Intermountain Seismic Belt Historical Earthquake Project
Earthquakes Sorted by Date

Date (YYYY/MM/DD)	Name	Magnitude	Intensity
1876-03-22	Moroni, UT	5.0	VI
1884-11-10	Bear Lake, ID	6.3	VIII
1887-12-05	Kanab, UT	5.7	VII
1891-04-20	St. George, UT	5.0	VI
1894-07-18	Ogden, UT	5.0	VI
1900-08-01	Eureka, UT	5½	VII
1901-11-13	Southern Utah	6½	IX
1902-11-17	Pine Valley, UT (series)	6±	VIII
1905-11-11	Shoshone, ID	5½	V
1908-04-15	Milford, UT	5.0	VI
1909-10-05	Hansel Valley, UT	6±	VIII
1910-01-10	Elsinore, UT (series)	5.0	VI
1910-05-22	Salt Lake City, UT	5½	VII
1914-05-13	Ogden, UT	5½	VII
1915-07-15	Provo, UT	5.0	VI
1921-09-29	Elsinore, UT (series)	6±	VIII
1925-06-27	Clarkston Valley, MT	6¾	VIII
1928-02-29	Helena, MT	5½	IV
1929-02-15	Lombard, MT	5.6	V
1930-06-12	Grover, WY	5.8	VI
1933-01-20	Parowan, UT	5.0	VI
1934-03-12	Hansel Valley, UT (series)	6.6	IX
1935-10-18	Helena, MT (series)	6¼	VIII
1942-08-30	Cedar City, UT	5.0	VI
1942-09-26	Cedar City, UT	5.0	VI
1943-02-22	Magna, UT	5.0	VI
1944-07-12	Central Idaho	6.1	VII
1945-02-13	Central Idaho	6.0	VI
1945-09-23	Flathead Lake, MT	5.5	VI
1945-11-17	Glenwood, UT	5.0	VI
1947-11-23	Virginia City, MT	6¼	VIII
1949-03-06	Salt Lake City, UT	5.0	VI
1952-03-31	Big Fork, MT	5.5	VII
1958-02-13	Wallsburg, UT	5.0	VI
1959-02-27	Panguitch, UT	5.0	VI
1959-07-21	Kanab, UT	5.7	VI
1959-08-17	Hebgen Lake, MT (series)	7.5	X
1961-04-15	Ephraim, UT	5.0	VI
1962-08-30	Cache Valley, UT	5.7	VII
1962-09-05	Magna, UT	5.2	VI
1967-10-04	Marysvale, UT	5.2	VII
1975-03-27	Pocatello Valley, ID	6.0	VIII
1975-06-30	Yellowstone National Park, WY	6.1	VII
1983-10-28	Borah Peak, ID (series)	7.3	IX
1988-08-14	San Rafael Swell, UT	5.3	VI
1989-01-29	So. Wasatch Plateau, UT	5.4	VI
1992-09-02	St. George, UT	5.8	VII
1994-02-03	Draney Peak, ID	5.9	VII

Explanation of Terms

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Local/GMT Date (Time)
The date and time of earthquake occurrence is expressed in either local time [e.g., Mountain Standard Time (MST)] or in Greenwich Mean Time (GMT). GMT time (sometimes referred to as Universal Coordinated Time or UTC) is the time along the prime meridian through Greenwich, England, and is used as a time standard throughout the world. GMT is 7 hours later than MST. [During war time (02:00 Feb. 9, 1942 to 02:00 Sep. 30, 1945), GMT was 6 hours later than MST]. Seismologists routinely convert from local time to GMT for research purposes to avoid potential problems in translating between time zones around the world.

Epicenter/Location
The epicenter of an earthquake is the map location of the shock. Scientists designate an earthquake's location in terms of latitude and longitude, listed in this study, in terms of degrees and minutes. For the majority of earthquakes occurring in Utah prior to 1962, the epicenter is assumed, and assigned coordinates based upon the town where felt effects were the strongest, resulting in an epicentral accuracy of ± 25-50 km. The epicentral accuracy of shocks after 1962 varies, but is on the order of several kilometers. For detailed information on epicentral accuracy, contact the University of Utah Seismograph Stations.

Magnitude
Magnitude is a measure of the size of an earthquake. There are a variety of methods used by scientists to calculate magnitude, the most familiar of which is the Richter magnitude. Typically, the calculation of magnitude involves measuring the largest ground motion record during the arrival of a specific type of seismic wave and then correcting for distance to the epicenter. Magnitude is expressed in decimal arabic whole numbers. Each earthquake is assigned one magnitude value, although the use of different methods of calculating magnitude may result in a slight variation of reported values. For historical earthquake data where there was no instrumental recording of the shock, magnitude is estimated from the size of the felt area (see below). In such cases, the magnitudes are listed as a whole number followed by a ± or a fraction (e.g., 1/2) rather than a decimal (e.g., 0.5).

Intensity
The intensity of an earthquake is a measurement of the size of an earthquake based upon observations of its effects on people, structures, and the ground surface at a particular place. In the USA, the Modified Mercalli Intensity (MMI) scale is used. MMI is expressed in Roman numerals, ranging from I to XII. One earthquake will have different effects in different areas, therefore a range of assigned intensities. The maximum intensity is used to designate the relative size of the shock. Intensity data is plotted onto maps and contours (lines) outlining areas of equal intensity are drawn to create an isoseismal map. Isoseismal maps are used to determine magnitudes of earthquakes for which there were no instrumental recordings.

Felt Area
The geographic region over which a particular earthquake was felt by people. Generally the area within the largest isoseismal (contour) on an isoseismal map. Felt area is reported in terms of square miles or square kilometers.

Foreshock/Aftershock
Foreshocks are smaller earthquakes preceding the largest earthquake in a series concentrated in a geographically small region. Aftershocks are smaller earthquakes following the largest earthquake in a series concentrated in a geographically small region.

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