZEN] upgraded to Etna2
- October 31 CAP2 EN[ZEN] installed (replaced CAPU)