

EARTHQUAKE ACTIVITY IN THE UTAH REGION

Preliminary Epicenters

October 1 – December 31, 2018

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 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 4 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, 2018

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During the three-month period October 1, 2018, through December 31, 2018, the University of Utah Seismograph Stations (UUSS) located 358 earthquakes within the Utah region (Figure 1). The total includes three earthquakes in the magnitude 3 range, and 47 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. Six earthquakes were reported felt during the report period (see Table 1, a cumulative tabulation of earthquakes during 2018 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 _L 3.4	October 27	04:34 MDT	55 mi NNW of Kayenta, AZ
M _L 3.6	October 30	02:15 MDT	13 mi SE of Minersville, UT
M _L 3.1	December 20	05:49 MST	9 mi E of Manti, UT

Other Notable Seismicity

During the report period, there were six 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 ($0.8 \leq M \leq 2.8$) occurred about 29 mi W of Garland, UT. Twelve of these events, including a magnitude 2.8 shock, occurred on October 17.
- B. A cluster of 21 earthquakes ($1.0 \leq M \leq 2.4$) occurred about 18 mi SW of Emery, UT. Nine of these events, including a magnitude 2.4 shock, occurred on October 27.
- C. A cluster of 21 earthquakes ($0.3 \leq M \leq 1.9$) occurred about 16 mi SSW of Kanosh, UT. Five of these events, including a magnitude 1.9 shock, occurred between October 11 and October 14.
- D. A cluster of 16 earthquakes ($0.8 \leq M \leq 2.8$) occurred about 1 mi SSE of Sevier, UT. Six of these events, including a magnitude 2.8 shock, occurred between December 18 and December 25.
- E. A cluster of 20 earthquakes ($0.4 \leq M \leq 3.6$) occurred about 13 mi SE of Minersville, UT. Four of these events, including a magnitude 3.6 shock, occurred between October 30 and November 4.
- F. A cluster of 13 earthquakes ($1.1 \leq M \leq 2.0$) occurred about 4 mi WNW of Enoch, UT. Seven of these events, including a magnitude 2.0 shock, occurred between October 10 and October 22.

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 50 located shocks ($0.9 \leq M \leq 2.3$) that occurred during the report period.

Seismicity of the Utah Region October 1, 2018 - December 31, 2018

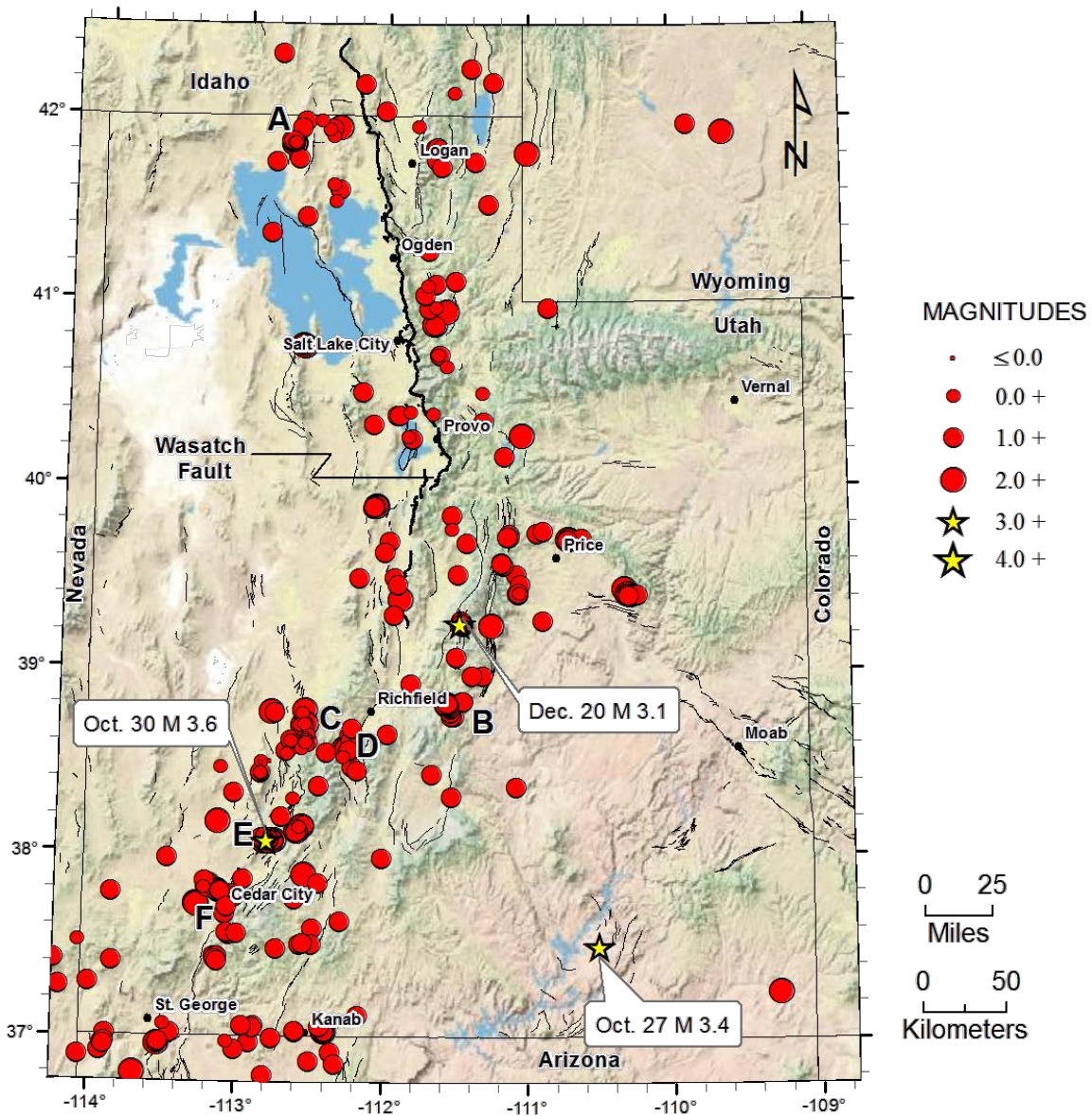


Figure 1. Earthquake epicenters, located by the University of Utah Seismograph Stations, superimposed on a map of Quaternary (geologically young) faults compiled by the Utah Geological Survey (black lines). The Wasatch fault is shown in bold. Earthquakes of magnitude 3.0 and larger are labeled by local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

Table 1**EARTHQUAKES FELT AND/OR GENERATING A SHAKEMAP IN THE UTAH REGION****January 1, 2018 to December 31, 2018**

Date	Time†	Felt Information‡	Latitude	Longitude	Magnitude§
January 8	15:38 MST 22:38 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (III) at Richfield, UT.	38° 27.13'	112° 28.77'	M. 3.5
February 28	07:11 MST 14:11 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (III) Panguitch, Alton, UT and (II) at Bryce Canyon, Paragonah, UT.	112° 31.84'	112° 31.84'	M. 3.6
March 21 March 22	18:27 MDT 00:27 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (III) at Loa, UT.	38° 25.04'	111° 39.36'	M. 3.0
March 22	07:21 MDT 13:21 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (IV) at Teasdale, UT (III) at Loa, UT, and (II) at Torrey, Richfield, UT.	38° 25.23'	111° 39.42'	M. 3.2
April 3	14:26 MDT 20:26 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (III) at Loa, Teasdale, Salina, UT and (II) at Torrey, UT.	38° 25.02'	111° 39.67'	M. 3.5
May 2 May 3	20:49 MDT 02:49 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (II) at Santa Clara, St. George, Washington, UT.	37° 00.37'	113° 49.77'	M. 3.0
June 19	01:15 MDT 07:15 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (III) at Salt Lake City, UT and (II) at West Jordan, Kaysville, UT.	38° 08.52'	112° 34.25'	M. 3.1
July 11	07:21 MDT 13:21 UTC	Utah. <i>ShakeMap</i> .	38° 03.51'	112° 24.05'	M. 3.1
September 11 September 12	23:54 MDT 05:34 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (III) at Cedar City, Salt Lake City (?), UT.	38° 45.92'	112° 44.06'	M. 3.8
October 16	11:07 MDT 18:04 UTC	Utah. <i>ShakeMap</i> .	39° 52.80'	112° 04.01'	M. 2.9
October 23 October 24	21:30 MDT 04:30 UTC	Utah. <i>CIIM</i> . Felt (III) at Bountiful, Salt Lake City, Centerville,	40° 52.03'	111° 39.80'	M. 2.8

Date	Time†	Felt Information‡	Latitude	Longitude	Magnitude§
		Farmington, Woods Cross, Keyesville, UT and (II) at Layton, UT.			
October 27	03:34 MDT 10:34 UTC	Utah. <i>ShakeMap</i> .	37° 29.65'	110° 30.90'	M. 3.4
October 30	01:15 MDT 08:15 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (IV) at Paragonah, Greenville, and Milford, UT, (III) at Summit, UT and (II) at Hurricane, UT.	38° 03.69'	112° 47.88'	M. 3.6
December 20	06:49 MST 12:49 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (II) at Sandy and Salt Lake City, UT.	39° 14.74'	111° 28.50'	M. 3.1
December 22 December 23	18:09 MST 00:09 UTC	Utah. <i>CIIM. ShakeMap</i> . Felt (II) at Saint George, Washington, Ivins, and Hurricane, UT and Mesquite, NV.	36° 57.18'	113° 31.12'	M. 2.9

† Times are listed both as Local Time—Mountain Standard Time (MST) or Mountain Daylight Time (MDT)—and as Universal Coordinated 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 (<http://www.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.) or 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, 2018

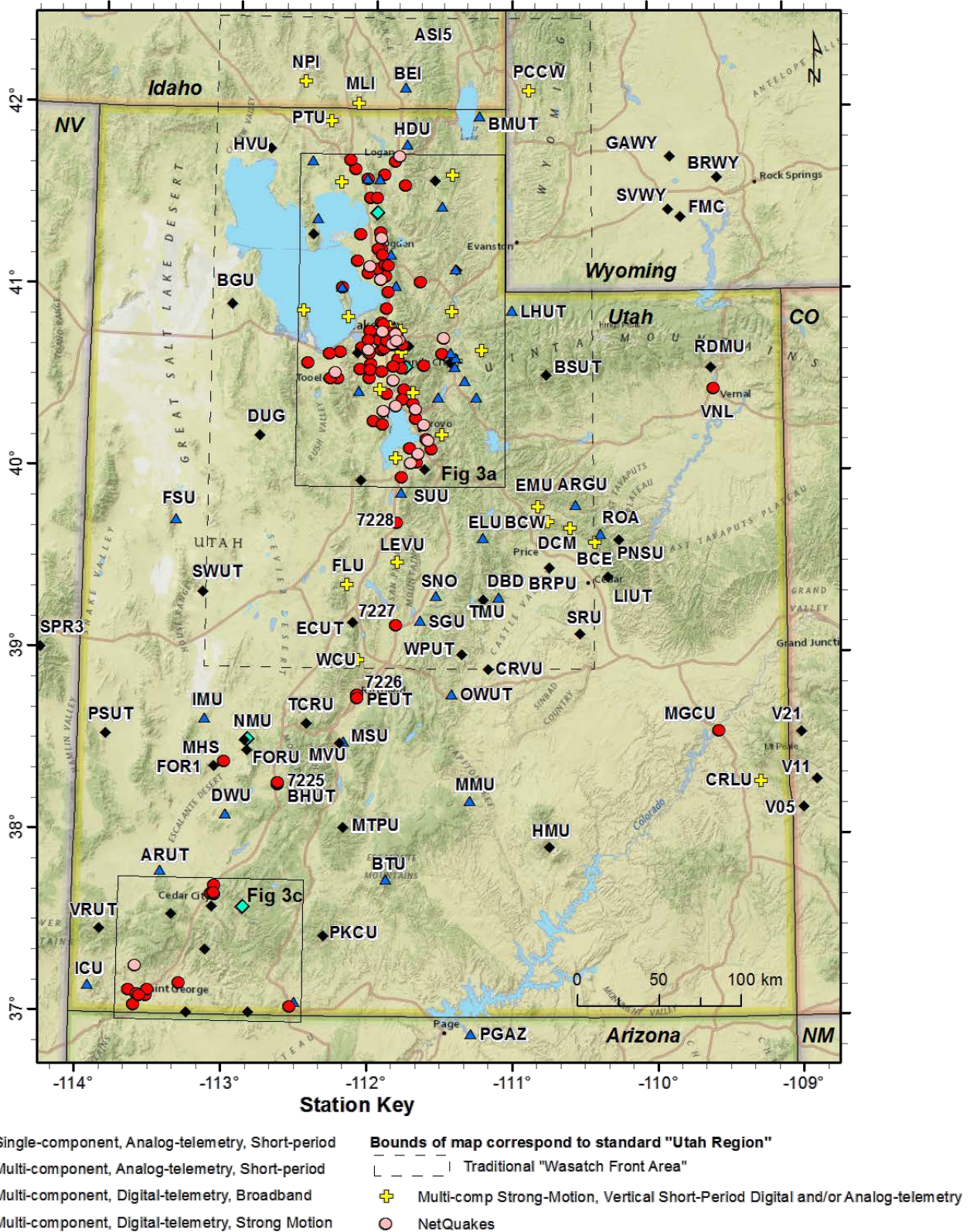
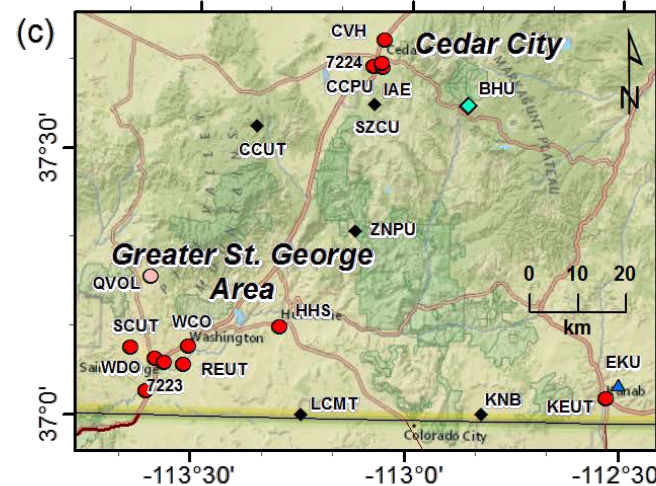
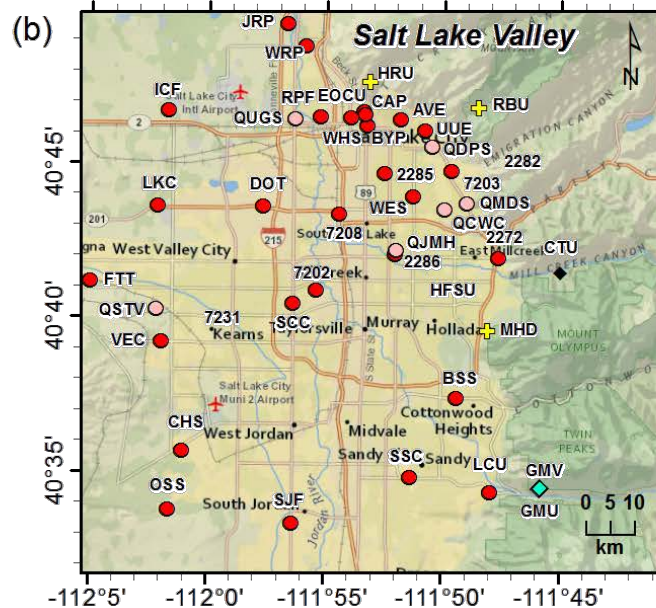
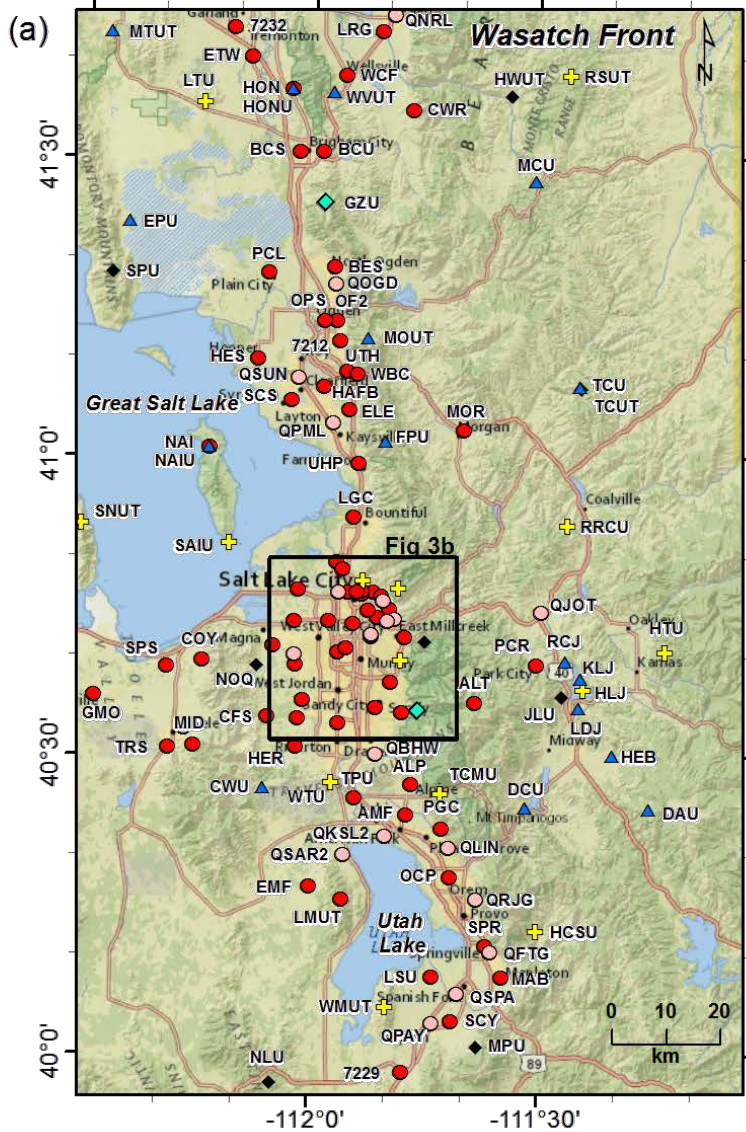


Figure 2

Utah Urban Seismic Network (December 31, 2018)



- ▲ Single-comp, Analog-telemetry, Short-period
- ◆ Multi-comp, Digital-telemetry, Broadband
- ⊕ Multi-comp Strong-Motion, Vertical Short-Period Digital and/or Analog-telemetry
- ◇ Multi-comp, Analog-telemetry, Short-period
- Multi-comp, Digital-telemetry, Strong Motion
- NetQuakes

Figure 3

Table 2. Earthquakes in the Utah Region: October 1–December 31, 2018

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181001	00:54:04.18	41° 55.92'	112° 37.86'	5.2*	1.1	19	165	21	0.16
181001	08:27:21.99	37° 01.44'	112° 23.62'	20.6	1.5	15	163	11	0.14
181001	08:48:30.02	36° 58.00'	113° 03.31'	23.8	0.9	9	211	18	0.09
181002	08:07:32.80	38° 07.08'	112° 35.84'	5.1*	1.8W	31	64	18	0.26
181002	11:21:29.07	38° 07.59'	112° 35.46'	9.7	1.6W	27	56	17	0.29
181003	01:37:32.10	37° 47.44'	113° 06.65'	3.1*	1.4W	9	105	22	0.06
181003	01:43:53.94	37° 46.97'	113° 07.02'	2.7*	1.2W	12	104	21	0.08
181003	02:00:53.11	37° 47.23'	113° 06.58'	5.2*	1.1	14	103	21	0.11
181003	07:15:57.05	37° 01.72'	112° 23.37'	21.5	1.1W	10	164	11	0.09
181004	04:36:37.45	39° 42.66'	110° 37.78'	-1.6	1.4W	10	84	4	0.08
181004	19:49:39.54	38° 04.12'	112° 47.22'	8.1*	1.0	19	67	19	0.16
181004	19:50:01.09	38° 04.63'	112° 46.32'	1.9*	1.6W	15	114	20	0.14
181005	01:10:39.54	38° 27.40'	113° 07.22'	2.6	0.9	11	112	10	0.26
181005	20:13:12.39	38° 44.65'	111° 30.73'	12.6	1.8W	14	91	9	0.14
181005	22:09:52.35	40° 38.12'	111° 34.66'	6.9	0.2	11	150	7	0.08
181006	09:21:33.25	38° 19.17'	113° 01.98'	4.0	1.0	15	115	8	0.08
181006	21:28:46.60	39° 30.75'	111° 29.46'	13.4	1.4W	19	104	22	0.12
181007	09:12:29.08	41° 47.94'	111° 00.61'	8.5*	2.6W	38	75	26	0.26
181007	14:18:10.30	37° 03.53'	112° 52.08'	23.4	1.8W	11	119	6	0.10
181007	15:08:56.49	38° 45.39'	112° 45.19'	6.6*	1.8	14	146	28	0.12
181007	23:32:23.08	39° 52.64'	112° 05.06'	8.0	1.2W	8	177	9	0.06
181008	00:03:26.90	38° 45.85'	112° 46.63'	4.1*	2.1W	19	63	28	0.23
181008	05:12:20.09	37° 01.69'	112° 23.11'	21.4	1.6	15	118	11	0.11
181008	23:51:28.93	38° 44.69'	111° 31.98'	12.4	1.6W	17	85	10	0.21
181009	02:28:39.95	38° 40.36'	112° 13.51'	12.8	1.0W	21	93	18	0.19
181009	07:58:36.60	39° 24.04'	110° 17.95'	-3.2	1.3	7	202	3	0.06
181009	15:53:09.03	37° 00.74'	113° 26.05'	7.6*	1.4W	21	126	17	0.17
181009	17:06:32.54	38° 27.80'	112° 13.14'	3.4	1.6W	22	64	5	0.16
181010	00:44:33.87	39° 22.44'	111° 53.44'	5.2*	2.1W	20	73	16	0.31
181010	01:12:58.61	36° 55.54'	112° 59.79'	17.8	1.2W	11	163	19	0.12
181010	10:05:07.76	39° 29.45'	111° 55.90'	12.8	1.7W	21	59	10	0.21
181010	17:26:49.29	37° 45.26'	113° 00.92'	2.8*	1.6W	11	116	19	0.17
181011	04:06:19.98	37° 45.94'	113° 03.11'	1.8*	1.8W	13	82	19	0.13
181011	04:45:32.53	37° 46.05'	113° 02.09'	5.0*	1.7W	17	76	20	0.19
181011	04:51:13.33	38° 33.09'	112° 40.55'	4.4*	1.9W	33	43	16	0.15
181011	05:03:59.18	38° 31.97'	112° 39.96'	2.5*	0.5	10	180	16	0.05
181011	10:35:05.60	39° 27.38'	111° 54.61'	15.0	1.7W	21	53	10	0.17
181011	21:50:36.29	39° 24.37'	110° 18.43'	-1.8	1.8	10	198	3	0.06
181012	06:43:42.53	41° 43.23'	111° 37.60'	10.9	1.2W	12	77	14	0.06
181012	22:55:10.31	40° 42.03'	111° 37.52'	7.2	1.2	18	80	11	0.14
181013	00:32:09.16	36° 47.00'	112° 48.33'	20.8	1.3	10	173	26	0.10
181013	05:30:20.72	38° 03.77'	112° 47.24'	7.9*	0.7	23	49	19	0.19
181013	06:27:17.93	38° 03.60'	112° 47.56'	8.5*	1.8W	31	46	19	0.19

Table 2. Earthquakes in the Utah Region: October 1–December 31, 2018

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181013	16:19:16.10	41° 58.22'	112° 36.15'	6.2*	1.6W	16	164	21	0.09
181013	22:11:25.34	38° 36.49'	112° 38.61'	3.4*	1.1	15	119	17	0.10
181013	22:26:07.24	38° 36.35'	112° 38.48'	0.7*	0.5	10	133	17	0.04
181013	22:45:19.65	38° 35.20'	112° 37.81'	4.2*	0.9	11	163	16	0.03
181014	11:38:58.12	38° 35.90'	112° 38.06'	6.4*	0.7	9	130	16	0.03
181014	19:07:02.08	38° 08.54'	112° 33.44'	3.6*	2.2W	18	70	35	0.27
181014	22:58:36.39	37° 46.00'	113° 02.41'	1.8*	1.9W	15	62	19	0.28
181014	23:10:49.92	37° 41.98'	113° 04.17'	-1.7*	1.1	11	265	12	0.11
181015	06:36:27.67	40° 57.58'	111° 39.62'	11.0	0.8W	10	113	17	0.09
181015	12:10:53.66	38° 03.71'	112° 47.65'	9.0	2.0W	26	45	18	0.16
181015	17:51:00.95	39° 24.38'	110° 16.85'	3.4*	1.5W	13	207	25	0.10
181016	04:12:35.30	39° 24.08'	110° 17.55'	-3.0	1.5W	12	203	4	0.19
181016	06:29:39.43	39° 23.82'	110° 17.30'	5.1*	1.9	8	205	26	0.14
181016	06:40:32.48	37° 03.08'	112° 25.26'	17.9	1.1	8	252	7	0.12
181016	08:10:22.94	39° 24.14'	110° 17.09'	5.7*	1.5W	8	206	25	0.13
181016	10:07:19.79	39° 24.19'	110° 17.22'	-3.4	2.3W	17	188	4	0.20
181016	17:30:46.69	39° 53.09'	112° 04.49'	8.5	1.7W	11	73	8	0.05
181016	18:04:13.76	39° 52.80'	112° 04.01'	9.8	2.9W	48	38	8	0.24
181016	18:04:44.39	39° 52.84'	112° 03.71'	6.5	2.7W	25	72	8	0.13
181016	18:05:10.98	39° 52.29'	112° 05.47'	6.0	1.6	9	152	9	0.11
181016	18:15:38.32	40° 22.38'	111° 54.57'	5.8	1.3	12	100	10	0.14
181016	18:15:47.63	40° 22.44'	111° 55.35'	1.5	1.5W	17	102	9	0.16
181016	20:36:30.38	39° 52.73'	112° 04.57'	9.0	1.9W	32	49	8	0.14
181017	07:22:22.45	39° 52.82'	112° 04.83'	8.3	1.3W	9	73	8	0.06
181017	10:11:32.60	39° 24.38'	110° 18.96'	3.6*	1.5W	10	136	24	0.16
181017	10:16:18.35	41° 50.53'	112° 41.46'	5.2	2.8W	29	156	10	0.15
181017	10:17:05.53	41° 50.69'	112° 41.32'	2.7	1.7	8	157	10	0.04
181017	10:20:41.76	41° 51.11'	112° 40.88'	0.5*	0.8	11	157	11	0.05
181017	10:25:19.88	41° 50.49'	112° 41.38'	5.5	2.0W	26	156	10	0.13
181017	10:30:41.74	41° 50.79'	112° 41.39'	2.4	2.8W	23	158	10	0.21
181017	10:35:14.35	41° 51.15'	112° 41.63'	5.6	1.4W	15	163	11	0.12
181017	10:35:46.67	41° 51.03'	112° 41.74'	4.5	1.3	18	163	10	0.14
181017	10:37:18.87	41° 50.90'	112° 41.98'	5.3	1.4	19	164	10	0.13
181017	13:15:24.78	41° 51.11'	112° 41.47'	1.7*	0.8	6	161	11	0.01
181017	13:51:39.80	41° 51.21'	112° 42.37'	5.1	1.3	15	170	10	0.09
181017	15:52:46.66	38° 03.59'	112° 48.10'	9.4	2.5W	32	36	18	0.20
181017	17:50:55.88	38° 05.37'	112° 49.54'	11.1	0.6	9	248	15	0.15
181017	20:42:13.42	41° 51.43'	112° 42.62'	4.4	1.2	12	173	10	0.19
181017	20:42:57.65	41° 51.57'	112° 41.90'	1.6*	0.9	10	168	11	0.20
181018	00:23:49.68	38° 05.50'	112° 49.34'	10.0	0.4	8	247	15	0.06
181018	02:31:48.69	37° 48.79'	113° 11.32'	14.4	2.0W	26	46	19	0.16
181018	16:04:53.77	39° 53.15'	112° 03.49'	8.8	1.6W	10	88	8	0.08
181019	13:24:39.85	39° 44.20'	110° 56.60'	1.8*	1.4W	13	166	14	0.26

Table 2. Earthquakes in the Utah Region: October 1–December 31, 2018

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181019	17:01:14.40	41° 35.72'	112° 21.37'	6.3	1.0	8	107	9	0.05
181020	16:34:55.49	38° 05.63'	112° 48.93'	4.5*	0.6	9	246	16	0.07
181021	02:50:22.58	38° 03.60'	112° 47.49'	10.2	0.6	11	74	19	0.26
181022	07:49:56.75	38° 21.52'	112° 26.88'	5.4*	1.2	17	94	26	0.08
181022	09:21:04.54	38° 46.99'	111° 32.47'	8.9	1.4W	11	149	10	0.17
181022	14:02:53.37	40° 20.39'	111° 18.84'	10.9	1.2W	10	187	9	0.12
181022	19:35:59.21	37° 45.36'	113° 01.37'	2.6*	1.6	13	87	19	0.13
181022	21:27:47.43	38° 30.96'	112° 16.90'	2.8	0.8	11	146	6	0.06
181023	07:57:14.37	39° 24.12'	110° 16.40'	-3.4	1.8	8	229	5	0.27
181023	13:15:59.86	38° 47.78'	111° 33.50'	2.0*	1.5	6	290	12	0.23
181023	14:58:42.56	38° 48.55'	111° 33.87'	1.6*	1.0W	8	285	13	0.20
181023	15:05:41.15	38° 47.74'	111° 32.83'	1.7*	1.3	8	288	11	0.21
181023	17:10:17.15	38° 48.69'	111° 34.33'	1.6*	1.3W	10	152	13	0.29
181023	18:19:36.55	37° 39.88'	113° 04.70'	11.1	1.3W	17	53	8	0.09
181023	21:37:24.90	38° 34.59'	112° 31.78'	1.9	0.6	8	183	8	0.04
181023	21:37:53.75	38° 36.03'	112° 31.81'	5.4	1.1	13	160	7	0.12
181023	21:45:30.15	38° 37.13'	112° 32.68'	0.1	1.2	16	85	9	0.10
181023	22:07:20.97	38° 36.82'	112° 32.32'	1.4	0.5	10	204	8	0.08
181023	22:09:23.01	38° 35.70'	112° 32.28'	1.7	0.3	11	150	8	0.05
181023	22:10:20.90	38° 36.36'	112° 32.44'	1.6	0.4	12	154	8	0.06
181024	04:24:31.09	40° 51.83'	111° 39.74'	9.7	1.6W	32	45	15	0.13
181024	04:30:12.99	40° 52.03'	111° 39.80'	10.1	2.8W	51	46	16	0.14
181024	13:46:31.16	41° 58.31'	112° 29.51'	14.1	0.5	7	126	15	0.12
181024	20:50:46.45	40° 45.12'	112° 35.62'	6.4*	2.2W	15	101	16	0.06
181024	20:51:22.00	40° 45.42'	112° 34.79'	8.0	0.9	10	98	15	0.06
181024	20:51:26.53	40° 44.81'	112° 34.88'	3.9*	2.8W	24	100	17	0.17
181024	20:55:15.35	40° 45.75'	112° 35.40'	5.3*	1.8W	21	97	15	0.19
181024	23:07:30.23	39° 24.75'	111° 03.88'	2.4*	0.9W	6	111	11	0.04
181025	13:22:02.44	40° 45.24'	112° 35.66'	6.8*	1.1	12	125	16	0.15
181025	17:33:09.05	40° 45.27'	112° 35.41'	8.4	1.3W	8	127	16	0.08
181025	18:44:17.71	38° 47.91'	111° 34.55'	2.3*	1.2W	8	161	13	0.19
181026	00:53:17.67	41° 31.92'	112° 23.07'	5.8*	0.5W	11	118	13	0.06
181026	02:06:14.29	40° 45.28'	112° 35.55'	6.7*	1.6W	15	100	16	0.14
181026	04:01:41.93	41° 51.21'	112° 41.43'	1.1*	1.0	10	206	11	0.17
181026	04:15:47.18	38° 38.01'	112° 14.06'	-0.7*	1.5W	15	89	14	0.21
181026	07:07:34.12	37° 51.21'	112° 57.29'	3.2*	1.3	7	291	31	0.13
181026	12:23:53.75	37° 48.17'	113° 13.57'	1.2*	0.9	8	121	19	0.30
181027	01:52:24.84	38° 37.98'	112° 32.76'	1.0	0.8	20	125	9	0.11
181027	02:50:06.82	37° 03.82'	113° 29.16'	12.7	0.9	9	161	22	0.12
181027	04:36:29.17	38° 48.43'	111° 33.88'	9.2	2.0W	21	91	13	0.22
181027	06:53:37.65	38° 45.91'	111° 32.49'	1.5	1.5	7	164	10	0.16
181027	06:55:04.86	38° 47.63'	111° 33.48'	1.8*	1.8	14	132	12	0.25
181027	06:56:54.48	38° 47.75'	111° 34.43'	3.7*	1.8	8	149	13	0.10
181027	07:38:00.64	38° 48.82'	111° 34.89'	2.2*	1.9	9	152	14	0.14

Table 2. Earthquakes in the Utah Region: October 1–December 31, 2018

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181027	08:08:36.50	38° 48.35'	111° 33.75'	1.7*	1.5	11	134	12	0.17
181027	09:45:32.11	38° 47.98'	111° 33.82'	3.5*	1.6	10	148	12	0.09
181027	10:34:24.46	37° 29.65'	110° 30.90'	6.0*	3.4W	16	134	106	0.18
181027	14:26:03.05	37° 46.70'	113° 07.63'	1.8*	1.5	8	157	21	0.20
181027	15:15:44.63	38° 48.59'	111° 33.10'	2.6*	1.5	8	133	12	0.17
181027	15:36:49.20	37° 47.95'	113° 07.24'	1.5*	1.8	16	108	15	0.24
181027	15:51:15.20	38° 48.01'	111° 33.55'	9.0	2.3W	24	60	12	0.19
181027	17:41:31.40	38° 18.19'	111° 32.04'	6.3*	1.9	15	89	24	0.11
181027	20:02:55.99	37° 47.79'	113° 07.47'	1.8*	1.7	12	109	23	0.27
181027	23:04:44.50	38° 55.11'	111° 48.83'	18.9	1.6	14	66	25	0.15
181028	20:02:00.33	42° 19.99'	112° 46.65'	3.5*	1.5	13	277	30	0.16
181028	22:51:18.29	39° 24.79'	111° 04.75'	5.6	1.5W	18	70	11	0.15
181029	07:30:25.11	38° 49.63'	111° 35.16'	2.7*	1.4W	8	281	15	0.19
181029	11:10:38.37	40° 23.52'	111° 50.22'	3.3	0.7	16	106	4	0.15
181029	21:11:13.42	38° 48.43'	111° 33.17'	1.7*	1.1W	8	246	12	0.08
181030	00:39:04.19	41° 04.37'	111° 43.06'	13.2	0.5	8	145	26	0.06
181030	05:59:59.04	40° 44.95'	112° 35.86'	1.5*	1.2	15	101	17	0.12
181030	06:08:24.07	40° 45.13'	112° 36.28'	5.1*	1.8W	31	87	17	0.16
181030	08:15:17.11	38° 03.69'	112° 47.88'	11.7	3.6W	39	44	18	0.22
181031	02:46:18.40	37° 33.56'	112° 59.75'	7.0	1.3	8	221	9	0.08
181031	05:08:02.13	40° 09.08'	111° 10.17'	5.7*	1.7W	18	114	30	0.17
181031	16:17:35.61	37° 37.51'	112° 17.50'	12.9	1.9W	13	110	20	0.18
181031	23:00:58.39	37° 06.70'	112° 09.99'	20.5	1.5	11	157	30	0.10
181101	03:50:04.87	38° 41.60'	112° 33.20'	6.2*	0.3	7	262	13	0.06
181101	05:50:30.37	38° 36.39'	112° 13.89'	11.6	1.2W	12	138	11	0.13
181101	10:29:50.65	38° 03.47'	112° 48.65'	11.6	2.5W	34	46	17	0.18
181101	15:49:56.73	41° 05.02'	111° 39.74'	7.3*	1.5	11	115	16	0.21
181102	07:03:55.34	39° 24.33'	110° 18.01'	-3.1	1.9W	14	184	3	0.17
181102	13:00:20.96	37° 58.27'	112° 00.61'	14.5	1.1	18	62	17	0.19
181102	13:47:33.04	37° 29.95'	112° 29.21'	-0.5*	1.7W	15	60	17	0.20
181102	14:35:41.27	41° 37.46'	112° 23.67'	8.0	0.7	16	84	7	0.20
181102	18:55:20.19	39° 26.20'	110° 19.63'	-3.2	2.0W	11	154	1	0.13
181103	07:14:21.57	38° 03.52'	112° 47.71'	10.5	2.0W	16	91	18	0.19
181103	12:47:38.11	37° 01.30'	112° 23.59'	20.8	1.7W	11	164	13	0.09
181103	22:09:40.17	42° 11.05'	111° 15.29'	2.7*	1.0W	9	110	25	0.06
181104	09:17:33.08	37° 43.15'	113° 16.43'	9.0	2.0W	16	120	17	0.10
181104	09:17:33.44	37° 42.62'	113° 16.05'	0.1*	2.0W	17	65	18	0.24
181104	15:51:55.65	38° 03.87'	112° 47.04'	6.0*	1.1W	12	56	19	0.24
181104	19:47:08.39	39° 25.07'	111° 04.36'	12.4	1.7	8	81	12	0.15
181104	21:11:10.87	37° 52.88'	112° 32.57'	7.4*	2.6W	28	54	36	0.20
181105	02:12:45.03	41° 16.08'	111° 42.84'	5.8*	1.0	14	84	28	0.14
181105	08:19:04.82	39° 29.36'	112° 11.08'	7.8	1.3	17	70	12	0.20
181105	19:09:44.16	38° 26.51'	112° 10.90'	1.6	1.1W	11	179	7	0.23

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DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181106	21:35:44.47	37° 50.52'	113° 13.31'	0.8*	1.6	12	137	20	0.22
181109	09:17:02.01	39° 24.48'	111° 04.38'	1.7*	1.5	11	113	17	0.09
181110	14:30:24.77	39° 49.84'	111° 32.25'	1.2*	1.5	26	70	22	0.21
181110	23:04:16.84	38° 08.59'	112° 32.74'	6.4*	1.9W	30	42	34	0.22
181111	08:25:57.87	37° 17.09'	113° 59.98'	4.5*	1.2	11	209	16	0.11
181111	09:55:42.18	39° 41.08'	111° 25.74'	5.4*	1.8W	22	87	20	0.19
181112	17:17:23.11	38° 04.43'	112° 47.57'	5.8*	0.8	9	189	18	0.16
181113	01:09:24.00	36° 51.83'	112° 29.54'	15.3	1.3	9	146	23	0.15
181113	09:19:17.02	38° 04.55'	112° 50.22'	11.9	1.5W	18	44	14	0.17
181113	10:41:20.88	41° 27.06'	112° 35.23'	0.5*	1.2W	21	124	16	0.09
181114	03:55:08.62	39° 24.04'	110° 14.54'	5.2*	1.5	6	237	28	0.13
181115	07:24:47.54	37° 33.61'	113° 03.96'	6.9	1.3W	13	95	12	0.12
181115	08:39:07.82	38° 29.73'	112° 46.83'	3.8	-.1	13	138	6	0.06
181116	19:48:54.12	39° 42.58'	110° 37.97'	-1.9	1.2W	10	84	5	0.11
181117	01:51:49.59	38° 06.89'	112° 35.69'	8.2*	2.4W	29	59	35	0.22
181117	01:57:00.73	38° 06.94'	112° 35.28'	3.6*	1.3	16	63	36	0.29
181117	02:23:50.82	38° 07.96'	112° 34.57'	7.2*	0.9	13	100	36	0.24
181117	02:24:52.47	42° 10.28'	112° 10.85'	7.0*	1.1	18	148	17	0.13
181118	07:45:58.74	38° 46.16'	112° 32.67'	3.9*	2.2W	23	51	20	0.23
181118	14:12:23.21	41° 44.83'	111° 22.79'	1.6*	1.8W	19	65	13	0.10
181118	14:54:06.88	40° 15.57'	111° 50.78'	7.1*	0.8	17	127	18	0.15
181118	21:05:17.49	40° 14.74'	111° 48.92'	11.1	1.2	9	148	17	0.16
181119	06:01:25.21	38° 34.01'	112° 37.43'	1.0*	0.9	10	176	16	0.05
181119	16:07:07.09	37° 35.26'	112° 28.65'	3.6*	1.7	9	110	22	0.19
181120	05:15:13.89	41° 53.24'	112° 24.42'	4.7	0.7	11	94	8	0.08
181120	10:13:08.58	38° 41.36'	112° 34.87'	-0.3*	0.6	10	170	30	0.26
181120	10:26:36.61	37° 01.30'	112° 35.49'	13.7	1.9W	15	112	10	0.16
181120	12:33:25.17	42° 07.47'	111° 32.12'	13.2	0.9	13	113	20	0.14
181120	14:32:29.67	37° 01.60'	112° 35.25'	11.4	1.8W	13	110	10	0.09
181121	06:15:20.24	42° 15.39'	111° 24.99'	10.3*	1.3W	11	131	25	0.10
181121	21:50:00.19	38° 06.42'	112° 35.77'	2.8*	1.2	12	149	35	0.15
181123	08:40:28.64	40° 29.82'	111° 19.35'	11.4	0.9	13	111	1	0.10
181123	16:54:08.78	37° 23.94'	113° 50.36'	8.5	1.8	17	62	7	0.18
181123	16:59:54.89	41° 45.87'	112° 39.23'	3.2	1.0	18	94	10	0.11
181126	07:20:21.21	39° 30.60'	111° 05.18'	5.3*	1.7	10	84	18	0.07
181126	14:48:03.75	36° 54.73'	113° 54.81'	9.2*	1.8	10	165	26	0.17
181126	22:47:41.23	38° 25.59'	111° 39.96'	19.4*	1.4	20	71	41	0.25
181126	23:53:28.68	38° 36.08'	112° 34.25'	1.1*	0.7	14	156	11	0.16
181127	00:42:49.46	41° 44.68'	112° 48.69'	6.3	1.4	14	223	5	0.17
181127	11:42:21.49	40° 57.70'	110° 51.57'	15.6	1.0	11	253	14	0.14
181127	12:05:00.76	37° 30.09'	112° 33.98'	1.8*	1.6	19	63	23	0.25
181127	15:52:02.90	38° 11.41'	112° 42.01'	2.5*	1.0	9	128	28	0.08
181129	05:51:57.01	38° 33.62'	112° 14.65'	4.4	2.0W	11	90	7	0.13

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DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181129	08:53:49.81	38° 34.09'	112° 16.06'	-2.7	1.8W	20	60	9	0.17
181129	09:58:40.04	38° 33.04'	112° 14.95'	6.6	1.3	9	136	8	0.18
181129	12:49:28.74	38° 33.44'	112° 14.28'	4.8	1.1	10	118	6	0.07
181130	02:12:03.20	42° 01.42'	112° 01.47'	0.3	1.2	13	133	8	0.08
181130	07:47:55.95	41° 49.85'	111° 38.44'	9.5	0.9	15	160	11	0.11
181130	10:09:39.96	38° 33.75'	112° 15.68'	-1.4	1.7W	12	86	8	0.15
181130	12:07:49.83	37° 44.63'	112° 36.07'	23.2	1.0	9	95	42	0.13
181130	15:35:13.74	41° 54.83'	109° 36.15'	15.1	2.0	14	163	28	0.22
181130	15:40:32.65	41° 49.56'	111° 39.37'	10.1	1.8	22	81	9	0.11
181130	15:40:32.87	41° 49.48'	111° 39.99'	6.5	1.8	27	80	8	0.17
181130	17:41:34.15	36° 55.00'	112° 20.87'	22.6	1.6	12	275	22	0.13
181201	12:18:17.90	38° 33.69'	112° 15.31'	0.3	2.0W	12	111	7	0.16
181201	13:47:44.80	40° 22.93'	111° 40.52'	7.0	0.3	11	153	3	0.09
181201	23:04:53.37	41° 01.75'	111° 44.19'	11.3	1.0	12	161	6	0.12
181204	03:19:54.07	39° 45.56'	111° 32.31'	3.6*	0.9	10	92	32	0.25
181204	09:41:10.43	40° 56.97'	111° 42.25'	5.4*	1.1	18	80	11	0.15
181204	10:29:09.69	39° 24.67'	110° 18.26'	-2.1	1.6	12	199	2	0.11
181204	13:19:50.23	38° 33.80'	112° 16.27'	-2.9	1.3W	13	90	8	0.16
181204	22:31:57.01	39° 24.34'	110° 18.37'	-3.2	1.6	9	199	3	0.08
181205	04:11:46.10	38° 38.70'	111° 58.54'	9.6*	1.5	11	129	23	0.15
181205	04:36:40.87	39° 24.45'	110° 18.40'	-3.4	2.0	11	116	2	0.12
181205	07:21:07.46	39° 24.31'	110° 17.95'	-3.3	1.8	10	201	3	0.11
181205	11:22:16.92	38° 32.47'	112° 23.86'	4.0	1.5W	10	124	9	0.10
181205	13:12:33.46	40° 42.06'	111° 38.46'	2.6	0.6	17	96	9	0.14
181205	14:33:01.40	37° 28.54'	112° 43.62'	4.1*	1.2	11	113	35	0.11
181206	03:14:39.87	39° 24.51'	110° 18.04'	5.7*	1.5	8	201	25	0.11
181206	07:48:05.59	37° 15.71'	114° 11.92'	0.1*	1.1	13	200	27	0.24
181206	13:29:58.48	37° 01.47'	112° 23.22'	21.0	2.0W	15	143	13	0.11
181206	20:18:32.51	38° 09.77'	113° 08.00'	0.2*	2.3W	22	54	14	0.16
181206	22:47:54.17	38° 04.55'	112° 47.63'	8.5*	1.2	22	62	18	0.19
181207	12:34:21.40	39° 15.58'	110° 53.82'	16.4	1.3W	23	57	18	0.16
181208	10:11:28.77	37° 14.62'	109° 16.92'	7.7*	2.0	9	133	70	0.18
181208	11:39:02.05	38° 35.75'	112° 34.88'	0.9*	0.7	22	78	12	0.09
181208	11:39:16.96	38° 33.85'	112° 34.07'	1.7*	0.5	10	182	12	0.07
181208	12:36:08.58	39° 03.64'	111° 30.05'	0.3*	1.5W	16	49	14	0.11
181209	03:27:08.62	40° 30.08'	112° 10.38'	3.4	1.2	20	104	7	0.19
181209	09:56:14.58	37° 01.25'	112° 23.16'	19.6	1.5	15	164	12	0.13
181210	03:24:47.87	39° 24.55'	110° 18.11'	-3.3	1.6	15	200	3	0.15
181210	13:18:58.16	38° 36.05'	112° 35.93'	6.2*	0.6	14	178	13	0.10
181210	18:35:07.31	38° 57.67'	111° 23.56'	-1.5	1.3W	11	112	5	0.11
181210	18:47:31.58	39° 24.48'	110° 18.57'	-2.4	1.9	11	198	2	0.15
181211	05:00:38.75	36° 53.42'	114° 03.27'	-1.8*	1.4	14	103	31	0.23
181211	07:30:04.52	38° 29.37'	112° 50.80'	-1.1	0.4	13	113	2	0.08
181211	07:31:20.25	38° 29.41'	112° 50.59'	-2.0	-1	8	216	3	0.05

Table 2. Earthquakes in the Utah Region: October 1–December 31, 2018

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181211	12:25:09.92	37° 46.29'	113° 51.35'	0.0*	1.0	13	104	34	0.27
181211	13:56:35.40	36° 47.74'	113° 40.82'	1.0*	2.6W	18	109	45	0.17
181211	21:47:40.11	37° 30.15'	112° 32.86'	4.7*	1.1	12	79	22	0.28
181211	22:10:59.54	38° 17.23'	112° 37.33'	7.9*	0.7	11	216	28	0.07
181211	22:28:15.82	39° 17.43'	111° 56.45'	6.4*	1.7	14	79	21	0.17
181212	02:58:09.58	40° 19.38'	112° 05.53'	7.8	1.1	25	117	9	0.19
181212	05:05:32.23	39° 24.52'	110° 18.99'	-2.5	1.7	13	195	2	0.18
181212	08:57:51.15	36° 57.57'	113° 52.92'	12.8	1.3	12	222	21	0.24
181212	13:12:15.09	39° 42.40'	110° 43.34'	-2.1	2.3W	19	66	3	0.15
181212	13:18:13.57	39° 42.05'	110° 43.65'	-2.4	1.7	10	166	4	0.10
181212	13:18:30.07	39° 42.21'	110° 43.50'	-2.3	1.8W	9	218	3	0.11
181213	16:56:57.75	39° 24.34'	110° 18.58'	-3.3	1.8	10	198	2	0.11
181214	03:49:47.30	41° 21.82'	112° 50.12'	4.0*	1.2	20	167	33	0.12
181214	06:38:42.33	39° 42.24'	110° 43.05'	-2.9	2.2W	20	63	4	0.15
181214	08:32:09.07	39° 27.69'	111° 03.60'	1.8*	1.2	11	79	17	0.22
181214	10:33:16.81	39° 42.21'	110° 43.40'	-2.2	1.8	15	70	3	0.10
181215	11:21:17.82	41° 57.51'	109° 52.08'	30.3	1.7	17	125	24	0.16
181215	23:00:45.04	37° 30.34'	114° 04.45'	0.6*	0.9	12	103	20	0.09
181215	23:20:04.66	39° 42.03'	110° 43.62'	-3.0	1.0W	8	147	4	0.05
181216	02:29:10.80	37° 49.90'	112° 26.48'	3.0*	1.5	15	87	32	0.20
181217	00:06:15.40	39° 24.78'	111° 04.25'	-1.9*	1.0W	12	80	11	0.10
181217	13:21:05.82	37° 25.85'	113° 07.57'	10.6	1.2W	15	78	8	0.13
181217	13:41:16.28	37° 25.61'	113° 07.52'	9.2	1.5	15	78	8	0.09
181217	13:58:33.05	41° 56.13'	112° 21.28'	8.4*	2.0W	20	90	22	0.15
181217	15:05:23.10	40° 16.01'	111° 02.66'	13.8	2.3W	31	61	24	0.20
181217	21:32:39.57	36° 57.83'	112° 53.86'	19.3	1.5	12	210	9	0.11
181218	00:36:38.90	37° 25.86'	113° 08.61'	10.8	1.4	17	73	8	0.17
181218	07:12:45.62	38° 34.17'	112° 16.21'	-2.6	1.8W	17	62	9	0.15
181218	10:19:19.22	41° 45.49'	111° 39.75'	9.4	1.3	17	137	10	0.13
181218	14:11:23.77	38° 21.63'	111° 04.96'	5.9*	1.6	15	117	55	0.14
181218	20:41:35.12	39° 43.08'	111° 09.01'	1.6	1.1	11	211	10	0.17
181219	05:43:44.04	37° 02.70'	112° 52.64'	17.7	1.2W	17	122	6	0.10
181220	02:59:36.35	39° 44.86'	110° 54.14'	-3.5	1.3	9	159	10	0.17
181220	03:21:20.53	36° 51.04'	112° 19.21'	5.9*	1.5	5	176	47	0.12
181220	08:02:18.03	38° 49.50'	111° 27.43'	5.9	1.3	7	189	6	0.12
181220	10:10:49.62	38° 49.26'	111° 27.50'	4.0	1.4	9	97	5	0.18
181220	12:49:22.93	39° 14.74'	111° 28.50'	4.8	3.1W	40	26	10	0.21
181220	12:55:28.92	39° 14.38'	111° 27.39'	1.6*	1.6	9	111	11	0.21
181221	02:15:46.21	39° 13.96'	111° 27.98'	1.6*	1.9	14	152	12	0.19
181221	05:01:03.21	38° 33.87'	112° 15.87'	3.2	2.8W	23	73	8	0.21
181221	11:15:54.56	38° 33.95'	112° 16.12'	-2.7	2.0W	16	74	8	0.17
181221	17:31:14.39	39° 24.45'	111° 04.21'	1.6*	1.3W	17	68	11	0.13
181221	21:08:40.19	38° 33.37'	112° 15.55'	3.6	1.5W	16	97	7	0.14

Table 2. Earthquakes in the Utah Region: October 1–December 31, 2018

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181221	23:34:59.14	41° 56.30'	111° 47.39'	0.5*	0.9	14	86	15	0.11
181222	03:03:05.65	39° 14.54'	111° 27.66'	-3.1*	1.4W	20	57	11	0.17
181222	07:56:54.03	38° 32.54'	112° 16.04'	1.6	1.6W	15	82	6	0.17
181222	10:03:33.08	39° 13.95'	111° 27.58'	-3.3*	1.8W	22	66	12	0.12
181222	11:10:52.79	37° 33.09'	113° 03.12'	4.7	1.4W	16	51	6	0.10
181223	00:09:17.83	36° 57.18'	113° 31.12'	8.6	2.9W	32	69	13	0.20
181223	02:01:58.28	36° 57.14'	113° 30.98'	5.5*	1.6	10	174	25	0.15
181223	03:06:46.69	41° 55.30'	112° 25.81'	17.4	0.6	8	102	26	0.15
181223	06:06:33.21	40° 56.07'	111° 34.73'	7.6	2.2W	50	32	13	0.18
181223	08:34:52.70	36° 57.96'	113° 30.43'	7.2*	1.5	10	135	24	0.10
181223	11:22:56.28	39° 15.57'	111° 28.27'	2.0	1.8	13	120	9	0.17
181223	12:23:45.62	36° 57.86'	113° 30.63'	9.3	1.5	15	135	13	0.15
181223	13:42:38.05	39° 14.80'	111° 28.08'	-1.9	1.3W	15	74	10	0.13
181223	19:18:47.24	41° 55.57'	112° 24.79'	1.6*	0.9	12	99	26	0.14
181223	19:22:21.84	39° 42.26'	110° 43.14'	-2.9	1.5	11	101	4	0.14
181224	08:25:06.87	38° 41.63'	112° 32.12'	2.7*	2.0W	22	72	12	0.14
181224	13:06:16.63	39° 34.71'	111° 11.45'	5.9	1.5	21	61	7	0.24
181224	13:06:16.73	39° 34.37'	111° 11.18'	4.4	1.5	20	60	8	0.21
181224	14:54:21.93	39° 15.16'	111° 27.80'	1.1	1.9W	21	45	10	0.14
181224	17:03:43.89	37° 25.00'	113° 08.26'	10.2	1.1W	15	75	7	0.10
181224	18:49:34.32	37° 24.19'	113° 07.47'	10.0	1.0W	12	119	5	0.14
181224	21:19:29.40	39° 33.66'	111° 10.46'	0.1	1.5	25	63	9	0.21
181225	00:46:55.02	39° 42.73'	110° 42.91'	-3.2	1.3	9	94	3	0.13
181225	07:10:17.06	39° 41.45'	111° 58.17'	1.9*	1.5	10	78	24	0.15
181225	12:11:37.37	36° 58.03'	113° 30.75'	6.2*	1.1	9	173	24	0.16
181225	22:17:30.10	38° 33.48'	112° 15.81'	2.6	1.5W	18	90	7	0.20
181226	02:41:08.24	39° 42.81'	111° 08.20'	6.7	1.4	20	118	10	0.20
181226	02:42:37.50	39° 43.85'	111° 08.20'	2.4*	1.5W	24	96	12	0.23
181226	08:50:02.61	41° 06.00'	111° 31.03'	8.6	1.2	13	107	9	0.15
181226	14:26:16.51	38° 38.24'	112° 31.22'	12.8	0.6	9	122	7	0.14
181226	14:33:19.96	38° 41.37'	112° 33.54'	2.3*	1.2	13	94	13	0.11
181226	14:38:00.48	38° 41.55'	112° 33.42'	-0.2*	2.3W	26	56	13	0.24
181226	15:44:58.82	38° 40.85'	112° 33.22'	4.8*	1.0	11	146	12	0.12
181227	05:34:27.15	37° 58.00'	113° 28.90'	-0.2*	1.6	13	86	20	0.21
181227	05:39:31.01	39° 14.43'	111° 28.68'	1.7	1.4W	16	70	10	0.18
181227	10:20:35.65	36° 56.82'	113° 53.09'	11.4*	1.3	11	102	23	0.14
181227	11:23:59.13	36° 57.15'	113° 53.64'	11.8	1.7W	13	128	22	0.20
181227	16:26:13.19	38° 03.40'	112° 45.89'	9.8*	2.1W	30	42	21	0.22
181227	17:00:27.81	37° 00.17'	113° 52.44'	15.7	1.4	7	206	17	0.19
181227	20:13:06.08	38° 45.14'	112° 34.01'	0.3*	0.8	11	127	19	0.14
181228	16:18:56.64	39° 37.93'	112° 00.43'	6.8*	1.3	12	83	22	0.16
181230	01:44:55.31	38° 57.71'	111° 19.15'	-3.4	1.5	6	107	5	0.13
181230	02:42:05.12	38° 25.37'	112° 51.02'	4.5	0.4	12	175	4	0.09

Table 2. Earthquakes in the Utah Region: October 1–December 31, 2018

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
181230	07:44:48.94	36° 59.35'	112° 44.79'	5.9*	1.9W	9	128	44	0.09
181230	17:20:23.31	37° 24.54'	114° 14.17'	10.3*	1.3	16	135	34	0.16
181230	20:14:56.75	41° 31.11'	111° 17.17'	17.8	1.6W	14	186	18	0.09
181230	20:55:18.40	38° 03.84'	112° 44.69'	10.9*	2.3W	25	69	23	0.13
181230	21:17:27.41	38° 25.78'	112° 51.01'	5.2	0.1	11	193	3	0.08
181230	22:12:43.16	38° 03.68'	112° 45.09'	11.4	1.4W	12	71	22	0.16
181230	23:05:39.63	38° 25.61'	112° 50.89'	5.1	0.6	12	174	4	0.07
181231	00:39:55.78	38° 25.25'	112° 50.57'	4.6	0.4	10	198	5	0.08
181231	00:57:30.24	39° 13.94'	111° 15.37'	-0.6	2.0	11	98	8	0.17
181231	04:26:56.83	38° 25.68'	112° 51.18'	5.7	1.3	14	120	3	0.09
181231	06:27:42.85	38° 25.21'	112° 50.53'	4.1	0.7	12	144	5	0.10
181231	14:32:52.03	37° 03.33'	112° 56.98'	15.8	1.1W	9	135	12	0.10

number of earthquakes = 358

* indicates poor depth control

W indicates Wood-Anderson data used for magnitude calculation

Table 3
UNIVERSITY OF UTAH REGIONAL/URBAN SEISMIC NETWORK
Operating Seismograph Stations
December 31, 2018

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
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

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
7232	City Parks & Recreation Office Tremonton, UT	HN[ZEN]	3	NP	41° 43.13'	112° 10.91'	1320	EpiSensor	Etna	Digital	NSMP, ANSS
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	K2	Digital	ANSS
ALT	Alta City Offices, Alta, UT	EN[ZEN]	3	UU	40° 35.42'	111° 38.25'	2635	Applied Mems	ANSS-130	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	Applied Mems	ANSS-130	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	Pantr944swy2008, 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	K2	Digital	ANSS
BCU	Brigham City, UT	EN[ZEN]	3	UU	41° 30.74'	111° 58.93'	1676	EpiSensor	K2	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			
BEI	Bear River Range, ID	EHZ	1	UU	42° 07.00'	111° 46.94'	1859	L4C	PSN	Analog	USGS
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

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
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
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			
BRWY	Blue Rim, WY	HH[ZEN]	3	UU	41° 37.32'	109° 30.19'	2098	Trillium 120	Centaur	Digital	Utah
BSS	Butlerville Substation Salt Lake City, UT	EN[ZEN]	3	UU	40° 37.45'	111° 49.37'	1411	EpiSensor	K2	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	Applied Mems	ANSS-130	Digital	ANSS
BZMT	Bozeman Pass, MT	EHZ	1	MB	45° 38.89'	110° 47.80'	1905	*	*	Analog	MBMT
CAPU	Capitol, Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.71'	111° 53.40'	1384	Applied Mems	ANSS-130	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	ANSS-130	Digital	USGS
		EN[ZEN]	3					Applied Mems			
CFS	Copperton Fire Station, Copperton, UT	EN[ZEN]	3	UU	40° 33.96'	112° 05.61'	1654	EpiSensor	K2	Digital	ANSS
CHS	Copper Hills High School, West Jordan, UT	EN[ZEN]	3	UU	40° 35.68'	112° 01.03'	1460	Applied Mems	ANSS-130	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	Applied Mems	ANSS-130	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	Observer	ANSS-130	Digital	USGS
		EN[ZEN]	3					R147			
CVH	Cedar City, Canyon View High School, 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			

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
CWR	Coldwater Ranch, Paradise, UT	EN[ZEN]	3	UU	41° 34.90'	111° 46.89'	1837	Applied Mems	ANSS-130	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			
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	Applied Mems	ANSS-130	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	Applied Mems	ANSS-130	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	Applied Mems	ANSS-130	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	PSN	Analog	USGS
ETW	Elwood Town Hall, Elwood, UT	EN[ZEN]	3	UU	41° 40.15'	112° 08.53'	1305	Applied Mems	ANSS-130	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[ZEN]	3	IW	44° 04.96'	110° 41.96'	2078	3ESP	RT-130	Digital	ANSS
FMC	FMC Mine, Green River, WY	HH[ZEN]	3	UU	41° 24.49'	109° 46.67'	1903	40T	RT-130	Digital	Utah
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
FOR3	Blundell North, UT	HH[ZEN]	3	UU	38° 30.80'	112° 52.85'	1699	Trillium 120	Centaur	Digital	Utah
FOR4	Blundell West, UT	HH[ZEN]	3	UU	38° 29.92'	112° 53.79'	1657	Trillium 120	ANSS-130	Digital	Utah
FORU	South Mineral Mountains, UT	HH[ZEN]	3	UU	38° 27.53'	112° 51.68'	1840	40T	ANSS-130	Digital	Utah

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
FPU	Francis Peak, UT	EHZ	1	UU	41° 01.58'	111° 50.21'	2816	L4C	PSN	Analog	USGS
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	Applied Mems	ANSS-130	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	EHZ	1	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	Applied Mems	ANSS-130	Digital	ANSS
GMU	Granite Mountain, UT	EH[ZEN]	3	UU	40° 34.53'	111° 45.79'	1829	S13	PSN	Analog	USGS
GRR1	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	PSN	Analog	USGS
H17A	Grant Village (YNP), WY	BH[ZEN]	3	TA	44° 23.71'	110° 34.57'	2400	STS-2	Q330	Digital	NSF
HAFB	Hill Air Force Base, Hill AFB, UT	EN[ZEN]	3	UU	41° 07.07'	111° 58.55'	1471	Applied Mems	ANSS-130	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			
HDU	Hyde Park, UT	EHZ	1	UU	41° 48.18'	111° 45.99'	1807	L4C	PSN	Analog	USGS
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	K2	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[XYZ]	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	Etna	Digital	Utah
HLID	Hailey, ID	BH[ZEN]	3	US	43° 33.75'	114° 24.83'	1772	*	*	Digital	USGS
HLJ	Hailstone, UT	EHZ	1	UU	40° 36.64'	111° 24.05'	1931	S13	PSN	Analog	Utah
		EN[ZEN]	3					FBA23	K2	Digital	
HMU	Henry Mountain, UT	HH[ZEN]	3	UU	37° 56.28'	110° 44.51'	2430	Trillium 120	Q330	Digital	Utah
		EN[ZEN]	3					EpiSensor			
HON	Honeyville, UT	EN[ZEN]	3	UU	41° 36.96'	112° 03.05'	1546	Applied Mems	ANSS-130	Digital	ANSS
HONU	Honeyville, UT	EHZ	1	UU	41° 36.90'	112° 03.00'	1515	L4C	PSN	Analog	USGS
HRU	Hogsback Ridge, UT	EHZ	1	UU	40° 47.67'	111° 53.14'	1620	Ranger	PSN	Analog	USGS
		EN[ZEN]	3					Applied Mems	ANSS-130	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			1609	Trillium 120	Q330	Digital	USGS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		EN[ZEN]	3		41° 46.78'	112° 46.50'		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	Etna	Digital	Utah
ICF	International Center Fire Station, Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.69'	112° 01.72'	1281	EpiSensor	K2	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
JLU	Jordanelle, UT	EN[ZEN]	3	UU	40° 36.12'	111° 27.00'	2285	EpiSensor	ANSS-130	Digital	ANSS
		HH[ZEN]	3					3ESP			
JRP	Jordan River State Park Salt Lake City, UT	EN[ZEN]	3	UU	40° 49.54'	111° 56.66'	1284	EpiSensor	K2	Digital	ANSS
KEUT	Kanab Elementary School, UT	EN[ZEN]	3	UU	37° 03.02'	112° 31.76'	1514	PA-23	SMART-24	Digital	Utah
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	3T	ANSS-130	Digital	Utah, ANSS, LLNL
		EN[ZEN]	3					EpiSensor			
LCMT	Little Creek Mountain, UT	HH[ZEN]	3	UU	37° 00.71'	113° 14.63'	1411	3T	SMART-24	Digital	Utah
		EN[ZEN]	3					PA-23			
LCU	Little Cottonwood, UT	EN[ZEN]	3	UU	40° 34.41'	111° 47.91'	1571	Applied Mems	K2	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	K2	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
LKC	Lee Kay Hunter Education Center Magna, UT	EN[ZEN]	3	UU	40° 43.62'	112° 02.14'	1289	EpiSensor	K2	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	K2	Digital	ANSS
LOHW	National Elk Refuge, WY	BH[ZEN]	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	Applied Mems	ANSS-130	Digital	ANSS
LSU	Lake Shores, UT	EN[ZEN]	3	UU	40° 07.94'	111° 43.80'	1375	EpiSensor	K2	Digital	ANSS
LTU	Little Mountain, UT	EHZ	1	UU	41° 35.51'	112° 14.83'	1585	L4C	Basalt	Analog	USGS
		EHZ	1					EpiSensor			

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		EN[ZEN]	3								
MAB	Mapleton Ambulance Building Mapleton, UT	EN[ZEN]	3	UU	40° 07.85'	111° 34.67'	1440	EpiSensor	K2	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	EHZ	1	UU	41° 27.70'	111° 30.45'	2664	18300	PSN	Analog	USGS
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			
MID	Middle Canyon, UT	EN[ZEN]	3	UU	40° 31.04'	112° 15.28'	1722	Applied Mems	ANSS-130	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[ZEN]	3	IW	43° 44.92'	110° 44.69'	2128	3ESP	RT-130	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	EHZ	1	UU	41° 11.94'	111° 52.73'	2743	S13	PSN	Analog	USGS
MPU	Maple Canyon, UT	EN[ZEN]	3	UU	40° 00.93'	111° 38.00'	1909	EpiSensor	ANSS-130	Digital	ANSS
		HH[ZEN]	3					3ESP			
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	K2	Digital	ANSS
NAIU	North Antelope Island, UT	EHZ	1	UU	41° 00.97'	112° 13.68'	1472	L4C	PSN	Analog	USGS
NLU	North Lily Mine, UT	EN[ZEN]	3	UU	39° 57.29'	112° 04.50'	2036	Episensor	ANSS-130	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	EpiSensor	K2	Digital	ANSS
		HH[ZEN]	3					Trillium 120			
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	K2	Digital	ANSS
OF2	Ogden Fire Station ° 2	EN[ZEN]	3	UU	41° 13.70'	111° 56.92'	1358	EpiSensor	K2	Digital	ANSS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
	Ogden, UT										
OPS	Ogden Public Safety Building, Ogden, UT	EN[ZEN]	3	UU	41° 13.72'	111° 58.54'	1317	Applied Mems	ANSS-130	Digital	ANSS
OSS	Oquirrh Sub Station, UT	EN[ZEN]	3	UU	40° 33.77'	112° 01.61'	1503	Applied Mems	ANSS-130	Digital	ANSS
OWUT	Old Woman Plateau, UT	EHZ	1	UU	38° 46.80'	111° 25.42'	2568	LAC	PSN	Analog	Utah
PCCW	Pine Creek, Cokeville, WY	EHZ	1	UU	42° 05.97'	110° 52.36'	1996	LAC	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	Applied Mems	ANSS-130	Digital	ANSS
PCR	Park City Recreation Center, Park City, UT	EN[ZEN]	3	UU	40° 39.25'	111° 30.19'	2100	EpiSensor	K2	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	K2	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	EHZ	1	IE	42° 52.20'	112° 22.21'	1670	*	*	Digital	INL
PTU	Portage, UT	EHZ	1	UU	41° 55.76'	112° 19.48'	2192	LAC	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
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

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
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	BH[ZEN]	3	TA	38° 20.93'	115° 35.12'	1756	STS-2	Q330	Digital	NSF
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	EHZ	1	UU	40° 39.51'	111° 26.36'	2090	S13	PSN	Analog	Utah
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
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	Applied Mems	ANSS-130	Digital	ANSS
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	
		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	K2	Digital	ANSS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
SCS	Syracuse City Cemetery Shop Syracuse, UT	EN[ZEN]	3	UU	41° 05.73'	112° 02.81'	1321	EpiSensor	K2	Digital	ANSS
SCUT	Santa Clara, UT	EN[ZEN]	3	UU	37° 07.69'	113° 38.68'	837	EpiSensor	Etna	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	Applied Mems	ANSS-130	Digital	ANSS
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	3ESP	RT-130	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								
SPR	Wildlife Resource Center Springville, UT	EN[ZEN]	3	UU	40° 10.94'	111° 36.71'	1379	EpiSensor	K2	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	Applied Mems	ANSS-130	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					STS-2	ANSS-130	Digital	
		EN[ZEN]	3					EpiSensor			
SSC	Sandy Senior Center Sandy, UT	EN[ZEN]	3	UU	40° 34.89'	111° 51.35'	1414	EpiSensor	K2	Digital	ANSS
SUU	Santaquin Canyon, UT	EHZ	1	UU	39° 53.29'	111° 47.45'	2024	18300	PSN	Analog	USGS
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			2269	EpiSensor	ANSS-130	Digital	ANSS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor		
		HH[ZEN]	3		41° 07.04'	111° 24.47'		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	K2	Digital	ANSS		
TRS	Tooele County Radio Shop, Tooele, UT	EN[ZEN]	3	UU	40° 30.83'	112° 18.63'	1568	EpiSensor	K2	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	K2	Digital	ANSS		
UTH	Uintah Town Hall, Uintah, UT	EN[ZEN]	3	UU	41° 08.65'	111° 55.52'	1389	EpiSensor	K2	Digital	ANSS		
UUE	University of Utah EMCB Bldg. Salt Lake City, UT	EN[ZEN]	3	UU	40° 46.09'	111° 50.77'	1449	EpiSensor	K2	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		
WBC	Weber Canyon, UT	EN[ZEN]	3	UU	41° 08.38'	111° 54.05'	1602	EpiSensor	K2	Digital	ANSS		
WCF	Wellsville Fire Station, Wellsville, UT	EN[ZEN]	3	UU	41° 38.37'	111° 55.94'	1387	Applied Mems	ANSS-130	Digital	ANSS		
WCO	Washington City Office Building, UT	EN[ZEN]	3	UU	37° 07.91'	113° 30.56'	837	EpiSensor	Etna	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	K2	Digital	ANSS		
WHS	West High School, SLC UT	EN[ZEN]	3	UU	40° 46.51'	111° 53.93'	1301	EpiSensor	K2	Digital	ANSS		

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
	Salt Lake City, UT										
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	Applied Mems	ANSS-130	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					Applied Mems	ANSS-130	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	Taurus	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		
		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	Q330	Digital	
		EN[ZEN]	3					Titan			
YHL	Hebgen Lake, MT	HH[ZEN]	3	WY	44° 51.05'	111° 10.98'	2691	Trillium 120	Q330	Digital	USGS
		EN[ZEN]	3					Titan			
YHR	Hawk's Rest, WY	HH[ZEN]	3	WY	44° 06.36'	110° 04.90'	2976	Trillium 120	Q330	Digital	USGS
YJC	Joseph's Coat (YNP), WY	EH[ZEN]	3	WY	44° 45.33'	110° 20.95'	2684	S13	PSN	Analog	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			2149	Trillium 120	Q330	Digital	USGS

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor		
		EN[ZEN]	3		44° 40.12'	110° 57.90'		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	EHZ	1	WY	44° 58.42'	110° 41.33'	1829	L4C	PSN	Analog	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	Q330	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	Compact	ANSS-130	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		

* Station operated by another agency and recorded as part of University of Utah regional seismic network
Network Statistics: 971 data channels from 313 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>> for information about the SEED channel naming convention. Relevant sections are reproduced below. In the SEED convention, each letter describes one aspect of the instrumentation and its digitization. The first letter specifies the general sampling rate and the response band of the instrument. Band codes used in this table include:

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

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

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

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

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

Number of Channels: Total number of waveform channels recorded.

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

Network Code	Network name; Network operator or responsible organization
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.

Sensor	Description
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
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

Digitizer	Description
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)

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
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, 2018

None