

and (8) enforcement. My assessment is that the chapter's coverage is comprehensive without being exhaustive.

Not surprisingly, the book is well footnoted with appropriate citations of the Code of Federal Regulations (CFR) and the US Standard Code (USC). In common with legal depositions, the book is double-spaced. That takes more pages than single spacing but certainly makes the material easy to follow.

Gallagher's writing ends on page 185 when she begins the Appendix Section. Initially, presented is a short list of acronyms. That list is followed by a copy of the complete Clean Water Act, as amended. This section is 230 pages long!

My overall assessment is that this book is a comprehensive and readable treatise of this landmark law.

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### **Water, Wastewater, and Stormwater Infrastructure Management**

Neil S. Grigg, Lewis Publishers, Boca Raton, FL, 2003, US\$ 109.95, 250 pp., ISBN: 1-56670-573-8

In the preface of this book, Grigg writes: "Delivery of water, wastewater, and stormwater services requires complex and expensive infrastructure, most of which is less than 100 years old. Given the postwar building boom and recent urbanization, systems with lifetimes of 50 years or less will begin to wear out soon. Unless renewal of these systems is well managed, public works agencies and utilities will face an infrastructure financing crisis."

Simultaneously with my reading of this book, I opened up my April copy of *Water Engineering and Management* that had the following in an article reporting on congressional committee hearing on water funding. I quote: "Representative John J. Duncan, Jr. (R-Tenn.), Chairman of the House Subcommittee on Water Resources and Environment, cited expected costs of \$400 billion over the next 20 years for replacement of aging water infrastructure. To meet that need, he said, we need to double the amount of money we are investing in wastewater infrastructure each year."

This book will assist in addressing that task. Grigg's stated goal in writing this book "... is to present clear and practical information for life-cycle management of the infrastructure systems that deliver water, sewer, and stormwater services, including recent thinking on best management practices and topics such as 'acid management', 'vulnerability assessment', and 'total quality management'."

This book has 12 well-written chapters dealing with the topic which is more system management and business oriented than process oriented. This is a change from books I normally review for this journal.

Grigg has provided a thoroughly up-to-date treatment of his topic as evidenced by Chapter 8 which is entitled "Risk Management and Disaster Preparedness." A quotation from the October 2001 issue of *Business Week* is evidence of the fact the book is dealing with current affairs. The 15 pages devoted to the topic made so critical by the 9/11 attacks is a good start. I predict that future issues of similar books will have a much greater number of pages devoted to this topic.

Other chapters are devoted to asset management; capital improvement planning, programming and budgeting; design and construction of infrastructure; financial management for water, sewer, and stormwater systems; and operations of water, sewer, and stormwater systems.

I did find some shortcomings in the text. Chapter 11 discusses laws and regulations. However, the chapter omits a discussion of the Clean Water Act that governs discharges of municipal wastewater. Conversely, the Safe Drinking Act (SDWA) is well discussed. In a discussion of technical expertise, chemical engineers and their US organization, AIChE, are neglected as a source of technical expertise while the WEF, ASCE and AWWA are cited.

These minor criticisms aside, I found the book interesting, though as I noted much different from my usual technical reading. I predict it will be well read and well used by practitioners in the field.

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