The Relationship Between the Run off and Precipitation in the AL-Aasi Basin

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Abstract

The importance of this study lies in the hydrological analysis of the relationship between the drainage system and the precipitation. The problem of the study reveals in the water incompetence in the basin which get to 336 million m3 and will gets to 600 million m3 with probability (p = 50%) and associated with missing the accurate evaluation of the water resources.

The study aims to evaluate the water resources in the basin, to create a mathematical model for calculation of the run off and its relationship with the precipitation, and to predict the water resources for the hydrological year according to many probabilities and the complementary management for water resources.

Stages of the study involve the following:

1- Determining of the active stations in the feeding of hydrometric stations.

2- Observing the average of water resources quantity (precipitation) over the basin that reached 9764 million m3 and range between

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2,26millionm3 in the hydrometric station of AL- Hamidi and 112,42 million m3 in Hama station.

3- Observing the average of the run off in the basin reached 744,67542 million m3.

4- Observing the run off system in the basin is a snow-rain system, where the average of maximum discharge associates with precipitation and the minor discharge associates with deprivation of the precipitation.

5- Creating a mathematical model for calculation of the run off and its relationship with the precipitation.

6- Predicting the water resources for the hydrological year according to many probabilities.

7- Creating a water strategy for the basin according to the data of water predication in many probabilities.