

## **Abstract**

Several studies have been carried out in the field of bed loading sediment control methods to ponds. As the water flow in the river approaches the openings of the pond, in proportion to the dehydration, Part of the flow is diverted to the reservoir, which causes a change in the hydraulic conditions of the rivers. Different methods are used to control sediment, but their use and their accuracy are less considered. In the present study, the sedimentary river of Sistan was selected at the end of the catchment area of the Hirmand River with a gentle slope and an approximate length of 70 km. In this research, the data of 25 years of the corresponding flow and discharge data of Sistan river sediment during the years 1370 to 1395 and half well during the years 1370 to 1395 were used. To increase the accuracy of the work, the data was categorized monthly and seasonally. Investigating the trend of flow data and sediment discharge in the Sistan River showed that during the studied years, discharge flow and sediment discharge decreased in different seasons and months And flow flow on the annual scale has a meaningful and decreasing trend at a 95% confidence level. Investigation of the trend of flow data and sediment discharge in semi-well During the studied years, the discharge flow and sediment discharge in different seasons and months increased, and flow flow in the annual scale has a meaningful and incremental trend. . Based on the results of existing analyzes, the amount of annual and monthly precipitation has increased Since the time of harvesting the Astana (1392), it has affected the spillway of the Sistan river basin, and the sediment has been entering the Sitan River.

**Key words:** River, Sediment Discharge, Diversion Ratio, Sill, Chahnimeh Reservoirs



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**The Thesis Submitted for the Degree of Master of M. Sc  
In the field of water engineering, water structures**

**Title:**

**Effet of Intake Ratio and Sill on Diversion Sediment Ratio in  
The Chahnimeh Intake Canal**

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January 2018