



1946 Aleutian Islands tsunami



E-53, Fishpond walls at Pukoo, Molokai, broken by Tsunami.



E-51, Damage to house, and scarp formation at head of beach, at Kainalu, Molokai.

Runups in the Hawaiian Islands for Large, Pacific-Wide 20th Century Tsunamis: Molokai and Lanai

Runups given are estimated maximum heights in feet of water levels on land relative to sea level, produced by inland flooding of the tsunami's waves. Runups should not be confused with inundation limits (i.e., horizontal measures of the inland penetrations of a tsunami's waves). In low-lying areas, inundation can extend inland for several hundred yards. Statewide, source locations for these tsunamis are the Aleutian Islands (1946 and 1957), the Kamchatka Peninsula (1952), Chile (1960), Alaska (1964), and Japan (2011). Runup data are not available for all of these tsunamis for all of the islands. Further discussion of runups, data sources, and the sectional runup maps from which these island-wide maps were derived may be found in

Field Guide for Measuring Tsunami Runups and Inundations, State of Hawaii, Dept of Defense, Civil Defense Division, Tsunami Technical Review Committee, 2002.
 Miller, J. and V. Roeber, 2012, *Final Report Tsunami Observer Program and the Tsunami of March 11, 2011, Environmental Center, Univ. of Hawaii.*
 Trusdell, F.A., Chadderton, A., Hinchliffe, G., Hara, A. Patenge, B., and T Weber, 2012, *Tohoku-Oki earthquake tsunami runup and inundation data for sites around the Island of Hawaii*, U.S. Geological Survey Open-File Report 2012-1229

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