



Utiliency Services LLC

www.utiliency.com

Utiliency Services provides a platform for virtual, instructor-led training of new and emerging wastewater operators, enhancing skills and knowledge to ensure high standards in the profession.

- Customized Training Programs: Tailored solutions to meet the specific needs.
- Experienced Instruction: Practical knowledge and expertise, ensuring valuable insights and skills.
- Collaborative Delivery: Small class sizes allow dialogue with participants to create relevant, engaging, and effective training programs.

Why choose Utiliency Services LLC for your wastewater training?

- ✓ 25+ years in water pollution control. ✓ MS Environmental Studies; U. Mass-Lowell
- ✓ MWRA-TRAC sampling associate background
- ✓ Managed MA Wastewater Operator Certification & Training; leading the transition to digitally-delivered training
- ✓ MA Grade 4M/1I & FL Grade C certified operator
- ✓ Real-world experience from collection to treatment

I don't just teach theory - I bring practical, field-tested knowledge to every session.

Partnering for Success - Join Utiliency Services in creating a knowledgeable and skilled workforce prepared to tackle everyday industry challenges.

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Collection System Training: Unlock the Secrets Beneath the Streets (5-hours; US-2025-01)

This 5-hour training program equips collection system personnel with essential skills for safely managing sanitary and combined sewer systems. It covers critical operational challenges including confined space safety, system maintenance, emergency response, and regulatory compliance. Through practical exercises, mathematical applications, and case studies, participants learn concepts of preventive maintenance strategies, proper inspection procedures, and emergency response protocols that protect public health and prevent costly violations while ensuring safe daily operations.

Learning Objectives

Upon completion, participants will have been provided resources and guidance to be able to identify and mitigate safety hazards in collection system operations, distinguish between sanitary, combined, and storm sewer systems, perform essential calculations for flow rates, pump sizing, and detention times, discuss proper maintenance and cleaning procedures, respond effectively to sanitary sewer overflows and combined sewer overflow events, understand federal and state regulatory compliance requirements, implement proper sampling and monitoring protocols, and apply emergency response procedures that protect public health and minimize environmental impacts.

Course Format: Two 2.5-hour remote sessions, starting at 5:00 pm

Total TCHs: 5 hours. All sessions must be completed.

SESSION 1: (10/9/25) Foundations & Operations (2.5 hours)

- Module 1: Safety in Collection Systems
- Module 2: System Types & Infrastructure
- Module 3: Operations, Maintenance & Cleaning

SESSION 2: (10/16/25) Compliance & Emergency Response (2.5 hours)

- Module 4: Regulatory Framework & System Performance
- Module 5: Emergency Response & System Protection
- Total TCHs: 5 hours. All sessions must be completed.



Pumping Wastewater and Sludge: 5-Hour Training Course (US-2025-04)

Essential pump training for certification success and daily operations. Participants master critical calculations including Total Dynamic Head (TDH), horsepower formulas, and pressure-head conversions through intensive practical exercises. The course combines pump theory with real-world applications using hands-on math problems and video demonstrations.

Learning Objectives

By completion, participants will have received instruction on mathematical proficiency (weight-volume math, TDH calculations, flow rate calculations) and technical knowledge (dynamic and displacement pump applications, centrifugal pump components and their functions, and appropriate pump types for specific wastewater applications).

Participants learn theoretical foundations with practical applications, emphasizing real-world scenarios that wastewater operators encounter in lift stations, treatment facilities, and chemical feed systems. Through integrated mathematical exercises and video demonstrations, operators learn to apply proven calculation methods that reduce exam anxiety, prevent operational problems, and ensure system reliability.

Course Format: Two 2.5-hour remote sessions, starting at 5:00 pm

Total TCHs: 5 hours. All sessions must be completed

SESSION 1: (10/23/25) Pumping Fundamentals and Core Theory (2.5 hours)

- Module 1A: Pump Classifications and Basic Math
- Module 1B: Pressure, Head, and System Analysis
- Module 1C: System Analysis and TDH Calculations

SESSION 2: (10/30/25) Pump Components, Types, and Horsepower (2.5 hours)

- Module 2A: Horsepower Concepts and Calculations
- Module 2B: Centrifugal Pump Components
- Module 2C: Pump Configurations and Applications

Register at: www.utility.com



Industrial Pretreatment and Source Control: 8-Hour Training Course (US-2025-002)

This comprehensive 8-hour training program provides municipal and industrial wastewater operators with knowledge and practical skills for managing industrial discharges under the National Pretreatment Program. The course addresses challenges that operators face daily, including system blockages from fats, oils, and grease (FOG), plant process upsets from high-strength discharges, and permit compliance.

The training combines regulatory foundation with practical treatment technologies, emphasizing real-world applications that municipal and industrial operators encounter. Through integrated case studies, mathematical problem-solving exercises, and video demonstrations, operators learn to implement effective source control programs that reduce municipal treatment costs, prevent infrastructure damage, and ensure regulatory compliance.

The course also provides specific guidance on managing two of the most challenging non-domestic discharge categories - food service establishments and craft breweries - while building fundamental skills in physical/chemical treatment processes, laboratory operations, and compliance strategies that are directly applicable to these industries.

Course Format: Three evening sessions, starting at 5:00 pm EST

Total TCHs: 8 hours. All sessions must be completed.

SESSION 1: (11/6/25) Regulatory Foundation & Treatment Science

- Module 1A: Clean Water Act and NPDES Framework
- Module 1B: National Pretreatment Program
- Module 1C: Treatment Science Fundamentals
- Module 1D: Basic Mathematical Applications
- Module 1E: Process Control and Monitoring

SESSION 2: (11/13/25) Physical/Chemical Treatment & Laboratory Operations

- Module 2A: Coagulation, Flocculation, and Sedimentation
- Module 2B: Filtration and Advanced Treatment
- Module 2C: Metals Removal and Specialized Treatment
- Module 2D: Laboratory Operations and Sampling
- Module 2E: Safety and Dewatering Operations

SESSION 3: (11/20/25) FOG Control, Brewery Management & Wrap-up

- Module 3A: FOG Issues and Collection System Impacts
- Module 3B: Grease Control Technology and Science
- Module 3C: FOG Triage and permitting programs
- Module 3D: Brewery Industry Wastewater Management
- Module 3E: Compliance Strategies and Program Implementation



Intermediate Math – Activated Sludge and Solids Processing: 5-hour Training Course (US-2025-05)

This program transforms calculation confusion into operational confidence for journeyman wastewater operators. Built around four universal mathematical principles that solve 80% of plant calculations, the course emphasizes commonalities across all process areas rather than isolated formulas. Through progressive skill-building and real-world applications, participants master the foundational math skills that drive optimal plant performance, from activated sludge management to solids processing optimization.

Learning Objectives

Upon completion, participants will have been provided resources and guidance to be able to perform accurate unit conversions and dimensional analysis across process applications, calculate loading rates for biological treatment, clarifiers, thickeners, and other unit processes, apply mass balance principles to any wastewater treatment operation, determine process efficiencies using universal calculation methods, solve flow-related problems in both liquid and solids processing, recognize mathematical patterns that connect different process areas, and use calculations for troubleshooting and process optimization decisions.

Participants will gain exposure to operator-focused math training, including instruction and videos for solving exam-type practice problems utilizing real plant data, and gain comfort to tackle many operational biological and solids-based calculations. Math skills for optimizing processes control strategies will be evaluated to provide the "why" behind every formula.

Course Format: Two 2.5-hour remote sessions, starting at 5:00 pm

Total TCHs: 5 hours. All sessions must be completed

SESSION 1: (12/3/25) Foundations & Flow-Based Calculations (2.5 hours)

- Module 1: Mathematical Foundations - Universal Skills
- Module 2: Flow Calculations - The Common Thread
- Module 3: Concentration & Mass Balance - Universal Principles

SESSION 2: (12/4/25) Applied Process Calculations & Optimization (2.5 hours)

- Module 4: Activated Sludge Process Applications
- Module 5: Solids Processing Applications
- Module 6: Chemical Dosing - Universal Application
- Module 7: Process Optimization Using Math

Register at: www.utiliency.com



Secondary Treatment Process Control and BNR: 6-hour Training Course (US-2025-03)

This 6-hour program provides wastewater operators with knowledge and practical skills for secondary treatment process control, basic troubleshooting approaches, and introductory biological nutrient reduction concepts. Operator daily challenges including monitoring dissolved oxygen and mixed liquor suspended solids, recognizing process stability indicators, identifying common problems like bulking and foaming will be discussed. Basic nutrient removal principles required by many NPDES permits will also be reviewed. Real-time solutions to essential calculations including F/M ratio basics, simple wasting rate determinations, and introductory nutrient concepts directly supporting treatment processes and regulatory compliance challenges will be shared.

Learning Objectives

Basic microbiological principles along with introductory troubleshooting strategies will demonstrate concepts operators need to understand secondary treatment and biological nutrient removal systems. Instructor-led case studies and mathematical problem-solving will build operator skills for recognizing process conditions, understanding cause-and-effect relationships, and grasping basic biological nutrient removal principles.

Participants receive resources for foundational guidance on the most common treatment concepts - monitoring, problem identification, and nutrient removal fundamentals - while building knowledge in process mechanics, basic laboratory interpretation, and system awareness directly supporting daily plant operations and compliance understanding.

Course Format: Two 3-hour remote sessions, starting at 5:00 pm

Total TCHs: 6 hours. All sessions must be completed.

SESSION 1: (12/11/25) Secondary Treatment Fundamentals & Basic Process Control (3.0 hours)

- Module 1A: Secondary Treatment Overview
- Module 1B: Microbiology Fundamentals
- Module 1C: Essential Process Parameters
- Module 1D: Process Observation and Monitoring
- Module 1E: Basic Process Control Concepts

SESSION 2: (12/18/25) Problem Recognition & Introductory BNR Concepts (3.0 hours)

- Module 2A: Common Process Problems
- Module 2B: Basic Troubleshooting Approach
- Module 2C: Introduction to Nutrient Removal
- Module 2D: BNR System Basics
- Module 2E: Putting It All Together

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