

Table 5.21-- EARTHQUAKES WITH INTENSITIES OF V OR GREATER ON OAHU: 1859 TO 2019

[As of December 31, 2019]

Date (HST)	Epicentral location	Magnitude	Oahu average intensity (Modified Mercalli Scale 1/)
1861: Dec. 5	Molokai-Lanai vicinity (?)	5.9	Mid V
Dec. 15	Molokai-Lanai vicinity (?)	5.6	Lower V - mid V
1868: Apr. 2	SE coast of Hawaii	7.9	Upper IV - lower V
Apr. 4	Maui group vicinity (?)	6.5	Lower V
1870: Aug. 7	Near Molokai	6.4	V
1871: Feb. 19	S coast of Lanai	6.8	Upper VI - lower VII
1881: Sep. 30	Maui vicinity	6.4	IV - V
1887: Jan. 13	Oahu vicinity	5.3	V
1895: Dec. 8	Oahu vicinity (?)	6.8	Mid V
1896: Sep. 13	Maui vicinity (?)	6.6	IV - V
1926: Mar. 19	N of Kohala, Hawaii	5.5	Upper IV - lower V
1929: Oct. 5	Hualalei	6.5	Lower V
1938: Jan. 22	N of Maui	6.8	Upper V - lower VI
1940: June 16	N of Hawaii	6.0	IV - V
1948: June 28	S coast of Oahu	5.2	Mid VI
1973: Apr. 26	Honomu, Hawaii	6.2	Mid V
1975: Nov. 29	Kalapana, Hawaii	7.2	V
1981: Mar. 5	Kalohi Channel	5.0	Mid V
2006: Oct. 15	Kiholo Bay, Hawaii	6.7	V

1/ Modified Mercalli Scale of 1931, 1956 abridged version further simplified. This scale, which extends from I to XII, reads in part:

IV. Hanging objects swing. Vibration like passing of heavy trucks or sensation of a jolt. Standing autos rock. Windows, dishes, doors rattle. Crockery clashes. In the upper part of range wooden construction creaks.

V. Felt outdoors; direction estimated. Sleepers wakened. Liquids distributed, some spilled. Small unstable objects displaced or upset. Doors, shutters, pictures swing. Pendulum clocks stop.

VI. Felt by all. Many frightened, run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books thrown off shelves, pictures off walls. Furniture moved, overturned. Weak plaster and masonry cracked. Small bells ring. Trees, bushes noticeably shaken.

VII. Difficulty in standing. Noticed by drivers of autos. Hanging objects quiver. Furniture broken. Damage to weak masonry. Weak chimneys broken at roof line. Fall of plaster, loose bricks, etc. Some cracks in ordinary masonry. Waves on ponds. Small slides on sand and gravel banks. Large bells ring. Irrigation ditches damaged.

Source: Cox, D.C. (1986a), *Earthquakes Felt on Oahu, Hawaii and Their Intensities*, Environmental Center Special Report, Vol. 38, University of Hawaii, 120 pp.; Cox, D.C. (1986b), *The Oahu Earthquake of June 1948, Associated Shocks, and the Hypothetical Diamond Head Fault*, Environmental Center Special Report, Vol. 36, University of Hawaii, 32 pp.; Cox, D.C. (1987), *Earthquake Experience in Honolulu*, Hawaiian Journal of History, Vol. 21, pp 98-109; Klein, F.C. and T.L. Wright (2000), *Catalog of Hawaiian Earthquakes, 1823-1959*, U.S. Geological Survey Professional Paper 1623, 98 pp.; Wyss, M. and R.Y. Koyanagi (1992), *Isoseismal maps, macroseismic epicenters, and estimated magnitudes of historical earthquakes in the Hawaiian Islands*, U.S. Geological Survey Bulletin 2006, 93 pp.; U.S. Geological Survey, Hawaiian Volcano Observatory, Seismic Catalog; and U.S. Geological Survey, National Earthquake Information Center, ShakeMap; and records.