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 Tsunamis of March 11, 2011, Environmental Center, Univ. of Hawaii. Trusdell, F.A., Chadderton, A., Hinchcliffe, 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. Illustrations by Nancy Hulbirt. Data compiled by Daniel A. Walker (Tsunami Memorial Institute, 59530 Pupukea Rd, Honolulu, HI 96712) and International Tsunami Information Center.

For more information: International Tsunami Information Center (ITIC) NOAA National Weather Service itic.tsunami@noaa.gov http://www.tsunamiwave.info

1946 Aleutian Islands tsunami

E-55, Fishpond walls at Pokoo, Molokai, broken by Tsunami.

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