



FUNDAMENTALS OF WATER TREATMENT

COURSE DESCRIPTION: This course contains information on water sources and characteristics, factors influencing water demand, and the development of water sources. It examines the operations and problems associated with water treatment and the importance of optimizing each unit process to maintain water quality.

MAJOR TOPICS:

- Water Sources & Characteristics
- Aeration, Chemical Oxidation, & Taste & Odor Control
- Water Quality, Sampling, & Analysis
- Coagulation/Flocculation
- Filtration
- Disinfection & Chlorination
- Distribution Systems Overview
- Fluoridation

TARGET AUDIENCE: New employees in the water treatment plant and other employees who need a refresher course. This course is necessary in preparation for the Class III Water Treatment Operator certification.

PREREQUISITES: Basic math skills are essential for the successful completion of this course.

COURSE LENGTH: This is a 40 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.



INTRODUCTORY WATER MATHEMATICS

COURSE DESCRIPTION: This course involves practices in applying basic math skills in calculations used in water treatment operations. This is an introductory course designed to guide students in preparation for learning and applying more advanced mathematics.

MAJOR TOPICS:

- Solving Math Problems
- Solving for an Unknown
- Linear, Area, & Volume Measurements
- Conversions
- How to Solve Word Problems
- The Pounds Formula
- Calculated Dosages

TARGET AUDIENCE: New employees in the water treatment plant and other employees desiring a basic math refresher course. This course is beneficial for individuals preparing for Class III Water Treatment certification.

PREREQUISITES: Basic math skills are essential for the successful completion of this course.

COURSE LENGTH: This is a 6 hour (1-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 6 certification renewal points.



APPLIED WATER MATHEMATICS

COURSE DESCRIPTION: This course involves practices in applying basic math skills in calculations used in water treatment operations. This is an applied course designed to guide students in preparation for learning and applying advanced mathematics both in the water treatment plant as well as during examination situations.

MAJOR TOPICS:

- Math Review
- Coagulation Math
- Chemical Feeders (Liquid & Dry)
- Clarification (SOR, WOR, DT)
- Chlorination Calculations
- Fluoride Math
- Filtration
- Pipes & Flow Rates
- Hydraulics/Motors & Pumps
- The “GWVI Water Plant”

TARGET AUDIENCE: Employees in the water treatment plant desiring a deeper understanding and practical application of math. This course is designed for individuals preparing for Class I, II, and III Water Treatment certification.

PREREQUISITES: Basic math skills on a high school level are essential for the successful completion of this course. Participants are encouraged to attend the Introductory Water Mathematics course to assist them in building a strong foundation before proceeding to a more difficult level of math.

COURSE LENGTH: This is a 15 hour (2 1/2-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.

COMPREHENSIVE WATER TREATMENT

COURSE DESCRIPTION: This course examines water treatment facilities with an emphasis on water analysis, treatment optimization, and current and proposed regulations. It builds on information learned in the Fundamentals class related to processes required to treat potable water and the importance of maintaining each unit process to maintain water quality.

MAJOR TOPICS:

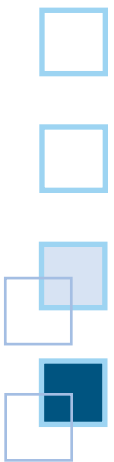
- Water Chemistry
- Preliminary Treatment Chemicals
- Coagulation/Flocculation
- Jar Testing
- Filter Optimization
- Disinfection
- Water Plant Safety

TARGET AUDIENCE: Employees currently certified as a Class III Water Treatment Operator and are preparing for higher certifications or for employees needing a refresher course and/or recertification points.

PREREQUISITES: Basic math skills are essential for the successful completion of this course. Students should have successfully completed the Fundamentals of Water Treatment course.

COURSE LENGTH: This is a 24 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.



CLASS IV WATER TRAINING

COURSE DESCRIPTION: This course contains information on Georgia's groundwater sources, including types of aquifers and wells, groundwater protection, water treatment, and proper operation of a small water plant under state and federal guidelines.

MAJOR TOPICS:

- Groundwater Resources in Georgia
- The Safe Drinking Water Act
- Monitoring Requirements
- Basic Mathematics

TARGET AUDIENCE: Employees in a small water plant. This course is necessary in achieving Class IV Water Operator certification.

PREREQUISITES: None.

COURSE LENGTH: This is a 6 hour (1-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 2 certification renewal points.



DISTRIBUTION SYSTEMS OPERATION & MAINTENANCE

COURSE DESCRIPTION: This course examines the system facilities and procedure used to distribute treated water to consumers. Desired outcome of this course is a working understanding of why procedures are performed and facilities are used within a distribution system.

MAJOR TOPICS:

- Pipe Materials
- Pipe Installation
- Fire Hydrants
- Valves
- Cross Connection Control
- Water Storage
- Services & Meters
- Pumps
- Water Quality & Sampling

TARGET AUDIENCE: New employees in the water distribution system and other employees who need a refresher course. This course is necessary in preparation for the Distribution System Operator certification.

PREREQUISITES: Basic math skills are essential for the successful completion of this course.

COURSE LENGTH: This is a 27 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.





BACKFLOW PREVENTION ASSEMBLY TESTER TRAINING

COURSE DESCRIPTION: This workshop will give individuals the fundamental knowledge of how backflow occurs and how backflow/cross connection hazards can be identified and corrected. This is a hands-on workshop where the students will learn to test a variety of devices in preparation for the Georgia Backflow Certification Exam.

MAJOR TOPICS:

- Causes of Backflow Occurrences
- Protective Backflow Prevention Measures
- Proper Installation of Backflow Preventers
- RPZ, DC, & PVB Testing Procedures
- When and Where to Use Backflow Devices

TARGET AUDIENCE: Individuals working in water systems who are involved in cross connection programs, plumbers, industries and institutions, irrigation personnel, and fire protection system personnel.

PREREQUISITES: None.

COURSE LENGTH: This is a 40 hour (5-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.

NOTE: This hands-on workshop is limited to a maximum of 15 people.

BACKFLOW 2-DAY REVIEW

COURSE DESCRIPTION: This workshop is intended to review individuals on the fundamental knowledge of how backflow occurs and how backflow/cross connection hazards can be identified and corrected. This course is designed as a refresher for individuals preparing for backflow tester recertification, and is best suited only for individuals currently holding an active Backflow Prevention Assembly Testers Certificate.

MAJOR TOPICS:

- New Equipment
- Cross-Connection Theory
- Refinements in Testing Techniques
- Discussion of Problems
- Hands-on Practice in the Lab

TARGET AUDIENCE: Individuals currently holding a Backflow Prevention Assembly Testers Certificate and preparing for a renewal examination.

PREREQUISITES: A Backflow Prevention Assembly Testers Certification. This course is for individuals preparing for recertification. It is structured for review and practice before the examination. It is advised that the individual feel comfortable with the material and testing practices before attending the class.

COURSE LENGTH: This is a 12 hour (2-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.

NOTE: This hands-on workshop is limited to a maximum of 15 people.



BACKFLOW FOR PROGRAM ADMINISTRATORS

COURSE DESCRIPTION: This is a discussion-based workshop designed for Backflow Program Administrators, which will focus on developing, implementing, and maintaining a local backflow program.

MAJOR TOPICS:

- Standard Plumbing Codes
- Performing a Cross-Connection Survey
- Results of Non-Compliance
- Cross Connection Control Terminology
- Public Water Supplier’s Legal Responsibilities

TARGET AUDIENCE: Individuals responsible for the creation, implementation, or management of a Cross Connection Control Program.

PREREQUISITES: A basic knowledge of cross connection control, backflow prevention, and hydraulics will be beneficial to the student.

COURSE LENGTH: This is a 12 hour (2-day) course that meets the training requirements set forth by the Certification Board.

CERTIFICATION RENEWAL POINTS: This course has been approved for 12 certification renewal points.

