عنوان مقاله:

a Comparison Study Between the Joint Probability Approach and Time Series Rainfall Modelling in Coastal Detention Pond Analysis (RESEARCH NOTE)

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خلاصه مقاله:

In tidally affected coastal catchments detention pond should be provided to store flood surface water. A comparison between the full simulation approach based on the joint probability method and time series rainfall modeling via the annual maximum of pond level was undertaken to investigate the assumptions of independence between variables that are necessary in the joint probability method. The rainfall data was run through a catchment model and the inflow hydrograph was obtained. This inflow was run through a detention pond with an outfall significantly affected by tidal action. The tidal variations were determined at that exact historical time of the time series rainfall. A continuous record of time series pond level was therefore determined and the peak pond level for each year was used to generate the annual maximum series of pond levels. A comparison between the growth curves of full simulation approach, and the time series rainfall modeling was undertaken. The results indicate that there are no significant differences between the two growth curves generated.

کلمات کلیدی:

Joint Probability, Time Series Rainfall, Detention Pond, Annual Maximum Level, Tidal Level, Growth Curve

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