



University of Zabol
Graduate school
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**The Thesis Submitted for the Degree of Master of Science
(in the field of hydraulic structures)**

Determining the effect of storage dams on flood capacity of Zahak-Niatek canal

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Abstract

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Occurrence of large floods in flood plains causes a lot of damage, so in order to reduce the risks of this natural disaster, hydraulic engineers create structures to transfer flood current to low-risk areas.

Niatek drainage canal is one of these structures that in order to make maximum use of flood currents at the end of it and at the entrance of Hamoon Lake, a number of earth dams have been constructed.

In this study, in order to determine the effect of the mentioned clauses on the flow capacity of flood canal flow on Niatek drain Channel, Software hec ras That is a very good And capabilities model in simulating river behavior and calculating water level profiles Was used

In this regard, first, the geometric data of the route, including cross sections and data related to hydraulic structures in the study area, Abbas Rostam Bridge, Zahat Niatak Overflow, Zahak Milak Road, flume Bridge, Deh Jahantigh Road Bridge, Bonjar-Doost Mohammad Road, Airport Road Bridge, Dike Lake Bridge , dams on End of Niatek drainage canal Entered the model

also After calibration and hydraulic validation, the simulation of flow was performed in 3 scenarios. The results of this study show Even though the presence of water storage dams at the end of the flood channel on Niatek drain has caused the water level to return to a length of 13.813 km. But The presence of water storage dams at the end of the flood channel Niatek drain canal has not reduced the flow transfer capacity of this water structure the maximum water transfer capacity of the flood channel on Niatek drain is equal to 300 cubic meters per second.

Keywords: floodwater, Dam, Back Water Surface, HEC RAS