Hydrology And Hydraulic Systems

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Synopsis

While retaining the strengths of the First Edition, this thoroughly revised edition of Hydrology and Hydraulic Systems offers a complete treatment of the quantitative elements involved in the development of water resources. The Second Edition includes fundamental, up-to-date coverage of applications and designs, the development and monitoring of groundwater, kinematic and contaminant hydrology, evapotranspiration, the design of water supply projects, the theory of leaky aquifers, probable maximum precipitation, and flood-routing procedures. The text’s broad coverage makes it ideal for a variety of courses on hydrology, hydrologic systems, and water resources management. Outstanding features of the Second Edition include: 280 illustrations and 175 tables; 225 fully solved example problems integrated within the text and 500 end-of-chapter problems; detailed treatment of theory and applications of groundwater flow for both steady- and unsteady-state conditions; application of EPA-recommended statistical procedures to groundwater monitoring; detailed presentation of field practices of hydrologic investigations and analytical procedures for data assessment; systematic treatment of various estimation techniques of surface water; analysis and design of basic hydraulic structures; presentation of contaminant hydrology as it relates to surface water, groundwater, and unsaturated media; and complete treatment of storm, sanitary, agriculture, and urban drainage systems.

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Customer Reviews

I have used this book for Water Resources Engineering that I teach to civil engineering students at
Kansas State University. I like the breadth this book has, it covers the basics of H&H and does not spend too much time, in my opinion, on deriving expressions. It has been well received by the over 100 students that have used it. The cost is also a lot less than others.

Bought this book to brush up on hydrology and hydraulics for the PE exam. I wish my college courses had used this book. It presents somewhat complex material in a format that is easier to understand than most books. There are example problems for every type of calculation. I highly recommend this text to college professors to use in their classes.

I have recently graduated and am currently working as a Civil/Transportation Engineer for a consulting company. I have used the book in my Water Resources course and worked on it in my Advanced Hydrology class. The strength of the book is all the examples. Many of these are conveniently set up in Table form with a key provided at the bottom of each table. It is an excellent resource that I am using as a reference material now.

This is a great deal for a textbook. It covers the basics of hydrology and hydraulics very thoroughly, and better than most other water-resources textbooks. The figures in the third edition are better than in previous ones, though some additional photos or figures would be helpful to augment the many schematics. The only real problem is that you have to jump around a lot to cover any topic in a coherent way, as different techniques for, say rainfall-runoff analysis, may appear in 2 or 3 different chapters. But it’s all in there.

The book covers comprehensive subjects on hydrology and hydraulics. It is better to use the book for a hydrology reference or text in a course. It has many practical examples for hydrologic engineering: intensity-duration-frequency curve analysis; potential evapotranspiration by Penman method; Thiessen coefficient computation by grid papers; storm sewer design with rational method, etc. Although one generally describes hydraulic subjects in separate books, it includes various hydraulic problems. That would be minor defects.

This book is the absolute very best to study Hydrology and Hydraulics for classroom study. After graduation this book was used for my exam review and I reference the manual in everyday actual applications. You will find there are many books to study hydrology and hydraulics but none that is more fundamentally rich with extensive examples of real life situations. This book is the most used
This textbook is fantastic, very well thought out, great use of examples and background information. I am currently a Ph.D. candidate at Johns Hopkins University and an Engineer at NASA and have worked with this textbook for creating a new edition with Dr. Ram Gupta (the author of the text) and can say for certain that this text is a great resource for hydrology inside and outside of class.

I purchased this book to study for the Water Resources and Environmental Depth portion of the PE Exam. I have not completed my studies for the October 2011 exam yet, however up to this point the only information that I have needed from this book that is not also found in the CERM is alternate equations for time of concentration. This book has a mistake in the Izzard formula having "0.007" where it should read "0.0007". In light of the mistake I found, the lack of information in the book that is both pertinent to the PE Exam and beyond what the CERM offers, and the somewhat subpar organization of topics I have given this book 2 stars.

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