

Analysis of the Probable Maximum Flood in Hydrologic Design Using Different Functions of Rainfall-Runoff Transformation

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Abstract : A crucial issue in hydrologic design is the sizing of structures and flood-control works in areas with limited data. This research work highlights the significant variation in probable maximum flood (PMF) for a design hyetograph, using different theoretical functions of rainfall-runoff transformation. The analysis focuses on seven subbasins with different characteristics in the municipality of Florina, northern Greece. This area is a semi-agricultural one which hosts important activities, such as the operation of one of the greatest fields of lignite for power generation in Greece. Results illustrate the notable variation in estimations among the methodologies used for the examined subbasins.

Keywords : rainfall, runoff, hydrologic design, PMF

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