

Abstract:

The water has particularly important key in human life as one of the major elements today. For drinking, sanitation, industry and agriculture used to be. Water has always been a key institution in the development of agriculture has played its role. To ensure optimum utilization of water resources in terms of agricultural development is inevitable. In the Sistan, programming and management of water resources of sistan plain is vital. Currently available water of Sistan River due to increased consumption for drinking, agriculture, fisheries, industry and causes uncontrolled river flow management in Afghanistan is coming down. However, HEC-RAS Software as a trendy application in river flow simulation model is introduced. In this context, for this paper first geometric information and hydrological Statistics of Sistan River were collected; also structural existing characteristics in the Sistan River glen were collected too.

Then the simulation flow for Lateral intakes existing in the river by using HEC-RAS model was performed and the pattern of flow distribution for the two scenarios, the average 10 year stream and the average 30 year was determined.

Results showed moderate drought conditions prevailing over the past 10 years Sistan river flow rate required by conventional cropping pattern does not match and Average 30 years of ruling the sistan River meets flow rate requirements, cropping patterns conventional in all months of the year except July months. Zahak dam valves In terms of the ten-year average just in the two months of July and August, and for the average 30-year terms just in July, must be closed to be able provide a major part of the water needed for cultivation by the city and taheri channels. In terms of the ten-year average, Sistan dam valves in four months and the average 30-year terms in July, must be closed until the water passed zahak dam spent irrigation lower shibe ab and poshte ab land

Keywords: water distribution, Sistan River, model HEC-RAS, zahak dam, sistan dam



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Simulation of water distribution pattern of sistan river farming land using HEC-RAS model

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