

II.4-RES-SNGL-A-BACKFLOW SINGLE RESERVOIR REGULATION OPERATION
UTILITY BACK-COMPUTED INFLOW

Description

Utility BACKFLOW is used to adjust the simulated inflow using observed pool elevation and observed mean daily discharge values.

First any missing pool elevations are filled by interpolating between observed values. Then mean daily 'observed' inflows are computed using the continuity equation and the pool elevations at day's end and the mean daily discharges. Instantaneous inflow values are adjusted by the mean daily inflow volumes as described in Section V.3.3-ADJUST-Q. Mean period adjusted inflows are then computed by averaging the adjusted instantaneous inflows.

The values of inflow computed in this Utility are very sensitive to the observed pool elevations provided. A small variation in pool elevation can lead to large changes in storage volume upsetting the precision of the computations. Investigation of the accuracy of the observed data is necessary before considering the use of this Utility (see Section II.4-RES-SNGL, 'Application of the Single Reservoir Model'). Once computed these adjusted inflows are used throughout the model whenever an inflow value is needed.

Parameters

No parameters are needed.

Time-Series

(OBSQ) - Observed mean daily discharge volumes

(OBSH) - Observed pool elevations

(NEWQ) - Adjusted instantaneous inflow (output from the model for later use)

Carryover

(ELEV) - Pool elevation one period before start of run - used to compute change in storage for first period when computing mean daily inflow volumes