

## **Abstract**

Long-term climate change and drought, vegetation density areas heavily on effective watershed runoff coefficient change the outcome and potential flood areas. Non-normative set of natural factors associated with increased exploitation of resources, leading to a worsening floods and the frequency of its occurrence. To determine the watershed flood of traffic affected by drought, was to estimate the number of curves in two different time periods. After long-term statistics of annual rainfall, drought indices and duration were determined. Digital elevation model (with a spatial resolution of 30 m) prepared by using the software Arc GIS 9.3 features physiographic areas extracted from combining maps of slope and soil taking into account the geological formations, Map of hydrological soil preparation respectively. when considered as well as the land use map was prepared. Subsequently, the software Arc GIS 9.3, the curve number CN maps that represent the most prone potential changes in each of the homogeneous hydrological basin, soil hydrologic group of integrating maps, land use and vegetation, according to the tables of runoff estimation of soil Conservation service of America, the sections were obtained before and during periods of drought. The results showed that the weighted average of 69.88 in the wet 1369 CN watershed stakeholders 73.9 and 71.74 respectively in 1385 and 1388 droughts have been modified. The flood peak discharge with return period of 5 years from the wet 1369 146.63 83.85 cubic meters per second, equivalent to 74.87 percent in 1385, which was affected by drought has increased. The increase for the 200-year peak flow, so that the amount of 22.64 percent in 1369 from 1012 in 1385 to 1242 cubic meters per second is increased.

**Key words:** NDVI, S.C.S metod, Flooding, Nehbandan



**University of Zabol  
Faculty of Water and soil  
Department of Range and Watershed Management**

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**Supervisor:  
Dr. A.H. Dehviri**

**Advisors:  
M. Dehghani**

**By:  
A.Siraty**

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