PREFACE

The National Institute of Hydrology is a premier research institute under the Ministry of Water Resources, Government of India. The institute is involved in studies and research in different aspects of hydrology, water resources and related areas including development of computer oriented approaches, field studies and technology transfer. The Institute started the activities of organisation of short duration workshops from 1985 onwards on various topics dealing with hydrologic analysis, design and modelling for surface and ground water, application of computer oriented techniques, etc. These workshops organised at Roorkee and in the States, have generated considerable interest among the field engineers and officers of Central and State Organisations. During these workshops, besides the course material for lectures, tutorials, etc., the computer programs were made operational on available computers and were transferred to the concerned State organisations for their use.

The flood frequency analysis is the commonly used approach for estimation of design flood, particularly for small and medium structures. When data record of sufficient length is available the analysis can be based almost exclusively on that record, however for limited data and ungauged sites, the regional frequency analysis provides reasonable estimates of expected flood.

The objective of this workshop is to present through lectures and tutorials as well as computer application, the theoretical basis for most commonly used methods as well as improved methods for flood frequency analysis. Special emphasis has been laid on use of computer programs for this purpose and these will be demonstrated through tutorials and practical exercises. It is expected that this course material, would not only be used during the workshop, but also in the professional activities for improvement of hydrological analysis and design; and considerable efforts put in by the scientists of this institute would lead to improvement in the design practices for water resources development in the country.

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