

Layer Name: UncertaintyGrids, UncertaintyASCIIGrids

Layer Type: GRID (either ESRI or ASCII format)

Status: Complete

Geog. Extent: Statewide extent only: Islands of Hawai'i, Kaho'olawe, Kaua'i, Lāna'i, Maui, Moloka'i and O'ahu

Projection: Geographic Coordinate System

Datum: World Geodetic System 1984 (WGS84)

Resolution: ~250m resolution (0.00225 x 0.00225 cell size)

Description: Each zipped file contains 13 grids: 1 annual and 12 monthly raster grids of the uncertainty. Grids are available in inches or millimeters (mm) for the state. Uncertainty refers to the combined standard error from all input sources to the final map.

Source: 2011 Rainfall Atlas of Hawai'i, <http://rainfall.geography.hawaii.edu/>

History: The original Rainfall Atlas of Hawai'i was created in 1986 by Giambelluca et al. The main outputs of the project were monthly and annual isohyets (lines of equal rainfall) of the mean rainfall patterns for the six major islands of Hawai'i in millimeters using a 68 year base period*. The maps were created using the isohyetal method along with expert knowledge of the patterns.

The 2011 Rainfall Atlas of Hawai'i uses a 30 year base period of 1978-2007 (a 30 year period is a standard climatological averaging period), and the main outputs are continuous spatial grid coverages of seven major islands of Hawai'i (Kaho'olawe has been included) of the mean rainfall in inches and mm, and accompanying uncertainty grids (also in inches and mm). From the rainfall grid layers, isohyet layers were also created (using the Contour List tool in ArcGIS). The 2011 maps were created using a Bayesian Data Fusion method, which incorporates secondary predictor variables.

For complete methodology, please see the final report and appendix on the [Downloads page](#), or a condensed description at <http://rainfall.geography.hawaii.edu/methods.html>

**With the exception of Moloka'i, which used a 53 year base period.*

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