

EARTHQUAKE ACTIVITY IN THE UTAH REGION

Preliminary Epicenters

January 1 – March 31, 2022

Prepared by the University of Utah Seismograph Stations and funded by
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June 28, 2022

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. $36^{\circ} 45' - 42^{\circ} 30' N$, long. $108^{\circ} 45' - 114^{\circ} 15' W$). 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 (yyymmdd) 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 MST through 02:00 (2:00 a.m.) on March 13 and MDT 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:

$$RMS = \sqrt{\frac{\sum_i (W_i R_i)^2}{\sum_i (W_i)^2}}$$

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

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January 1 – March 31, 2022

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During the three-month period January 1, 2022, through March 31, 2022, the University of Utah Seismograph Stations (UUSS) located 866 earthquakes within the Utah region (Figure 1). The total includes three earthquakes in the magnitude 3 range and 127 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. Two earthquakes were reported felt during the report period (see Table 1, a cumulative tabulation of earthquakes during 2022 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 3.0	February 6	00:30 MST	14 mi NNW of Panguitch, UT
M _L 3.5	February 19	15:17 MST	2 mi ESE of Sevier, UT
M _L 3.4	March 2	02:08 MST	3 mi E of Sevier, 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 27 earthquakes ($0.2 \leq M \leq 1.9$) occurred about 5 mi NW of West Valley City, UT. Four of these events, including a magnitude 1.9 shock, occurred between January 30 to February 1.
- B. A cluster of 30 earthquakes ($1.0 \leq M \leq 3.5$) occurred about 3 mi ESE of Sevier, UT. Nine of these events, including a magnitude 3.5 shock, occurred between February 19 and February 21.
- C. A cluster of 21 earthquakes ($0.3 \leq M \leq 1.5$) occurred about 16 mi SSW of Kanosh, UT. 12 of these events, including a magnitude 1.5 shock, occurred between March 17 and March 20.
- D. A cluster of 19 earthquakes ($-0.9 \leq M \leq 0.8$) occurred about 12 mi NE of Milford, UT. Four of these events, including a magnitude 0.8 shock, occurred between January 27 and January 31.
- E. A cluster of 21 earthquakes ($0.5 \leq M \leq 2.0$) occurred about 5 mi SW of Milford, UT. 20 of these events, including a magnitude 2.0 shock, occurred between February 10 and February 12.
- F. A cluster of 60 earthquakes ($0.7 \leq M \leq 2.6$) occurred about 7 mi SSE of Cedar City, UT. 49 of these events, including a magnitude 2.6 shock, occurred between January 2 and January 12.

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 513 located shocks ($0.8 \leq M \leq 2.7$) that occurred during the report period.

Seismicity of the Utah Region January 1, 2022 – March 31, 2022

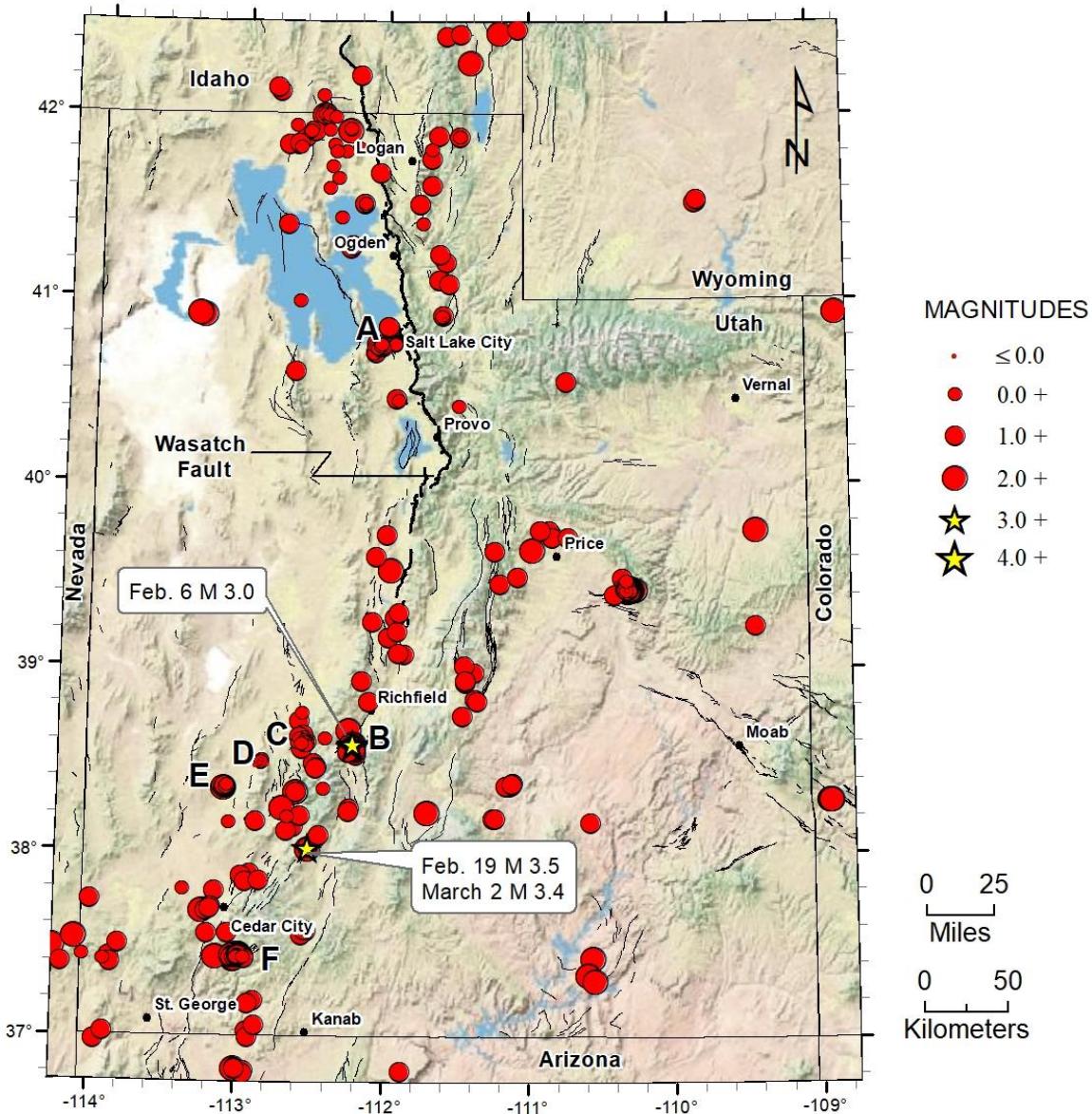


Figure 1. Earthquake epicenters, located by the University of Utah Seismograph Stations, superimposed on a map of Quaternary (geologically young) faults (black lines) compiled by the Utah Geological Survey. The Wasatch fault is shown in bold. Earthquakes of magnitude 3.0 and larger are labeled by local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

Table 1**EARTHQUAKES FELT AND/OR GENERATING A SHAKEMAP IN THE UTAH REGION****January 1, 2022 to December 31, 2022**

Date and Time†	Felt Information‡	Latitude	Longitude	Magnitude§
2022-02-19 15:17:28 MST 2022-02-19 22:17:28 UTC	DYFI ShakeMap	38° 34.41'	112° 13.43'	M _L 3.5
2022-03-02 02:08:11 MST 2022-03-02 09:08:11 UTC	DYFI ShakeMap	38° 35.09'	112° 12.75'	M _L 3.4

† 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

March 31, 2022

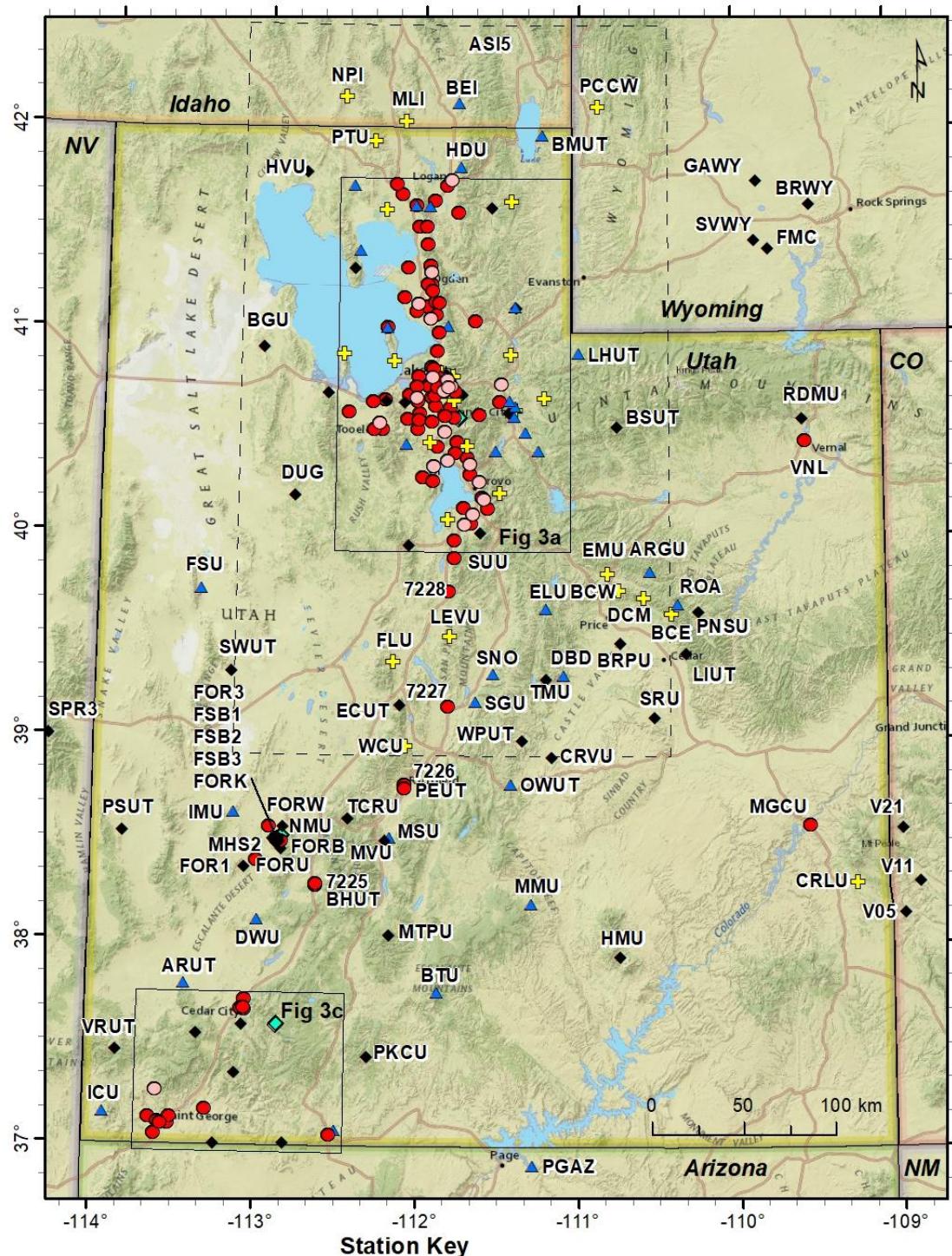


Figure 2

Utah Urban Seismic Network (March 31, 2022)

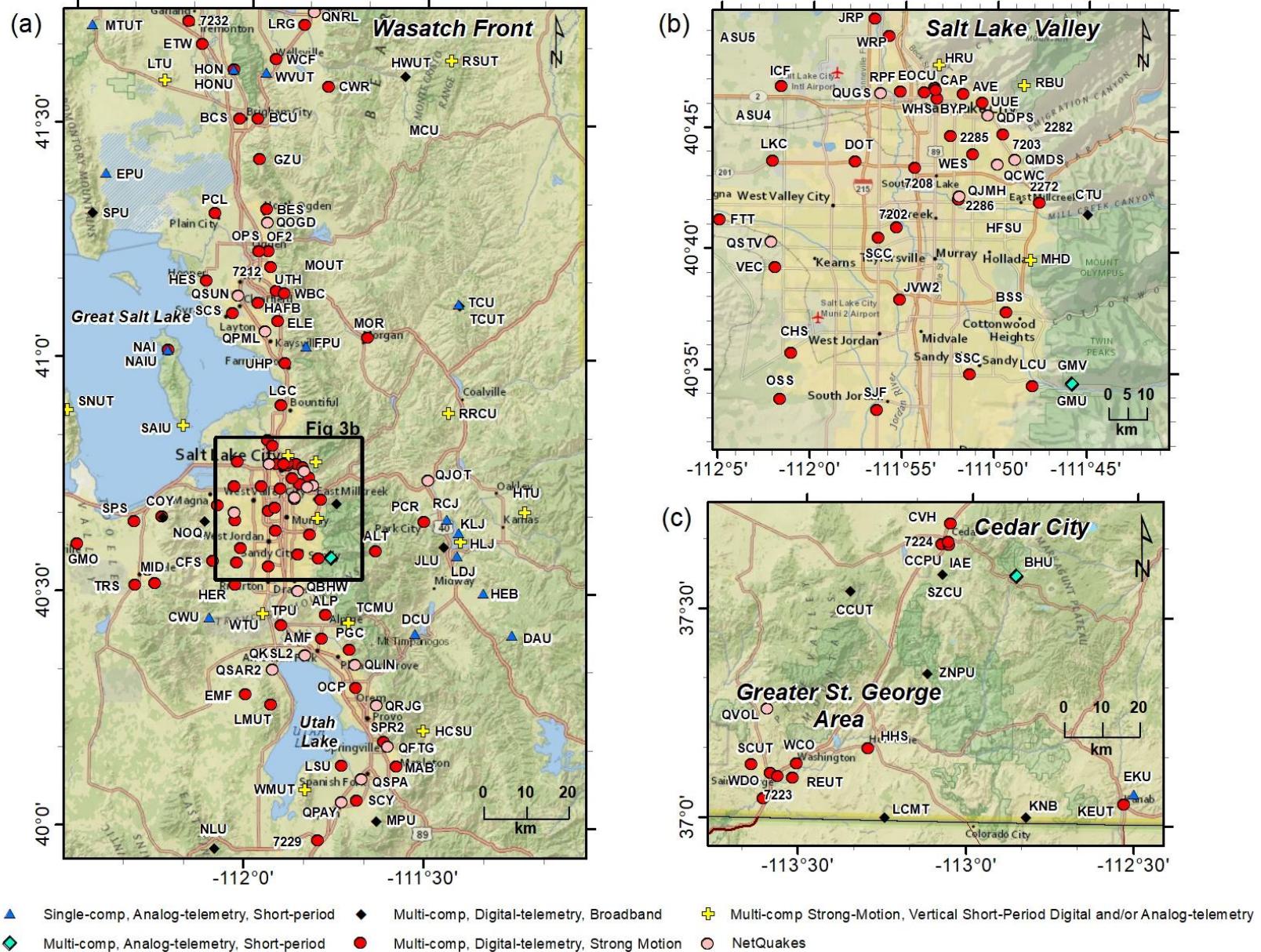


Figure 3

Table 2. Earthquakes in the Utah Region: January 1–March 31, 2022

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
220325	13:24:57.20	41° 32.01'	109° 48.30'	-3.3	1.4	8	102	10	0.06
220325	17:37:35.59	39° 25.29'	110° 18.43'	-2.1	1.5W	8	197	2	0.12
220325	23:47:09.23	38° 42.28'	112° 35.10'	8.9	1.4W	13	177	16	0.26
220327	09:39:39.54	41° 30.27'	111° 46.58'	8.5	1.6W	34	44	9	0.11
220327	09:40:01.63	41° 30.32'	111° 46.69'	8.7	1.0	20	93	8	0.15
220327	10:50:05.11	42° 27.14'	111° 04.95'	7.2*	1.6	10	120	56	0.14
220327	18:50:23.11	37° 25.32'	110° 33.63'	-1.2*	2.4W	11	103	59	0.23
220327	20:57:32.79	38° 28.30'	112° 51.59'	1.7	-0.6	7	164	1	0.04
220328	05:56:46.09	40° 32.99'	110° 44.44'	12.7	1.3	16	142	2	0.10
220328	08:12:16.20	38° 12.76'	111° 42.03'	6.0*	2.0W	13	109	55	0.25
220328	14:51:04.06	39° 25.33'	110° 18.84'	-1.4	1.0	5	194	1	0.02
220328	15:11:48.00	39° 25.36'	110° 19.37'	-1.3	1.5	5	191	0	0.01
220328	19:13:16.52	39° 25.24'	110° 18.73'	-1.5	1.6	7	196	1	0.04
220329	03:28:11.67	38° 35.61'	112° 32.15'	1.5	1.3W	13	171	8	0.15
220329	04:03:57.51	40° 36.06'	112° 39.07'	6.0*	1.0	8	121	34	0.21
220329	12:04:04.28	41° 47.50'	112° 22.99'	1.3*	0.3	9	101	15	0.19
220329	17:28:24.62	39° 25.19'	110° 18.45'	-2.0	1.5	8	197	2	0.09
220329	21:00:27.61	40° 26.73'	111° 55.17'	8.3	0.9	15	159	3	0.11
220329	21:23:45.71	39° 25.34'	110° 19.09'	-1.4	1.9	6	193	1	0.03
220330	02:33:20.57	36° 49.28'	112° 59.44'	17.3	1.4W	11	170	26	0.10
220330	05:20:02.36	39° 24.89'	110° 17.10'	-3.4	1.5	7	204	4	0.19
220330	10:48:29.05	40° 27.35'	111° 56.01'	9.6	1.4W	29	57	2	0.20
220330	16:32:44.94	39° 25.05'	110° 18.23'	-2.7	1.4W	6	198	2	0.07
220330	21:10:03.41	39° 25.28'	110° 19.05'	-1.3	1.5	10	193	1	0.06
220331	02:55:43.68	39° 25.21'	110° 18.35'	-2.1	1.9	13	197	2	0.13
220331	05:12:10.65	39° 24.95'	110° 18.09'	-3.2	2.1	7	199	2	0.13
220331	10:54:47.92	38° 29.31'	112° 50.72'	-0.2	-0.4	10	97	2	0.04

number of earthquakes = 866
* 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
March 31, 2022

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
FORW	Milford Wind Farm, UT	EN[ZEN]	3	UU	38° 33.76'	112° 56.21'	1516	EpiSensor	Obsidian	Digital	Utah
FPU	Francis Peak, UT	EHZ	1	UU	41° 01.58'	111° 50.21'	2816	L4C	PSN	Analog	USGS
FSB1	FORGE surface borehole 1, UT	DN[Z12]	3	UU	38° 29.10'	112° 53.48'	1697	Titan	Centaur	Digital	Utah
		EN[Z12]	3								
		HH[Z12]	3					Compact			
FSB2	FORGE surface borehole 2, UT	DN[Z12]	3	UU	38° 30.44'	112° 54.98'	1587	Titan	Centaur	Digital	Utah
		EN[Z12]	3								
		HH[Z12]	3					Compact			
FSB3	FORGE surface borehole 3, UT	DN[Z12]	3	UU	38° 30.80'	112° 52.84'	1701	Titan	Centaur	Digital	Utah
		EN[Z12]	3								
		HH[Z12]	3					Compact			
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
GRRI	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 EpiSensor	Obsidian	Digital	USGS
		EN[ZEN]	3								
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 EpiSensor	Basalt	Digital	Utah, USGS
		EN[ZEN]	3								
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	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	EHZ	1	UU	40° 36.64'	111° 24.05'	1931	S13 FBA23	PSN K2	Analog Digital	Utah
		EN[ZEN]	3								
HMU	Henry Mountain, UT	HH[ZEN]	3	UU	37° 56.28'	110° 44.51'	2430	Trillium 120 EpiSensor	Q330	Digital	Utah
		EN[ZEN]	3								

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
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						Basalt	Digital	
		EN[ZEN]	3					EpiSensor			
HVU	Hansel Valley, UT	HH[ZEN]	3	UU	41° 46.78'	112° 46.50'	1609	Trillium 120 EpiSensor	Q330	Digital	USGS
		EN[ZEN]	3								
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	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
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	Trillium 120 EpiSensor	Centaur	Digital	Utah, ANSS, LLNL
		EN[ZEN]	3								
LCMT	Little Creek Mountain, UT	HH[ZEN]	3	UU	37° 00.71'	113° 14.63'	1411	3T PA-23	SMART-24	Digital	Utah
		EN[ZEN]	3								
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 EpiSensor	Basalt	Digital	USGS
		EN[ZEN]	3								
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
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

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
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						Basalt	Digital	
		EN[ZEN]	3					EpiSensor			
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	Marysville, 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	Marysville, 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
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	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

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

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
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 EpiSensor	Basalt	Digital	USGS
		EN[ZEN]	3								
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 PA-23	SMART-24	Digital	Utah
		EN[ZEN]	3								
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	Applied Mems	ANSS-130	Digital	ANSS
RRCU	Rees Ranch, Coalville, UT	EHZ	1	UU	40° 53.21'	111° 26.22'	2028	L4C EpiSensor	Basalt	Digital	Utah, USGS
		EN[ZEN]	3								
RSUT	Red Spur, UT	EHZ	1	UU	41° 38.31'	111° 25.90'	2682	S13 EpiSensor	Basalt	Digital	USGS
		EN[ZEN]	3								

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor	
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						Basalt	Digital		
		EN[ZEN]	3					EpiSensor				
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						Basalt	Digital		
		EN[ZEN]	3					EpiSensor				
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 3ESP	ANSS-130	Digital	ANSS	
		HH[ZEN]	3									
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	Etna2	Digital	ANSS	
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	

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

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor	
WCU	Willow Creek, UT	EHZ	1	UU	$38^{\circ} 57.88'$	$112^{\circ} 05.44'$	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	$37^{\circ} 06.46'$	$113^{\circ} 35.19'$	831	PA-23	SMART-24	Digital	Utah	
WES	Westminster College Salt Lake City, UT	EN[ZEN]	3	UU	$40^{\circ} 43.97'$	$111^{\circ} 51.26'$	1341	EpiSensor	Etna2	Digital	ANSS	
WHS	West High School, SLC UT Salt Lake City, UT	EN[ZEN]	3	UU	$40^{\circ} 46.51'$	$111^{\circ} 53.93'$	1301	EpiSensor	Etna2	Digital	ANSS	
WMUT	West Mountain, UT	EHZ	1	UU	$40^{\circ} 04.60'$	$111^{\circ} 50.00'$	1981	L4C	PSN	Analog	USGS	
		EHZ	1					EpiSensor	Basalt	Digital		
		EN[ZEN]	3									
WPUT	Wasatch Plateau, UT	HH[ZEN]	3	UU	$38^{\circ} 59.85'$	$111^{\circ} 21.53'$	2618	Trillium 120	Taurus	Digital	Utah	
WRP	Water Reclamation Plant Salt Lake City, UT	EN[ZEN]	3	UU	$40^{\circ} 48.82'$	$111^{\circ} 55.87'$	1286	EpiSensor	Etna2	Digital	ANSS	
WTNK	7433 Soaring Heights, NV	HH[ZEN]	3	NN	$36^{\circ} 11.50'$	$115^{\circ} 00.64'$	676	3ESP	ANSS-130	Digital	UNR	
WTU	Western Traverse Mountains, UT	EH[ZEN]	3	UU	$40^{\circ} 27.29'$	$111^{\circ} 57.21'$	1552	S13	PSN	Analog	USGS	
		EN[ZEN]	3					EpiSensor	Etna2	Digital		
WUAZ	Wupatki, AZ	BH[ZEN]	3	US	$35^{\circ} 31.01'$	$111^{\circ} 22.43'$	1592	*	*	Digital	USGS	
WVUT	Wellsville, UT	EHZ	1	UU	$41^{\circ} 36.61'$	$111^{\circ} 57.55'$	1828	L4C	PSN	Analog	USGS	
YDC	Denny Creek, MT	EHZ	1	WY	$44^{\circ} 42.51'$	$111^{\circ} 14.60'$	2025	L4C	PSN	Analog	USGS	
YDD	Grant Junction, Yellowstone, WY	HH[ZEN]	3	WY	$44^{\circ} 24.00'$	$110^{\circ} 34.80'$	2400	STS-2	Q330	Digital	USGS	
		EN[ZEN]	3					EpiSensor				
YEE	East Entrance (YNP), WY	HH[ZEN]	3	WY	$44^{\circ} 29.12'$	$109^{\circ} 53.81'$	2270	Compact	Centaur	Digital	USGS	
YFT	Old Faithful (YNP), WY	HH[ZEN]	3	WY	$44^{\circ} 27.05'$	$110^{\circ} 50.24'$	2292	Compact	Centaur	Digital	USGS	
		EN[ZEN]	3					Titan				
YGC	Grayling Creek, MT	EHZ	1	WY	$44^{\circ} 47.77'$	$111^{\circ} 06.45'$	2075	L4C	PSN	Analog	USGS	
YHB	Horse Butte, MT	EHZ	1	WY	$44^{\circ} 45.07'$	$111^{\circ} 11.71'$	2157	L4C	PSN	Analog	USGS	
		HH[ZEN]	3					Compact	ANSS-130	Digital		
		EN[ZEN]	3					Titan				
YHH	Holmes Hill (YNP), WY	EHZ	1	WY	$44^{\circ} 47.30'$	$110^{\circ} 51.03'$	2717	S13	PSN	Analog	USGS	
		HH[ZEN]	3					Trillium 120	Q330	Digital		
		EN[ZEN]	3					Titan				
YHL	Hebgen Lake, MT	HH[ZEN]	3	WY	$44^{\circ} 51.05'$	$111^{\circ} 10.98'$	2691	Trillium 120	Q330	Digital	USGS	
		EN[ZEN]	3					Titan				
YHR	Hawk's Rest, WY	HH[ZEN]	3	WY	$44^{\circ} 06.36'$	$110^{\circ} 04.90'$	2976	Trillium 120	Q330	Digital	USGS	
YJC	Joseph's Coat (YNP), WY	EH[ZEN]	3	WY	$44^{\circ} 45.33'$	$110^{\circ} 20.95'$	2684	S13	PSN	Analog	USGS	
YLA	Lake Butte (YNP), WY	EHZ	1	WY	$44^{\circ} 30.76'$	$110^{\circ} 16.12'$	2580	L4C	PSN	Analog	USGS	
YLT	Little Thumb Creek (YNP), WY	EHZ	1	WY	$44^{\circ} 26.25'$	$110^{\circ} 35.28'$	2439	L4C	PSN	Analog	USGS	

SEED Station	Location	SEED Channel	No. of Channels	Network Code	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor	
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	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	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: 1016 data channels from 347 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	Kinemetrics Ranger short-period seismometer
40T	Guralp CMG-40T broadband seismometer
3T	Guralp CMG-3T broadband seismometer
3ESP	Guralp CMG-3ESP broadband seismometer
STS-2	Streckheisen STS-2 broadband seismometer
STS-5A	Streckheisen STS-5A broadband seismometer
FBA23	Kinemetrics FBA-23 accelerometer
EpiSensor	Kinemetrics EpiSensor accelerometer
Applied Mems	Applied Mems accelerometer
PA-23	Geotech PA-23 accelerometer
Compact	Nanometrics Compact broadband seismometer
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
Digitizer	Description
K2	Kinemetrics Altus Series K2 (19-bit resolution field digitizer)
Etna	Kinemetrics Altus Series Etna (18-bit resolution field digitizer)
72A-07	Refraction Technology (REF TEK) model 72A-07 (24-bit field digitizer)

72A-08	Refraction Technology (REF TEK) model 72A-08 (24-bit field digitizer)
ANSS-130	Refraction Technology (REF TEK) model 130-ANSS/02 (24-bit resolution field digitizer)
RT-130	Refraction Technology (REF TEK) model RT-130 (24-bit resolution field digitizer)
Q330	Quanterra, Inc. Q330 digitizer (24-bit resolution field digitizer)
SMART-24	Geotech SMART-24 digitizer (24-bit resolution field digitizer)
PSN	PSN-ADC-SERIAL version III (16-bit resolution field digitizer)
Basalt	Kinemetrics Basalt (24-bit resolution field digitizer)
Taurus	Nanometrics Taurus (24-bit resolution field digitizer)
Gsig-GMS	Geosig-GMS NetQuakes (24-bit resolution field digitizer)
Centaur	Nanometrics Centaur (24-bit resolution field digitizer)
Obsidian	Kinemetrics Obsidian (24-bit resolution field digitizer)
Etna2	Kinemetrics Etna 2 (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 JANUARY 1–MARCH 31, 2022

None