

Table 5. Existing strong-motion instrument sites in Utah as of January 1, 1997.

Site No. (Type of site*)	Location Description	Latitude (degrees)	Longitude (degrees)	Description of Structure	Type of Instrument** (serial no.)	Trigger Threshold, g	Owner/ Operator***	Surficial Geology	Name of nearest Qt fault (distance & direction from fault) [upthrown or downthrown side]	Liquefaction potential	Depth to Bedrock (depth to groundwater)	Elevation
1 (N)	Logan, Utah State University Geosciences building basement	41.74083	111.81361	Large 3-story building with basement	SMA-1 (3929)	0.01	USGS, CA	L. Bonneville deltaic deposits: loose to medium dense gravel. Vs measured.	Central segment of East Cache fault (1.9 km west) [downthrown]	very low	>287 ft (= 150 ft)	4780 ft
2 (DN)	Hyrum Dam	41.64000	111.87000	Homogeneous earthfill dam. Crest length: 540 ft height: 116 ft	SMA-1 (2301 on right abutment) CRA-1 with 3 FBA-3's in dam crest, in boreholes (171)	0.01	BOR	Soft rock	Central segment of East Cache fault (5.7 km west) [downthrown]	low	0 (not applicable)	4620 to 4680 ft [spillway 4669]
3 (N)	Brigham City, Fire Station, basement	41.51944	112.01444	Brick, one story	SMA-1 (3930)	0.01	USGS, CA	Fan alluvium: pebble and cobble gravel in sand, silt, and clay matrix.	Brigham City segment of Wasatch fault (1.8 km west of Main trace) [downthrown] (0.73 km east of minor trace) [upthrown]	very low	Not known (> 30 ft)	4420 ft
4 (F)	Ogden City, Weber State University, maintenance building boiler room	41.19444	111.93944	Large 1-story wood frame building	SMA-1 (1489)	0.01	USGS, CA	Lateral-spread deposits of pebble gravel sand, silt, and minor clay.	Weber segment of Wasatch fault (0.7 km west) [downthrown]	very low	Not known (> 20 ft)	4720 ft
5 (DF)	East Canyon Dam	40.92200	111.6000	Double curvature concrete thin arch dam. Crest length: 436 ft height: 260 ft	SMA-1 (2303 center crest) SMA-1 (2304 right crest)	0.01	BOR	Hard rock	Northern segment of East Canyon fault (0.6 km west) [upthrown]	very low	0 (not applicable)	5480-5550 ft

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6 (DN)	Flaming Gorge Dam	40.91500	109.42083	Double curvature concrete thin arch dam	SMA-1 (2136 upper gallery of dam) SMA-1 (6254 lower foundation gallery of dam)	0.01	BOR	Hard rock	Pot Creek (faults) (22.8 km northwest of end of trace of lineament)	very low	0 (not applicable)	5820-6006 ft
7 (F)	Salt Lake City, NOAA Weather Service building, east airport.	40.78389	111.96333	Small 1-story building, metal storage shack on concrete pad 10' X 15'.	SMA-1 (5312)	0.01	USGS, CA	Fill overlying stream alluvium (sand, silt, and clay). Vs measured	West Valley fault zone (0.3 km west) [downthrown]	high	3,445 ft (0-10 ft)	4221 ft
8 (F)	Salt Lake City, UP&L building, Temple Square west (40 N 100 W).	40.77056	111.89472	2-car garage	SMA-1 (5307)	0.01	USGS, CA	Alluvial-fan gravel overlying L. Bonneville sand and clay.	Salt Lake segment of Wasatch fault zone (0.2 km west) [downthrown]	high	≈300 ft (10-30 ft)	4292 ft
9 (F)	Salt Lake City, City and County Building, recorder in electrical room.	40.77056	111.88611	Large 4-story masonry building retrofitted with base isolators.	CRA-1 (two 12-channels, 321 & 322) Free-field components at southwest corner of lot in shallow drill-hole casing.	0.01	USGS, CA	Lacustrine, marsh, and alluvial deposits of clay, silt, sand, and peat. Vs measured	Salt Lake segment of Wasatch fault zone (1.2 km west) [downthrown]	moderate	885 ft (10-30 ft)	4257 ft
10 (N)	Salt Lake City, VA Hospital Building #1, seventh floor, inside elevator room	40.75750	111.83972	Large 7-story brick building with basement	SMA-1 in basement (770) SMA-1 on 7th floor (847)	0.01	USGS, CA	Fill overlying fan alluvium of pebbles and cobbles gravel.	Salt Lake segment of Wasatch fault zone (0.5 km east) [upthrown]	very low	Not known (10-30 ft)	4744 ft

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11 (F)	Salt Lake City, Liberty Park greenhouse	40.74680	111.87150	Glass building	SMA-1 (5310)	0.01	USGS, CA	Marsh clay overlying L. Bonneville clay and sand	Salt Lake segment of Wasatch fault zone (1.4 km west) [downthrown]	moderate	≈450 ft (0-10 ft)	4264 ft
12 (N)	Salt Lake City, Eastwood Elementary School (3305 Wasatch Blvd.), basement boiler room	40.68306	111.79278	Large 1-story building with basement	SMA-1 (3575)	0.01	USGS, CA	Fill overlying fan alluvium, pebble and cobble gravel	Salt Lake segment of Wasatch fault zone (3.8 km east) [upthrown]	very low	Not known (>50 ft)	4974 ft
13 (DF)	Jordanelle dam site	40.59500	111.42361	Zoned earthfill dam. ≈295 feet high	Two digital instruments (in dam crest and toe)	0.01	BOR	Tertiary volcanic and volcanoclastic rocks	Bald Mountain fault (1.9 km east) [downthrown]	moderate	0 (not applicable)	≈5880 ft
14 (DF)	Upper Stillwater dam, field station	40.55889	110.69917	Small wooden housing on concrete pad	SMA-1 (2154 downstream bedrock) Digital instrument (same location)	0.01	BOR	Mutual Formation of the Uinta Mountain Group, interbedded sandstone and argillite	Towanta Flat graben (25 km northwest of end point of trace)	very low	33 ft (0-50 ft in valley of Rock Creek)	≈7900 ft
15 (DN)	Deer Creek Dam	40.40000	111.53000	Zoned earthfill dam. Crest length: 1304 ft height: 235 ft	SMA-1 (2293 on downstream face of dam) SSA-2 (FBA-23 on crest of dam) SMA-1 (2294 left abutment) SSA-2 (FBA-23DH on foundation in bedrock)	0.01	BOR	Stream gravel overlying limestone	Round Valley faults (4.8 km northwest of end point of trace) [upthrown]	moderate	0 (not applicable)	5270-5427 ft

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16 (N)	Provo, Utah State Hospital, heat plant and maintenance shops boiler room	40.23361	111.63194	Unreinforced rock building.	SMA-1 (1506)	0.01	USGS, CA	L. Bonneville sand	Provo segment of Wasatch fault (1.3 km west) [downthrown]	moderate	Not known (< 10 ft)	4570 ft
17 (DN)	Soldier Creek Dam	40.13694	111.02611	Zoned earthfill dam. Crest length: 1290 ft height: 251 ft	SMA-1 (3939 down stream face midslope of dam) SMA-1 and digital instrument (3940) (crest of dam) SMA-1 (3941 left abutment, bedrock)	0.01	BOR	Soft rock	Stinking Springs fault (1 km east) [upthrown]	very low	0 (not applicable)	7555-7575 ft. Spillway elev 7558 ft.
18 (N)	Nephi, Juab High School (555 E 800 N), cafeteria ticket room	39.71083	111.83472		SMA-1 (1516)	0.01	USGS, CA	Alluvial-fan deposits of boulder to clay size material	Nephi segment of Wasatch fault (1.5 km northwest of short trace) [downthrown] (1.5 km southeast of end point of main trace) [upthrown]	very low	Not known (\geq 30 ft)	5,160 ft
19 (DN)	Joes Valley Dam	39.29000	111.27000	Zoned earthfill embankment. Crest length: 750 ft height: 192 ft	SMA-1 (5707 crest of dam) SMA-1 (5708 down-stream face of dam, midslope) SMA-1 (5709 Bedrock near toe of dam)	0.01	BOR	Soft rock	Joes Valley fault (0.3 km west of east trace) [downthrown]	very low	0 (not applicable)	7004 ft

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20 (F)	Richfield, Utah Dept. of Transportation garage (100 W 708 S), service station building, storage/parts supply room	38.75806	112.08583		SMA-1 (4226)	0.01	USGS, CA	Quaternary alluvium	Elsinore "fault" (fold) (0.9 km east) [downthrown]	very low	Not known (>30 ft)	5296 ft
21 (N)	Cedar City, Southern Utah University Library, mounted on seismic pier on bottom floor.	37.67556	113.06833	Large multi-story building.	SMA-1 (1509)	0.01	USGS, CA	Quaternary flood plain alluvium	Cross Hollow Hills (faults) (1.4 km northeast of end point of trace) Cedar City-Parowan monocline (2.1 km southwest of end point of trace) [downthrown]	low	Not known (>30 ft)	5796 ft
22 (F)	Salt Lake City, Salt Lake Junction, AT&T Communications garage (3100 Kennedy Dr.), in back of microwave tower, against mountain.	40.75000	111.80800	Reinforced concrete 3-car garage plus shop. Cut into mountain	SMA-1 (5311)	0.01	USGS, CA	Hard rock	Salt Lake segment of Wasatch fault zone (3.7 km east) [upthrown]	very low	0 (750 ft)	5200 ft
23 (F)	Salt Lake City, Roosevelt Elementary School shed (800 East Springview Dr.)	40.70120	111.86570	Steel shed on 12 ft X 12 ft concrete pad	SMA-1 (5308)	0.01	USGS, CA	Marsh deposit overlying L. Bonneville silt and clay.	Salt Lake segment of Wasatch fault zone (0.8 km west) [downthrown]	moderate	Not known (0-10 ft)	4278.2 ft 1304 m 4296 ft on topo
24 (F)	Magna, Deadman's Cave	40.72549	112.15543	Founded on 6' X 6' concrete pad on concrete pier in fiberglass enclosure	SSA-1	0.001	KEN	Hard rock	East Great Salt Lake fault zone (6.9 km south of end point of trace, and in line with trend of fault)	very low	0 (<10 ft)	4280 ft

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25 (N)	Old Morton Salt Plant	40.76894	112.10060	Concrete block building, slab on grade construction. Instrument bolted to slab.	SSA-2	0.001	KEN	L. Bonneville sediments	East Great Salt Lake fault zone (5.1 km southeast of end point of trace) [upthrown]	high	Not known (<10 ft)	4212 ft
26 (DN)	Magna, north-west corner of Kennecott tailings pond	40.73557	112.16757	Founded on 6' X 6' concrete pad on concrete pier in fiberglass enclosure	SMA-1 (midslope) SSA-1 with remote FBA SBA-23 (at crest and toe)	0.01	KEN	Impoundment dike: tailings	East Great Salt Lake fault zone (5.7 km south and slightly to west of end point of trace) [downthrown?]	high	Not known (<10 ft)	~4230 ft
27 (DN)	Newton Dam	41.89601	111.98555	Earth dam	SMA-1 (crest) SMA-1 (toe)	0.01	BOR	Tuffaceous sandstone of Salt Lake Fm. One abutment of the dam is in a pre-L. Bonneville landslide deposit.	Dayton fault (1.3 km west) [upthrown]	very low	0 (not applicable)	4780-4860 ft
28 (N)	Lampo Junction, Thiokol chemical plant, Building M-3	41.66593	112.43452	Large 2-story building	SSA-1 (full scale \pm 2 g)	0.02	THIO	Alluvium	North Promontory fault (17 km east) [upthrown]	low	Not known (>30 ft)	4470 ft.
29 (F)	Kaysville, city center restroom building	41.033	111.933	Mason block, 1-story, 297 s.f.	SSA-2 (2335)	0.01	UGS	L. Bonneville lake bottom deposits: clay, silt, and sand.	Weber segment of Wasatch fault (2.5 km west) [downthrown]	moderate	Not Known	4370 ft
30 (F)	Draper, animal control facility	40.517	111.900	Mason block, 1-story, 2,576 s.f.	SSA-2 (2334)	0.01	UGS	L. Bonneville lake bottom deposits: silt, clayey silt, and fine sand	Salt Lake segment of Wasatch fault (7.0 km west) [downthrown]	moderate	Not known	4420 ft

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31 (F)	Santaquin, West Park restroom building	39.967	111.783	Mason block, 1-story, 625 s.f.	SSA-2 (2333)	0.01	UGS	Alluvium: gravelly sand, silty sand, and clay; overlies lake bottom deposits: pebble-cobble gravel or silt, clay, and sand.	Nephi segment of Wasatch fault (2.4 km west) [downthrown]	very low	Not known	4990 ft
32 (F)	Gunnison, Gunnison Valley High School storage shed	39.150	111.187	Wood-framed, steel shed, 759 s.f.	SSA-2 (2332)	0.01	UGS	Valley-fill deposits: pebbles and cobbles in mud, silt, and sands matrix.	Fayette segment of Wasatch fault (6.7 km south-southeast) [not applicable]	low	Not known	5103 ft
33 (F)	Beaver, city center restroom building	38.267	112.633	Mason block, 1-story, 299 s.f.	SSA-2 (2331)	0.01	UGS	Terrace alluvium: sand and gravel	Unnamed normal fault (0.3 km west) [downthrown]	very low	6-10 feet	5880 ft
34 (F)	St. George, Dixie College Hansen Stadium ticket gate house	37.100	113.567	Brick, 1-story 160 s.f.	SSA-2 (2330)	0.01	UGS	Eolian deposits: fine sand and silt.	Washington fault (5.4 km west) [downthrown]	not known	Not known	2655 ft

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