



## **A comparison of baseflow indices, which were calculated with seven different baseflow separation methods**

**K. Eckhardt**

Institute of Physics and Meteorology, University of Hohenheim (eckhardt@uni-hohenheim.de)

The baseflow index characterises the long-term ratio of baseflow to total streamflow. In the present study, baseflow indices for 65 North American catchments are compared, which were calculated with seven different baseflow separation methods: HYSEP1, HYSEP2, HYSEP3, PART, BFLOW, UKIH, and Eckhardt. Special emphasis is placed on the recursive digital filtering of hydrographs. The idea behind this method is that the discharge of water from ground water storage is a process, which provides considerable smoothing. Hence, in the frequency spectrum of a hydrograph, long waves will be more likely to be associated with baseflow while the high frequency variability of the streamflow will primarily be caused by direct runoff. It should therefore be possible to identify the baseflow by low-pass filtering the hydrograph.