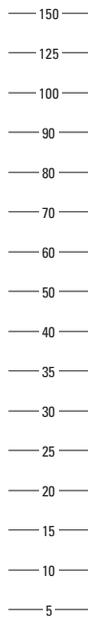
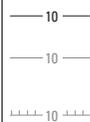


Contour intervals, %g

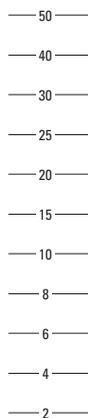


Explanation



Contours of spectral response acceleration expressed as a percent of gravity. Hachures point in direction of decreasing values

Contour intervals, %g



DISCUSSION

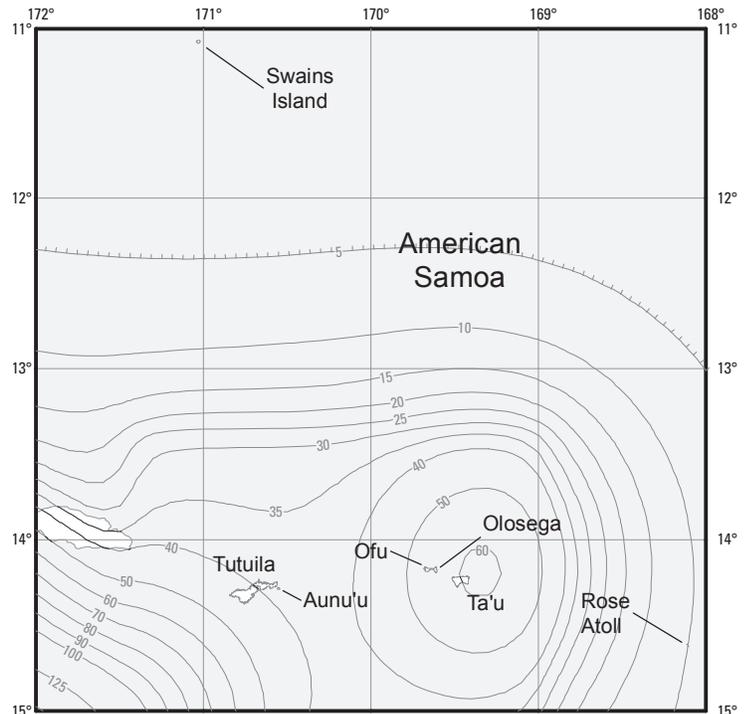
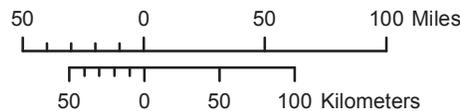
Maps prepared by United States Geological Survey (USGS) in collaboration with the Federal Emergency Management Agency (FEMA)-funded Building Seismic Safety Council (BSSC). The basis is explained in commentary prepared by BSSC and in the references.

Ground motion values contoured on these maps incorporate:

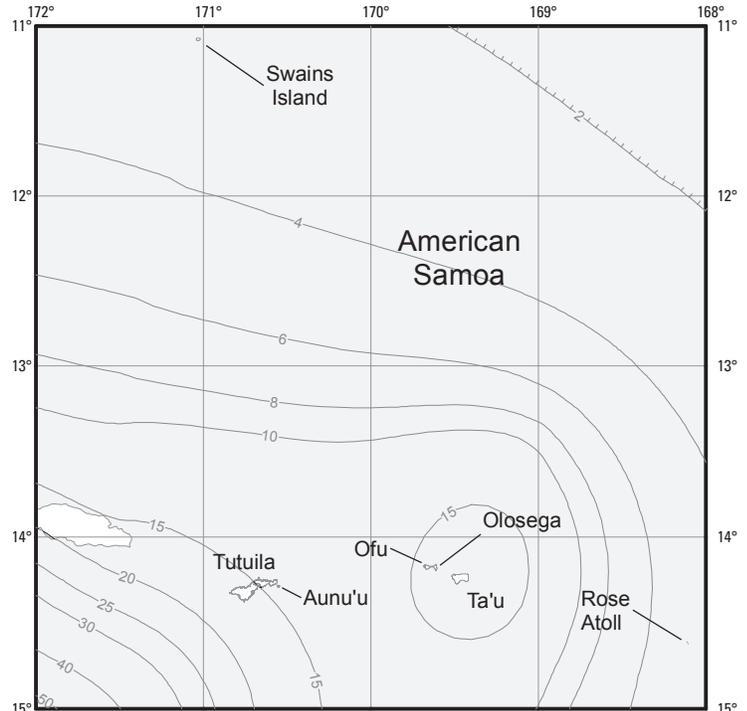
- a target risk of structural collapse equal to 1% in 50 years based upon a generic structural fragility
- a factor of 1.1 and 1.3 for 0.2 and 1.0 sec, respectively, to adjust from a geometric mean to the maximum response regardless of direction
- deterministic upper limits imposed near large, active faults, which are taken as 1.8 times the estimated median response to the characteristic earthquake for the fault (1.8 is used to represent the 84th percentile response), but not less than 150% and 60% g for 0.2 and 1.0 sec, respectively.

As such, the values are different from those on the uniform-hazard 2012 USGS National Seismic Hazard Maps for American Samoa posted at <http://earthquake.usgs.gov/hazmaps>.

Larger, more detailed versions of these maps are not provided because it is recommended that the corresponding USGS web tool (<http://earthquake.usgs.gov/designmaps>) be used to determine the mapped value for a specified location.



0.2 Second Spectral Response Acceleration (5% of Critical Damping)



1.0 Second Spectral Response Acceleration (5% of Critical Damping)

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 Huang, Yin-Nan, Whittaker, A.S., and Luco, Nicolas, 2008, Maximum spectral demands in the near-fault region, Earthquake Spectra, Volume 24, Issue 1, pp. 319-341.
 Luco, Nicolas, Ellingwood, B.R., Hamburger, R.O., Hooper, J.D., Kimball, J.K., and Kircher, C.A., 2007, Risk-Targeted versus Current Seismic Design Maps for the Conterminous United States, Structural Engineers Association of California 2007 Convention Proceedings, pp. 163-175.
 Petersen, M.D., Harmsen, S.C., Rukstales, K.S., Mueller, C.S., McNamara, D.E., Luco, Nicolas, and Walling, Melanie, 2012, Seismic Hazard of American Samoa and Neighboring South Pacific Islands: Data, Methods, Parameters, and Results: U.S. Geological Survey Open-File Report 2012-1087.

Figure 1613.3.1(8) Risk-Targeted Maximum Considered Earthquake (MCE_R) Ground Motion Response Accelerations for American Samoa of 0.2- and 1-Second Spectral Response Acceleration (5% of Critical Damping), Site Class B