



## **Recommended Reading List Wastewater Operators Training Manuals**

In partnership with Wisconsin Department of Natural Resources (WDNR), the Wisconsin Wastewater Operator's Association (WWOA), and Central States Water Environment Association - Wisconsin Section (CSWEA-W) Wisconsin's Water Library is making available these technical manuals in support of the educational needs of current and potential wastewater operators around the state.

Nature has an amazing ability to cope with small amounts of water wastes and pollution, but it would be overwhelmed if we didn't treat the billions of gallons of wastewater and sewage produced every day before releasing it back to the environment.

Treatment plants reduce pollutants in wastewater to a level nature can handle. Wastewater is used water. It includes substances such as human waste, food scraps, oils, soaps and chemicals. In homes, this includes water from sinks, showers, bathtubs, toilets, washing machines and dishwashers. Businesses and industries also contribute their share of used water that must be cleaned. Wastewater also includes storm runoff. Although some people assume that the rain that runs down the street during a storm is fairly clean, it isn't. Harmful substances that wash off roads, parking lots, and rooftops can harm our rivers and lakes. There are also useful links here: [Water on the Web: Wastewater Treatment](#).

Anyone can borrow these materials - please fill in the [book request form](#).

**Mathematics manual for water and wastewater treatment plant operators** by Frank R. Spellman.

Boca Raton, Fla.: CRC Press: 2004. WWL call no. 172921

This text is divided into three parts. Part 1 covers basic math, Part 2 covers applied math concepts, and Part 3 presents a comprehensive workbook with more than 1700 sample problems highlighting the kinds of exam questions operators can expect to see on state licensure examinations. Readers working through the book systematically will acquire a definitive understanding of and skill in performing the applied water/wastewater calculations that are essential for a successful career.

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For more information, please contact:

Wisconsin Water Library | Phone: (608) 262-3069 | Email: [askwater@aqu.wisc.edu](mailto:askwater@aqu.wisc.edu)

**Biological nutrient removal (BNR) operation in wastewater treatment plants** New York: McGraw-Hill: 2006. WWL call no. 172922

Biological Nutrient Removal (BNR) Operation Wastewater Treatment Plants instructs readers in the theory, equipment, and practical techniques needed to optimize BNR in varied environments, from plants larger than 380 000 m<sup>3</sup>/d (100 mgd) to plants smaller than 380 m<sup>3</sup>/d (100 000 gpd), anywhere in the world. Prepared by the Biological Nutrient Removal (BNR) Operation in Wastewater Treatment Plants Task Force of the Water Environment Federation and the American Society of Civil Engineers/Environmental and Water Resources Institute.

**Wastewater disinfection** Alexandria, VA: Water Environment Federation: 1996. WWL call no. 172923  
Prepared by Task Force on Wastewater Disinfection under the direction of the Municipal Subcommittee of the Technical Practice Committee.

**Advanced waste treatment: a field study training program** by Kenneth D. Kerri. Sacramento: California State University Sacramento Foundation: 2006. WWL call no. 172924  
Prepared by Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento; in cooperation with California Water Environment Association; Kenneth D. Kerri, project director ... [et al.]. 5th ed.

**Operation of municipal wastewater treatment plants** New York: WEF Press; McGraw Hill: 2008. WWL call no. 172925

The newly revised MOP 11, integrates the experiences, current practices, and innovations from thousands of wastewater treatment plants. Updated to reflect the latest trends, regulations and technologies, this three-volume, hard-cover manual aims to be the principal reference source for beginners or veterans in the wastewater field. The study guide is a companion to the sixth edition of Operation of Municipal Wastewater Treatment Plants (Manual of Practice No. 11). These two publications serve as the principal training documents for plant managers, superintendents, and operators of municipal wastewater treatment plants as well as college students and consulting engineers. 6th ed., 3 v.

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**Operation of wastewater treatment plants: a field study training program** Sacramento: California State University Sacramento Foundation: 2007. WWL call no. 172926

This volume II supports the OWP's on training operators to safely and effectively operate and maintain wastewater treatment plants. 7th edition.

**Operation of municipal wastewater treatment plants study guide** New York: WEF Press; McGraw Hill: 2007. WWL call no. 172927

The study guide is a companion to the sixth edition of Operation of Municipal Wastewater Treatment Plants (Manual of Practice No. 11). These two publications serve as the principal training documents for plant managers, superintendents, and operators of municipal wastewater treatment plants as well as college students and consulting engineers.

**Operation of wastewater treatment plants: a field study training program.** Volume I [Sacramento: California State University]: 2004. WWL call no. 172929 v.1

Prepared by California State University, Sacramento, College of Engineering and Computer Science, Office of Water Programs in cooperation with the California Water Environment Association for the U.S Environmental Protection Agency, Office of Water Program Operations, Municipal Permits and Operations Division; Kenneth D. Kerri ... [et al.] 6th ed.

**Handbook of water and wastewater treatment plant operations** by Frank R. Spellman. Boca Raton, Fla.: Lewis Publishers: 2003. WWL call no. 172930

Water and wastewater treatment plant operators must have a breadth of knowledge that encompasses more than scientific theory. They need to be generalists with knowledge bridging several scientific, academic, and engineering disciplines. This handbook is the first complete resource manual exclusively for water and wastewater plant operators. It is a thorough compilation of water science, treatment information, process control procedures, problem-solving techniques, safety and health information, and administrative and technological trends.

**Phosphorus and nitrogen removal from municipal wastewater: principles and practice** [Chelsea, Mich.]: Lewis Publishers: 1991. WWL call no. 172933

This book offers practical guidance regarding the design and operation of systems for reducing effluent nitrogen and phosphorus. The principles of nitrogen and phosphorus removal are discussed, including sources of nitrogen and phosphorus in wastewater, removal options, nitrogen and phosphorus transformations in treatment, process selection, and treatment. Richard Sedlak, editor. 2nd ed.

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**Basic activated sludge process control** [Alexandria, VA: Water Environment Federation]: 1994. WWL call no. 172936

This publication will teach wastewater operators the basic practices for controlling the performance of the activated sludge systems. The reader will be able to: describe biochemical oxygen demand; identify the five basic activated sludge systems in use today; perform the recommended basic process control tests in their activated sludge plants; identify basic biological organisms in activated sludge; understand safety considerations and demonstrate each of the control tests and their uses.

**Biological wastewater treatment** by C.P. Leslie Grady, Jr., Glen T. Daigger, and Henry C. Lim. Boca Raton, FL: CRC Press: IWA Pub.: 2011. WWL call no. 172938

This thoroughly updated third edition covers commonly used and emerging suspended and attached growth reactors.

**Water and wastewater technology** by Mark J. Hammer and Mark J. Jr. Hammer. Englewood Cliffs, N.J.: Prentice Hall: 2012. WWL call no. 172939

This new edition includes coverage of water processing principles and modern management practices, integrating a new emphasis on sustainability.

**Water and wastewater treatment: a guide for the non-engineering professional** by Frank R. Spellman and Joanne Drinan. Boca Raton, FL: CRC Press: 2013. WWL call no. 172940

Designed to meet the information needs of professionals without an engineering background, this book describes and explains in simple, non-mathematical terms the unit processes used to treat both drinking water and wastewater. The text presents each unit process, states what function(s) it performs, illustrates what equipment it uses, and explains its role in the process of purifying or cleaning water.

**Water distribution system operation and maintenance: a field study training program**

Sacramento: Office of Water Programs, CSU: 2005. WWL call no. 172942

This text is designed to be used in either classroom or as self-study and teaches proper installation, inspection, operation, maintenance, repair and management of systems. 5th edition.

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**Wastewater treatment plant operations made easy: a practical guide for licensure** by Frank R. Spellman and Joanne Drinan. Lancaster, PA: Destech Publications: 2003. WWL call no. 172943  
Wastewater technologies and math presented in basic, understandable terms.

**Water treatment plant operation: a field study training program. Volume I, Sixth edition**

Sacramento: California State University, Sacramento: 2008. WWL call no. 172944

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. Prepared by Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento; Kenneth D. Kerri, Project Director.

**Water treatment plant operation: a field study training program, Vol. II, fifth edition** Sacramento:

California State University, Sacramento: 2006. WWL call no. 172945

The purpose of this water treatment field study training program is to: (1) develop new qualified water treatment plant operators; (2) expand the abilities of existing operators, permitting better service both to employers and public; and (3) prepare operators for civil service and certification examinations (examinations administered by state/professional associations which operators take to indicate a level of professional competence). Volume 2 is a continuation of volume 1, in which the emphasis was on the knowledge and skills needed by operators of conventional surface water treatment plants. Prepared by Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento

**Small water system operation and maintenance: a field study training program - fifth edition**

Sacramento: California State University, Sacramento Foundation: 2009. WWL call no. 172946

The objective of this manual is to provide small water system operators with the knowledge and skills required to operate and maintain their systems effectively. Prepared by Office of Water Programs College of Engineering and Computer Science California State University, Sacramento.

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**Water distribution system operation and maintenance: a field study training program - Sixth edition** Sacramento: Office of Water Programs, CSU: 2012. WWL call no. 172947

Written to train operators in the practical aspects of operating and maintaining water distribution systems, emphasizing safe practices and procedures. Prepared by Office of Water Programs, College of Engineering and Computer Science, California State University, Sacramento; Kenneth D. Kerri, project director.

**Operation and Maintenance of Wastewater Collection Systems: A Field Study Training Program**

Sacramento: California State University: 2010. WWL call no. 172948

This textbook set is designed to train operators in the practical aspects of operating and maintaining wastewater collection systems, emphasizing safe practices and procedures. Volume 2 covers: Lift stations -- Equipment maintenance -- Sewer renewal (rehabilitation) -- Safety/survival programs for collection system operators -- Administration -- Organization for system operation and maintenance -- Capacity assurance, management, operation, and maintenance (CMOM). Seventh edition.

**Operation of Nutrient Removal Facilities** [S.I.]: Water Environment Federation: 2013. WWL call no. 172949

This manual is ideal for plant managers, operators, design engineers, and regulators looking to gain a better understanding of fundamental biological and chemical processes that are in use at nutrient removal facilities and the ways that operators may use, monitor, and control these processes to meet their facility's treatment goal.

**Operation and maintenance of wastewater collection systems: a field study training program**

Sacramento: California State University: 2003. WWL call no. 172950

This textbook set is designed to train operators in the practical aspects of operating and maintaining wastewater collection systems, emphasizing safe practices and procedures. Volume 1 covers: The wastewater collection system operator -- Why collection system operation and maintenance? -- Wastewater collection systems -- Safe procedures -- Inspecting and testing collection systems -- Pipeline cleaning and maintenance methods -- Underground repair. Sixth edition.

**Water treatment operator training handbook** by Nicholas G. Pizzi. Denver, CO: American Water Works Association: 2013. WWL call no. 172951

Updated from the 2005 edition, AWWA's handbook for water treatment operators solves problems, supplies math and chemistry calculations, optimizes treatment processes and helps operators studying for certification. Third edition.

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