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**KEY=HYDROLOGY - GAMBLE CONOR**

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## Applied Hydrology

## Elements of Water Resources Engineering

*New Age International* **The Book Conforms To The Modern Concept Of Treating The Diversified Problems Of Water Resources Engineering Through A Multi-Disciplinary And Integrated Approach And Incorporating It In The Educational Curriculum For Effective And Comprehensive Teaching. It Specifically Deals With The Principal Segments Of Water Resources Engineering Which Include Hydrology, Ground Water, Water Management For Irrigation And Power, Flood Control, Engineering Economy In Water Resources Projects For Flood Control, Project Planning In Water Resources, Concrete And Earth Dams. Because Of The Multi-Disciplinary Nature Of Water Resources Engineering Problems, It Is Seldom Possible To Do Full Justice To The Subjects Unless The Teaching Imparts Background Knowledge Of The Allied Disciplines, Viz., Probability And Statistics, Engineering Economics And Systems Engineering. The Book Represents An Attempt To Fulfill This Primal Need. The Book Would Primarily Benefit Students Doing Graduation In Civil Engineering And Those Appearing In Section-B Examination Of The Institution Of Engineers (India). Besides, Some Of The Topics**

Covered In The Book Would Also Be Of Much Use By Post-Graduate Students In Water Resources Engineering.

# Hydrology and Soil Conservation Engineering Including Watershed Management

*PHI Learning Pvt. Ltd.* Streamlined to facilitate student understanding, this second edition, containing the latest techniques and methodologies and some new problems, continues to provide a comprehensive treatment of hydrology of watersheds, soil erosion problems, design and installation of soil conservation practices and structures, hydrologic and sediment yield models, watershed management and water harvesting. It also deals with the special requirements of management of agricultural and forested watersheds. This book is designed for undergraduate students of agricultural engineering for courses in hydrology, and soil and water conservation engineering. It will also be of considerable value to students of agriculture, soil science, forestry, and civil engineering. **KEY FEATURES** Emphasises fundamentals using numerous illustrations to help students visualise different phenomena Offers lucid presentation of field practices Presents the analysis and design of basic hydraulic structures Devotes an entire chapter to watershed management Provides numerous solved design problems and exercise problems to develop a clear understanding of the theory Gives theoretical questions, and objective type questions with answers to test the students' understanding.

## Elementary Engineering Hydrology

*Pearson Education India* **Elementary Engineering Hydrology** is a textbook for undergraduate and diploma students of civil engineering. It provides a comprehensive coverage of all the essential aspects of hydrology. To make it easy for students to grasp the concepts, all important topics have been divided into sub-topics, lending clarity to the subject matter. The text is interspersed with numerous figures and tables, and a wide range of solved problems to illustrate the underlying concepts and techniques effectively. Simple and comprehensible for beginners in the course, this book also contains a host of additional information, by way of appendices, including India's National Water Policy, water resources of India and also a guide to using survey maps. These features of the book will make it an invaluable reference book for practicing engineers as well.

# Rainwater Management: Theory and Practice

*Scientific Publishers* **Rainwater Management: Theory and Practice** is a comprehensive treatise on water management based on water harvesting techniques for management of storage water for irrigation purpose & irrigation water management. This book, primarily designed to cater to the needs of undergraduate and postgraduate students of agricultural engineering, agricultural and soil & water engineering, research scholars, professionals and policy planners associated with rainwater management, dryland farming and irrigation water management. It covers major topics on water harvesting and design of water harvesting structures and recycling of harvested rainwater aspects. Entire content has been divided into the 22 chapters with solved examples and case studies. A sincere attempt has been made to compile and present the text in quickly understandable term, well drawn diagrams, understanding the rainwater management and livelihood security aspects of dryland and irrigated farmers. This book could be a text book for undergraduate and postgraduate students, a reference tool for professional and good teaching material for teachers in the field of rainwater management and irrigation management under dryland ecosystem and also for the scientists working in the field of rainwater and Irrigation water management.

## Flood Hydrology

Proceeding of the International Symposium on Flood Frequency and Risk Analyses, 14–17 May 1986, Louisiana State University, Baton Rouge, USA

*Springer Science & Business Media* **Floods** constitute a persistent and serious problem throughout the United States and many other parts of the world. They are responsible for losses amounting to billions of dollars and scores of deaths annually. Virtually all parts of the nation--coastal, mountainous and rural--are affected by them. Two aspects of the problem of flooding that have long been topics of scientific inquiry are flood frequency and risk analyses. Many new,

even improved, techniques have recently been developed for performing these analyses. Nevertheless, actual experience points out that the frequency of say a 100-year flood, in lieu of being encountered on the average once in one hundred years, may be as little as once in 25 years. It is therefore appropriate to pause and ask where we are, where we are going and where we ought to be going with regard to the technology of flood frequency and risk analyses. One way to address these questions is to provide a forum where people from all quarters of the world can assemble, discuss and share their experience and expertise pertaining to flood frequency and risk analyses. This is what constituted the motivation for organizing the International Symposium on Flood Frequency and Risk Analyses held May 14-17, 1986, at Louisiana State University, Baton Rouge, Louisiana.

## Environmental Hydrology and Hydraulics

## Eco-technological Practices for Sustainable Development

*CRC Press* Water is a precious natural resource, which is crucial to our survival. It needs to be used judiciously in the context of an increasing population not only to sustain essential requirements such as those for drinking and domestic usage, but also for increased food production, industrial usage, power generation, navigational requirements, pisciculture, recreation, landscaping etc. There are many books dealing with hydrology, hydraulics and hydraulic structures, which generally deal with larger problems of development, analysis, design and implementation of water resources. However, there are few books, which deal with small-scale development of water resources consistent with the environmental concerns as well as application of relevant eco-friendly technologies. This book provides both the perspectives.

## Smart Technologies for Energy, Environment and Sustainable Development

# Select Proceedings of ICSTEESD 2020

*Springer Nature* This book contains select proceedings of the International Conference on Smart Technologies for Energy, Environment, and Sustainable Development (ICSTEESD 2020). The book is broadly divided into the themes of energy, environment, and sustainable development; and discusses the significance and solicitations of intelligent technologies in the domain of energy and environmental systems engineering. Topics covered in this book include sustainable energy systems including renewable technologies, energy efficiency, techno-economics of energy system and policies, integrated energy system planning, environmental management, energy efficient buildings and communities, sustainable transportation, smart manufacturing processes, etc. The book will be a valuable reference for young researchers, professionals, and policy makers working in the areas of energy, environment and sustainable development.

## Hydrology

*PHI Learning Pvt. Ltd.*

## Drinking-Water Distribution, Sewage, and Rainfall Collection

*Presses inter Polytechnique*

## Climate Change, Extreme Events and Disaster Risk Reduction

# Towards Sustainable Development Goals

*Springer* This book discusses the science, causes, impacts and risk reduction strategies for climate change and disasters. It focuses on the use of traditional knowledge, new innovation and education to build a culture of safety and resilience at all levels in order to promote sustainable development goals in general and disaster risk reduction in particular. The global climate has changed substantially over the last century. There is strong evidence of global climate change in the form of increase in air and sea surface temperature, recession of glaciers, changes and shifting of climate regimes, increasing number of extreme events and sea levels changes. The increasing frequency of climate change induced disasters in particular is posing a threat to resilience, lives and livelihoods at global, regional and local levels. Major ecosystems of the world have experienced several climate induced disaster events in recent past. This book provides new insights into the occurrence and impacts of climatic extremes and strategies for disaster risk reduction. It includes studies on rainfall and temperature trends, floods and drought disasters, weather and climatic related disasters in mountains, changes in plant activities, risk assessment and responses in different ecosystems of the world. The book is particularly useful for environmental and disaster managers, researchers and graduate students, as well as policy makers.

## Climate Change and Water Security

### Select Proceedings of VCDRR 2021

*Springer Nature* This book presents the select proceedings of the Virtual Conference on Disaster Risk Reduction (VCDRR 2021). It emphasizes on the role of civil engineering for a disaster resilient society. It presents latest research on climate change and water security focusing on disaster risk reduction. Various topics covered in this book are climate change, stormwater management, flood risk analysis, drought management, water treatment, etc. This book is a comprehensive volume on disaster risk reduction (DRR) and its management for a sustainable built environment. This book is useful for the students, researchers, policy makers and professionals working in the area of civil engineering, climate change and disaster management.

# Introduction to the Numerical Modeling of Groundwater and Geothermal Systems

## Fundamentals of Mass, Energy and Solute Transport in Poroelastic Rocks

*CRC Press* **This book provides an introduction to the scientific fundamentals of groundwater and geothermal systems. In a simple and didactic manner the different water and energy problems existing in deformable porous rocks are explained as well as the corresponding theories and the mathematical and numerical tools that lead to modeling and solving them. This approach provides the reader with a thorough understanding of the basic physical laws of thermoporoelastic rocks, the partial differential equations representing these laws and the principal numerical methods, which allow finding approximate solutions of the corresponding mathematical models. The book also presents the form in which specific useful models can be generated and solved. The text is introductory in the sense that it explains basic themes of the systems mentioned in three areas: engineering, physics and mathematics. All the laws and equations introduced in this book are formulated carefully based on fundamental physical principles. This way, the reader will understand the key importance of mathematics applied to all the subjects. Simple models are emphasized and solved with numerous examples. For more sophisticated and advanced models the numerical techniques are described and developed carefully. This book will serve as a synoptic compendium of the fundamentals of fluid, solute and heat transport, applicable to all types of subsurface systems, ranging from shallow aquifers down to deep geothermal reservoirs. The book will prove to be a useful textbook to senior undergraduate and graduate students, postgraduates, professional geologists and geophysicists, engineers, mathematicians and others working in the vital areas of groundwater and geothermal resources.**

# Dams and Reservoirs, Societies and Environment in the 21st Century

*Taylor & Francis* **Water resources stored by dams and reservoirs play an essential role in water resource management, hydropower and flood control. Where there is an extensive network of dam infrastructures, dams have made a major contribution to economic and social development, providing considerable storage capacity per capita. However, dams and reservoirs may also have an important social and environmental impact, and should be studied within the framework of integrated water resource management and sustainable development. Dams and Reservoirs, Societies and Environment in the 21st Century presents the latest research on the role played by dams and reservoirs in 21st century societies, in developed, emergent and developing countries. It analyses the viability of dams and suggests alternative solutions from a holistic perspective, considering the technical, economic, social and environmental aspects. Other issues covered include the social acceptability of dams, public involvement and dam awareness. The book covers subjects ranging from dam engineering, through the benefits and drawbacks of dams, to their social and environmental impact, and contains numerous case studies of the constructive contributions that reservoirs have made to water development and management. The book is a valuable resource for professional and dam engineers, water managers, governmental organizations and commercial enterprises responsible for dam development and management.**

# Statisttics for Geoscientists Techniques and Applications.

*Concept Publishing Company*

# Engineering and Mathematical Topics in Rainfall

*BoD - Books on Demand* **The mathematics involved in describing the attributes of precipitation are embodied in the technical fields of Hydrology and Hydrometeorology. In this book, multiple experts present their work on various engineering characteristics of rainfall. The topics presented will update the readers on the recent developments and**

their applications across different regions of the world.

## Flood Routing in Ungauged Catchments Using Muskingum Methods

*Universal-Publishers* River stage or flow rates are required for the design and evaluation of hydraulic structures. Most river reaches are ungauged and a methodology is needed to estimate the stages, or rates of flow, at specific locations in streams where no measurements are available. Flood routing techniques are utilised to estimate the stages, or rates of flow, in order to predict flood wave propagation along river reaches. Models can be developed for gauged catchments and their parameters related to physical characteristics such as slope, reach width, reach length so that the approach can be applied to ungauged catchments in the region. The objective of this study is to assess Muskingum-based methods for flow routing in ungauged river reaches, both with and without lateral inflows. Using observed data, the model parameters were calibrated to assess performance of the Muskingum flood routing procedures and the Muskingum-Cunge method was then assessed using catchment derived parameters for use in ungauged river reaches. The Muskingum parameters were derived from empirically estimated variables and variables estimated from assumed river cross-sections within the selected river reaches used. Three sub-catchments in the Thukela catchment in KwaZulu-Natal, South Africa were selected for analyses, with river lengths of 4, 21 and 54 km. The slopes of the river reaches and reach lengths were derived from a digital elevation model. Manning roughness coefficients were estimated from field observations. Flow variables such as velocity, hydraulic radius, wetted perimeters, flow depth and top flow width were determined from empirical equations and cross-sections of the selected rivers. Lateral inflows to long river reaches were estimated from the Saint-Venant equation. Observed events were extracted for each sub-catchment to assess the Muskingum-Cunge parameter estimation method and Three-parameter Muskingum method. The extracted events were further analysed using empirically estimated flow variables. The performances of the methods were evaluated by comparing both graphically and statistically the simulated and observed hydrographs. Sensitivity analyses were undertaken using three selected events and a 50% variation in selected input variables was used to identify sensitive variables. The performance of the calibrated Muskingum-Cunge flood routing method using observed hydrographs displayed acceptable results. Therefore, the Muskingum-Cunge flood routing method was applied in ungauged catchments, with variables estimated empirically. The results obtained shows

that the computed outflow hydrographs generated using the Muskingum-Cunge method, with the empirically estimated variables and variables estimated from cross-sections of the selected rivers resulted in reasonably accurate computed outflow hydrographs with respect to peak discharge, timing of peak flow and volume. From this study, it is concluded that the Muskingum-Cunge method can be applied to route floods in ungauged catchments in the Thukela catchment and it is postulated that the method can be used to route floods in other ungauged rivers in South Africa.

## Soil and Groundwater Pollution from Agricultural Activities

*The Energy and Resources Institute (TERI)* **Groundwater is an important source of water for the industrial and agricultural sectors. The course book on soil and groundwater pollution from agricultural activities introduces the reader to major agricultural activities in India and their impact on soil and groundwater.**

## Hydropower in the New Millennium

### Proceedings of the 4th International Conference Hydropower, Bergen, Norway, 20-22 June 2001

*CRC Press* **The power sector has undergone a liberalization process both in industrialized and developing countries, involving market regimes, as well as ownership structure. These processes have called for new and innovative concepts, affecting both the operation of existing hydropower plants and transmission facilities, as well as the development and implementation of new projects. At the same time a sharper focus is being placed on environmental considerations. In this context it is important to emphasize the obvious benefits of hydropower as a clean, renewable and sustainable energy source. It is however also relevant to focus on the impact on the local environment during the planning and operation of hydropower plants. New knowledge and methods have been developed that make it possible to mitigate the local undesirable effects of such projects. Development and operation of modern power systems**

require sophisticated technology. Continuous research and development in this field is therefore crucial to maintaining hydropower as a competitive and environmentally well-accepted form of power generation.

## Himalayan Glaciers

## Hydrology and Hydrochemistry

*Allied Publishers*

## Advances in the Research of Aquatic Environment

### Volume 1

*Springer Science & Business Media* **The book focuses on the management of the aquatic environment. It is aimed at scientists, students, governmental officials and specialists dealing with groundwater and environment. Its main goal is to inform the reader of ideas, knowledge and experience in terms of a sustainable aquatic environment. The main topics are as follows: Water Bodies and Ecosystems; Climate Change and Water Bodies; Water quality and agriculture; Interaction of Surface and ground waters; Karst Hydrogeology; Continuous Media Hydrogeology; Fissured Rocks Hydrogeology; Hydrochemistry; Geothermics and thermal waters; The role of water in construction projects; Hydrology**

## Third National Symposium on Hydrology, July 5-7, 1990

### Proceedings

# Drinking-Water Distribution, Sewage, and Rainfall Collection, Third Edition

*Presses inter Polytechnique* **Drinking Water Distribution, Sewage, and Rainfall Collection (Back cover) Drinking Water Distribution, Sewage, and Rainfall Collection is the first textbook produced in French and English entirely devoted to practical hydraulic problems as they occur in modern cities. It looks at the design and application of equipment for drinking water distribution, runoff and sewage collection. Fundamental hydraulic principles are presented clearly and their application is illustrated in examples representative of real-world situations. Exercises and problems enable students to test their knowledge in each chapter. Specific topics include the measurement of sewage flow, sewage pumping stations, pump selection, inverted siphon, and characteristics of pipes available on the market in a wide variety of materials. The textbook also covers issues such as water hammer and other overpressures, dead and live loads, underground pipe installation, water supply to high rise buildings, the design of sewer and water service connections, water flows and volumes for fire fighting, water intake and intake pipes, fire hydrants, water inlets and valve settings on water networks, sewage outfall, pipe freezing and corrosion, thrust blocks and restrained joints, culverts, etc. One chapter is entirely devoted to waterborne diseases, chemical contaminants and dangerous gases that accumulate in enclosed spaces. Engineers, technicians and scientists can use the textbook to learn the basic requirements for designing and evaluating sanitary storm networks, sewage networks and water distribution networks. François G. Brière is a civil engineer and Professor in the Department of Civil, Geological and Mining Engineering at the École Polytechnique de Montréal. He received his education in Québec and the United States and worked for the Ministère des Affaires municipales et des Régions du Québec (Ministry of municipal and regional affairs of Québec) before entering academia, where he has taught water chemistry, sewage treatment and urban hydraulics for more than 30 years.**

# Water Resources System Operation

Proceedings of the International Conference on Water and Environment (WE-2003), December 15-18, 2003, Bhopal, India

*Allied Publishers*

## Hydrology Papers

## Water Resources Development and Planning

## Watershed Management and Applications of AI

*CRC Press* Land use and water resources are two major environmental issues which necessitate conservation, management, and maintenance practices through the use of various engineering techniques. Water scientists and environmental engineers must address the various aspects of flood control, soil conservation, rainfall-runoff processes, and groundwater hydrology. **Watershed Management and Applications of AI** provides the necessary principles of hydrology to provide practical strategies useful for the planning, design, and management of watersheds. The book also synthesizes novel new approaches, such as hydrological applications of machine learning using neural networks to predict runoff and using artificial intelligence for the prediction of groundwater fluctuations. **Features:** Presents hydrologic analysis and design along with soil conservation practices through proper watershed management techniques Provides analysis of land erosion and sediment transport in watersheds from small to large scale Includes

estimations for runoff using different methodologies with systematic approaches for each Discusses water harvesting and development of water yield catchments This book will be a valuable resource for students in hydrology courses, environmental consultants, water resource engineers, and researchers in related water science and engineering fields.

## 4th International R&D Conference, Water and Energy for 21st Century, 28-31 January 2003, Aurangabad, Maharashtra: Water resources

Chiefly with reference to India.

### HIDROLOGI TERAPAN

*Penerbit Andi* Dalam buku ini diuraikan secara singkat tentang pengertian hidrologi, siklus hidrologi dan sejarah perkembangan hidrologi (Bab 1), Jaringan Sungai dan Topografi (Bab 2), Kriteria Perhitungan Debit Banjir (Bab 3), Penelusuran Banjir (Bab 4), dan Metode Perhitungan Debit Banjir (Bab 5). Buku ini sengaja memasukkan studi kasus penanganan sungai Lempuing yang ada kaitannya dengan analisis hidrologi, agar pembaca nantinya dapat mengetahui konsep dalam penerapan analisis hidrologi di lapangan.

## Water Resources Management

## Coping with Drought

# Options for Soil and Water Management in Semi-arid Kenya

## Flood Handbook

## Analysis and Modeling

*CRC Press* **Floods are difficult to prevent but can be managed in order to reduce their environmental, social, cultural, and economic impacts. Flooding poses a serious threat to life and property, and therefore it's very important that flood risks be taken into account during any planning process. This handbook presents different aspects of flooding in the context of a changing climate and across various geographical locations. Written by experts from around the world, it examines flooding in various climates and landscapes, taking into account environmental, ecological, hydrological, and geomorphic factors, and considers urban, agricultural, rangeland, forest, coastal, and desert areas. Features: Presents the main principles and applications of the science of floods, including engineering and technology, natural science, and sociological implications. Considers floods in urban, agricultural, rangeland, forest, coastal, and desert areas. Covers flood control structures as well as preparedness and response methods. Written in a global context, by contributors from around the world.**

## Integrated Rural Water Supply and Sanitation Project for Ntchisi and Mzimba Districts

Surface Water Resources Assessment Report for Ntchisi District

Indian Journal of Soil Conservation

Proceedings, Third IWRS National Symposium on Watershed Development and Management at C.S. Azad University of Agriculture & Technology, Kanpur, U.P., Feb. 2-4, 1990

Journal of Soil and Water Conservation in India

River Behaviour Management and Training

Annals of the National Association of Geographers, India

# Conservation Status Siwalik Area of Ilam District

**Data set for the socio-economic, hydrology, agriculture, land use etc., of Siwalik Range in Ilam District of Nepal.**

Bulletin of the Faculty of Science  
Geology. F