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Runoff Estimation in the Khiyav River Basin by Using the SCS_ CN Model

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Abstract : The volume of runoff caused by rainfall in the river basin has enticed the researchers in the fields of the water management resources. In this study, first of the hydrological data such as the rainfall and discharge of the Khiyav river basin of Meshkin city in the northwest of Iran collected and then the process of analyzing and reconstructing has been completed. The soil conservation service (scs) has developed a method for calculating the runoff, in which is based on the curve number specification (CN). This research implemented the following model in the Khiyav river basin of Meshkin city by the GIS techniques and concluded the following fact in which represents the usage of weight model in calculating the curve numbers that provides the possibility for the all efficient factors which is contributing to the runoff creation such as; the geometric characteristics of the basin, the basin soil characteristics, vegetation, geology, climate and human factors to be considered, so an accurate estimation of runoff from precipitation to be achieved as the result. The findings also exposed the accident-prone areas in the output of the Khiyav river basin so it was revealed that the Khiyav river basin embodies a high potential for the flood creation.

Keywords : curve number, khiyav river basin, runoff estimation, SCS
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