Table 5.20-- MAJOR EARTHQUAKES: 1838 TO 2014

[As of December 31, 2014. Includes all earthquakes with magnitudes of 6.0 or greater, 1838 to 1983, and 5.0 or greater, 1984 to present. Except for the earthquake of April 2, 1868, magnitudes of earthquakes prior to 1929 are conjectural]

| | | Magnitude (Richter |
|--------------------------|--|-----------------------|
| Date and time (HST) | Location | scale) |
| | | , |
| 1838: December 12 | Hawaii | 6.0 |
| 1841: April 7 | Hawaii | 6.0 |
| 1852: March 31 | Hawaii | 6.0 |
| 1868: March 28 | Mauna Loa, south flank, Hawaii | 6.5-7.0 |
| April 2 | Mauna Loa, south flank, Hawaii | 7.5-8.1 |
| 1871: February 19 | Molokai or Maui | 6.5 |
| 1875: November 23 | Hawaii | 6.0 |
| 1887: January 24 | Hawaii | 6.0 |
| 1913: October 25 | Hawaii | 6.5 |
| 1918: November 1 | Hawaii | 6.5 |
| 1919: September 14 | Hawaii | 6.5 |
| 1929: October 5 | Hualalai, Hawaii | 6.5 |
| 1938: January 23 | North of Pauwela Point, Maui | 6.8 |
| 1940: June 17 | Hawaii | 6.0 |
| 1941: September 25 | South east of Mauna Loa, Kaoiki fault zone, Hawaii | 6.0 |
| 1950: May 29 | Mauna Loa, south west rift, Hawaii | 6.2 |
| 1951: April 22 | Kilauea, Hawaii | 6.3 |
| August 21 | Kona, Hawaii | 6.9 |
| 1952: May 23 | Kona, Hawaii | 6.0 |
| 1954: March 30 | Kilauea, south flank, Hawaii | 6.5 |
| 1961: September 25 | Hawaii | 5.75-6.0 |
| 1962: June 27 | South east of Mauna Loa, Kaoiki fault zone, Hawaii | 6.1 |
| 1973: April 26 | North of Hilo, Honomu, Hawaii | 6.2 |
| 1975: Nov. 29, 4:47 AM | Kilauea, south flank, Kalapana, Hawaii | 7.2 |
| 1983: Nov. 16, 6:13 AM | South east of Mauna Loa, Kaoiki fault zone, Hawaii | 6.7 |
| 1984: June 8, 5:34 PM | 80 miles south of Honolulu, Oahu | 5.3 |
| 1986: April 26, 7:19 AM | 28 miles north east of Maui | 5.1 |
| 1987: Feb. 3, 4:22 PM | 26 miles south of Kahoolawe | 5.0 |
| 1989: June 25, 5:27 PM | Kilauea, south flank, Kalapana, Hawaii | 6.2 |
| 1994: Feb. 1, 12:01 AM | 12 miles south of Kilauea, offshore, Hawaii | 5.2 |
| 1997: June 30, 5:47 AM | 5 miles west of Kalapana, Hawaii | 5.2 |
| 1999: April 16, 2:56 PM | 4 miles north of Pahala, Hawaii | 5.6 |
| 2000: April 1, 8:18 PM | 7 miles south east of Kilauea Summit, Hawaii | 5.0 |
| 2003: August 26, 8:24 PM | 6 miles north west of Kaena Point, Oahu | 5.0 |
| 2005: May 13, 12:06 AM | 27 miles south of Naalehu near Loihi, Hawaii | 5.0 |
| 2005: July 15 | 49 miles north of Hilo, Hawaii | 5.2 |
| 2005: July 17, 9:15 AM | Near seamount Loihi, Hawaii | 5.2 |
| | | <u> </u> |

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Table 5.20-- MAJOR EARTHQUAKES: 1838 TO 2014 -- Con.

| Date and time (HST) | Location | Magnitude (Richter scale) |
|--|---|--|
| 2006: October 15, 7:07:49 AM 2006: October 15, 7:14:12 AM 2006: November 23, 9:20:10 AM 2007: August 13, 7:38 PM 2009: April 14, 12:44 PM 2013: June 4, 2:12 PM | Just offshore of Kiholo Bay, Hawaii 6 miles west of Mahukona, Hawaii Just offshore of Kiholo Bay, Hawaii Kilauea, south flank, Hawaii 9 miles south of Volcano, Hawaii 34 miles southeast of Pahala, Hawaii | 6.7 6.0 5.1 5.4 5.0 5.3 |

Source: Augustine S. Furumoto, N. Norby Nielsen, and William R. Phillips, *A Study of Past Earthquakes, Isoseismic Zones of Intensity and Recommended Zones for Structural Design for Hawaii* (University of Hawaii, Center for Engineering Research, Engineering Bulletin, June 15, 1972); information supplied by Wm. Mansfield Adams and Augustine S. Furumoto, Institute of Geophysics, University of Hawaii; Hawaii Institute of Geophysics, records; U.S. Geological Survey, National Earthquake Information Service; U.S. Geological Survey, Hawaiian Volcano Observatory, records; and U.S. Geological Survey, Earthquake Hazards Program, http://earthquake.usgs.gov/eqcenter/eqinthenews/ and records.