

Application of Peak Over Threshold Model for Seasonal Low Flow Variation Analysis (Case Study: Halilroud River)

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(Received : Sep. 14-2007 ; Accepted May. 14-2008)

Abstract

Low flow estimation and its characteristics play an important role in hydrologic studies. However, some low flow events are ignored compared with the lowest annual low flow that may have high risk. These events are taken into consideration by the use of partial duration or peak over threshold models. In this study, a 7-day low flow was applied for frequency distribution and threshold, and the lower events were considered as the number of low flow event ($\Lambda(t)$) to study seasonal variation of low flows together with two graphical methods. The results showed two major low flow seasons, and for other times of the year, the low flow events are negligible. At last, the region was divided into homogeneous groups based on seasonal variation of low flows.

Keywords: Low flow, POT model, Frequency analysis, Seasonal low flow variation, Halilrud basin.

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