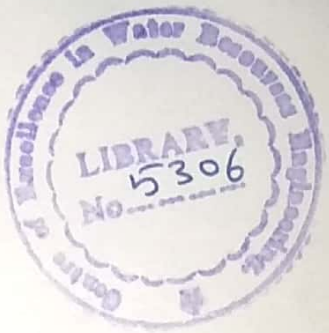
THESIS

THE STUDY OF PROBABLE MAXIMUM PRECIPITATION TECHNIQUES FOR LAHORE



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For the degree
of
MASTER OF PHILOSOPHY
IN
HYDROLOGY

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Lahore - Pakistan
1995

ABSTRACT

The lack of confidence in reliability and limited length of rainfall data cause problems in designing the storm drainage system in an urban area. The value of a secure storm drainage system is higher for the human life, buildings, roads and other public utilities. Reliable estimates of probable maximum precipitation are required for urban development projects.

In this study a version of generalized methods of estimating probable maximum precipitation is applied to urban area of Lahore. The basis for determining the level of PMP is the extreme storm record and the concepts of storm maximization, envelopment and systematic analysis of storm data. Annual and partial series of maximum storms data of 60 years and a modified wind-moisture maximization method (using the available parameters) is applied, giving the consistent estimates of PMP.

Generalized methods of estimating PMP are used to obtain reliable estimates of PMP and also to give estimates which are consistent over the study area. Conclusive result from different methodologies has been obtained in the present study to come out with convincing design standard for the urban planning/development.

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