System Simulation in Water Resources


This book is a conference volume and follows the common practice of publishing papers presented at a conference—in this case the proceedings of the international symposium on “Biosystems Simulation in Water Resources and Waste Problems.” The book is divided into six chapters each containing several papers. The chapters are:

2) “Water Resources Simulation as a Synthesis Problem,”
3), 4), and 5) “On the Use of Deductive Information in Quantity and Quality Models of Water Resources Systems and in Quality Models Involving Biosystems,” and
6) “Water Resources Simulation for Control.”

The book contains papers on microhydrology models, such as profile studies of a soil-water-salt system, as well as papers on macrohydrology models like the quality of runoff water from a watershed. There are several good articles on modeling simultaneous flow of salt and water in soils which can be used as a reference for a lecture or a course on micibile displacement in unsaturated soils. Application of simulation techniques to systems involving biological parameters like BOD is relatively simple but interesting. Other models relate to the thermal pollution of industrial estuaries, infiltration in multilayered system, and effect of land use on stream salinity. There are also papers dealing in general with the identification of parameters for a model and role of models in planning and decision-making.

In these proceedings it is difficult to identify the various mathematical symbols from one paper to another. Also, sometimes it is difficult to follow the discussion after the paper because the information presented during the proceedings is obviously not included in the paper. Much of the literature cited is European and is not easily accessible.

Because of the diversity of the papers, parts of this book should be of interest to readers in the fields of soil science, hydrology, irrigation and drainage, biological science, sanitary engineering, and environmental sciences. However, the confusion due to writing by various authors and the cost of this book will preclude its use as a text book.—SATISH C. GUPTA, Department of Soil Science, University of Minnesota, St. Paul, MN 55108.

Managing Livestock Wastes


This international symposium was held in April 1975 at the University of Illinois and was attended by over 600 men and women from the USA and 18 foreign countries. The symposium was sponsored by ASAE and 18 other national and international organizations. The proceedings contain 180 papers ranging from literature reviews to research reports to detailed case histories of specific livestock waste management systems. A number of timely topics are covered including health and economic impacts of livestock waste management, regulations affecting waste management, and utilization of waste for livestock feed and as a source of energy.

Environmental Modeling and Simulation


This book is a proceedings of an EPA conference held in Cincinnati, Ohio, on April 19-22, 1976. This is the most comprehensive book to cover the state-of-the-art of mathematical modeling over the broad spectrum of air, water, and solid waste environmental modeling efforts currently available. The proceedings contain 164 papers from 31 sessions discussing air quality, water quality management, energy and waste management, and water quality management, air and water pollutant transport, processes, water runoff and supply, environmental planning, economics and statistics, solid waste management, and health. Perhaps not adequately represented are models developed in the International Biological Program and common models used to predict hydrologic processes.

The goal of the conference was to provide an interaction between model users and model developers. There is no record of the discussion that occurred between these people at the various sessions. About 37% of the keywords such as planning, management, and policy orientation. About 12% appear to be technical content ranges from philosophical to empirical. While there is something for nearly everyone, probably not find more than a dozen papers of adequate data base for testing the models in question. What data are available have usually been used to develop the model. Thus, very few of the models are really ready for use.

This is a good buy for graduate students interested in modeling the behavior of pollutants in the environment.—M. H. FRERE, U. S. Department of Agriculture, Agricultural Research Service, Chickasha, OK 73018.

Land Treatment and Disposal of Municipal Wastewater


This book is an updated compilation of the 1974 conference at Montana State University. The conference proceedings in general in that the conference had no record of the discussion that occurred between these people at the various sessions. About 37% of the conference sessions are on planning, management, and policy orientation. About 12% appear to be technical content ranges from philosophical to empirical. While there is something for nearly everyone, probably not find more than a dozen papers of adequate data base for testing the models in question. What data are available have usually been used to develop the model. Thus, very few of the models are really ready for use.

Most of the chapters on basic relationships and the engineering aspects are generally good in quality. The chapters on land treatment in that the chapters quite often represent totally opposite points-of-view. Such conflicts are to be encouraged at conferences and symmetric. Reconciliation of these conflicts in a text that complete reference for investigations, planning, and treatment systems.

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