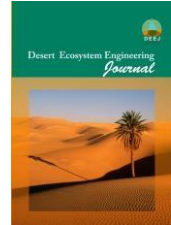




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## The Application of Neural Network Model to Estimate Amount of Groundwater Consumption

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### Abstract

Predicting the amount of water consumed would help the managers in exploitation of underground water systems so that they could manage consumption effectively. This issue, especially in Iran with repeatedly drought and limited water sources is significantly more important. In the present research, by using, artificial neural networks as a powerful tool in non-linear and indefinite processes have been used in order to predict the amount of water. The data used in this study to analyze the status of groundwater resources and predict the future course of using the neural network, are the discharge of any of the existing wells in the villages of the region according to different years, In the period 2003 to 2011, the number of 16222 wells. exploited from underground resources located in the eastern part of Isfahan plain. The results indicate that the water volume exploited from underground resources will reach up to 519 Million cubic meters until 2015. Considering the instability of surface resources in the region, this issue adds more and more on the necessity of the crisis management planning.

**Keywords:** Groundwater, prediction, artificial neural network, eastern part of Isfahan plain.

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