Aquatic Pollution: An Introductory Text (Second Edition)


Although very pricey, especially for a paperback, this is an excellent updated version of Laws' 1981 text of the same name. The target audience is undergraduate students. The bulk of the new text has the same structure as his earlier book, well documented by case studies to illustrate ecological and toxicological principles in 17 chapters. The first three chapters provide a good background in physical and biological concepts relevant to understanding aquatic pollution issues in general. The remainder of the text is organized by a broad breadth of topics, including various specific forms of pollution (such as oil pollution, thermal pollution, eutrophication, radioactivity, metal contamination, and pesticides) and more general topics (such as pathogens, industrial pollution, and urban runoff). One especially appealing aspect of this text is its coverage of pollution impacts on both humans and natural ecosystems.

Chemistry and Biology of Water, Air, and Soil: Environmental Aspects


The solution to pollution is no longer dilution from one environmental compartment into another. Scientists, managers, and regulators are learning to view the environment as an integrated ecosystem instead of individual components. This hardcover book, Volume 53 in the International Geological Congress Environmental Science series, will help workers in the environmental protection become acquainted with the physical, chemical, and biological processes that affect water, air, and soil.

The first half of the book is devoted to water. Chapter 2 covers the inorganic and organic chemistry of natural and polluted water, and wastewaters. Chapter 3 includes a technical and mathematical analysis of analytical methods of wastewater treatment. Chapter 4 provides a section on analytical techniques to determine the chemical parameters of water quality. Chapter 5 follows a similar format to Chapter 4, covering the biology and ecology of aquatic systems and a section on biological treatment of wastewater.

The second half of the book is split between air and soil. Chapter 6 by T.P. Burns describes the procedure of conducting ecological risk assessments related to hazardous waste remediation. Chapter 7 by R.P. Brooks covers current technologies for the restoration and creation of wetlands, with a helpful step-by-step summary of the procedure and a case study of a moderately successful project. Although generally positive about the potential for restoration and creation of wetlands, Brooks does not shy away from detailing the controversy over use of this procedure for mitigating the destruction or impairment of natural wetlands. The last six chapters are an excellent summary of the current legal and technological aspects of wetlands.

Because of the strengths of the chapters on regulatory and legal issues, I recommend this book for wetland scientists, regulators, consultants, and students, as well as interested laymen. However, the ecology section of the book is inadequate. Luckily, the ecology of wetlands is summarized well in a recently published second edition of the book Wetlands by Mitsch and Gosselink (2nd ed., 1993, Van Nostrand Reinhold, New York). These two books together make an excellent resource for those interested in the science and regulatory issues of wetlands today. --SCOTT D. BRIDGHAM, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.