



2025 COURSE CATALOGUE

Leading the
way in operator
training.

BOOKING TRAINING IS EASY!

Step 1: Select Preferred Training Method

In-Person

Traditional and face-to-face.



Webinar

Live, instructor-led and online.

E-Learning

Anywhere, any time.

Step 2: Choose Your Path



Join a Public Course

Register for in-person or webinar training here:



Scan or visit:
wwotc.com

Schedule Private Group Training

Available in-person and via webinar!

Explore E-Learning

Enroll here:



Scan or visit:
elearning.wwotc.com

Step 3: Select Courses & Dates

Request a Quote

Get a free quote today! Simply fill out our "Request a Quote" form online or contact us directly.



Scan or visit: wwotc.com
Email Chase Taylor: ctaylor@wwotc.ca



CONTACT US

Phone: 519-974-5464
Toll Free: 1-866-622-6535
Email: info@wwotc.ca
Web: www.wwotc.com

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Windsor, ON, Canada
N8X 2E6



Message from the WWOTC

Dear Valued Customers,

As we embark on a new year, we want to take a moment to express our gratitude for your continued support and partnership. Our commitment to enhancing your skills and knowledge in water/wastewater management remains stronger than ever. Together, we are fostering a more sustainable future for our communities and the environment.

We are excited to introduce new training programs and resources in this service guide, designed to empower you in your vital roles. Thank you once again for trusting us as your training partner. Let's make 2025 our best year yet!

Warm regards,

The WWOTC Team

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Explore our 150+
accredited courses

WHO WE ARE

For over 20 years, World Water Operator Training Company Inc. has been a leader in setting the standard for operator training in the water industry. With a team of highly skilled, expert instructors, we offer an extensive catalog of more than 150 courses designed to enhance both skills and knowledge. While we've long been a trusted provider of on-site training at municipal locations, we're also proud to offer flexible, instructor-led webinars and e-learning options that provide the most adaptable, solution-oriented training to meet the diverse needs of today's workforce. No other training provider offers the same level of flexibility and commitment to excellence. We've got your training needs covered—wherever you are.

WHAT WE DO

Operator Training

- Over 150 accredited water & wastewater operator training courses
- Highly interactive and based on principles of adult-learning
- Delivered by experienced, industry veterans
- Delivery Methods:
 - In-person
 - Live Instructor-Led Webinar
 - E-Learning

*Our In-Person and Live Instructor-Led Webinar training is delivered to both public and private groups.

Our Training Specialists

Our training specialists are seasoned veterans with extensive expertise in their respective fields. Their excellence is demonstrated through years of hands-on experience, a deep understanding of best practices, and a commitment to nurturing the skills and knowledge of those they train.

Rent-a-Course Service (Course Licensing)

This unique training alternative is based on the premise that our clients often have their own subject matter experts that can deliver training. Contact Chase Taylor to learn more!

Giving Back to the Community

From the start, we've prioritized giving back to our local community.

Our initiatives include: Annual charitable sponsorships; annual scholarships and support programs for post-secondary students and young professionals

Post Secondary Student and Young Professionals Discount Program

WWOTC offers a support program to enhance the education of full-time post-secondary students and young professionals in the environmental education sector. Active students from any chartered Canadian institution can now receive a 50% course discount with proof of enrollment or being within 6 months of program completion.

ONSITE/GROUP TRAINING

World Water Operator Training Company (WWOTC) is committed to being the most flexible training provider in the industry. Whether in-person or via live instructor-led webinar, we offer both private and public group training options—no matter where you are or what your needs are. We're dedicated to providing convenient, effective, and accessible training solutions.

PRIVATE GROUP TRAINING ONSITE OR VIA WEBINAR

Our private group training is perfect for municipalities or companies that need to train a large group on the same topic(s).

Let us know what course(s) you want delivered, as well as when, where, and for how many people, and we will provide you with a free quote. Sign and return this quote to us and you're all set. It's as simple as that.

*Our base charge is for 8 students + instructor travel.

**For webinar deliveries, we use the same pricing model but exclude the instructor's travel costs.

***Significant discounts are available based on size of group and duration of training.

PUBLIC "TRAVELLING TRAINING TOUR" SESSIONS ONSITE

Our Travelling Training Tour sessions are ideal for organizations with limited staff who can't justify the cost of private group training, or those looking to benefit from having external participants in the session. Best of all, setting up a session is quick and easy!

Step 1: Contact us to share the specific course(s) you're interested in, what your preferred dates are, and where you'd like the training to be delivered.

Step 2: WWOTC will provide the pricing per person, per course. Pricing will be based on a minimum enrollment of 8 people and include instructor travel costs.

Step 3: WWOTC will list the session online and provide you with a flyer to share with your regional contacts to help boost attendance.

Step 4: WWOTC will confirm the session once it receives an average of 8 registrations across all the days of training.

Step 5: WWOTC will administer all registration and invoicing.

NOTE: WWOTC will reward you the host with one free seat to one day of training once the session is confirmed to be running. Furthermore, if WWOTC receives an average of 10 registrations across all the days of training, it will award the host with one free seat to EACH day of training.

**For sessions organized outside of Ontario, we require a minimum of 3 consecutive days of training.*

Log Book Requirements

Click on the icons to reveal the text.

- Log books should be filled out in ink.
- Each entry should be initialed by the operator responsible.
- Include the date and time for each entry – in chronological order, at the event itself to ensure accuracy.
- Include the asset number of the part of the system being operated or adjusted.
- Check carefully for errors – stroke through any incorrect information, if changes.

Types of Chlorine Chemicals

Several types of chlorine chemicals may be used in water disinfection. Gaseous chlorine and sodium hypochlorite are the most common chemicals as used in drinking water disinfection followed by chloramination. Click each image to learn more:

Sodium Hypochlorite	Calcium Hypochlorite	Gaseous Chlorine	Chlorine Dioxide

Interconnections

- The hydrologic cycle interconnects ground and surface water which means they can contaminate one another.
- As rain or snow falls to the earth's surface, some water runs off the land to rivers, lakes, streams, and oceans.
- Some water is also evaporated and absorbed by plants or continues to move down to become groundwater.

E-LEARNING

TRAIN ANYWHERE, ANY TIME

Interactive, dynamic and engaging course content.



WATER COURSES

Learn the essential skills required to effectively manage and maintain water treatment and distribution systems, ensuring the delivery of safe and clean drinking water to communities.



WASTEWATER COURSES

Develop the vital skills necessary to oversee and manage wastewater treatment and collection systems, ensuring the protection of the environment and public health.



REGULATORY/ MANAGEMENT COURSES

Navigate regulatory compliance with confidence.



OCCUPATIONAL HEALTH & SAFETY

Delve into vital topics such as confined space entry, electrical safety, emergency response procedures, and so much more to ensure a safe and compliant workforce.



CTAYLOR@WWOTC.CA



VISIT ELEARNING.WWOTC.COM

E-LEARNING

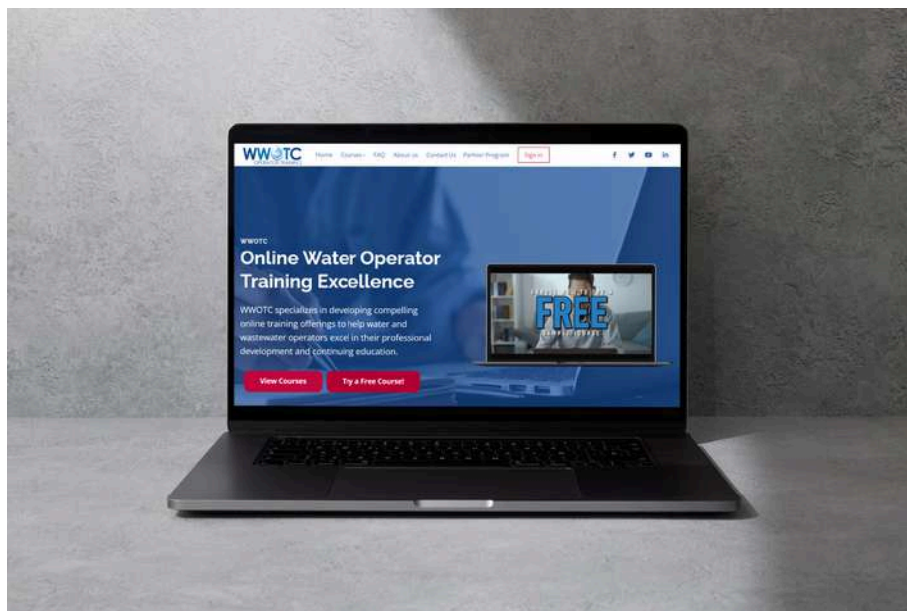
World Water Operator Training Company (WWOTC) is dedicated to developing cutting-edge e-learning solutions that provide operators with convenient, flexible ways to enhance their skills and knowledge. With a focus on accessibility and effectiveness, our courses are designed to meet the evolving needs of the industry and support continuous professional growth.

WATER COURSES

WWOTC NOW OFFERING THE FOLLOWING COURSE TITLES:

- Stay Safe: Health & Safety Fundamentals - 0.1 CEU - \$54.95
- Pump & Lift Stations - 0.1 CEU - \$54.95
- Water Essentials - 0.2 CEUs - \$105.95
- Chlorine Residual Testing - 0.3 CEUs - \$155.95
- Record Keeping - 0.3 CEUs - \$155.95
- Introductory Math - 0.4 CEUs - \$195.95
- Basic Laboratory Procedures for Water Operators - 0.7 CEUs - \$305.95
- Chemical Safety - 0.7 CEUs - \$305.95
- Chlorination & Disinfection Refresher - 0.7 CEUs - \$305.95
- Groundwater Quality & Treatment - 0.7 CEUs - \$305.95
- Maintaining Chlorine Residuals & Proper Sampling Techniques - 0.7 CEUs - \$305.95
- Surface Water Quality & Treatment - 0.7 CEUs - \$305.95
- Water Distribution: Level 1-2 Practice Exam - \$155.95
- Water Treatment: Level 1-2 Practice Exam - \$155.95

...And there's more coming!



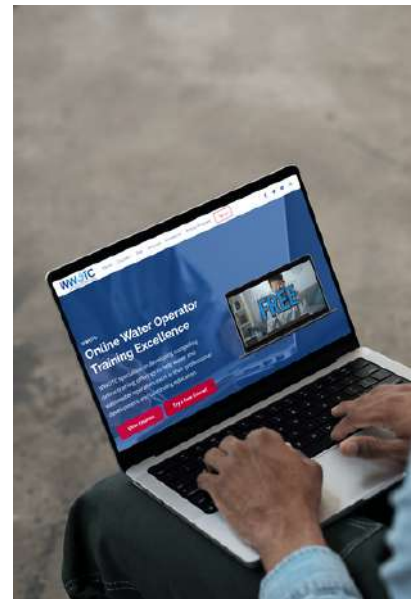
E-LEARNING

World Water Operator Training Company (WWOTC) is dedicated to developing cutting-edge e-learning solutions that provide operators with convenient, flexible ways to enhance their skills and knowledge. With a focus on accessibility and effectiveness, our courses are designed to meet the evolving needs of the industry and support continuous professional growth.

WASTEWATER COURSES

WWOTC NOW OFFERING THE FOLLOWING COURSE TITLES:

- Aerobic Digestion and Sludge - 0.1 CEU - \$54.95
- Effective Nutrient Removal: Strategies for Success - 0.1 CEU - \$54.95
- Essential Wastewater Math - 0.1 CEU - \$54.95
- Intro to Microorganisms and Bacteria in Wastewater - 0.1 CEU - \$54.95
- Intro to Ponds and Lagoons - 0.1 CEU - \$54.95
- Intro to Wastewater Digester Operation and Control - 0.1 CEU - \$54.95
- Pump & Lift Stations - 0.1 CEU - \$54.95
- Stay Safe: Health & Safety Fundamentals - 0.1 CEU - \$54.95
- Wastewater Disinfection - 0.1 CEU - \$54.95
- Wastewater Preliminary & Primary Treatment - 0.1 CEU - \$54.95
- Record Keeping - 0.3 CEUs - \$155.95
- Introductory Math - 0.4 CEUs - \$195.95
- Ponds & Lagoons - 0.7 CEUs - \$305.95
- Wastewater Digester Operation & Control - 0.7 CEUs - \$305.95
- Wastewater Collection: Level 1-2 Practice Exam - \$155.95
- Wastewater Treatment: Level 1-2 Practice Exam - \$155.95



OCCUPATIONAL HEALTH & SAFETY

We now also offer 400+ Occupational Health & Safety e-learning courses covering a wide range of topics, including: hazardous materials safety, confined space safety, trenching and excavating safety, emergency response - and so much more! To view your vast library of options, visit www.wwotc.com.





WATER DISTRIBUTION COURSES

Our Water Distribution training courses are tailored for professionals at all levels in water distribution and supply services. The curriculum includes essential topics such as pipeline maintenance, leak detection techniques, water pressure management, valve operation, and system flushing procedures, among others. Participants will engage in a blend of classroom instruction and hands-on training, ensuring they gain practical skills and knowledge to effectively manage and optimize various aspects of water distribution systems in their communities.

LEGEND

- **Course Code Suffix “HO” means “Hands-on”**
- **Course Code Suffix “CT” means “Classroom/Theory-based”**
- **“SIM” means “Simulator”**
- **“WEB” means “Webinar”**
- **“IP” means “In-person”**
- **“EL” means “E-learning”**

Tapping of Watermains - WD-01-HO - 1 Day - 0.7 CEUs

IP - \$404

This course provides essential training on the methods and procedures for tapping watermains, with opportunities for hands-on practice and demonstrations. Participants will learn both dry and wet tapping techniques to safely and efficiently connect water services.

What is Covered:

- *Water service taps*
- *Service clamps and saddles*
- *Saddle tapping*
- *Corporation stops*
- *Large diameter pressure taps*
- *Tapping tools and safety practices*

This course is designed for water system professionals looking to enhance their skills in maintaining and expanding distribution systems.

Operation & Maintenance of Fire Hydrants - WD-02-HO - 2 Days - 1.4 CEUs

IP - \$774

This course provides detailed training on the operation and maintenance of fire hydrants, with opportunities for hands-on practice and demonstrations. Participants will learn essential skills to ensure fire hydrants remain in good working order for public safety.

What is Covered:

- *Fire hydrant uses (firefighting, flushing, and more)*
- *Types of hydrants (dry barrel, wet barrel, special hydrants)*
- *Fire hydrant operation procedures*
- *Installation techniques for hydrants*
- *Maintenance and inspection of hydrants*

This course is ideal for individuals responsible for hydrant management and water distribution system maintenance.

Flushing Techniques - WD-03-HO - 1 Day - 0.7 CEUs

IP - \$404 WEB - \$314

This course offers in-depth training on watermain flushing techniques, with opportunities for hands-on practice and demonstrations. Participants will learn effective methods for maintaining water quality and managing flushing programs in distribution systems.

What is Covered:

- *Flushing and cleaning water mains*
- *Fire hydrant operation and flow testing*
- *Water sampling and adverse result reporting*
- *Flushing program planning and execution*
- *Corrective actions for water quality issues*
- *Tools and techniques for flushing, including unidirectional flushing*

This course is ideal for water system operators responsible for maintaining distribution systems and ensuring water quality.

Distribution System Breaks & Repairs - WD-04-HO - 1 Day - 0.7 CEUs

IP - \$404 WEB - \$314

This course offers comprehensive training on managing and repairing distribution system breaks, with opportunities for hands-on practice and demonstrations. Participants will learn best practices for identifying, isolating, and repairing watermain breaks efficiently and safely.

What is Covered:

- *Leak detection techniques and equipment*
- *Repairing water mains and service lines*
- *Disinfection after repairs*
- *Water quality sampling procedures*
- *Safety practices during repairs*

This course is designed for water system operators responsible for maintaining the integrity and safety of distribution systems.

Commissioning New Watermain Systems - WD-05-HO - 1 Day - 0.7 CEUs

IP - \$404 WEB - \$314

This course provides essential training on the procedures for commissioning new watermains, with opportunities for hands-on practice and demonstrations. Participants will gain practical skills for ensuring watermains are safely and effectively brought into service.

What is Covered:

- *Flushing and swabbing techniques*
- *Pressure testing procedures*
- *Chlorination and de-chlorination methods*
- *Bacteriological sampling*
- *Documentation and record-keeping*

This course is ideal for water system operators involved in new watermain installations and those responsible for maintaining public water safety.

Distribution System Pipe Assemblies - WD-06-HO - 2 Days - 1.4 CEUs

IP - \$774

This course provides an introduction to the key components of water distribution systems, with opportunities for hands-on practice and demonstrations. Participants will learn about the various types of pipes, valves, and fittings used in waterworks and how these components function together.

What is Covered:

- Overview of distribution system components
- Types of pipe materials (PVC, ductile iron, steel, etc.)
- Pipe joint and fitting assemblies
- Installation techniques and considerations
- Traffic control and trench safety procedures

This course is ideal for newer waterworks employees or those looking to gain a deeper understanding of distribution system assemblies.

Corrosion Prevention & Control - WD-19-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an in-depth exploration of corrosion processes and effective strategies for corrosion prevention in water distribution systems. Participants will gain valuable knowledge about the types of corrosion, their effects on infrastructure, and the methods available to protect critical assets.

What is Covered:

- Definition and types of corrosion (e.g., galvanic, pitting, microbiologically influenced corrosion)
- Corrosion processes and their impact on infrastructure
- Corrosion prevention methods (e.g., coatings, cathodic protection, alloying)
- Soil types and their influence on corrosion
- Use of corrosion inhibitors and water conditioning techniques

This course is ideal for professionals tasked with maintaining and safeguarding water systems from corrosion-related damage to ensure longevity and reliability.

Introductory Math (OIT) - WD-22-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides foundational mathematical skills required for water distribution operators. Participants will gain experience with calculations and formulas essential for daily operations in the field.

What is Covered:

- Basic arithmetic (addition, subtraction, multiplication, division)
- Geometry for calculating areas and volumes
- Flow rate and detention time calculations
- Horsepower and pump-related math
- Metric conversions and scientific notation
- Problem-solving with percentages and multi-step problems

This course is ideal for new operators or those looking to refresh their math skills relevant to water distribution systems.

Maintaining Chlorine Residuals & Proper Sampling Techniques - WD-24-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course offers essential training on maintaining chlorine residuals and proper microbiological sampling techniques in water distribution systems. Participants will gain the knowledge needed to ensure water safety through accurate monitoring and disinfection practices.

What is Covered:

- Importance of disinfection in drinking water
- Waterborne microorganisms and pathogens
- Microbiological water sampling procedures
- Chlorine disinfection processes
- Secondary disinfection and maintaining chlorine residuals
- Flushing methods for maintaining water quality
- Adverse sample reporting and corrective actions

This course is ideal for water system operators focused on ensuring safe and compliant drinking water through proper disinfection and monitoring techniques.

Buried Utility Locating - WD-32-HO - 1 Day - 0.7 CEUs

IP - \$404

This course provides essential training on locating buried utilities, including opportunities for hands-on practice and demonstrations. Participants will explore various methods and techniques to accurately and safely locate utilities before excavation, minimizing damage risks and ensuring safety.

What is Covered:

- Utility mapping and records
- Acoustic and electromagnetic locating methods
- Ground-penetrating radar (GPR) and infrared imaging
- Ferromagnetic and tracer gas techniques
- Safety protocols and marking procedures

This course is ideal for professionals in excavation, construction, or utility management who are committed to ensuring safe, effective, and accurate buried utility locating.

Fundamentals of Water Distribution for New Operators - WD-44-HO - 5 Days - 3.5 CEUs

IP - \$1,619

This course provides foundational training on water distribution systems, with opportunities for hands-on practice and demonstrations. Participants will gain essential knowledge of water distribution components, operations, and safety procedures. \

What is Covered:

- Overview of water distribution systems
- Ontario water legislation and regulations
- Pipe materials, joints, and fittings
- Water service connections and valves
- Fire hydrants and their maintenance
- Disinfection of water mains
- Repairing distribution system breaks

This course is ideal for new operators seeking a solid understanding of water distribution fundamentals and safe operating practices.

Watermain Disinfection - WD-51-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an in-depth understanding of corrosion processes and strategies for corrosion prevention in water distribution systems. Participants will gain insight into the types of corrosion and methods used to protect infrastructure.

What is Covered:

- Definition and types of corrosion (e.g., galvanic, pitting, microbiologically influenced corrosion)
- Corrosion processes and their impact on infrastructure
- Corrosion prevention methods (e.g., coatings, cathodic protection, alloying)
- Soil types and their influence on corrosion
- Use of corrosion inhibitors and water conditioning techniques

This course is ideal for professionals responsible for maintaining and protecting water systems from corrosion-related damage.

Hydrostatic Testing of Watermains - WD-58-HO - 1 Day - 0.7 CEUs

IP - \$404

This course offers practical and theoretical training on performing hydrostatic testing of watermains, with opportunities for hands-on practice and demonstrations. Participants will learn the necessary steps to conduct safe and accurate pressure and leakage tests in compliance with industry standards.

What is Covered:

- Hydrostatic testing procedures for water mains
- Pressure testing and leakage testing for various pipe materials (PVC, ductile iron, HDPE)
- General specifications for pressure testing of piping
- Testing preparation and execution
- Troubleshooting and failed pressure tests
- Testing for non-pressure piping

This course is ideal for distribution system operators, consultants, and contractors involved in watermain testing and maintenance.

Emerging Issues: Lead Services - WD-62-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides essential knowledge on the emerging issue of lead in drinking water systems. Participants will learn about the sources of lead contamination, health impacts, and methods for lead control, with an emphasis on regulatory compliance and public education.

What is Covered:

- Sources of lead in drinking water
- Health impacts of lead exposure
- Corrosion control methods
- Regulatory requirements for lead sampling
- Public education and lead awareness programs
- Lead sample collection procedures

This course is ideal for water distribution professionals looking to address lead-related concerns and ensure compliance with regulatory standards.

Water Quality for Distribution Systems - WD-65-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a comprehensive overview of the key practices needed to maintain and improve water quality within distribution systems. Participants will gain valuable insights into preventing water quality deterioration through essential activities, with a strong emphasis on regulatory compliance and industry best practices.

What is Covered:

- Microbiological, chemical, and radiological safety in water distribution
- Monitoring and maintaining chlorine residuals and turbidity
- Customer satisfaction and managing common complaints
- Techniques for water main flushing and swabbing
- Cross-connection control and backflow prevention

This course is ideal for water distribution operators dedicated to ensuring the delivery of safe, high-quality drinking water and addressing water quality challenges effectively.

Troubleshooting for Water Distribution Operators - WD-69-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course equips water distribution operators with the essential troubleshooting skills required to quickly identify and resolve issues in the field. Through practical learning and case studies, participants will develop the ability to diagnose problems and implement effective solutions.

What is Covered:

- *Problem-solving versus troubleshooting techniques*
- *Root cause analysis and the 5 Whys technique*
- *Preventative maintenance strategies*
- *Common issues in water distribution systems*
- *Leak detection and repair methods*
- *Case studies on real-world troubleshooting scenarios*

This course is ideal for operators looking to enhance their problem-solving capabilities and ensure the smooth operation of water distribution systems.

Flow Testing of Fire Hydrants - WD-71-HO - Half-day - 0.4 CEUs

IP - \$283

This course provides detailed training on the procedures for flow testing fire hydrants, with opportunities for hands-on practice and demonstrations. Participants will learn how to ensure accurate fire flow data collection to support fire suppression efforts and water system evaluations.

What is Covered:

- *Importance of fire hydrant flow testing*
- *Factors affecting available fire flows*
- *Definitions related to flow testing*
- *Proper flow testing procedures*
- *Work zone setup and safety*
- *Documentation of test results*

This course is ideal for water system operators responsible for hydrant maintenance and ensuring sufficient fire flows.

Assessing Your Distribution System for Rehabilitation - WD-72-CT - 2 Days - 1.4 CEUs

IP - \$699 WEB - \$619

This course provides a comprehensive understanding of assessing water distribution systems for rehabilitation or replacement. Participants will learn to gather data, perform assessments, and apply evaluation methods to ensure system functionality and longevity.

What is Covered:

- *Overview of water system deterioration*
- *Data collection and historical data analysis*
- *Assessment of structural and functional integrity*
- *Investigation methods, including mapping and leak detection*
- *Inspection programs and techniques*

This course is ideal for professionals involved in the maintenance, assessment, and rehabilitation of water distribution systems.

Distribution System Rehabilitation Alternatives - WD-73-CT - 2 Days - 1.4 CEUs

IP - \$699 WEB - \$619

This course provides a thorough overview of rehabilitation alternatives for water distribution systems, focusing on both traditional and modern techniques. Participants will gain practical knowledge of technologies and methods for repairing or replacing aging infrastructure to enhance system efficiency and sustainability.

What is Covered:

- *Open cut construction methods*
- *Spray lining applications (cement mortar and epoxy)*
- *Cured-in-place pipe (CIPP)*
- *Sliplining techniques*
- *Pipe bursting methods*
- *Horizontal directional drilling*

This course is ideal for water distribution professionals seeking to expand their knowledge of effective rehabilitation technologies and strategies for infrastructure renewal.

Distribution System Valve Maintenance - WD-75-HO - 1 Day - 0.7 CEUs

IP - \$404 WEB - \$314

This course provides comprehensive training on the maintenance and operation of distribution system valves, including opportunities for hands-on practice and demonstrations. Participants will gain practical skills and learn best practices to maintain valve functionality and ensure the reliability of water distribution systems.

What is Covered:

- *Types of valves in water distribution systems*
- *Valve exercising and maintenance procedures*
- *Troubleshooting and repairing valves*
- *Documentation and performance tracking*
- *Safety considerations for valve maintenance*

This course is ideal for water distribution operators seeking to enhance their expertise in valve operation and maintenance, ensuring efficient and reliable system performance.

Water Conservation: Cut Your Losses - WD-76-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a comprehensive overview of water conservation strategies and the importance of managing water losses in distribution systems. Participants will explore methods to conserve water, reduce system losses, and improve operational efficiency.

What is Covered:

- *Drivers of water conservation*
- *Evaluating system losses and water audit methods*
- *Leak detection techniques and technologies*
- *Water loss reduction strategies*
- *Repair and rehabilitation techniques*
- *Public education and efficient water use programs*

This course is ideal for water utility professionals looking to enhance their water conservation efforts and reduce losses in distribution systems.

Fire Hydrant & Valve: Operation, Inspection, Maintenance & Installation - WD-98-HO - 1 Day - 0.7 CEUs

IP - \$404 WEB - \$314

This course provides detailed training on the procedures for flow testing fire hydrants, with opportunities for hands-on practice and demonstrations. Participants will learn how to ensure accurate fire flow data collection to support fire suppression efforts and water system evaluations.

What is Covered:

- *Importance of fire hydrant flow testing*
- *Factors affecting available fire flows*
- *Definitions related to flow testing*
- *Proper flow testing procedures*
- *Work zone setup and safety*
- *Documentation of test results*

This course is ideal for water system operators responsible for hydrant maintenance and ensuring sufficient fire flows.

Winter Wise: The Cold Hard Facts About Distribution Systems - WD-103-CT - 1 Day -

IP - \$354 WEB - \$314

This course provides vital training on managing and maintaining water distribution systems during cold weather conditions. Participants will learn strategies to prevent, mitigate, and repair damage caused by freezing temperatures.

What is Covered:

- *Properties of water and its behavior in cold temperatures*
- *Frost penetration and its impact on water mains*
- *Preventing winter damage to water infrastructure*
- *Thawing methods for hydrants, valves, and water services*
- *Winterizing fire hydrants and maintaining auto flushers*
- *Winter safety and cold stress management*

This course is ideal for water distribution professionals responsible for ensuring system reliability in freezing conditions.

Overview of Water Storage Systems - WD-106-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides essential training on the components, operation, and maintenance of water storage systems. Participants will learn about the critical role of water storage in maintaining distribution system performance, water quality, and safety.

What is Covered:

- *Need for drinking water storage facilities and their role in system reliability*
- *Types of water storage facilities: standpipes, reservoirs, and elevated tanks*
- *Design and operation considerations for water storage tanks*
- *Water quality problems, including microbiological, chemical, and physical issues*
- *Strategies for tank mixing and maintaining water quality*
- *Maintenance and inspection requirements for water storage systems*

This course is ideal for water distribution professionals responsible for the operation and maintenance of water storage infrastructure.

Exam Prep Review for Water Distribution & Supply - WD-107-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This course prepares participants for Level 1 & 2 water distribution and supply certification exams, using the ABC Need-to-Know Criteria as a foundational guide. Topics cover essential water distribution operations, maintenance, and safety.

What is Covered:

- *Water sources and characteristics*
- *Disinfection methods, including chlorination and UV*
- *Maintenance of pipes, valves, and hydrants*
- *Water quality sampling and corrective actions*
- *Emergency response and safety protocols*

Ideal for those seeking a focused review for certification exams in water distribution.

***NOTE: inquire about our 5 day version of this course.**

Exam Prep Review for Water Distribution & Supply: Level 3 & 4 - WD-108-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This advanced exam preparation course provides a focused review for individuals preparing for Level 3 & 4 water distribution and supply certification exams, using the ABC Need-to-Know Criteria as a foundational guide. It covers complex operational aspects of water distribution systems and critical management practices for water safety.

What is Covered:

- *Water source characteristics and quality comparisons*
- *Advanced disinfection methods, including chlorination and UV*
- *Hydraulics and flow management within distribution systems*
- *Emergency response planning and safety protocols*
- *Exam strategies and practice questions*

This course is ideal for experienced professionals looking to deepen their expertise and ensure readiness for advanced certification exams.

***NOTE: inquire about our 5 day version of this course.**

The Distribution System: Protect Your Water from Source to Tap - WD-109-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course offers comprehensive training on the critical aspects of protecting water distribution systems from the source to the tap. Participants will learn about the challenges and solutions involved in maintaining water quality throughout the entire distribution system.

What is Covered:

- *The multiple barrier approach to water protection*
- *Influences on source water, including climate change and human activities*
- *Key water quality parameters: microbiological, chemical, and physical characteristics*
- *Protecting distribution systems from water quality degradation*
- *Addressing emerging issues such as biofilms and aging infrastructure*
- *Techniques for preventing and mitigating cross-connections and backflow*

This course is ideal for water professionals responsible for ensuring safe, clean, and reliable drinking water through proactive system protection and maintenance.

Impacts of Trapped Air Particles in the Distribution System - WD-110-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides critical training on understanding and addressing the challenges posed by trapped air in water distribution systems. Participants will learn how trapped air affects system performance, water quality, and infrastructure, and they will explore methods for managing and mitigating these impacts.

What is Covered:

- *Properties of dissolved air in water distribution systems*
- *How air enters a distribution system and its effects on water mains*
- *Types and functions of air valves and surge tanks*
- *The impacts of biofilm and dissolved air on water quality*
- *Methods for removing trapped air, including pigging, ice pigging, and flushing*
- *Cavitation causes and effects in water distribution systems*

This course is ideal for water distribution professionals responsible for maintaining the efficiency and reliability of water systems by effectively managing air in pipelines.

Understanding System Hydraulics - WD-112-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides fundamental training on the principles of hydraulics as they apply to water distribution systems. Participants will gain a deeper understanding of how water pressure and flow dynamics influence system performance and reliability.

What is Covered:

- *Basics of water pressure and flow in water mains*
- *The Hazen-Williams formula and its application to hydraulic analysis*
- *Factors affecting pressure and flow, including pipe size, material, and system layout*
- *Methods to restore hydraulic capacity, such as flushing, pigging, and ice pigging*
- *Cavitation, air pockets, and their effects on system performance*

This course is ideal for water distribution professionals responsible for optimizing system hydraulics to ensure efficient water delivery and maintain system integrity.

Water Meter Installation (& Removal) - MT-02-CT - 3 Days - 2.1 CEUs

IP - \$1,114

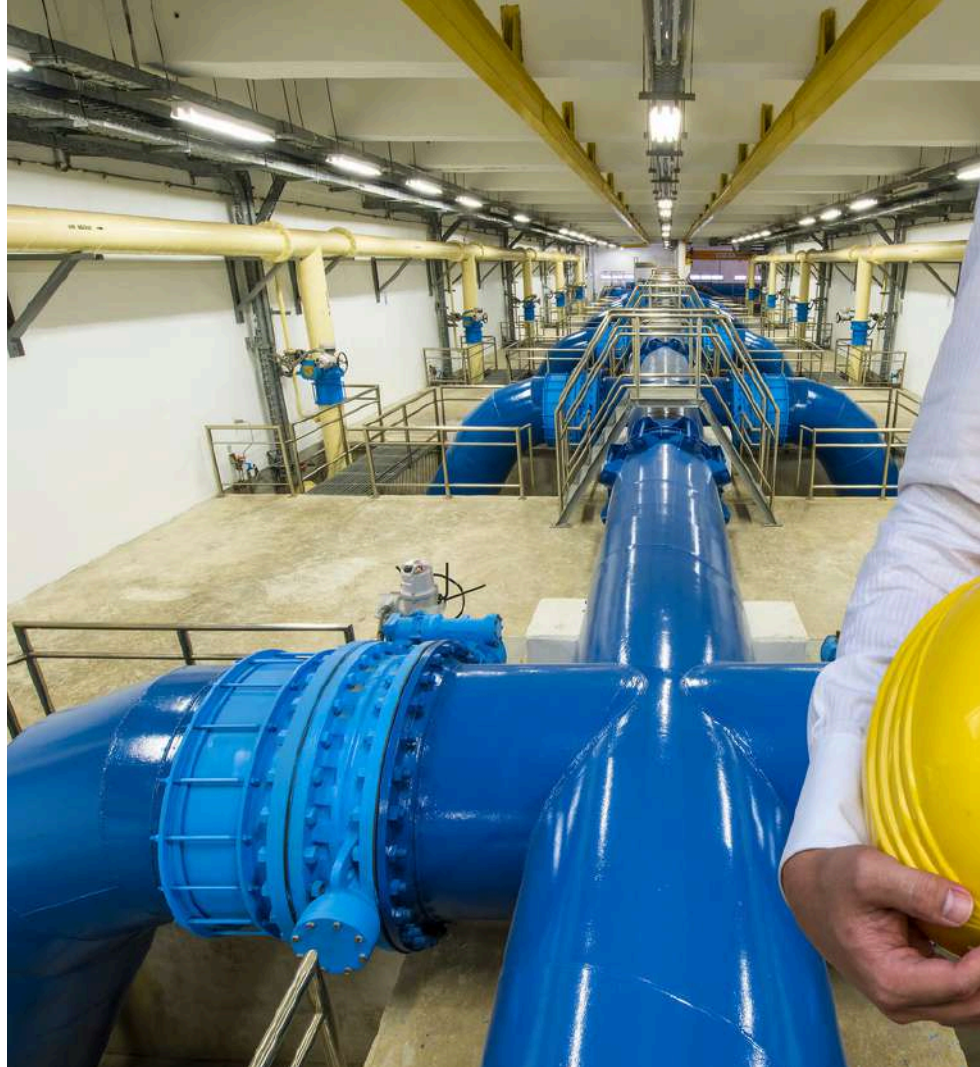
This course provides hands-on practice and demonstrations for installing, servicing, and maintaining water meters. Participants will gain essential skills for safe and effective water meter management in residential and commercial settings.

What is Covered:

- *Types of water meters, their components, and functionality*
- *Safe work practices, including compliance with Ontario regulations and confined space protocols*
- *Techniques for soldering, threading, and using compression fittings*
- *Steps for accurate meter installation, removal, and troubleshooting*
- *Water quality considerations and customer service best practices*

This course is designed for water meter installers seeking practical training to enhance technical skills and ensure regulatory compliance.

***NOTE: inquire about our 4 day version of this course.**



WATER TREATMENT COURSES

Our Water Treatment courses are designed for professionals at all levels in the water treatment sector. The curriculum covers essential topics such as water disinfection methods (chlorination, UV treatment), advanced filtration techniques (sand and activated carbon), chemical handling and dosing, regulatory compliance, and water quality testing and monitoring, among others. Participants will benefit from a blend of classroom instruction and hands-on training, equipping them with practical skills and knowledge to effectively operate and optimize water treatment facilities, ensuring the delivery of safe, high-quality drinking water to their communities.

Exam Prep Review for OIT: Water Treatment & Water Distribution - WT-11-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This course offers a comprehensive review for Operator in Training (OIT) candidates preparing for roles in water treatment and distribution. Participants will cover foundational topics in regulatory compliance, water sampling, essential lab tests, and practical mathematics, preparing them for certification exams and operational responsibilities.

What is Covered:

- Key regulatory requirements for water treatment
- Best practices in water sampling and testing
- Practical calculations in water treatment operations
- Overview of core treatment and distribution processes

Ideal for those entering the water treatment field, this course supports certification readiness and foundational knowledge.

Pumps & Pumping Hydraulics - WT-17-HO - 1 Day - 0.7 CEUs

IP - \$404 WEB - \$314

This course provides a foundational understanding of pump types, their operations, and basic hydraulic principles essential for water and wastewater professionals, with opportunities for hands-on practice and demonstrations. Participants will gain insights into centrifugal and positive displacement pumps, their applications, maintenance requirements, and efficiency factors.

What is Covered:

- Types of pumps and their classifications
- Centrifugal pump principles and variations
- Positive displacement pumps: diaphragm, piston, and peristaltic types
- Hydraulic concepts: pressure, flow rate, and pump head
- Total Dynamic Head and system friction losses
- Pump efficiency and power calculations
- Troubleshooting common pump issues

This course is designed for water system operators and maintenance personnel seeking to deepen their knowledge of pump mechanics and hydraulic systems in water distribution and treatment contexts.

Introduction to Membranes for Water Treatment - WT-18-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This introductory course provides essential knowledge of membrane filtration processes in water treatment, emphasizing practical applications and compliance with industry standards. Participants will gain an understanding of key filtration technologies, material selection, and system configurations vital for achieving safe and efficient water treatment operations.

What is Covered:

- Types of membrane filtration, including microfiltration and reverse osmosis
- Key materials and module configurations, such as hollow-fiber systems
- Basics of hydraulic design and system flow optimization
- Essentials of regulatory compliance for pathogen and turbidity control

Ideal for those new to water treatment, this course lays a strong foundation for operational roles and regulatory understanding.

Hypochlorination & Disinfection - WT-22-CT - 3 Days - 2.1 CEUs

IP - \$1,014 WEB - \$924

This course provides an in-depth overview of hypochlorination practices for effective water and wastewater disinfection. Participants will gain practical knowledge on chlorine use and safety protocols essential to maintaining water quality.

What is Covered:

- Principles of chlorination and microbial control
- Key chemical properties of chlorine
- Overview of chlorination equipment
- Safety procedures and emergency protocols

This course is designed for water treatment operators and technicians focused on ensuring safe, effective disinfection in water distribution and wastewater treatment systems.

Gas Chlorination & Disinfection - WT-23-HO - 4 Days - 2.8 CEUs

IP - \$1,394

This course provides essential training on the components, operation, and maintenance of water storage systems. Participants will learn about the critical role of water storage in maintaining distribution system performance, water quality, and safety.

What is Covered:

- Need for drinking water storage facilities and their role in system reliability
- Types of water storage facilities: standpipes, reservoirs, and elevated tanks
- Design and operation considerations for water storage tanks
- Water quality problems, including microbiological, chemical, and physical issues
- Strategies for tank mixing and maintaining water quality
- Maintenance and inspection requirements for water storage systems

This course is ideal for water distribution professionals responsible for the operation and maintenance of water storage infrastructure.

Chemical Safety - WT-26-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course provides a comprehensive overview of chemical safety protocols and hazardous materials management essential for maintaining safe water treatment environments. Participants will examine chemical properties, exposure concerns, and critical safety measures aligned with regulatory standards.

What is Covered:

- Hazardous materials management and emergency response planning
- Health risks from exposure to toxic chemicals and protective measures
- Use of personal protective equipment (PPE) and respiratory protection
- WHMIS and safe handling of flammable, reactive, and toxic substances
- Safety data sheets (SDS) interpretation and labeling requirements

This one-day course is designed for water treatment professionals responsible for handling and managing chemicals, with a focus on safety procedures, emergency response, and compliance with regulatory standards.

Gas Chlorination Safety - WT-27-CT - Half Day - 0.3 CEUs

IP - \$232 WEB - \$162

This introductory course provides essential knowledge of membrane filtration processes in water treatment, emphasizing practical applications and compliance with industry standards. Participants will gain an understanding of key filtration technologies, material selection, and system configurations vital for achieving safe and efficient water treatment operations.

What is Covered:

- Types of membrane filtration, including microfiltration and reverse osmosis
- Key materials and module configurations, such as hollow-fiber systems
- Basics of hydraulic design and system flow optimization
- Essentials of regulatory compliance for pathogen and turbidity control

Ideal for those new to water treatment, this course lays a strong foundation for operational roles and regulatory understanding.

Chlorine Emergency Repair Kit - WT-28-CT - Half Day - 0.3 CEUs

IP - \$232 WEB - \$162

This course provides essential training on the use of chlorine emergency repair kits for managing and containing chlorine gas leaks. Participants will learn procedures for safely addressing emergency leaks, focusing on minimizing risks to personnel and the environment.

What is Covered:

- Types of chlorine containers and safety features
- Effects of chlorine exposure and first aid procedures
- Personal protective equipment, including self-contained breathing apparatus (SCBA)
- Procedures for detecting and containing chlorine leaks with Repair Kit "A" and Kit "B"
- Emergency response planning, including CHLOREP resources and protocols

This course is designed for water treatment personnel who may respond to chlorine leaks, providing critical knowledge in leak detection, containment, and emergency response procedures.

Chlorination & Disinfection Refresher - WT-30-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course provides a focused review of chlorination and disinfection practices essential to water treatment. Participants will deepen their understanding of chlorine's role in pathogen control, explore alternative disinfection methods, and learn practical approaches to enhance safety and compliance.

What is Covered:

- Principles of disinfection, including primary and secondary processes
- Types of chlorine compounds and their applications
- Safe handling, storage, and leak detection of disinfection chemicals
- Calculations for chlorine dosage, residual levels, and breakpoint chlorination
- Overview of alternatives to chlorine, such as UV and ozone systems

This course is ideal for water treatment operators and technicians seeking to strengthen their expertise in disinfection practices, improve safety measures, and optimize system performance.

Iron & Manganese Removal - WT-31-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a detailed overview of the methods and challenges associated with removing iron and manganese from water systems. Participants will gain an understanding of the chemical and microbiological processes involved and the treatment methods that ensure water quality and system efficiency.

What is Covered:

- Occurrence and effects of iron and manganese in water supplies
- Pretreatment methods, such as aeration and chlorination
- Filtration media and methods, including manganese greensand
- Troubleshooting biofilm formation and microbiological fouling
- Operational and safety considerations for managing iron and manganese levels

This course is tailored for water treatment operators who need to understand and address issues related to iron and manganese, including pretreatment, filtration, and microbial impacts on water systems.

Cross Connection Control - WT-39-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a thorough overview of cross-connection control principles and practices for safeguarding water quality. Participants will explore the potential health hazards associated with cross-connections, emphasizing methods to prevent contamination in water systems.

What is Covered:

- Principles of backflow, backsiphonage, and cross-connection hazards
- Overview of health risks and case studies of contamination incidents
- Regulatory standards and building code requirements for cross-connection control
- Types of backflow prevention devices, including air gaps, vacuum breakers, and check valves
- Installation, inspection, and maintenance of backflow prevention systems

This course is tailored for water utility personnel, plumbers, and facility managers responsible for ensuring compliance with cross-connection control protocols to prevent contamination in potable water systems.

Surface Water Treatment & Quality - WT-54-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course provides a comprehensive overview of surface water treatment processes, focusing on quality control and regulatory compliance for water treatment professionals. Participants will gain an understanding of water quality influences, monitoring, and essential treatment processes for surface water.

What is Covered:

- Key factors affecting surface water quality, including climate, land use, and human activity
- Regulatory requirements for water treatment and quality standards
- Physical, chemical, and biological characteristics of surface water
- Treatment processes: presedimentation, coagulation, flocculation, clarification, and filtration
- Disinfection methods and multi-barrier protection using UV and chlorination
- Monitoring practices and equipment operation for maintaining water quality

This one-day course is ideal for water treatment operators and technicians responsible for surface water treatment and quality control, emphasizing best practices for safe drinking water production.

Groundwater Treatment & Quality - WT-55-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course provides an in-depth overview of groundwater treatment processes, with a focus on quality management and regulatory compliance. Participants will gain foundational knowledge of groundwater behavior, common contaminants, and treatment solutions for maintaining water quality.

What is Covered:

- Occurrence and characteristics of groundwater, including the hydrologic cycle and aquifers
- Well types, construction methods, and common components
- Water quality issues related to groundwater, including natural and contamination sources
- Treatment techniques such as aeration, softening, filtration, and chlorination

This one-day course is ideal for water treatment operators responsible for the management and quality assurance of groundwater supplies.

Chlorine Residual Testing - WT-61-CT - Half Day - 0.3 CEUs

IP - \$232 WEB - \$162 EL - \$155.95

This course provides essential training on methods for testing chlorine residuals to ensure effective disinfection and water quality control. Participants will learn the principles of chlorine chemistry and the application of various testing techniques in field and lab environments.

What is Covered:

- Properties of chlorine and its role in disinfection
- Types of chlorine compounds used in water treatment
- Methods of disinfection and understanding breakpoint chlorination
- Testing tools and techniques, including test strips, colorimetric analysis, and amperometric titration
- Overview of automatic chlorine analyzers

This course is ideal for water operators responsible for monitoring chlorine levels to meet regulatory standards and ensure safe drinking water.

Adverse Water Quality Response - WT-64-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides essential training for water treatment personnel on responding to adverse water quality incidents (AWQIs). Participants will gain a solid understanding of regulatory requirements, incident response protocols, and corrective actions to protect public health and maintain water quality standards.

What is Covered:

- Overview of drinking water legislation and the Safe Drinking Water Act
- Definitions and types of adverse water quality incidents (AWQIs)
- Steps for reporting, notification, and documentation of AWQIs
- Corrective actions for microbial contamination, low disinfectant residuals, and other AWQIs
- Interaction with local Health Units and MECP during incident response

This course is tailored for water treatment operators and distribution staff responsible for identifying, reporting, and resolving adverse water quality incidents in compliance with regulatory requirements.

Basic Laboratory Procedures for Water Operators - WT-68-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course provides foundational laboratory skills and safety procedures for water operators, covering essential analytical techniques and quality control for water testing. Participants will learn to perform and interpret key water quality tests and follow proper laboratory protocols.

What is Covered:

- Overview of water sampling techniques, including grab sampling and continuous monitoring
- Basic chemistry principles and common laboratory equipment
- Proper use of laboratory glassware, pipettes, and titration methods
- Introduction to key water quality tests, including pH, alkalinity, and chlorine residuals
- Laboratory safety protocols, including handling chemicals, waste disposal, and accident prevention

This one-day course is ideal for water treatment operators and analysts responsible for routine water testing and quality assurance in laboratory settings.

Emerging Issues in Water Treatment - WT-77-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides water treatment professionals with up-to-date knowledge on emerging contaminants and issues that impact drinking water safety. Participants will explore new contaminants, evolving regulations, and treatment processes to address these challenges in water management.

What is Covered:

- Overview of microbiological contaminants, including bacteria, viruses, and parasites
- Disinfection by-products (DBPs) and their health implications
- Chemical contaminants, such as PFAS and heavy metals
- Pharmaceuticals, personal care products (PPCPs), and endocrine-disrupting compounds (EDCs)
- Climate change and its impact on water sources and treatment processes
- New regulatory changes affecting water treatment standards

This course is ideal for water treatment operators and professionals responsible for adapting treatment protocols to address the latest public health concerns and regulatory requirements in water quality management.

Advanced Water Treatment - WT-79-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides water treatment operators with a comprehensive understanding of advanced water treatment methods and the latest technologies used to address challenging water quality issues. Participants will explore innovative processes to enhance water quality and meet stringent regulatory standards.

What is Covered:

- Overview of water treatment issues, including emerging contaminants and water scarcity
- Advanced treatment processes: activated carbon adsorption, ozone, UV disinfection, membrane filtration, and advanced oxidation processes (AOPs)
- Applications and operational considerations for each treatment method
- Integration of advanced treatment with conventional processes for enhanced water quality

This course is ideal for water treatment professionals seeking to improve their knowledge of cutting-edge treatment technologies and their role in managing complex water quality issues.

Ultraviolet Disinfection & Advanced Oxidation - WT-81-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course offers specialized training in ultraviolet (UV) disinfection and advanced oxidation processes (AOP) for water treatment. Participants will gain an understanding of how UV light inactivates pathogens and can be combined with oxidants for enhanced contaminant removal.

What is Covered:

- Fundamentals of UV light and its disinfection properties
- UV treatment systems and their key components
- Principles of UV advanced oxidation for organic contaminant breakdown
- Operation and maintenance of UV systems
- Health and safety considerations for UV system handling

This course is intended for water treatment professionals looking to implement or enhance UV and AOP techniques to improve water quality and meet regulatory standards.

Exam Prep Review for Water Treatment: Level 1 & 2 - WT-87-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This exam prep course is designed to equip participants with the knowledge required for Level 1 & 2 water treatment certification exams, using the ABC Need-to-Know Criteria as a foundational guide. It covers essential processes, calculations, and safety practices in water treatment operations.

What is Covered:

- Overview of key water treatment processes, including coagulation, flocculation, and disinfection
- Types of water sources and the characteristics that affect treatment
- Sampling methods and water quality monitoring for compliance
- Mathematical calculations for dosage, flow rates, and storage
- Safety protocols, including chemical handling and emergency procedures

Ideal for operators preparing for certification and seeking a comprehensive review of essential water treatment concepts.

***NOTE: inquire about our 5 day version of this course.**

Exam Prep Review for Water Treatment: Level 3 & 4 - WT-88-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This course provides in-depth exam preparation for individuals targeting Level 3 & 4 water treatment certification, using the ABC Need-to-Know Criteria as a foundational guide. It covers advanced topics in water quality management, treatment processes, and operational safety for complex treatment facilities.

What is Covered:

- Characteristics of water sources and their unique treatment requirements
- Disinfection methods, including advanced options like UV, ozone, and chlorine dioxide
- Key calculations for flow rates, chemical dosing, and system detention times
- Filtration and coagulation troubleshooting, optimization techniques, and performance factors
- Comprehensive safety protocols for handling chemicals, confined spaces, and emergency scenarios

This course is tailored for seasoned water treatment professionals preparing for higher certification levels.

***NOTE: inquire about our 5 day version of this course.**

Multi-Barrier Approach to Drinking Water - WT-90-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course introduces the Multi-Barrier Approach (MBA) to drinking water safety, covering its principles and the essential measures to protect water quality from source to tap. Participants will explore risk management, source water protection, and the role of each barrier in ensuring safe drinking water.

What is Covered:

- Risk assessment and management, including hazard identification and mitigation strategies
- Source water protection practices to minimize contamination risks
- Total quality management and operational best practices
- Public involvement and communication strategies for promoting safe water use

This one-day course is ideal for water treatment professionals seeking to understand and apply the Multi-Barrier Approach to safeguard public health and maintain compliance with water safety standards.

Municipal Residential Drinking Water Systems in Source Protection Areas - WT-91-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This one-day course provides an essential overview of the principles and practices for protecting municipal residential drinking water sources within designated source protection areas. Participants will learn foundational approaches to risk assessment and management to ensure sustainable and safe drinking water.

What is Covered:

- Introduction to the Clean Water Act, 2006, and source water protection regulations
- Multi-barrier approach to drinking water safety
- Identification of vulnerable areas, including Wellhead Protection Areas (WHPAs) and Intake Protection Zones (IPZs)
- Risk management for common threats to drinking water sources
- Effective stakeholder engagement and collaboration strategies

This course is ideal for water utility operators, municipal planners, and professionals involved in environmental health and water resource management.

Successful Ministry Inspections - WT-92-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course offers practical guidance for water treatment operators on achieving successful Ministry inspections, emphasizing compliance strategies and risk management. Participants will learn how to proactively prepare for inspections, respond to findings, and maintain high standards of operational documentation.

What is Covered:

- Overview of the Ministry inspection process and key focus areas
- Risk assessment and management to minimize compliance issues
- Detailed review of inspection components, including capacity assessment, treatment process monitoring, and distribution system management
- Understanding and improving risk rating scores and inspection outcomes
- Best practices for record-keeping, reporting, and responding to inspection findings

This one-day course is ideal for water treatment operators and facility managers focused on ensuring compliance and demonstrating excellence in Ministry inspections.

SCADA Systems Overview for Operators - WT-101-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course introduces water operators to Supervisory Control and Data Acquisition (SCADA) systems, focusing on the key components, functionality, and applications within water treatment and distribution. Participants will gain foundational knowledge of SCADA's role in enhancing process control, monitoring, and data acquisition in water systems.

What is Covered:

- Overview of SCADA: purpose, components, and operation
- Key SCADA system components: sensors, actuators, RTUs, PLCs, and HMIs
- SCADA applications for water treatment and distribution monitoring
- Communication networks and data acquisition methods
- Basic troubleshooting and maintenance of SCADA systems

This one-day course is ideal for water treatment operators seeking to understand SCADA systems' structure, functionality, and role in optimizing water treatment processes.



WASTEWATER COLLECTION COURSES

Our Wastewater Collection courses offer comprehensive training for professionals at all stages of their careers in wastewater management. The curriculum encompasses critical topics such as collection system design, maintenance and repair techniques, pump station operation, odor control strategies, regulatory compliance, and safety protocols. Participants will gain essential skills and knowledge necessary to efficiently operate and maintain wastewater collection systems, ensuring effective wastewater management and protecting public health and the environment in their communities.



Exam Prep Review for Wastewater Collection: Level 1 & 2 - WWC-01-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This foundational course is designed to prepare participants for Level 1 & 2 certification exams in wastewater collection, using the ABC Need-to-Know Criteria as a foundational guide. It covers essential knowledge on system design, safety, and maintenance for effective wastewater collection.

What is Covered:

- Basics of wastewater flow and system design, including topography and pipe sizing
- Applied math for hydraulic calculations and flow estimation
- Safety protocols, including confined space entry and chemical handling
- Pumping systems and lift station operations in varied collection systems
- Preventive maintenance strategies for wastewater system reliability

Ideal for operators preparing for certification, this course ensures a comprehensive review of critical concepts and practical skills in wastewater collection.

Exam Prep Review for Wastewater Collection: Level 3 & 4 - WWC-02-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This advanced course is designed for individuals preparing for Level 3 & 4 wastewater collection certification exams, using the ABC Need-to-Know Criteria as a foundational guide. It provides a comprehensive review of complex collection system operations, safety practices, and management strategies.

What is Covered:

- Topographical considerations for system design and flow management
- Advanced hydraulic calculations for flow, pressure, and velocity in collection systems
- Safety protocols, including lockout/tagout and trenching safety
- Advanced lift station operations and maintenance for optimal system performance
- Techniques for infiltration/inflow detection and odor control

This course is ideal for experienced wastewater collection professionals aiming to deepen their expertise and ensure readiness for higher-level certification.

Basic Wastewater Collection - WWC-07-CT - 3 Days - 2.1 CEUs

IP - \$1,014 WEB - \$924

This one-day course provides an essential overview of the principles and practices for protecting municipal residential drinking water sources within designated source protection areas. Participants will learn foundational approaches to risk assessment and management to ensure sustainable and safe drinking water.

What is Covered:

- Introduction to the Clean Water Act, 2006, and source water protection regulations
- Multi-barrier approach to drinking water safety
- Identification of vulnerable areas, including Wellhead Protection Areas (WHPAs) and Intake Protection Zones (IPZs)
- Risk management for common threats to drinking water sources
- Effective stakeholder engagement and collaboration strategies

This course is ideal for water utility operators, municipal planners, and professionals involved in environmental health and water resource management.

Sewer Flushing & Cleaning Techniques - WWC-08-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides essential training on cleaning and maintaining sewer collection systems to prevent blockages and ensure efficient flow. Participants will learn various hydraulic and mechanical cleaning techniques used in routine maintenance.

What is Covered:

- Overview of sewer collection systems and maintenance issues
- Hydraulic cleaning methods, including jetting and flushing
- Mechanical cleaning tools, like power rodders and bucket machines
- Safety procedures for confined space entry and hazardous material handling
- Preventive maintenance to reduce blockages and extend system life

Ideal for wastewater collection operators seeking practical skills to maintain effective sewer systems.

Collection System Odour & Corrosion Control - WWC-09-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides specialized training on odour and corrosion control techniques essential for maintaining effective and compliant wastewater collection systems. Participants will learn about the causes of odour and corrosion, effective prevention strategies, and appropriate chemical treatments to ensure system longevity and environmental safety.

What is Covered:

- Sources and impacts of hydrogen sulfide in wastewater collection
- Safety protocols for handling hazardous gases and confined spaces
- Chemical treatment options, including chlorine and hydrogen peroxide
- Maintenance strategies to control odour and corrosion
- Techniques for system design to minimize sulfide production

Ideal for operators responsible for system integrity, this course equips participants with critical skills for managing odour and corrosion issues in wastewater infrastructure.

Lift Station Operation & Control - WWC-10-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides comprehensive training in the operation, maintenance, and troubleshooting of wastewater lift stations, emphasizing best practices to enhance efficiency and ensure system reliability. It covers key components, system design, and safe practices necessary for effective lift station management.

What is Covered:

- Types and functions of lift stations, including wet well and dry well setups
- Key lift station components, such as pumps, controls, and electrical systems
- Routine maintenance procedures and cleaning techniques
- Troubleshooting common lift station issues, including pump and electrical malfunctions
- Safety protocols for confined space entry and handling hazardous gases

This course is ideal for wastewater professionals responsible for lift station operation and maintenance.

Controlling Wastewater Collection: Inflow & Infiltration - WWC-12-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides in-depth training on methods to identify, analyze, and control inflow and infiltration (I&I) in wastewater collection systems, focusing on improving performance and extending system life. Participants will learn to assess I&I issues and apply best practices for system maintenance and rehabilitation.

What is Covered:

- Identification of inflow and infiltration sources within collection systems
- Techniques for flow monitoring, groundwater, and rainfall data analysis
- Manhole inspections, smoke testing, and CCTV for I&I detection
- Rehabilitation methods including sliplining and cured-in-place lining (CIP)
- Effective reporting and documentation for I&I management

Ideal for wastewater professionals focused on reducing I&I to improve system efficiency and reduce treatment costs.

Sanitary Sewer Design & Construction Overview - WWC-13-CT - 2 Days - 1.4 CEUs

IP - \$699 WEB - \$619

This one-day course provides an essential overview of the principles and practices for protecting municipal residential drinking water sources within designated source protection areas. Participants will learn foundational approaches to risk assessment and management to ensure sustainable and safe drinking water.

What is Covered:

- Introduction to the Clean Water Act, 2006, and source water protection regulations
- Multi-barrier approach to drinking water safety
- Identification of vulnerable areas, including Wellhead Protection Areas (WHPAs) and Intake Protection Zones (IPZs)
- Risk management for common threats to drinking water sources
- Effective stakeholder engagement and collaboration strategies

This course is ideal for water utility operators, municipal planners, and professionals involved in environmental health and water resource management.

Protecting Your Collection System Through Sampling & Monitoring - WWC-14-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides comprehensive training in sampling and monitoring techniques essential for maintaining wastewater collection system integrity, optimizing performance, and ensuring regulatory compliance. Participants will learn about the equipment, procedures, and safety protocols for effective monitoring.

What is Covered:

- Types and purposes of wastewater sampling, including grab and composite samples
- Health and safety considerations for sampling, including PPE and confined space entry
- Equipment and methods for manual and automated sampling
- Techniques for analyzing sample flow, pH, dissolved oxygen, and other key parameters
- Procedures for spill response and compliance monitoring

Ideal for wastewater operators responsible for sampling, monitoring, and ensuring compliance in collection systems.

Assessing Your Collection System for Rehabilitation - WWC-16-CT - 2 Days - 1.4 CEUs

IP - \$699 WEB - \$619

This course offers comprehensive training in evaluating wastewater collection systems to identify and prioritize rehabilitation needs. Participants will gain insights into assessment techniques, data collection methods, and decision-making criteria essential for the long-term maintenance and operational efficiency of collection systems.

What is Covered:

- Overview of collection system components and common problems in wastewater systems
- Five-step process for system assessment, including data gathering and classification
- Infiltration and Inflow (I/I) analysis to identify and mitigate excess flow issues
- Structural, functional, and hydraulic condition assessments of sewer lines and manholes
- Inspection program development, focusing on prioritizing areas for inspection and rehabilitation

This course is ideal for wastewater system operators, engineers, and public works personnel responsible for maintaining efficient wastewater infrastructure.

Collection System Rehabilitation Alternatives - WWC-17-CT - 2 Days - 1.4 CEUs

IP - \$699 WEB - \$619

This course provides in-depth training on a variety of rehabilitation techniques for wastewater collection systems, focusing on effective, minimally disruptive methods to extend the lifespan of infrastructure and enhance system reliability. Participants will gain insights into decision-making frameworks and explore modern repair methods that address structural and operational challenges.

What is Covered:

- *Criteria for deciding between rehabilitation and replacement*
- *Overview of open-cut and trenchless technologies and their applications*
- *Techniques such as sliplining, cured-in-place piping (CIPP), and pipe bursting*
- *Methods for manhole rehabilitation and inflow/infiltration control*
- *Risk assessment, safety protocols, and community impact considerations*

Ideal for wastewater professionals managing system maintenance and rehabilitation projects, this course offers valuable insights into modern repair approaches and best practices.

Sewer Line Repair - WWC-18-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides in-depth training on sewer line repair, equipping participants with essential skills to address common sewer line issues effectively.

What is Covered:

- *Identifying and diagnosing common sewer line failures, such as leaks and blockages*
- *Overview of piping and joint materials, including corrosion-resistant options*
- *Safety protocols for excavation, handling hazardous materials, and confined space entry*
- *Techniques for line repairs, including spot and service connection repairs*
- *Procedures for trenchless repair options and methods to minimize disruption*

This course is designed for wastewater professionals involved in the maintenance and repair of sewer systems, focusing on effective repair techniques and operational safety.

Collection System Valve Operation & Maintenance - WWC-22-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an in-depth examination of the principles and practices necessary for the operation and maintenance of valves in wastewater collection systems. Participants will gain essential skills to identify, operate, maintain, and troubleshoot a variety of valves used in water and wastewater management.

What is Covered:

- *Types and purposes of system valves (e.g., ball, gate, globe, butterfly, and plug valves)*
- *Valve construction and material selection based on system requirements*
- *Common valve maintenance procedures and repair techniques*
- *Safety protocols for valve handling, including confined space and traffic control considerations*

This course is ideal for wastewater collection system operators, technicians, and maintenance personnel focused on ensuring the reliability and longevity of critical system components.

Stormwater Management - WWC-23-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a comprehensive overview of stormwater management systems, focusing on pollution control, system types, and the maintenance of stormwater facilities. Participants will learn best practices to effectively manage runoff and mitigate environmental impacts through various stormwater management strategies.

What is Covered:

- *Fundamentals of stormwater pollution and its impact on ecosystems*
- *Types of stormwater management systems (e.g., wet ponds, dry ponds, sand filters)*
- *Operation and maintenance practices for stormwater ponds and wetlands*
- *Sediment control and vegetation management for optimal system function*
- *Safety protocols and corrective actions for stormwater infrastructure*

This course is intended for municipal employees, environmental engineers, and professionals in stormwater and wastewater management aiming to enhance water quality and mitigate stormwater impacts on urban environments.

Municipal Sewer Use Sampling & Monitoring - WWC-25-CT - Half Day - 0.3 CEUs

IP - \$232 WEB - \$162

This course provides essential training on sampling and monitoring techniques for municipal wastewater sewer use, focusing on compliance with local sewer use by-laws. Participants will learn methods for assessing discharges and identifying non-compliant inputs that may affect wastewater collection and treatment operations.

What is Covered:

- *Overview of municipal sewer use by-laws, including discharge prohibitions and penalties*
- *Protocols for sampling and analysis of industrial and municipal wastewater*
- *Techniques for composite and grab sampling, and best practices for sample preservation*
- *Spill response requirements and methods for managing and reporting spills to sewer systems*
- *Designing and executing effective wastewater surveys to monitor system integrity*

This course is ideal for wastewater collection system operators, compliance officers, and environmental monitoring professionals committed to maintaining system integrity and regulatory compliance.

WASTEWATER TREATMENT COURSES



Our Wastewater Treatment courses offer thorough training for professionals across all experience levels in the wastewater treatment industry. The curriculum covers vital topics such as treatment processes (biological, chemical, and physical methods), sludge management, nutrient removal, regulatory compliance, and water quality assessment. Participants will acquire essential skills and knowledge to effectively operate and optimize wastewater treatment facilities, ensuring the safe and efficient processing of wastewater to protect public health and the environment.

Basic Wastewater Treatment - WWT-02-CT - 3 Days - 2.1 CEUs

IP - \$1,014 SIM - \$1,064 WEB - \$924

This course introduces fundamental concepts in wastewater treatment, focusing on essential processes and methods for effective management to ensure water quality and public health. Participants will learn about wastewater characteristics, key treatment stages, and the role of microbial activity in pollutant removal.

What is Covered:

- Wastewater sources and treatment objectives, including pathogen reduction and environmental protection
- Preliminary and primary treatment processes, including screening, sedimentation, and grit removal
- Biological treatment methods such as activated sludge, aerobic, and anaerobic processes
- Secondary treatment and clarification to remove residual solids and organic matter
- Safety protocols and regulatory compliance for wastewater operations

This course is ideal for entry-level operators and technicians looking to understand core wastewater treatment practices.

Biosolids Handling - WWT-03-CT - 2 Days - 1.4 CEUs

IP - \$699 WEB - \$619

This course covers essential practices for the handling and management of biosolids, emphasizing stabilization, disposal options, and regulatory compliance to ensure safe, effective biosolids use. Participants will gain a foundational understanding of biosolids processing, application methods, and benefits to soil health.

What is Covered:

- Overview of biosolids and their applications in agriculture and land reclamation
- Key processes for biosolids stabilization, including aerobic and anaerobic digestion
- Techniques for sludge thickening and dewatering to reduce biosolids volume
- Safe practices for biosolids transportation, storage, and land application
- Compliance with regulatory requirements on biosolids use and heavy metal limits

This course is ideal for wastewater treatment operators and environmental technicians involved in biosolids processing and regulatory compliance.

Activated Sludge Control - WWT-05-CT - 3 Days - 2.1 CEUs

IP - \$1,014 SIM - \$1,064 WEB - \$924

This course provides a thorough understanding of activated sludge process control, emphasizing techniques to monitor, optimize, and troubleshoot sludge operations. Participants will learn essential methods for maintaining balanced microbial populations and addressing common operational issues.

What is Covered:

- Components and microbiology of the activated sludge process
- Modes of operation, including plug flow, complete mix, and extended aeration
- Process monitoring, including dissolved oxygen, solids inventory, and flow management
- Troubleshooting common issues such as foaming, sludge bulking, and rising sludge
- Safety protocols for handling biological, chemical, and mechanical hazards

This course is intended for wastewater treatment operators and technicians who seek to enhance their expertise in activated sludge process management.

Exam Prep Review for OIT: Wastewater Collection & Wastewater Treatment - WWT-06-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This course prepares participants for the Wastewater Treatment & Collection Operator-in-Training (OIT) exam using the ABC Need-to-Know Criteria as a foundational guide. Participants will review core concepts in wastewater treatment and collection systems, with a focus on practical applications and compliance standards.

What is Covered:

- Safety protocols, including WHMIS, chemical hazards, and confined space entry
- Wastewater math, including flow rate, dosage, and detention time calculations
- Overview of wastewater legislation, regulations, and operator responsibilities
- Key wastewater treatment processes, such as screening, grit removal, and biological treatment
- Essential equipment operation and maintenance, including pumps, pipes, and valves

This course is ideal for individuals preparing to enter the field as certified wastewater treatment and collection operators.

Microorganisms - WWT-09-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course explores the critical role of microorganisms in wastewater treatment processes, emphasizing their functions in activated sludge systems. Participants will gain a comprehensive understanding of microbial life and its influence on wastewater treatment outcomes.

What is Covered:

- Overview of microbial life in wastewater, including bacteria, protozoa, fungi, and viruses
- The role of microorganisms in the activated sludge process, including floc formation and nutrient cycling
- Identifying and understanding indicator organisms and their impact on system health
- Factors influencing microbial activity, including dissolved oxygen, pH, and temperature
- Troubleshooting wastewater systems using microscopic analysis of microbial populations

This course is ideal for wastewater treatment operators and technicians aiming to optimize plant performance through microbiological knowledge and process control.

Wastewater Problem Solving - WWT-10-CT - 1 Day - 0.7 CEUs

IP - \$354 SIM - \$404 WEB - \$314

This course equips participants with essential skills and strategies for identifying and resolving common issues in wastewater treatment systems. Through a structured problem-solving approach, attendees will learn how to diagnose, plan, and implement effective solutions for operational challenges.

What is Covered:

- Steps and tools for problem-solving in wastewater operations
- Identifying and mitigating activated sludge process issues, including foaming and solids washout
- Troubleshooting bulking and settling problems in secondary clarifiers
- Strategies for managing nutrient deficiencies, pH imbalances, and toxic loads
- Best practices for system monitoring, data collection, and performance evaluation

This course is designed for wastewater operators and technicians focused on enhancing system efficiency and troubleshooting complex operational problems.

Ponds & Lagoons - WWT-11-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course provides an in-depth understanding of lagoon and pond systems for wastewater treatment, focusing on design, operation, and maintenance for optimal performance. Participants will learn to manage these systems efficiently, ensuring compliance and sustainability.

What is Covered:

- Types of lagoons and ponds: facultative, aerobic, and anaerobic systems
- Key design components, including cell structure, aeration methods, and detention time
- Operation techniques, such as flow measurement, sludge management, and discharge timing
- Maintenance best practices, including odour control, erosion prevention, and vegetation management
- Troubleshooting common issues like overloading, low dissolved oxygen, and algal blooms

This course is ideal for wastewater treatment operators, technicians, and engineers looking to enhance their expertise in lagoon-based treatment systems.

Wastewater Digester Operation & Control - WWT-12-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314 EL - \$305.95

This course provides detailed insights into the operation and control of wastewater digesters, focusing on both aerobic and anaerobic systems. Participants will learn strategies to optimize digester performance and troubleshoot operational issues effectively.

What is Covered:

- Fundamentals of sludge stabilization and digestion processes, including aerobic and anaerobic methods
- Key parameters for evaluating and monitoring digester performance
- Techniques for managing gas production, heating, and temperature control
- Troubleshooting common issues such as foaming, odours, and low dissolved oxygen levels
- Best practices for maintenance, safety protocols, and regulatory compliance

This course is designed for wastewater treatment operators and technicians aiming to enhance their knowledge and operational expertise in digester management.

Fixed Film & Other Treatment Processes - WWT-13-CT - 2 Days - 1.4 CEUs

IP - \$699 WEB - \$619

This course explores fixed-film and alternative wastewater treatment processes, focusing on the design, operation, and troubleshooting of systems such as trickling filters and rotating biological contactors. Participants will gain strategies to optimize these systems and address common challenges effectively.

What is Covered:

- Design and operation of fixed-film systems, including trickling filters and rotating biological contactors (RBCs)
- Optimization of sequencing batch reactors and submerged aerated filters
- Resolving common issues such as ponding and biofilm imbalances
- Overview of emerging technologies like membrane bioreactors and activated carbon treatment
- Safety, maintenance, and regulatory compliance in advanced treatment processes

This course is ideal for operators and engineers looking to enhance their knowledge of fixed-film and alternative treatment systems.

Calculations in Wastewater Technology - WWT-14-CT - 1 Day - 0.7 CEUs

IP - \$354 SIM - \$404 WEB - \$314

This course provides essential training in the calculations used to manage and operate wastewater treatment facilities efficiently. Participants will learn key arithmetic operations, flow rate, detention time, and loading calculations to improve plant performance and ensure effective wastewater treatment.

What is Covered:

- Basic arithmetic and unit conversions for wastewater calculations
- Flow velocity, rate of flow, and detention time calculations
- Horsepower requirements for pumps and equipment in treatment processes
- Calculation of organic loading, solids retention time, and sludge age
- Gas production and volatile solids destruction in anaerobic digestion

This course is ideal for wastewater treatment operators and technicians who need to master the key calculations that ensure smooth plant operation and compliance with treatment standards.

Jar Testing: Plant Operations in a Beaker - WWT-25-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides foundational training in jar testing for water and wastewater treatment plants. Participants will gain practical knowledge on performing jar tests to optimize chemical dosing and improve treatment efficiency.

What is Covered:

- Overview of jar testing principles and applications
- Techniques for chemical dosage optimization
- Practical steps for conducting jar tests
- Methods for analyzing and interpreting test results Integration of jar testing into routine plant operations

This course is ideal for water and wastewater treatment operators and technicians seeking to enhance their operational processes through effective jar testing techniques.

Wastewater Bacteria - WWT-28-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a detailed exploration of bacteria essential to wastewater treatment, focusing on their roles in organic matter breakdown, nutrient cycling, and system efficiency. Participants will gain practical insights into bacterial classifications, growth dynamics, and strategies to manage microbial populations effectively.

What is Covered:

- Classification and roles of aerobic, anaerobic, and facultative bacteria
- Bacterial functions in nitrogen removal (nitrification and denitrification) and phosphorus cycling
- Floc-forming bacteria and filamentous bacteria in sludge management
- Impacts of sulfur-oxidizing and sulfur-reducing bacteria on treatment systems
- Techniques for monitoring and optimizing bacterial populations

This course is ideal for wastewater treatment operators and plant technicians seeking to enhance their understanding of microbial processes and improve plant performance.

Wastewater Laboratory Health & Safety - WWT-50-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides essential training in wastewater laboratory health and safety, focusing on legislation, risk management, and best practices. Participants will gain the knowledge necessary to maintain a safe working environment and prevent hazards in laboratory operations.

What is Covered:

- Overview of the Occupational Health & Safety Act and its application
- WHMIS guidelines for hazardous materials in the laboratory
- General laboratory hygiene and conduct requirements
- Safe handling and storage of chemicals and reagents
- Identification and control of biological hazards in wastewater laboratories

This course is ideal for operators, analysts, and personnel with access to wastewater laboratories who seek to ensure compliance with health and safety standards while mitigating risks.

Wastewater Treatment System Design & Optimization - WWT-70-CT - 2 Days - 1.4 CEUs

IP - \$699 SIM - \$749 WEB - \$619

This course provides a comprehensive exploration of wastewater treatment processes, focusing on strategies to maximize infrastructure capacity, improve performance, and reduce operational costs. Participants will develop an understanding of iterative optimization approaches tailored for wastewater treatment plants, enabling enhanced efficiency and sustainability.

What is Covered:

- Fundamentals of liquid and sludge treatment processes
- Techniques for primary, secondary, and tertiary treatment optimization
- Methods for effluent disinfection and biosolids management
- Tools for flow and process monitoring to improve operational decision-making
- Advanced techniques for nutrient removal and energy efficiency

This course is designed for wastewater treatment operators, engineers, and technicians aiming to achieve excellence in plant performance and resource management.

Nutrient Removal Systems - WWT-75-CT - 1 Day - 0.7 CEUs

IP - \$354 SIM - \$404 WEB - \$314

This course provides a comprehensive understanding of nutrient removal systems, emphasizing biological and chemical methods for eliminating nitrogen and phosphorus. Participants will learn to optimize nutrient removal processes to improve water quality and prevent environmental impacts such as eutrophication.

What is Covered:

- Biological nutrient removal (BNR) configurations and their applications for nitrogen and phosphorus
- Processes for nitrification, denitrification, and biological phosphorus removal
- Chemical treatment methods, including precipitation and membrane filtration
- Troubleshooting common issues such as rising sludge and nutrient imbalances
- Strategies for optimizing plant performance to meet regulatory standards

This course is ideal for wastewater treatment operators and engineers aiming to enhance nutrient removal efficiency and ensure compliance with environmental regulations.

Wastewater Microbiology - WWT-85-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a detailed exploration of advanced wastewater microbiology, emphasizing the critical role of microorganisms in treatment processes and system optimization. Participants will gain a deeper understanding of microbial interactions, nutrient cycles, and effective monitoring techniques to ensure efficient biological treatment.

What is Covered:

- *Microbial classifications, including bacteria, protozoa, fungi, and their functions in wastewater systems*
- *The role of microorganisms in nutrient cycling, organic matter decomposition, and treatment efficiency*
- *Methods for identifying and controlling filamentous bacteria and other microbial imbalances*
- *Applications of microscopy in analyzing sludge health and diagnosing operational issues*
- *Strategies for optimizing treatment processes using microbiological insights and data*

This course is ideal for experienced wastewater operators and microbiologists aiming to advance their expertise in managing microbiological aspects of wastewater systems.

Laboratory Procedures for Wastewater Operators - WWT-86-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course focuses on essential laboratory procedures for wastewater operators, emphasizing accurate testing methods, safety protocols, and the preparation of reagents and standards. Participants will learn how to conduct key analyses to support wastewater treatment processes.

What is Covered:

- *Proper use and maintenance of laboratory equipment, including glassware and spectrophotometers*
- *Techniques for sample preparation, reagent standardization, and titration procedures*
- *Analysis of key parameters: dissolved oxygen, total suspended solids, and biochemical oxygen demand*
- *Microscopic examination of wastewater microorganisms for process monitoring*
- *Safety protocols for handling chemicals and biological samples in laboratory settings*

This course is ideal for wastewater operators and technicians aiming to enhance their analytical skills and ensure treatment efficiency through accurate lab testing.

Effluent Disinfection - WWT-90-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an in-depth overview of effluent disinfection methods, focusing on chemical and physical disinfection technologies to reduce pathogen levels in wastewater. Participants will gain practical knowledge to select, operate, and maintain disinfection systems.

What is Covered:

- *Overview of wastewater pathogens and waterborne diseases*
- *Chemical disinfection methods, including chlorination and the use of hypochlorite compounds*
- *Physical disinfection processes such as ultraviolet (UV) irradiation and ozone application*
- *Equipment operation and maintenance for disinfection systems*
- *Safety protocols and regulatory compliance in effluent disinfection*

This course is ideal for wastewater operators and technicians seeking to improve disinfection practices and ensure compliance with public health standards.

Exam Prep Review for Wastewater Treatment: Level 1 & 2 - WWT-91-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This course prepares participants for the Level 1 and 2 Wastewater Treatment Operator exams, using the ABC Need-to-Know Criteria as a foundational guide. Participants will review essential concepts, calculations, and regulatory standards crucial for success in the certification exams.

What is Covered:

- *Applied math skills, including flow rate, dosage, and detention time calculations*
- *Core treatment processes, such as activated sludge, preliminary treatment, and nutrient removal*
- *Safety protocols, including confined space entry and chemical handling*
- *Understanding wastewater characteristics and related microbiological principles*
- *Test-taking strategies and preparation tips for multiple-choice exams*

This course is ideal for wastewater operators preparing for certification or seeking to strengthen their foundational knowledge of treatment processes.

***NOTE: inquire about our 5 day version of this course.**

Exam Prep Review for Wastewater Treatment: Level 3 & 4 - WWT-92-CT - 4 Days - 2.8 CEUs

IP - \$1,319 WEB - \$1,219

This course is designed to prepare participants for the Level 3 and 4 Wastewater Treatment Operator exams, using the ABC Need-to-Know Criteria as a foundational guide. Participants will review advanced treatment processes, safety standards, and mathematical applications critical to achieving certification success.

What is Covered:

- *Comprehensive wastewater math, including flow, loading, and detention time calculations*
- *Advanced biological and chemical treatment processes, such as nutrient removal and disinfection*
- *Core safety protocols, including confined space entry and chemical handling*
- *Key aspects of plant operations and maintenance, focusing on troubleshooting and optimization*
- *Effective test-taking strategies and preparation tips for certification exams*

This course is ideal for experienced wastewater operators aiming to obtain Level 3 or 4 certification and deepen their operational expertise.

***NOTE: inquire about our 5 day version of this course.**

Membrane Bioreactors in Wastewater Treatment - WWT-94-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course offers an in-depth exploration of membrane bioreactors (MBRs), highlighting their role in combining biological treatment with advanced membrane filtration. Participants will learn the design, operation, and optimization of MBR systems to enhance wastewater treatment performance.

What is Covered:

- Core principles of membrane bioreactors, including microfiltration and ultrafiltration technologies
- Comparison of MBRs with conventional treatment systems for efficiency and effluent quality
- Design considerations for flux, transmembrane pressure, and permeability
- Troubleshooting common challenges such as fouling and operational fluctuations
- Applications of MBRs in nutrient removal, reuse, and constrained site facilities

This course is ideal for wastewater operators, engineers, and municipal managers aiming to integrate cutting-edge MBR technology into their treatment systems.

Primary Basics - WWT-95-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a comprehensive understanding of primary clarifiers, focusing on their critical role in removing solids and organic matter from wastewater. Participants will learn practical strategies, detailed calculations, and operational techniques to enhance clarifier performance, ensure regulatory compliance, and optimize plant efficiency.

What is Covered:

- Overview of primary clarifiers, including their purpose, design features, and operational zones
- Detailed calculations for detention time, surface overflow rate (SOR), and solids loading rate (SLR)
- Techniques to optimize solids removal, sludge blanket management, and scum collection
- Strategies for diagnosing and resolving common clarifier performance issues
- Maintenance practices and safety protocols to ensure consistent operation and reliability

This course is designed for wastewater treatment operators and technicians aiming to deepen their expertise in primary clarifier management and system optimization.

Sludge Conditioning Basics - WWT-96-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an in-depth exploration of sludge conditioning and dewatering processes, emphasizing preparation techniques to optimize water removal efficiency. Participants will learn to evaluate sludge characteristics, select appropriate conditioning methods, and optimize equipment performance.

What is Covered:

- Fundamentals of sludge conditioning and its role in mechanical dewatering
- Types of polymers: cationic, anionic, and non-ionic, and their applications
- Key calculations for polymer dosage and cost optimization
- Techniques for conducting jar tests to determine optimal polymer selection and dosage
- Overview of dewatering equipment, including belt filter presses, centrifuges, and drying beds

This course is ideal for wastewater treatment operators and technicians aiming to enhance their expertise in sludge management and cost-efficient dewatering practices.

Municipal Wastewater Environmental Compliance Approvals & Inspections - WWT-97-CT - Half Day - 0.3 CEUs

IP - \$232 WEB - \$162

This course provides a detailed understanding of environmental compliance, approvals, and inspection processes for municipal wastewater systems. Participants will explore key regulatory frameworks, monitoring practices, and the steps required to maintain operational compliance with local, provincial, and federal standards.

What is Covered:

- Legislative requirements, including the Ontario Water Resources Act and related regulations
- Procedures for sampling, analysis, and reporting for municipal sewage works
- Managing environmental compliance approvals and inspection protocols
- Best practices for addressing overflows, bypasses, and emergency discharge events
- Strategies for ensuring compliance with effluent limits and environmental standards

This course is designed for wastewater operators, compliance officers, and environmental managers seeking to enhance their understanding of regulatory requirements and compliance measures.

Wastewater Operational Imperatives - RM-59-CT - 1 Day - 0.7 CEUs

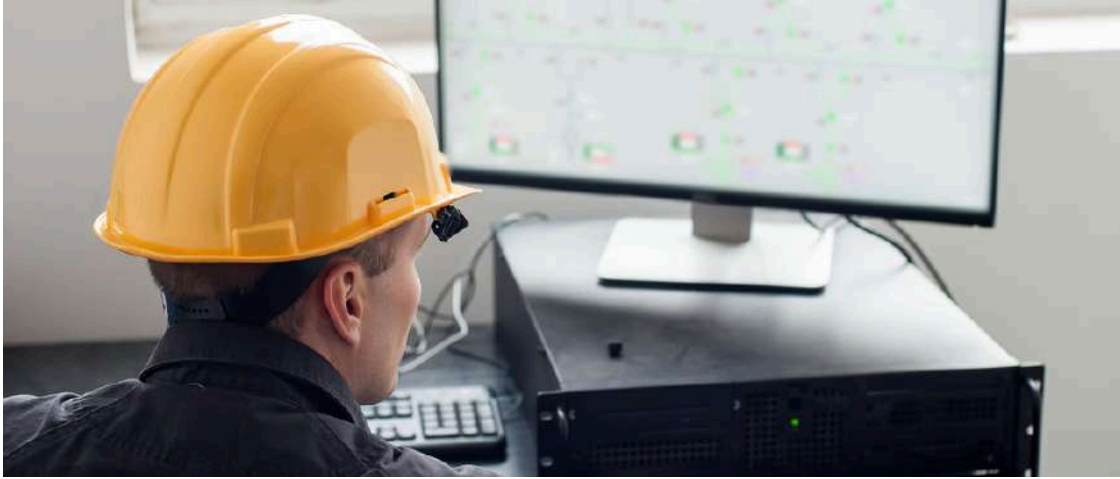
IP - \$354 WEB - \$314

This course provides an extensive overview of the regulatory frameworks and operational responsibilities critical to wastewater treatment and collection systems in Ontario. Participants will gain the knowledge and skills required to navigate compliance and ensure optimal system performance.

What is Covered:

- Overview of the Ontario Water Resources Act and O. Reg. 129/04
- Roles and responsibilities of Overall Responsible Operators (ORO) and Operators-in-Charge (OIC)
- Effluent standards, sampling procedures, and environmental compliance strategies
- Record-keeping requirements and operational logs for facility management
- Techniques for maintaining regulatory compliance during inspections and audits

This course is designed for wastewater operators and managers committed to regulatory adherence and efficient system operation.



REGULATORY/ MANAGEMENT, MANAGEMENT OF SYSTEMS & METERING COURSES



The Regulatory/Management, Management of Systems, and Metering section of our course catalogue offers targeted training for water and wastewater operators. These courses focus on regulatory compliance, effective management of systems, and accurate metering practices. Designed to enhance operational efficiency and ensure compliance, this section provides the tools operators need for professional success.

Safe Drinking Water Act - RM-07-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an overview of Ontario's Safe Drinking Water Act, focusing on key regulatory frameworks, operational requirements, and compliance responsibilities for drinking water systems. Participants will gain a thorough understanding of legal standards and best practices to ensure water safety and quality.

What is Covered:

- Overview of the Safe Drinking Water Act, 2002, and associated regulations
- Key requirements of O. Reg. 170/03: Drinking Water Systems
- Sampling, testing, and reporting procedures for drinking water compliance
- Operational responsibilities and the standard of care for water system operators
- Corrective actions for non-compliance and responding to adverse water quality events

This course is designed for water operators, managers, and municipal staff responsible for drinking water safety and regulatory compliance.

O. Reg. 128.04: Overall Responsibilities for Operators - RM-42-CT - Half Day - 0.3 CEUs

IP - \$232 WEB - \$162

This course provides a comprehensive overview of the responsibilities, training, and certification requirements for drinking water operators in Ontario. Participants will gain practical knowledge of regulatory frameworks and operational standards essential for managing municipal water systems effectively.

What is Covered:

- Overview of Ontario Regulation 128/04 and its impact on operator certification
- Roles and duties of certified operators, including operational checks and water treatment adjustments
- Training requirements and pathways for certification renewal
- Roles of Overall Responsible Operators (ORO) and Operators in Charge (OIC)
- Compliance standards and documentation for safe drinking water management

This course is designed for current and aspiring drinking water operators focused on meeting provincial requirements and ensuring excellence in water system operations.

Record Keeping - RM-43-CT - Half Day - 0.3 CEUs

IP - \$232 WEB - \$162 EL - \$155.95

This course introduces water and wastewater operators to the essential practices of record-keeping and documentation. Participants will develop skills to manage operational logs and meet regulatory requirements effectively.

What is Covered:

- Importance of accurate record-keeping for regulatory compliance and operational history
- Types of records required for water and wastewater systems
- Proper use and maintenance of operator log books
- Strategies for clear and effective written communication in operational documentation
- Practical tips for correcting errors and ensuring due diligence in record-keeping

This course is designed for water and wastewater operators aiming to enhance their documentation practices to support compliance, planning, and system efficiency.

Wastewater Environmental Compliance - RM-50-CT - 2 Days - 1.4 CEUs

IP - \$699 SIM - \$749 WEB - \$619

This course provides an in-depth exploration of environmental compliance in wastewater operations, focusing on Canadian and Ontario regulations. Participants will gain the knowledge required to manage compliance and implement best practices for environmental protection.

What is Covered:

- Key provisions of the Ontario Water Resources Act and Environmental Protection Act
- Overview of the Canadian Environmental Protection Act, 1999 (CEPA) and its application
- Roles and responsibilities of Overall Responsible Operators (ORO) and Operators-in-Charge (OIC)
- Effluent standards, monitoring, and record-keeping requirements for compliance
- Strategies for responding to spills, environmental inspections, and enforcement actions

This course is designed for wastewater operators and managers committed to upholding regulatory standards and promoting sustainable wastewater practices.

Intermediate Math (Water and Wastewater) - RM-55-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course equips water and wastewater operators with essential mathematical skills to solve practical problems in system operations. Participants will learn to confidently apply mathematical formulas and techniques specific to the water and wastewater industry.

What is Covered:

- Conversion of units, including metric and imperial systems
- Calculation of flow rates, volumes, and chemical dosages
- Problem-solving strategies for detention time and velocity
- Use of formulas for pump efficiency and energy cost analysis
- Practical application of sludge calculations and filtration rates

This course is designed for water and wastewater operators looking to enhance their mathematical proficiency for effective decision-making and operational excellence.

Equipment Preventative Maintenance - RM-56-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides water and wastewater operators with the knowledge and skills necessary to develop and implement effective preventative maintenance programs. Participants will learn best practices for ensuring equipment reliability, reducing downtime, and optimizing plant operations.

What is Covered:

- Principles and benefits of preventative maintenance for water and wastewater systems
- Techniques for maintaining pumps, motors, and valves for longevity and efficiency
- Preventative maintenance planning, scheduling, and documentation
- Troubleshooting common issues in mechanical and electrical systems
- Safety protocols during maintenance activities to prevent workplace hazards

This course is designed for water and wastewater operators seeking to enhance system reliability and maintain compliance with operational standards.

Operational Imperatives - RM-58-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides a detailed guide to sampling techniques and laboratory best practices for drinking water systems. Participants will develop practical skills to ensure compliance with regulatory standards and accuracy in water quality testing.

What is Covered:

- Principles of representative sampling and its significance in drinking water quality analysis
- Techniques for proper sample collection, preservation, and transportation
- Overview of chain-of-custody requirements and documentation
- Best practices for selecting and working with accredited laboratories
- Compliance with Ontario regulations, including O. Reg 170/03

This course is designed for drinking water operators focused on maintaining high standards in water quality monitoring and ensuring regulatory compliance.

Wastewater Operational Imperatives - RM-59-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an extensive overview of the regulatory frameworks and operational responsibilities critical to wastewater treatment and collection systems in Ontario. Participants will gain the knowledge and skills required to navigate compliance and ensure optimal system performance.

What is Covered:

- Overview of the Ontario Water Resources Act and O. Reg. 129/04
- Roles and responsibilities of Overall Responsible Operators (ORO) and Operators-in-Charge (OIC)
- Effluent standards, sampling procedures, and environmental compliance strategies
- Record-keeping requirements and operational logs for facility management
- Techniques for maintaining regulatory compliance during inspections and audits

This course is designed for wastewater operators and managers committed to regulatory adherence and efficient system operation.

Emergency Management & Preparedness - MS-01-CT - 1 Day - 0.7 CEUs

IP - \$354 WEB - \$314

This course provides an in-depth understanding of emergency management within the context of the Drinking Water Quality Management Standard (DWQMS). Participants will gain practical insights into preparing for and responding to drinking water-related emergencies effectively.

What is Covered:

- Understanding the definition and classification of emergencies
- Regulatory frameworks, including the Emergency Management and Civil Protection Act and DWQMS requirements
- Key elements of risk assessment, mitigation, and emergency response planning
- The importance of debriefing and lessons learned for continuous improvement
- Practical exercises on real-world emergency scenarios and troubleshooting

This course is designed for water operators, supervisors, and municipal staff responsible for ensuring safe and reliable water services during emergencies.

Water Meter Installation (& Removal) - MT-02-CT - 3 Days - 2.1 CEUs

IP - \$1,114

This course provides hands-on practice and demonstrations for installing, servicing, and maintaining water meters. Participants will gain essential skills for safe and effective water meter management in residential and commercial settings.

What is Covered:

- Types of water meters, their components, and functionality
- Safe work practices, including compliance with Ontario regulations and confined space protocols
- Techniques for soldering, threading, and using compression fittings
- Steps for accurate meter installation, removal, and troubleshooting
- Water quality considerations and customer service best practices

This course is designed for water meter installers seeking practical training to enhance technical skills and ensure regulatory compliance.

***NOTE: inquire about our 4 day version of this course.**



WWOTC IS PROUD TO WORK WITH THESE GOVERNMENTS, INSTITUTIONS, AND ASSOCIATIONS TO BRING VALUABLE TRAINING AND EDUCATION TO THE WATER/WASTEWATER INDUSTRY...

