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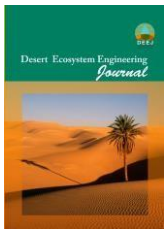

Study the effects Of Drought on Groundwater Resources using SPI Index (A Case Study: Kashan Plain)

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Abstract

Groundwater is a valuable resource both in the Iran and throughout the world. Drought as a natural and inevitable phenomenon, frequently occur in the different regions of the world, especially in the hot and dry area. It leads to economical, social, and environmental damages. Drought should decrease groundwater recharge. In main aim of this study was to investigate the effects of drought on groundwater resources using Standardized Precipitation Index (SPI). The longest period of drought, the number of drought months and large drought period (DM) in supercritical Kashan plain were studied. To investigate the relationship between drought and groundwater level, period 1991 to 2010 was selected based on the available data. Also, a significant relationship was observed between groundwater level decreasing and drought index, but in the groundwater depletion, the role of the over exploitation is more important than drought effects. We can conclude that the only basic principal method of preventing dangerous consequences of groundwater depletion is proper and lawful consumption of water to avoid uncontrolled withdrawal of groundwater.

Keywords: Drought; Groundwater; Kashan aquifer; SPI.

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