Abstract

In this research flood's routing were studied in two ways hydraulic and hydrologic in the sarbaz river station (pirdan- firoozabd) in province sistan and bluchestan where was used in HEC-RAS software and HEC-HMC software. The data were used in the study consist of : geometric information web are the river < cross sections profiles; roughness coefficient; etc>: and in the upstream and downstream boundary conditions and physical characteristics of the watershed basin. At first the hydraulic routing finite differences method was performed using by the software HEC-RAS and according to the profiles and cross sections was determined through flood situation in rural areas which was observed in four rural areas of flooding from rivers has exceeded five rural area it was found that the resulting wall height is not enough for the four of transmission capacity doesn't flood. Finally with the help of two software outflow hydrograph above were calculated and plotted and determined after evaluating the model was specified the point of peak computing output in hydraulic showed finite difference method using the software as much as 4.76 percent error HEC-RAS relative observed output hydrograph. Then routing is done by software HEC-HMS that this software did routing to hydraulic methods lag time and maskingum that were calculated in the first method the relative error was 11.77 and the second method was 25.18 and given the differences between observed and calculated by the software hydrograph was determined that error hydraulic methods is less than observation data from hydrological method < 18 percent of the average of two methods>. At the end of research suggested that in the areas where floods are not capable of leading the restoration of the wall height has sufficient capacity to guide flood disaster

Keywords: hydraulic routing ; hydrologic routing ; river; software HEC-RAS; software HES-HMS.

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(case study: sarbaz river: pirdan - firuzabad station

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