JOURNAL OF WATER AND
LAND DEVELOPMENT
J. Water Land Dev. No. 13b, 2009: 41–56

Annual runoff coefficient in the Cerhovický Stream catchment

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Abstract: The runoff coefficient is one of the fundamental hydrological characteristics of a catchment. It indicates a share of the precipitation water that runs off from the catchment.

The results of the runoff coefficient calculation based on measurements carried out continuously in the Cerhovický Stream catchment over a considerable period of time, i.e. from 1988 up to 2006 are presented. The precipitation and runoff data in the catchment were used.

Mean value of the runoff coefficient and the runoff coefficients for the agricultural and forest parts of the catchment are presented. The total mean runoff coefficient for the Cerhovický Stream is 0.19 with the standard deviation of 0.06. Mean runoff coefficient for the forest part is 0.13 and for the agricultural part – 0.24.

Differences between the years with a higher and a lower precipitation were followed as well. We also statistically evaluated possible hydrological changes caused by the construction of the highway and the market centre. For another possible explanation of quite high standard deviation of the mean annual runoff coefficient we followed the monthly runoff coefficient dependence on water temperature and of ground water table depth.

Key words: runoff coefficient, dry year, wet year, land use, water temperature, ground water level