

PRISM Data Descriptions and Terms of Use

Historical 4km US Lower 48 dataset

The PRISM Climate Mapping Program is an ongoing effort to produce and disseminate the most detailed, highest-quality spatial climate datasets currently available. These digital climate maps are created using **PRISM (Parameter-elevation Regressions on Independent Slopes Model)** an analytical tool that uses point data, a digital elevation model, and other spatial data sets to generate gridded estimates of monthly, yearly, and event-based climatic parameters, such as precipitation, temperature, and dew point. PRISM is uniquely designed and constantly updated to map climate in the most difficult situations, including high mountains, rain shadows, temperature inversions, coastal regions, and other complex climatic regimes.

The data presented here was produced under NOAA/NASA funding, involves development of 103 years (1895-1997) of gridded monthly precipitation and maximum and minimum temperature at a 4-km resolution for the contiguous United States. PRISM, a knowledge based interpolation system was used to produce the gridded climate datasets (Daly et al. 1994, 1997, 2002). The project involves development of serially complete monthly data for approximately 8,000 stations in the U.S. An important part of this work has been to develop and apply a semi-analytical, spatially intelligent quality control system, based on PRISM, for monthly station observations.

Source Data Description and Citation

Resolution: 4 kilometer (Geographic, WGS84)
Spatial Extent: US Lower 48 States
Temporal Extent: 1895-1996 monthly time-series
Climate Variables: Precipitation
http://www.prism.oregonstate.edu/docs/meta/ppt_103yr.htm
Average Maximum Temperature
Average Minimum Temperature
http://www.prism.oregonstate.edu/docs/meta/temp_103yr.htm

- Gibson, W.P., C. Daly, T. Kittel, D. Nychka, C. Johns, N. Rosenbloom, A. McNab, and G. Taylor. 2002. Development of a 103-year high-resolution climate data set for the conterminous United States. *In: Proc., 13th AMS Conf. on Applied Climatology*, Amer. Meteorological Soc., Portland, OR, May 13-16, 181-183. http://www.prism.oregonstate.edu/pub/prism/docs/appclim02103yr_hires_dataset-gibson.pdf

Terms of Use

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