

BOOK REVIEW

HANDBOOK ON THE PRINCIPLES OF HYDROLOGY, edited by D. M. Gray. Published by the Canadian National Committee for the International Hydrological Decade.

Today it is impossible to write a book on hydrology and satisfy the requirements of all hydrologists, because of the interdisciplinary nature of the topic and because of regional differences in the type and analysis of hydrological data and processes. For example, hydrologists interested in optimization, simulation, and other mathematically oriented processes will find treatment of these techniques missing from the Handbook. Still, the authors have presented a broad coverage of practical hydrology, and agricultural and engineering hydrologists will find most of the areas of interest to them discussed. Although many of the data used in the numerous examples are based on conditions in Canada, the non-Canadian reader will find virtually all sections of general interest.

The book is arranged in an order suggested by the sequence in the hydrological cycle, with sections on precipitation, energy-evaporation-evapotranspiration, interception, infiltration, flow through porous media, groundwater hydrology, and rainfall-runoff relationships. Peak flow and hydrograph determinations are divided into two sections, one dealing with rainfall events and the other with snowmelt events. Basin yield and land-use hydrology are discussed in separate sections that tie in with previous material. Sediment transportation and statistical methods in hydrology constitute two sections somewhat less integrated with the main body of the text.

As the word "handbook" in its title indicates, the book is a reference containing many tables, charts, figures, and nomograms often used by the practising hydrologist. It is written in a clear, easily understandable form which makes it suitable as a textbook for the teaching and training of students in hydrology, both at the graduate and advanced undergraduate levels.

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