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The EROS snow water equivalent model is a spatially distributed snowmelt model driven by remotely sensed and assimilated meteorological data. The model is based upon the Utah Energy Balance (UEB) snowmelt model developed by Tarboton (Tarboton, 1994; Tarboton et al., 1995). The UEB model is very parsimonious with only three state variables. The model uses a lumped representation of the snowpack with two primary state variables, namely, water equivalence (or total amount of water, expressed in depth, in the snowpack), and energy content relative to a reference state of water in the ice phase at 0 C. This version of the model runs in a spatially distributed mode using a grid resolution of 10 km. The daily rainfall input grids are the satellite rainfall estimates (RFE) provided by NOAA/CPC (Climate Prediction Center) (Xie et al., 1997). The RFE is calculated on a 0.1-degree latitude/longitude grid. The remaining input variables required by the model (solar radiation, air temperature, wind, humidity, and atmospheric pressure) are estimated from downscaled output fields from NOAA's Global Data Assimilation System (GDAS) and the Global Forecast System (GFS) weather forecast model. Ten-year means were calculated for each day of the year based on data from the years 2002 to 2011. The mean data are displayed in the time series charts

Legend

est. current water level compared to the 2004-2012 average

- average
- slight below
- below
- very below
- no data

EROS est. snow water equivalent charts

