

# **EARTHQUAKE ACTIVITY IN THE UTAH REGION**

Preliminary Epicenters

January 1 – March 31, 2018

Prepared by the University of Utah Seismograph Stations and funded by  
the U.S. Geological Survey (Cooperative Agreement No. G15AC00028) and  
by the State of Utah

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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.  $36^{\circ} 45' - 42^{\circ} 30'$  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 11 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).



## **EARTHQUAKE ACTIVITY IN THE UTAH REGION**

### **January 1 – March 31, 2018**

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During the three-month period January 1, 2018 through March 31, 2018, the University of Utah Seismograph Stations (UUSS) located 235 earthquakes within the Utah region (Figure 1). The total includes four earthquakes in the magnitude 3 range, and 39 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. Four 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 <sub>L</sub> 3.5	January 7	15:38 MST	15 mi NNE of Beaver, UT
M <sub>L</sub> 3.6	February 28	07:11 MST	2 mi SSW of Panguitch, UT
M <sub>L</sub> 3.1	March 21	18:27 MDT	1 mi NW of Loa, UT
M <sub>L</sub> 3.2	March 22	07:21 MDT	2 mi NW of Loa, UT

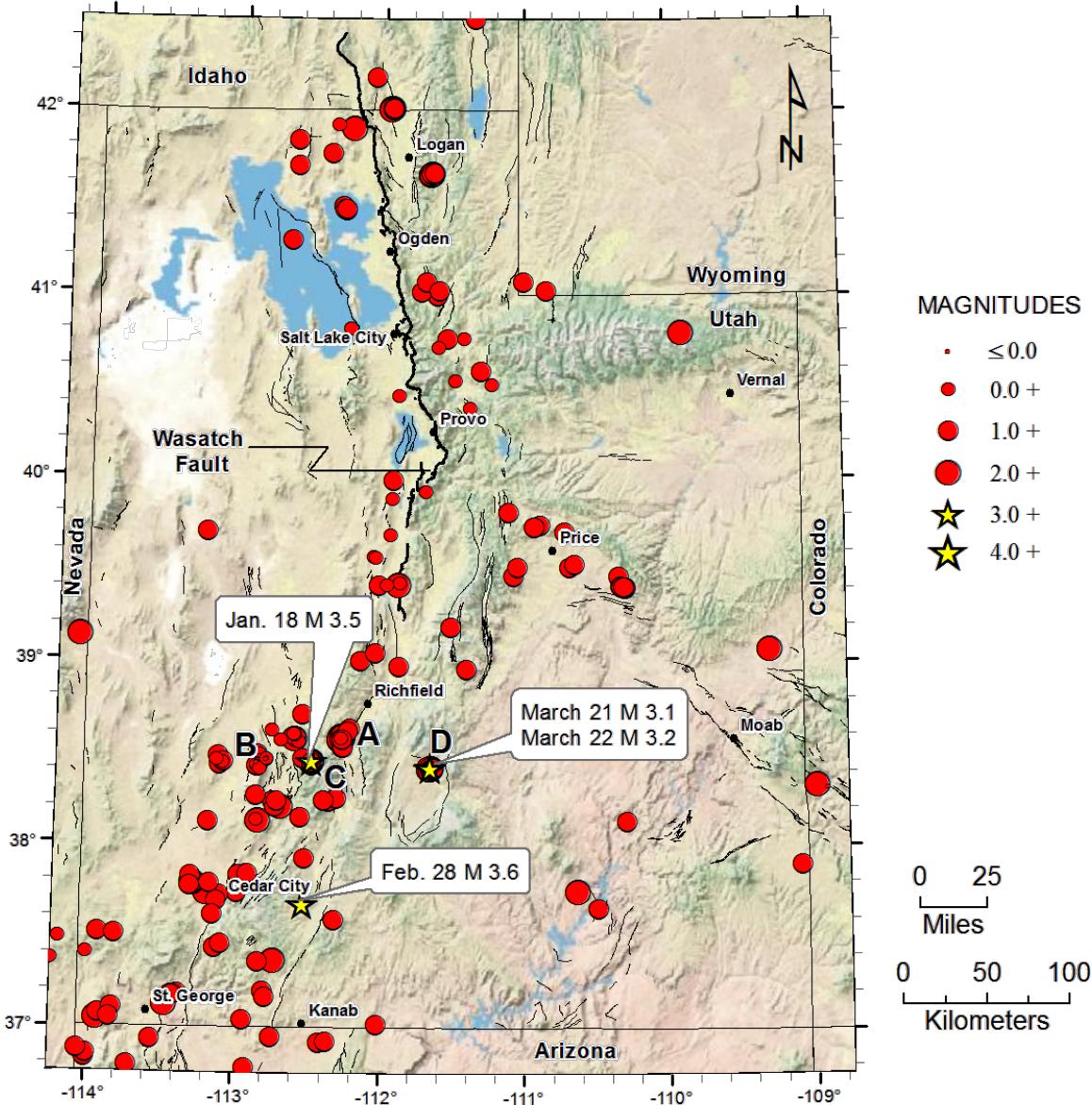
## **Other Notable Seismicity**

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

- A. A cluster of 21 earthquakes ( $0.7 \leq M \leq 2.9$ ) occurred about 3 mi SSE of Sevier, UT. Four of these events, including a magnitude 2.9 shock, occurred between January 20 and January 22.
- B. A cluster of 20 earthquakes ( $-0.5 \leq M \leq 1.2$ ) occurred about 16 mi NE of Milford, UT. Eight of these events occurred between January 11 and January 12.
- C. A cluster of 15 earthquakes ( $0.5 \leq M \leq 3.5$ ) occurred about 14 mi NNE of Beaver, UT. Twelve of these events, including a magnitude 3.5 shock, occurred between January 8 and January 12.
- D. A cluster of 22 earthquakes ( $1.3 \leq M \leq 3.2$ ) occurred about 1 mi S of Loa, UT, UT. Nineteen of these events, including a magnitude 3.2 shock, occurred between March 22 and March 23.

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 18 located shocks ( $1.1 \leq M \leq 1.9$ ) that occurred during the report period.

## Seismicity of the Utah Region January 1, 2018 - March 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–D 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 <sub>L</sub> 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 <sub>L</sub> 3.6
March 21	18:27 MDT	Utah. <i>CIIM. ShakeMap.</i>	38° 25.04'	111° 39.36'	M <sub>L</sub> 3.0
March 22	00:27 UTC	Felt (III) at Loa, UT.			
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 <sub>L</sub> 3.2

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

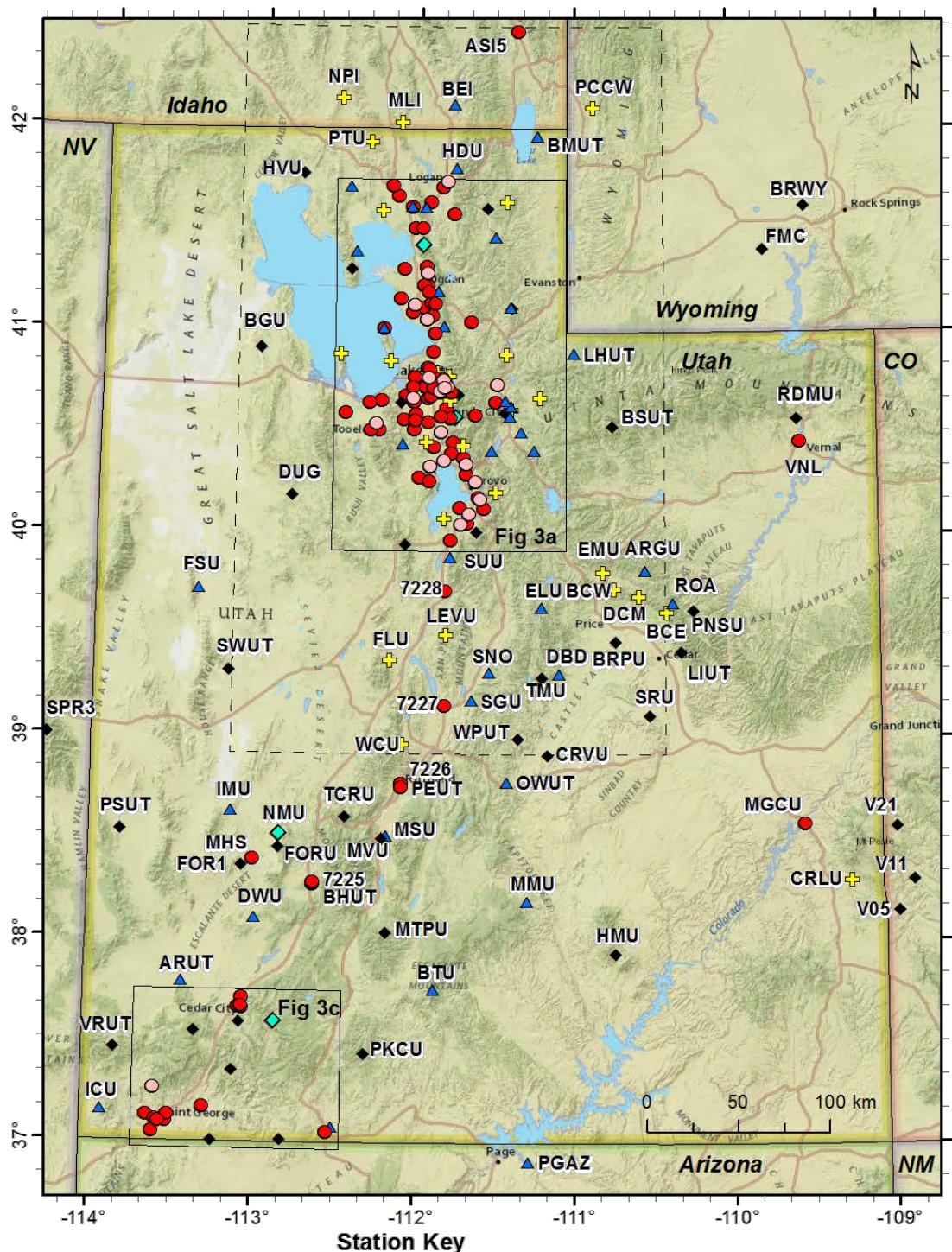
? Indicates on-line reports that appear questionable given the distance from the source

‡ *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<sub>L</sub>) or coda magnitude (M<sub>C</sub>) determined by UUSS. If labeled “NEIC,” data are from the National Earthquake Information Center of the USGS.

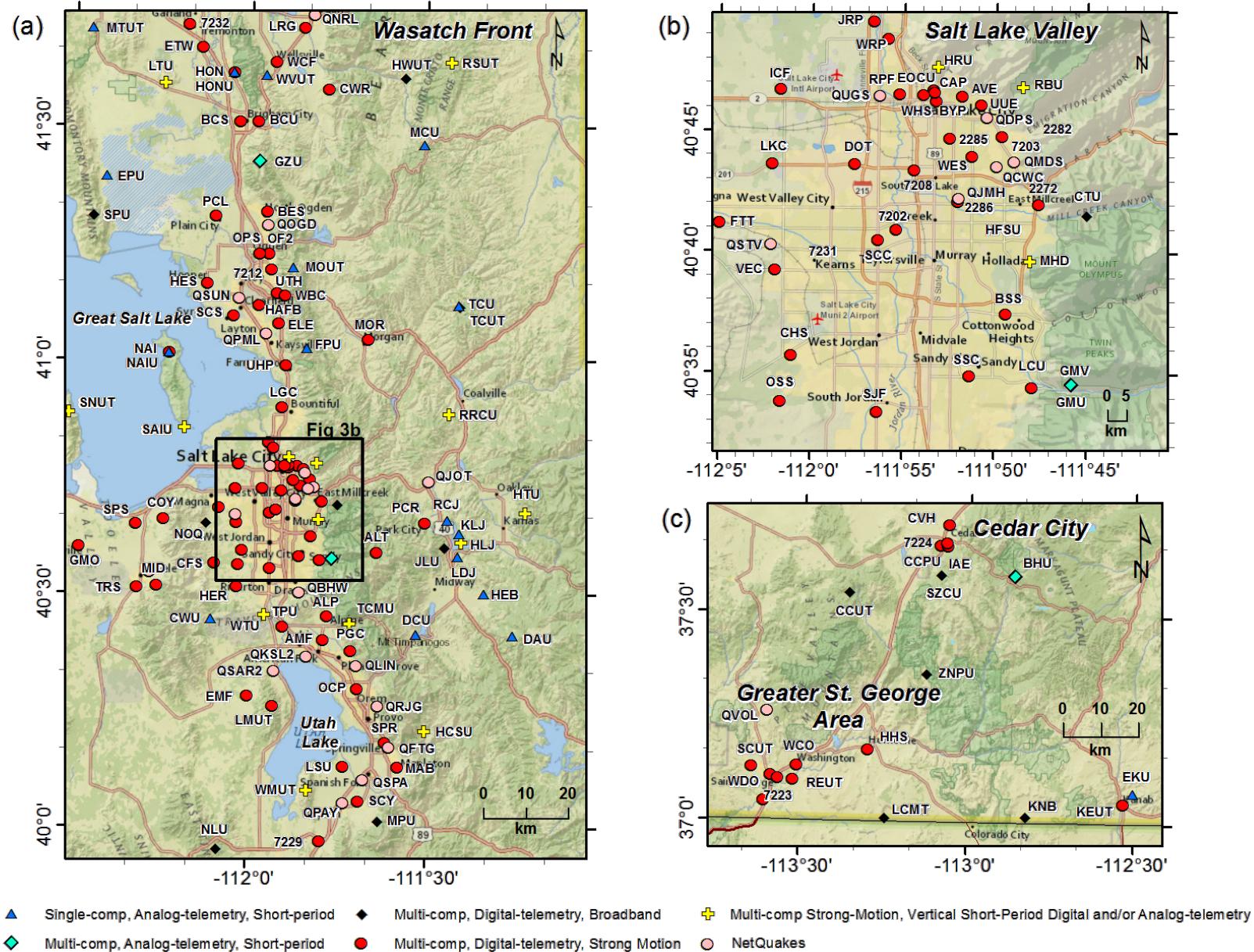
# Utah Regional/Urban Seismic Network

## March 31, 2018



**Figure 2**

## Utah Urban Seismic Network (March 31, 2018)



**Figure 3**











**Table 2. Earthquakes in the Utah Region: January 1–March 31, 2018**

DATE	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	NO	GAP	DMN	RMS
180329	09:57:39.28	38° 25.00'	111° 39.19'	1.4*	2.4W	21	72	40	0.12
180329	14:53:49.03	39° 23.85'	110° 17.61'	-3.3	1.7	6	204	4	0.14
180329	16:06:54.34	39° 24.18'	110° 18.15'	-3.0	1.5W	9	200	3	0.11
180329	17:03:00.30	39° 11.26'	111° 31.20'	1.9*	1.4	13	93	11	0.17
180329	17:35:41.43	39° 24.36'	110° 19.48'	-1.4	1.7W	6	193	2	0.03
180329	23:53:21.18	37° 07.27'	113° 27.35'	14.1	2.4W	30	76	5	0.20
180330	00:20:35.61	41° 01.15'	110° 51.07'	19.4	1.2	8	256	19	0.11
180330	07:40:03.92	39° 24.07'	110° 18.29'	-2.3	1.8	11	200	3	0.08
180331	11:07:44.30	39° 24.77'	111° 58.17'	10.2	0.3	6	153	17	0.03
180331	12:44:52.12	36° 55.23'	112° 24.33'	21.1	1.9W	13	161	19	0.17

number of earthquakes = 235

\* indicates poor depth control

W indicates Wood-Anderson data used for magnitude calculation

M indicates moment magnitude, M<sub>w</sub>

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

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

UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation	Sensor	Digitizer	Telemetry	Sponsor
		Station	Channel	Channels	Code			(meters)				
7229	City Maintenance Shop Santaquin, UT	7229	HN[ZEN]	3	NP	39° 58.35'	111° 47.58'	1520	EpiSensor	Etna	Digital	NSMP, ANSS
7232	City Parks & Recreation Office Tremonton, UT	7232	HN[ZEN]	3	NP	41° 43.13'	112° 10.91'	1320	EpiSensor	Etna	Digital	NSMP, ANSS
AHI	Auburn, ID	AHID	BH[ZEN]	3	US	42° 45.92'	111° 06.02'	1960	*	*	Digital	USGS
ALP	Alpine Fire Station, Alpine, UT	ALP	EN[ZEN]	3	UU	40° 27.26'	111° 46.61'	1510	EpiSensor	K2	Digital	ANSS
ALT	Alta City Offices, Alta, UT	ALT	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	AMF	EN[ZEN]	3	UU	40° 24.11'	111° 47.27'		1445	EpiSensor	Basalt	Digital
ANMO	Albuquerque, NM	ANMO	BH[ZEN]	3	IU	34° 57.01'	106° 27.61'	1743	*	*	Digital	USGS
ARGU	Argyle Ridge, UT	ARGU	EHZ	1	UU	39° 49.37'	110° 32.62'	2828	S13	PSN	Analog	Utah
ARUT	Antelope Range, UT	ARUT	EHZ	1	UU	37° 47.28'	113° 26.42'	1646	L4C	PSN	Analog	Utah
AVE	Avenues, Salt Lake City, UT	AVE	EN[ZEN]	3	UU	40° 46.47'	111° 51.83'	1387	Applied Mems	ANSS-130	Digital	ANSS
B206	Canyon206bwY2008, Yellowstone, WY	B206	EH[ZEN]	3	PB	44° 46.66'	110° 30.70'		2400	IESE-S2	Q330	Digital
B207	Madisn207bwY2007, Yellowstone, WY	B207	EH[ZEN]	3	PB	44° 37.14'	110° 50.91'	2182	IESE-S2	Q330	Digital	PBO
B208	Lakejn208bwY2008, Yellowstone, WY	B208	EH[ZEN]	3	PB	44° 33.61'	110° 24.09'	2406	IESE-S2	Q330	Digital	PBO
B944	Grantt944bwY2008, Yellowstone, WY	B944	EH[ZEN]	3	PB	44° 23.38'	110° 32.63'	2365	IESE-S2	Q330	Digital	PBO
B945	Panthr944swY2008, Yellowstone, WY	B945	EH[ZEN]	3	PB	44° 53.64'	110° 44.65'	2249	IESE-S2	Q330	Digital	PBO
B950	Norris950bwY2013, Yellowstone, WY	B950	EH[ZEN]	3	PB	44° 42.77'	110° 40.71'	2328	IESE-S2	Q330	Digital	PBO
BCE	Book Cliffs East, UT	BCE	EHZ	4	UU	39° 36.79'	110° 24.51'	2666	L4C	Basalt	Digital	Utah
			EN[ZEN]						EpiSensor			
BCS	Brigham City Maintenance Shop Brigham City, UT	BCS	EN[ZEN]	3	UU	41° 30.71'	112° 01.98'	1303	EpiSensor	K2	Digital	ANSS
BCU	Brigham City, UT	BCU	EN[ZEN]	3	UU	41° 30.74'	111° 58.93'	1676	EpiSensor	K2	Digital	ANSS
BCW	Book Cliffs West, UT	BCW	EHZ	4	UU	39° 43.82'	110° 44.55'	2614	L4C	Basalt	Digital	Utah
			EN[ZEN]						EpiSensor			
BEI	Bear River Range, ID	BEI	EHZ	1	UU	42° 07.00'	111° 46.94'	1859	L4C	PSN	Analog	USGS
BES	Bates Elementary School Ogden, UT	BES	EN[ZEN]	3	UU	41° 19.10'	111° 57.26'	1455	EpiSensor	K2	Digital	ANSS
BGMZ	Barton Gulch, MT	BGMT	EHZ	1	MB	45° 14.00'	112° 02.43'	2172	*	*	Analog	MBMT
BGU	Big Grassy Mountain, UT	BGU	EN[ZEN]	3	UU	40° 55.53'	113° 01.79'	1640	EpiSensor	Q330	Digital	ANSS
			HH[ZEN]						Trillium 120			

UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation	Sensor	Digitizer	Telemetry	Sponsor	
		Code	Station	Channel	Channels	Code	Code	(meters)					
BHU	Blowhard Mountain, UT	BHU	BHU	EH[ZEN]	3	UU	37° 35.63'	112° 51.72'	3250	S13	PSN	Analog	Utah
BHUT	Beaver High School, UT	BHUT	BHUT	EN[ZEN]	3	UU	38° 16.61'	112° 38.42'	1799	PA-23	SMART-24	Digital	Utah
BMUT	Black Mountain, UT	BMUT	EHZ		1	UU	41° 57.49'	111° 14.05'	2243	S13	PSN	Analog	USGS
BOZ	Bozeman, MT	BOZ	BOZ	BH[ZEN]	3	US	45° 38.82'	111° 37.78'	1589	*	*	Digital	USGS
BRPU	Butcher Ranch, Price, UT	BRPU	HH[ZEN]	3	UU	39° 28.38'	110° 44.40'	1687	Trillium 240	Q330	Digital	Utah	
			EN[ZEN]	3					EpiSensor				
BRWY	Blue Rim, WY	BRWY	HH[ZEN]	3	UU	41° 37.32'	109° 30.19'	2098	Trillium 120	Centaur	Digital	Utah	
BSS	Butlerville Substation Salt Lake City, UT	BSS	EN[ZEN]	3	UU	40° 37.45'	111° 49.37'	1411	EpiSensor	K2	Digital	ANSS	
BSUT	Blindstream Canyon, Hanna, UT	BSUT	HH[ZEN]	3	UU	40° 32.19'	110° 45.67'	3211	Trillium 120	Q330	Digital	Utah	
			EN[ZEN]	3					EpiSensor				
BTU	Barney Top, UT	BTU	EHZ	1	UU	37° 45.34'	111° 52.46'	3235	S13	PSN	Analog	Utah	
BW0	Boulder, WY	BW06	BH[ZEN]	3	US	42° 46.00'	109° 33.50'	2224	*	*	Digital	USGS	
BYP	Brigham Young Park Salt Lake City, UT	BYP	EN[ZEN]	3	UU	40° 46.26'	111° 53.23'	1323	Applied Mems	ANSS-130	Digital	ANSS	
BZMZ	Bozeman Pass, MT	BZMT	EHZ	1	MB	45° 38.89'	110° 47.80'	1905	*	*	Analog	MBMT	
CAPU	Capitol, Salt Lake City, UT	CAP	EN[ZEN]	3	UU	40° 46.71'	111° 53.40'	1384	Applied Mems	ANSS-130	Digital	ANSS	
CCPU	Cedar City Park, UT	CCPU	EN[ZEN]	3	UU	38° 16.61'	112° 38.42'	1799	PA-23	SMART-24	Digital	Utah	
CCUT	Cedar City, UT	CCUT	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	CFS	EN[ZEN]	3	UU	40° 33.96'	112° 05.61'	1654	EpiSensor	K2	Digital	ANSS	
CHS	Copper Hills High School, West Jordan, UT	CHS	EN[ZEN]	3	UU	40° 35.68'	112° 01.03'	1460	Applied Mems	ANSS-130	Digital	ANSS	
COM	Craters of the Moon, ID	COMI	EHZ	1	IE	43° 27.72'	113° 35.64'	1890	*	*	Digital	INL	
COY	Coyote Canyon, Tooele Valley, UT	COY	EN[ZEN]	3	UU	40° 39.56'	112° 14.34'	1572	Applied Mems	ANSS-130	Digital	ANSS	
CRLU	Curley Ranch, La Sal, UT	CRLU	EHZ	1	UU	38° 17.50'	109° 15.64'	2035	L4C	Basalt	Digital	Utah, USGS	
			EN[ZEN]	3					Episensor				
CRMZ	Chrome Mountain, MT	CRMT	EHZ	1	MGB	45° 27.35'	110° 08.41'	2941	*	*	Analog	MBMT	

UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		Station	Channel	Channels	Code							
CTU	Camp Tracy, UT	CTU	HH[ZEN]	3	UU	40° 41.55'	111° 45.02'	1731	Observer	RT-130	Digital	USGS
CVH	Cedar City, Canyon View High School, UT	CVH	EN[ZEN]	3	UU	37° 42.91'	113° 03.85'	1724	PA-23	SMART-24	Digital	Utah
CVRU	Castle Valley Ranch, Emery, UT	CVRU	HH[ZEN]	3	UU	38° 55.06'	111° 10.30'	1912	STS-2	Q330	Digital	Utah
			EN[ZEN]	3					EpiSensor			
CWR	Coldwater Ranch, Paradise, UT	CWR	EN[ZEN]	3	UU	41° 34.90'	111° 46.89'	1837	Applied Mems	ANSS-130	Digital	ANSS
CWU	Camp Williams, UT	CWU	EHZ	1	UU	40° 26.75'	112° 06.13'	1945	L4C	PSN	Analog	USGS
DAU	Daniels Canyon, UT	DAU	EHZ	1	UU	40° 24.75'	111° 15.35'	2771	S13	PSN	Analog	USGS
DBD	Des Bee Dove, UT	DBD	EHZ	1	UU	39° 18.82'	111° 05.55'	2265	L4C	PSN	Analog	Utah
DCM	Dugout Coal Mine, UT	DCM	EHZ	1	UU	39° 41.70'	110° 35.00'	2537	L4C	Basalt	Digital	Utah
			EN[ZEN]	3					EpiSensor			
DCU	Deer Creek Reservoir, UT	DCU	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	DOT	EN[ZEN]	3	UU	40° 43.61'	111° 57.65'	1282	Applied Mems	ANSS-130	Digital	ANSS
DUG	Dugway, UT	DUG	BH[ZEN]	3	US	40° 11.70'	112° 48.80'	1477	STS-2	Q330	Digital	USGS
DVCI	Devils Canyon, ID	DVCI	HH[ZEN]	3	IE	44° 22.99'	114° 02.31'	1997	Trillium 120	Q330	Digital	INL
DWU	Dry Willow, UT	DWU	EHZ	1	UU	38° 06.32'	112° 59.85'	2270	S13	PSN	Analog	Utah
ECR	Eagle Creek, ID	ECRI	EHZ	1	IE	43° 03.24'	111° 22.26'	2086	*	*	Digital	INL
EKU	East Kanab, UT	EKU	EHZ	1	UU	37° 04.48'	112° 29.81'	1829	S13	PSN	Analog	Utah
ELE	East Layton Elementary School, East Layton, UT	ELE	EN[ZEN]	3	UU	41° 04.84'	111° 55.09'	1444	Applied Mems	ANSS-130	Digital	ANSS
ELK	Elko, NV	ELK	BH[ZEN]	3	US	40° 44.69'	115° 14.33'	2210	*	*	Digital	USGS
ELU	Electric Lake, UT	ELU	EHZ	1	UU	39° 38.41'	111° 12.23'	2970	L4C	PSN	Analog	Utah
EMF	Eagle Mountain Gas Tap, UT	EMF	EN[ZEN]	3	UU	40° 16.89'	111° 59.92'	1487	Applied Mems	ANSS-130	Digital	ANSS
EMU	Emma Park, UT	EMU	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	EOCU	EN[ZEN]	3	UU	40° 46.62'	111° 53.95'	1356	EpiSensor	Basalt	Digital	Utah
EPU	East Promontory, UT	EPU	EHZ	1	UU	41° 23.49'	112° 24.53'	1436	L4C	PSN	Analog	USGS
ETW	Elwood Town Hall, Elwood, UT	ETW	EN[ZEN]	3	UU	41° 40.15'	112° 08.53'	1305	Applied Mems	ANSS-130	Digital	ANSS
FLU	Fool's Peak, UT	FLU	EHZ	1	UU	39° 22.69'	112° 10.29'	1951	18300	Basalt	Digital	USGS
			EN[ZEN]	3								

UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		Station	Channel	Channels	Code							
FLWY	Flagg Ranch, WY	FLWY	BH[ZEN]	3	IW	44° 04.96'	110° 41.96'	2078	3ESP	RT-130	Digital	ANSS
FMC	FMC Mine, Green River, WY	FMC	HH[ZEN]	3	UU	41° 24.49'	109° 46.67'	1903	40T	RT-130	Digital	Utah
FOR1	Milford Southwest, UT	FOR1	HH[ZEN]	3	UU	38° 22.13'	113° 05.63'	1642	Trillium 120	Centaur	Digital	Utah
FORU	South Mineral Mountains, UT	FORU	HH[ZEN]	3	UU	38° 27.53'	112° 51.68'	1840	40T	ANSS-130	Digital	Utah
FPU	Francis Peak, UT	FPU	EHZ	1	UU	41° 01.58'	111° 50.21'	2816	L4C	PSN	Analog	USGS
FSU	Fish Springs, UT	FSU	EHZ	1	UU	39° 43.35'	113° 23.48'	1487	18300	PSN	Analog	Utah
FTT	Fire Training Tower, Magna, UT	FTT	EN[ZEN]	3	UU	40° 41.16'	112° 04.99'	1381	Applied Mems	ANSS-130	Digital	ANSS
GBI	Big Grassy Butte, ID	GBI	EHZ	1	IE	43° 59.22'	112° 03.78'	1541	*	*	Digital	INL
GCAZ	Grand Canyon, AZ	GCAZ	EHZ	1	AR	36° 03.51'	112° 11.02'	2072	*	*	Analog	NAU
GMO	Grantsville Maintenance Office, Grantsville, UT	GMO	EN[ZEN]	3	UU	40° 36.04'	112° 28.48'	1320	Applied Mems	ANSS-130	Digital	ANSS
GMU	Granite Mountain, UT	GMU	EH[ZEN]	3	UU	40° 34.53'	111° 45.79'	1829	S13	PSN	Analog	USGS
GRR	Grays Lake, ID	GRRI	EHZ	1	IE	42° 56.28'	111° 25.32'	2207	*	*	Digital	INL
GZU	Grizzly Peak, UT	GZU	EH[ZEN]	3	UU	41° 25.53'	111° 58.50'	2646	S13	PSN	Analog	USGS
H17A	Grant Village (YNP), WY	H17A	BH[ZEN]	3	TA	44° 23.71'	110° 34.57'	2400	STS-2	Q330	Digital	NSF
HAFB	Hill Air Force Base, Hill AFB, UT	HAFB	EN[ZEN]	3	UU	41° 07.07'	111° 58.55'	1471	Applied Mems	ANSS-130	Digital	Utah
HCSU	Hobble Creek, Springville, UT	HCSU	EHZ	1	UU	40° 12.40'	111° 30.14'	1789	L4C	Basalt	Digital	Utah, USGS
HDU	Hyde Park, UT	HDU	EHZ	1					EpiSensor			
HEB	Heber, UT	HEB	EHZ	1	UU	41° 48.18'	111° 45.99'	1807	L4C	PSN	Analog	USGS
HER	Herriman Fire Station Herriman, UT	HER	EN[ZEN]	3	UU	40° 30.94'	112° 01.85'	1502	EpiSensor	K2	Digital	ANSS
HES	Hooper Elementary School Hooper, UT	HES	EN[ZEN]	3	UU	41° 09.89'	112° 07.30'	1292	EpiSensor	K2	Digital	ANSS
HHA	Hell's Half Acre, ID	HHAI	EHZ	1	IE	43° 17.70'	112° 22.74'	1371	*	*	Digital	INL
HHS	Hurricane High School, UT	HHS	EN[ZEN]	3	UU	37° 10.43'	113° 17.74'	987	EpiSensor	Etna	Digital	Utah
HLI	Hailey, ID	HLID	BH[ZEN]	3	US	43° 33.75'	114° 24.83'	1772	*	*	Digital	USGS
HLJZ	Hailstone, UT	HLJ	EHZ	1	UU	40° 36.64'	111° 24.05'	1931	S13	PSN	Analog	Utah
HMU	Henry Mountain, UT		EN[ZEN]	3					FBA23	K2	Digital	
HON	Honeyville, UT	HON	EN[ZEN]	3	UU	41° 36.97'	112° 03.05'	1528	Applied Mems	ANSS-130	Digital	ANSS
HONU		HONU	EHZ	1					L4C	PSN	Analog	USGS

UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		Station	Channel	Channels	Code							
HRU	Hogsback Ridge, UT	HRU	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	HTU	EHZ	1	UU	40° 40.52'	111° 13.21'	2576	L4C	PSN	Analog	USGS
			EHZ	1					Episensor	Basalt	Digital	
			EN[ZEN]	3					Trillium 120	Q330	Digital	USGS
HVU	Hansel Valley, UT	HVU	HH[ZEN]	3	UU	41° 46.78'	112° 46.50'	1609	EpiSensor			USGS
HWU	Hardware Ranch, UT	HWUT	BH[ZEN]	3					*	*	Digital	USGS
IAE	Cedar City, Iron County Adult Education, UT	IAE	EN[ZEN]	3	UU	37° 39.91'	113° 40.02'	1807	EpiSensor	Etna	Digital	Utah
ICF	International Center Fire Station, Salt Lake City, UT	ICF	EN[ZEN]	3	UU	40° 46.69'	112° 01.72'	1281	EpiSensor	K2	Digital	ANSS
ICU	Indian Springs Canyon, UT	ICU	EHZ	1	UU	37° 08.98'	113° 55.41'	1451	S13	PSN	Analog	Utah
IMU	Iron Mountain, UT	IMU	EHZ	1	UU	38° 37.99'	113° 09.50'	1833	L4C	PSN	Analog	Utah
IMW	Indian Meadows, WY	IMW	BH[ZEN]	3	IW	43° 53.58'	110° 56.58'	2670	3ESP	RT-130	Digital	ANSS
ISCO	Idaho Springs, CO	ISCO	BH[ZEN]	3	US	39° 47.98'	105° 36.80'	2743	STS-2	Q330	Digital	ANSS
JLU	Jordanelle, UT	JLU	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	JRP	EN[ZEN]	3	UU	40° 49.54'	111° 56.66'	1284	EpiSensor	K2	Digital	ANSS
KEUT	Kanab Elementary School, UT	KEUT	EN[ZEN]	3	UU	37° 03.02'	112° 31.76'	1514	PA-23	SMART-24	Digital	Utah
KLJ	Keetley, UT	KLJ	EHZ	1	UU	40° 37.85'	111° 24.30'	1992	S13	PSN	Analog	Utah
KNB	Kanab, UT	KNB	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	LCMT	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	LCU	EN[ZEN]	3	UU	40° 34.41'	111° 47.91'	1571	Applied Mems	K2	Digital	ANSS
LDJ	Lady, UT	LDJ	EHZ	1	UU	40° 34.89'	111° 24.52'	2217	S13	PSN	Analog	Utah
LEVU	Levan, UT	LEVU	EHZ	1	UU	39° 30.39'	111° 48.88'	1996	L4C	Basalt	Digital	USGS
			EN[ZEN]	3					EpiSensor			

UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation	Sensor	Digitizer	Telemetry	Sponsor	
		Station	Channel	Channels	Code			(meters)					
LGC	Lakeside Golf Course Bountiful, UT	LGC	EN[ZEN]	3	UU	40° 54.04'	111° 54.51'	1292	EpiSensor	K2	Digital	ANSS	
LHUT	Little Humpy Peak, UT	LHUT	EHZ	1	UU	40° 53.49'	110° 59.78'	3084	S13	PSN	Analog	Utah	
LIUT	Lila Canyon, UT	LIUT	HH[ZEN]	3	UU	39° 25.45'	110° 19.51'	2178	Trillium 120	Centaur	Digital	Utah	
LKC	Lee Kay Hunter Education Center Magna, UT	LKC	EN[ZEN]	3	UU	40° 43.62'	112° 02.14'	1289	EpiSensor	K2	Digital	ANSS	
LKW	Lake, WY	LKWy	BH[ZEN]	3	US	44° 33.91'	110° 24.00'	2424	*	*	Digital	USGS	
LMUT	Lake Mountain, UT	LMUT	EN[ZEN]	3	UU	40° 15.69'	111° 55.69'	2330	EpiSensor	K2	Digital	ANSS	
LOHW	National Elk Refuge, WY	LOHW	BH[ZEN]	3	IW	43° 36.76'	110° 36.30'	2245	3ESP	RT-130	Digital	ANSS	
LRG	Logan River Golf Course Logan, UT	LRG	EN[ZEN]	3	UU	41° 42.82'	111° 51.08'	1362	Applied Mems	ANSS-130	Digital	ANSS	
LSU	Lake Shores, UT	LSU	EN[ZEN]	3	UU	40° 07.94'	111° 43.80'	1375	EpiSensor	K2	Digital	ANSS	
LTU	Little Mountain, UT	LTU	EHZ	1	UU	41° 35.51'	112° 14.83'	1585	L4C	PSN	Analog	USGS	
			EHZ	1						Basalt	Digital		
			EN[ZEN]	3									
MAB	Mapleton Ambulance Building Mapleton, UT	MAB	EN[ZEN]	3	UU	40° 07.85'	111° 34.67'	1440	EpiSensor	K2	Digital	ANSS	
MCID	Moose Creek, ID	MCID	EHZ	1	WY	44° 11.45'	111° 11.03'	2137	L4C	PSN	Analog	USGS	
MCU	Monte Cristo Peak, UT	MCU	EHZ	1	UU	41° 27.70'	111° 30.45'	2664	18300	PSN	Analog	USGS	
MGCCU	Grand County Courthouse, Moab, UT	MGCCU	EN[ZEN]	3	UU	38° 34.46'	109° 32.89'	1241	EpiSensor	K2	Digital	Utah	
MHD	Mile High Drive, UT	MHD	EHZ	1	UU	40° 39.64'	111° 48.05'	1597	Ranger	Basalt	Digital	USGS	
			EN[ZEN]	3					EpiSensor				
MHS	Milford High School, UT	MHS	EN[ZEN]	3	UU	38° 23.94'	113° 00.86'	1529	EpiSensor	Basalt	Digital	Utah	
MID	Middle Canyon, UT	MID	EN[ZEN]	3	UU	40° 31.04'	112° 15.28'	1722	Applied Mems	ANSS-130	Digital	ANSS	
MLI	Malad Range, ID	MLI	EHZ	1	UU	42° 01.61'	112° 07.53'	1896	L4C	Basalt	Digital	USGS	
			EN[ZEN]	3					EpiSensor				
MMU	Miners Mountain, UT	MMU	EHZ	1	UU	38° 11.57'	111° 17.66'	2387	S13	PSN	Analog	Utah	
MOMZ	Monida, MT	MOMT	EHZ	1	MB	44° 35.60'	112° 23.66'	2220	*	*	Analog	MBMT	
MOOW	Moose Ponds, WY	MOOW	BH[ZEN]	3	IW	43° 44.92'	110° 44.69'	2128	3ESP	RT-130	Digital	ANSS	
MOR	Morgan, UT	MOR	EN[ZEN]	3	UU	41° 02.77'	111° 39.94'	1633	Applied Mems	ANSS-130	Digital	ANSS	
MOUT	Mount Ogden, UT	MOUT	EHZ	1	UU	41° 11.94'	111° 52.73'	2743	S13	PSN	Analog	USGS	
MPU	Maple Canyon, UT	MPU	EN[ZEN]	3	UU	40° 00.93'	111° 38.00'	1909	EpiSensor	K2	Digital	ANSS	

UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation	Sensor	Digitizer	Telemetry	Sponsor
Code		Station	Channel	Channels	Code			(meters)				
		HH[ZEN]	3					3ESP				
MSU	Marysvale, UT	MSU	EHZ	1	UU	38° 30.74'	112° 10.63'	2105	18300	PSN	Analog	Utah
MTPU	Mt. Pierson, UT	MTPU	EN[ZEN]	3	UU	38° 02.49'	112° 11.06'	3112	EpiSensor	Q330	Digital	Utah
			HH[ZEN]	3					Trillium 120			
MTUT	Morton Thiokol, UT	MTUT	EHZ	1	UU	41° 42.55'	112° 27.28'	1373	L4C	PSN	Analog	USGS
MVCO	Mesa Verde, CO	MVCO	BH[ZEN]	3	US	37° 12.62'	108° 29.92'	2170	STS-2	Q330	Digital	ANSS
MVU	Marysvale, UT	MVU	BH[ZEN]	3	LB	38° 30.22'	112° 12.74'	2240	*	*	Digital	Sandia
NAI	North Antelope Island, UT	NAI	EN[ZEN]	3	UU	41° 00.97'	112° 13.68'	1472	EpiSensor	K2	Digital	ANSS
NAIU		NAIU	EHZ	1					L4C	PSN	Analog	USGS
NLU	North Lily Mine, UT	NLU	EN[ZEN]	3	UU	39° 57.29'	112° 04.50'	2036	Episensor	RT-130	Digital	ANSS
			HH[ZEN]	3					Trillium 120			
NMU	North Mineral Mountain, UT	NMU	EH[ZEN]	3	UU	38° 30.99'	112° 51.00'	1853	S13	PSN	Analog	Utah
NOQ	North Oquirrh Mountains, UT	NOQ	EN[ZEN]	3	UU	40° 39.16'	112° 07.26'	1628	EpiSensor	K2	Digital	ANSS
			HH[ZEN]	3					Trillium 120	ANSS-130	Digital	USGS
NPI	North Pocatello, ID	NPI	EHZ	1	UU	42° 08.84'	112° 31.10'	1640	L4C	Basalt	Digital	ANSS
			EN[ZEN]	3					EpiSensor			
O20A	White River City, CO	O20A	BH[ZEN]	3	TA	40° 08.09'	108° 14.50'	1915	STS-2	Q330	Digital	NCF
OCP	Orem City Park, Orem, UT	OCP	EN[ZEN]	3	UU	40° 17.87'	111° 41.44'	1464	EpiSensor	K2	Digital	ANSS
OF2	Ogden Fire Station ° 2 Ogden, UT	OF2	EN[ZEN]	3	UU	41° 13.70'	111° 56.92'	1358	EpiSensor	K2	Digital	ANSS
OPS	Ogden Public Safety Building, Ogden, UT	OPS	EN[ZEN]	3	UU	41° 13.72'	111° 58.54'	1317	Applied Mems	ANSS-130	Digital	ANSS
OSS	Oquirrh Sub Station, UT	OSS	EN[ZEN]	3	UU	40° 33.77'	112° 01.61'	1503	Applied Mems	ANSS-130	Digital	ANSS
OWUT	Old Woman Plateau, UT	OWUT	EHZ	1	UU	38° 46.80'	111° 25.42'	2568	L4C	PSN	Analog	Utah
PCCW	Pine Creek, Cokeville, WY	PCCW	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	PCL	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	PCR	EN[ZEN]	3	UU	40° 39.25'	111° 30.19'	2100	EpiSensor	K2	Digital	ANSS
PEUT	Richfield, Pahvant Elementary School, UT	PEUT	EN[ZEN]	3	UU	38° 46.55'	112° 05.32'	1644	PA-23	SMART-24	Digital	Utah
PGAZ	Page, AZ	PGA	EHZ	1	AR	36° 54.34'	111° 16.86'	1272	*	*	Analog	NAU



UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		Station	Channel	Channels	Code							
QVOL	955 W Topaz, St. George, UT	QVOL	HN[ZEN]	3	UU	37° 15.68'	113° 36.14'	1435	Gsig-AC63	Gsig-GMS	Digital	ANSS
QUGS	240 N Redwood Road, SLC, UT	QUGS	HN[ZEN]	3	UU	40° 46.45'	111° 56.32'	1300	Gsig-AC63	Gsig-GMS	Digital	ANSS
R11A	Troy Canyon, Currant, NV	R11A	BH[ZEN]	3	TA	38° 20.93'	115° 35.12'	1756	STS-2	Q330	Digital	NCF
RBUZ	Red Butte Canyon, UT	RBU	EHZ	1	UU	40° 46.85'	111° 48.50'	1676	L4C	Basalt	Digital	USGS
			EN[ZEN]	3					EpiSensor			
RCJZ	Ross Creek, UT	RCJ	EHZ	1	UU	40° 39.51'	111° 26.36'	2090	S13	PSN	Analog	Utah
RDMU	Red Mountain, UT	RDMU	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	REDW	BH[ZEN]	3	IW	43° 21.74'	110° 51.18'	2322	3ESP	RT-130	Digital	ANSS
REUT	Washington Fields, Riverside Elementary School, UT	REUT	EN[ZEN]	3	UU	37° 05.86'	113° 31.16'	791	PA-23	SMART-24	Digital	Utah
ROA	Roan Cliffs, UT	ROA	EHZ	1	UU	39° 39.69'	110° 21.88'	2962	S13	PSN	Analog	Utah
RPF	Rose Park Fire Station, Salt Lake City, UT	RPF	EN[ZEN]	3	UU	40° 46.52'	111° 55.22'	1287	Applied Mems	ANSS-130	Digital	ANSS
RRCU	Rees Ranch, Coalville, UT	RRCU	EHZ	1	UU	40° 53.21'	111° 26.22'	2028	L4C	Basalt	Digital	Utah, USGS
			EN[ZEN]	3					EpiSensor			
RRWY	Rawlins, WY	RRWY	BH[ZEN]	3	IW	41° 41.33'	107° 12.61'	2402	3ESP	RT-130	Digital	ANSS
RSUT	Red Spur, UT	RSUT	EHZ	1	UU	41° 38.31'	111° 25.90'	2682	S13	Basalt	Digital	USGS
			EN[ZEN]	3					EpiSensor			
SAIU	South Antelope Island, UT	SAIU	EHZ	1	UU	40° 51.29'	112° 10.89'	1384	L4C	Basalt	Digital	USGS
			EHZ	1					EpiSensor			
			EN[ZEN]	3					EpiSensor			
SCC	Salt Lake Community College, SLC UT	SCC	EN[ZEN]	3	UU	40° 40.49'	111° 56.37'	1306	EpiSensor	K2	Digital	ANSS
SCS	Syracuse City Cemetery Shop Syracuse, UT	SCS	EN[ZEN]	3	UU	41° 05.73'	112° 02.81'	1321	EpiSensor	K2	Digital	ANSS
SCUT	Santa Clara, UT	SCUT	EN[ZEN]	3	UU	37° 07.69'	113° 38.68'	837	EpiSensor	Etna	Digital	Utah
SCY	Salem City Yard, Salem, UT	SCY	EN[ZEN]	3	UU	40° 03.47'	111° 41.14'	1386	Applied Mems	ANSS-130	Digital	ANSS
SGSU	St. George Fire Station #4, UT	SGSU	EN[ZEN]	3	UU	38° 16.61'	112° 38.42'	1799	PA-23	SMART-24	Digital	Utah
SGU	Sterling, UT	SGU	EHZ	1	UU	39° 10.94'	111° 38.68'	2357	18300	PSN	Analog	USGS
SHP	Sheep Range, NV	SHP	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	SJF	EN[ZEN]	3	UU	40° 33.37'	111° 56.34'	1356	Applied Mems	ANSS-130	Digital	ANSS



UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation (meters)	Sensor	Digitizer	Telemetry	Sponsor
		Station	Channel	Channels	Code							
TPNV	Topopah Spring, NV	TPNV	BH[ZEN]	3	US	36° 56.93'	116° 14.97'	1600	*	*	Digital	USGS
TPU	Thanksgiving Point, Lehi, UT	TPU	EN[ZEN]	3	UU	40° 25.81'	111° 54.13'	1383	EpiSensor	K2	Digital	ANSS
TRS	Tooele County Radio Shop, Tooele, UT	TRS	EN[ZEN]	3	UU	40° 30.83'	112° 18.63'	1568	EpiSensor	K2	Digital	ANSS
U15A	North Rim, AZ	U15A	BH[ZEN]	3	AE	36° 25.80'	112° 17.40'	2489	Trillium 240	Q330	Digital	AZGS
UHP	Utah Highway Patrol Farmington, UT	UHP	EN[ZEN]	3	UU	40° 59.47'	111° 53.88'	1295	EpiSensor	K2	Digital	ANSS
UTH	Uintah Town Hall, Uintah, UT	UTH	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	UUE	EN[ZEN]	3	UU	40° 46.09'	111° 50.77'	1449	EpiSensor	K2	Digital	ANSS
V05	E. Island Mesa, Paradox Basin, CO	PV05	HH[ZEN]	3	RE	38° 08.87'	108° 50.08'	2142	*	*	Digital	USBR
V11	Davis Mesa, Paradox Basin, CO	PV11	HH[ZEN]	3	RE	38° 17.96'	108° 52.33'	1881	*	*	Digital	USBR
V15	Pinto Mesa, Paradox Basin, CO	PV15	HH[ZEN]	3	RE	38° 20.51'	108° 28.66'	2280	*	*	Digital	USBR
V21	Cone Mountain, Paradox Basin, CO	PV21	HH[ZEN]	3	RE	38° 33.67'	108° 58.50'	2235	*	*	Digital	USBR
VEC	Valley Emergency Communications Center West Valley City, UT	VEC	EN[ZEN]	3	UU	40° 39.21'	112° 01.95'	1480	EpiSensor	Basalt	Digital	ANSS
VNL	Vernal, UT	VNL	EN[ZEN]	3	UU	40° 27.48'	109° 32.89'	1648	FBA23	Etna	Digital	Utah
VRUT	Veyo Road, Veyo, UT	VRUT	HH[ZEN]	3	UU	37° 27.71'	113° 51.41'	1874	Trillium 120 PA-23	SMART-24	Digital	Utah
			EN[ZEN]	3								
W13A	Hualapai Mountain Park, Kingman, AZ	W13A	BH[ZEN]	3	AE	35° 06.00'	113° 53.40'	1988	3T	Q330	Digital	AZGS
WBC	Weber Canyon, UT	WBC	EN[ZEN]	3	UU	41° 08.38'	111° 54.05'	1602	EpiSensor	K2	Digital	ANSS
WCF	Wellsville Fire Station, Wellsville, UT	WCF	EN[ZEN]	3	UU	41° 38.37'	111° 55.94'	1387	Applied Mems	ANSS-130	Digital	ANSS
WCO	Washington City Office Building, UT	WCO	EN[ZEN]	3	UU	37° 07.91'	113° 30.56'	837	EpiSensor	Etna	Digital	Utah
WCU	Willow Creek, UT	WCU	EHZ	1	UU	38° 57.88'	112° 05.44'	2673	18300 EpiSensor	PSN Basalt	Analog Digital	USGS
			EHZ	1								
			EN[ZEN]	3								
WDO	Saint George, Washington County School District Office, UT	WDO	EN[ZEN]	3	UU	37° 06.46'	113° 35.19'	831	PA-23	SMART-24	Digital	Utah
WES	Westminster College Salt Lake City, UT	WES	EN[ZEN]	3	UU	40° 43.97'	111° 51.26'	1341	EpiSensor	K2	Digital	ANSS
WHS	West High School, SLC UT	WHS	EN[ZEN]	3	UU	40° 46.51'	111° 53.93'	1301	EpiSensor	K2	Digital	ANSS



UURSN	Location	SEED	SEED	No. of	Network	Latitude	Longitude	Elevation	Sensor	Digitizer	Telemetry	Sponsor	
Code		Station	Channel	Channels	Code			(meters)					
YMR	Madison River (YNP), WY	YMR	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	YMS	EHZ	1	WY	44° 15.84'	110° 31.67'	3106	L4C	PSN	Analog	USGS	
YMV	Mammoth Vault (YNP), WY	YMV	EHZ	1	WY	44° 58.42'	110° 41.33'	1829	L4C	PSN	Analog	USGS	
YNE	Northeast Entrance (YNP), WY	YNE	HH[ZEN]	3	WY	45° 00.46'	110° 00.48'	2343	Compact	ANSS-130	Digital	USGS	
YNM	Norris Museum (YNP), WY	YNM	HH[ZEN]	3	WY	44° 43.59'	110° 42.22'	2311	Trillium 240	Q330	Digital	USGS	
YNR	Norris Junction (YNP), WY	YNR	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	YPC	EHZ	1	WY	44° 38.88'	110° 11.55'	2932	L4C	PSN	Analog	USGS	
YPK	Parker Peak (YNP), WY	YPK	EH[ZEN]	3	WY	44° 43.91'	109° 55.32'	2897	L4C	PSN	Analog	USGS	
YPM	Purple Mountain (YNP), WY	YPM	EHZ	1	WY	44° 39.43'	110° 52.12'	2582	L4C	PSN	Analog	USGS	
YPP	Pitchstone Plateau (YNP), WY	YPP	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	YSB	EHZ	1	WY	44° 53.04'	110° 09.06'	2072	L4C	PSN	Analog	USGS	
YTP	The Promontory (YNP), WY	YTP	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	YUF	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	YWB	EHZ	1	WY	44° 36.35'	111° 06.05'	2310	L4C	PSN	Analog	USGS	
ZNPU	Zion National Park, UT	ZNPU	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: 928 data channels from 303 stations were being recorded at the end of this report period

## EXPLANATION OF TABLE

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

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

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

**SEED Channel:** The SEED format uses three letters to name seismic channels. See <[http://www.iris.edu/manuals/SEEDManual\\_V2.4.pdf](http://www.iris.edu/manuals/SEEDManual_V2.4.pdf)>> for information about the SEED channel naming convention. Relevant sections are reproduced below. In the SEED convention, each letter describes one aspect of the instrumentation and its digitization. The first letter specifies the general sampling rate and the response band of the instrument. Band codes used in this table include:

<b>Band Code</b>	<b>Band Type</b>	<b>Sample Rate</b>	<b>Corner Period</b>
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:

<b>Instrument Code</b>	<b>Description</b>
H	High gain seismometer
L	Low gain seismometer
N	Accelerometer

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

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

**Number of Channels:** Total number of waveform channels recorded.

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

<b>Network Code</b>	<b>Network name; Network operator or responsible organization</b>
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	Kinematics Ranger short-period seismometer
40T	Guralp CMG-40T broadband seismometer
3T	Guralp CMG-3T broadband seismometer
3ESP	Guralp CMG-3ESP broadband seismometer
STS-2	Streckheisen STS-2 broadband seismometer
FBA23	Kinematics FBA-23 accelerometer
EpiSensor	Kinematics EpiSensor accelerometer
Applied Mems	Applied Memes 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
IESE-S2	Institute of Earth Science and Engineering S-2 model borehole seismometer
Gsig-AC63	Geosig-AC63 NetQuakes accelerometer

Digitizer	Description
K2	Kinematics Altus Series K2 (19-bit resolution field digitizer)
Etna	Kinematics Altus Series Etna (18-bit resolution field digitizer)
72A-07	Refraction Technology (REF TEK) model 72A-07 (24-bit field digitizer)
72A-08	Refraction Technology (REF TEK) model 72A-08 (24-bit field digitizer)
ANSS-130	Refraction Technology (REF TEK) model 130-ANSS/02 (24-bit resolution field digitizer)
RT-130	Refraction Technology (REF TEK) model RT-130 (24-bit resolution

	field digitizer)
Q330	Quanterra, Inc Q330 digitizer (24-bit resolution field digitizer)
SMART-24	Geotech SMART-24 digitizer (24-bit resolution field digitizer)
PSN	PSN-ADC-SERIAL version III (16-bit resolution field digitizer)
Basalt	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)

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

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

USGS	U.S. Geological Survey
Utah	State of Utah
ANSS	Advanced National Seismic System
INL	Idaho National Laboratory
USBR	U.S. Bureau of Reclamation
LLNL	Lawrence Livermore National Laboratory
Sandia	Sandia National Laboratory
BYU-I	Brigham Young University, Idaho (formerly Ricks College)
MBMT	Montana Bureau of Mines and Geology
NSMP	National Strong Motion Project, U.S. Geological Survey
UNR	University of Nevada, Reno
AZGS	Arizona Geological Survey
NAU	Northern Arizona University
NSF	National Science Foundation
PBO	Plate Boundary Observatory

**NETWORK CHANGES DURING JANUARY 1–MARCH 31, 2018**

March 27 Stations FOR2, FOR3, and FOR4 closed.