COMPARISON OF SOME TECHNIQUES FOR DESIGN FLOOD ESTIMATION

BY

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ABSTRACT

Sri Lanka, a country with abundant water resources, has a predominantly agriculture oriented economy. Hence, hydrological development plays an important role, not only in the vast irrigation development efforts, but also in meeting the energy requirements of the country through hydro-power.

Many hydrologic design problems require simply an estimation of the peak flow rate generated by a river system under specific conditions. Several methods are available for the estimation of peak flow rate, but many of these are quite inadequate to produce results which are consistant within the accuracy required for hydrologic analysis and design.

In this study several different flood estimation methods have been considered for sixteen catchments to determine their applicability to Sri Lankan catchments. A frequency analysis is also carried out for each of the catchments and their flood peaks are compared with the design floods obtained by different methods.

It is observed that the findings of this thesis lead to various research areas, for further detailed studies with regard to some of the methods of analysis.

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