This manual is designed to train operators in the safe and effective operation and maintenance of drinking water treatment plants. It emphasizes the knowledge and skills needed by operators of conventional surface water treatment plants. Also included is information needed by all operators responsible for the administration and management of a water treatment plant.

In a simple, straightforward manner, this book presents most of the major process units for water treatment, addressing what the unit is and how it basically works. Along with that it provides some of the math problems associated with each unit. Each math problem, presented in English units, is usually followed by a nearly identical problem in metric units. It also presents new concepts and simplified math in layman's terms, so the reader can concentrate on the subject matter instead of the language used to present it. Simplified Water Treatment Plant Operations provides comprehensive and technically accurate water treatment information in an easy-to-understand manner to help you handle daily concerns. It includes helpful suggestions on how to calculate amounts of chemical to be used in steam boilers, cooling towers, and ion exchange processes. It addresses the issues and solutions of water treatment problems, as well as the amount of chemicals and equipment used to control these problems. This book covers pumps, pump calculations, hydronic systems, and much more. It includes sample questions and problems for each chapter to reinforce the material presented. This book is designed to explain water treatment technologies using down-to-earth approaches comprehensible to students at the high school level, as well as to water industry professionals.

Handbook of Water and Wastewater Treatment Plant Operations is the first thorough resource manual developed exclusively for water and wastewater plant operators. It has been updated and expanded. An industry standard now in its third edition, this book addresses management issues and security needs, contains coverage on pharmaceuticals and personal care products (PPCPs), and includes regulatory changes. The author explains the material in layman's terms, providing real-world operating scenarios with problem-solving practice sets for each scenario. The book contains additional emphasis on operator safety, new chapters on energy conservation and sustainability, and basic science for operators. What's New in the Third Edition: Prepares operators for licensure exams Provides additional math problems and solutions to better prepare users for certification exams Updates all chapters to reflect the developments in the field Enables users to properly operate water and wastewater plants and suggests troubleshooting procedures for returning a plant to optimum operation levels A complete compilation of water science, treatment information, process control procedures, problem-solving techniques, safety and health information, and administrative and technological trends, the text serves as a resource for professionals working in water and wastewater operations and operators preparing for wastewater licensure exams.

This standard describes the critical requirements for the effective operation and management of drinking water treatment plants.
Step-by-step procedures, example problems, and review information about various phases of water treatment plant operation, with the emphasis on practical applications. The student must be able to operate an electronic calculator and have the ability to interpolate from a nomograph.

Water treatment is a growing field in North America, with seventy US states and localities and ten Canadian provinces requiring certification for water treatment plant operators. This book provides a step-by-step look at the most current water treatment technologies, balancing academic theory and professional practice. A compilation of studies conducted over the past decade at the Bloomington, Illinois Water Treatment Plant, it presents studies that are useful as templates for comparable long-term studies at other water utilities. This is an unparalleled gathering of techniques, processes, and data, including test results for every potential taste and odor control method.

Designed to train operators in the safe and effective operation and maintenance of water treatment plants, Volume I emphasizes the knowledge and skills needed by an operator working in a conventional water treatment plant used for treating surface waters.