

RUNOFF FORECASTING BASED ON ADAPTIVE MODE APPROACH

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ABSTRACT

The judicious exploitation of runoff water is dependent on the timely forecasting of runoff from the watershed. It also helps in taking appropriate decisions pertaining to flood warning, flood control, reservoir operation and river regulations etc. Therefore, in the present study, the runoff forecasting models were developed for real time forecasting of runoff for Naula watershed of the Ramganga catchment, Uttarakhand, India. The models were developed based on adaptive mode concept of real time forecasting using transfer function approach considering watershed as linear and time invariant system. The model order was selected on the basis of Schwartz's Bayesian criterion. The performance of the developed model was tested on the basis of various statistical indices such as the mean absolute deviation (MAD), the mean square error (MSE), the revised Theil inequality coefficient (RTIC), the correlation coefficient (CC) and the coefficient of efficiency (CE). On the basis of performance evaluation criteria, the model performed well for the study watershed.