

Desalination Technology

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Desalination Technology: Health and Environmental Impacts covers the latest developments in desalination, examining the environmental and public health-related impacts of these technologies. Written by international experts, the text presents specifications for assessing water quality, technical issues associated with desalination technologies, and the chemical aspects of desalinated water and its microbiology.

The book also discusses environmental protection issues that assist in the optimization of proposed and existing desalination facilities to ensure that nations and consumers enjoy the benefits of the expanded access to desalinated water. This includes coverage of health and environmental issues such as energy conservation and sustainability as well as protection of delicate coastal ecosystems and groundwater from contamination by surface disposal of concentrates—challenges that must be addressed during the design, construction, and operation of a desalination facility.

Development of new and improved desalination technologies, including major cost reduction trends, have significantly broadened the opportunities to access large quantities of safe water in many parts of the world. And while there are many books available on desalination, this book's unusual approach blends technical coverage of the latest technologies with coverage of the environmental and public health-related impacts of these technologies, setting it apart from other resources. It provides technical guidance based on the practical expertise of a balanced group of international scientists and engineers.

- Reviews the issues associated with the use of desalinated water, including the technological and management approaches, water quality issues, and health and environmental topics
- Analyzes the major aspects of desalination technology, engineering, and chemistry, identifying process-related mechanisms that may bring about departures from desired drinking water quality goals
- Covers the chemicals present in raw source water or introduced during the various stages of producing drinking water
- Discusses the monitoring requirements to demonstrate that water safety plans are appropriately designed, function effectively, and produce water that is safe to drink
- Introduces the concept, methodology, and practice of environmental impact assessment (EIA) for desalination projects with a proposed 10-step EIA approach

Co-published with CRC Press

Publication Date: 14/07/2010

ISBN13: 9781843393474

Pages: 240

Print:

Standard price: £73 / €91 / \$110

Member price: £55 / €68 / \$82

eBook:

Standard price: £73 / €91 / \$110

Member price: £55 / €68 / \$82



