

WEFTEC 2023 Workshops

W01 Making Resource Recovery Concepts Come to Life: Operator Education Through Interactive Simulation

Saturday, September 30, 2023

Process simulators are a valuable operator teaching tool because they allow operators to explore the consequences of operational decisions across a water resource recovery facility in an interactive, risk-free way. This workshop will demonstrate the strength of simulators to illustrate fundamental resource recovery concepts to operators by offering simulator-based training on

- operating a nitrifying activated sludge system to achieve year-round nitrification and
- assessing the impacts of secondary clarifier operation on process performance.

Price: \$240 members, \$270 non-members*

W02 Wastewater Microbiology

Saturday, September 30, 2023

Facility operators, managers, and engineers will use staining techniques and phase-contrast microscopes to analyze floc and will identify protozoa, metazoa, and filaments, thereby developing practical information to help these professionals control their processes. This lecture will discuss types of microorganisms, environmental factors affecting the microorganisms, and metabolism and growth characteristics that may affect participants' processes. This combination of learning styles will enable participants to help with related process control problems at their facilities.

Price: \$240 members, \$270 non-members*

W03 Fate of PFAS Through Thermal Processes at Water Resource Recovery Facilities

Saturday, September 30, 2023

This workshop discusses the fate of perfluoroalkyl and polyfluoroalkyl substances (PFAS) through thermal processes available to the wastewater industry. The audience will be presented with the current knowledge of PFAS and developing research on this topic, as well as examples of utility experience with some of the technologies discussed. Foundational discussions on developing air regulations and the state of the analytical science of PFAS will broaden the audience's perspective on tackling the issue.

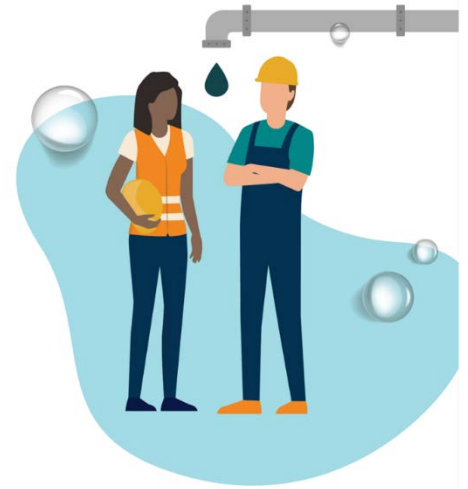
Price: \$210 members, \$240 non-members*

W04 Refinery and Petrochemical Wastewater Treatment: Operations, Control, and Troubleshooting

Sunday, October 1

The Refinery and Petrochemical Workshop will focus on operational issues, case studies, and troubleshooting of unit operations of a typical refinery wastewater treatment system. A treatment challenge or overview of treatment processes and their function will be presented by a facilitator. Attendees will separate into groups, identify solutions, and present solutions to the other participant groups. The facilitator will then provide real-world examples of how the issue was resolved at a facility.

Price: \$210 members, \$240 non-members*



W05 Aeration Control for Practitioners: Optimization of Aeration, Process, and Energy

Sunday, October 1

Aeration control is complex and directly affects process stability, settling, nutrient removal, effluent quality, permit compliance, and energy consumption. Many aeration systems are inadequately tuned, and water resource recovery facility staff are often insufficiently trained to identify issues and optimize controls. This workshop provides training for operations and electrical, instrumentation, and controls (EI&C) staff and design, mechanical, supervisory control and data acquisition, and EI&C engineers. Participants will learn to apply step-by-step approaches to solve common aeration control challenges in the field.

Price: \$240 members, \$270 non-members*

W06 Game-Based Modeling of Water Resource Recovery Facilities

Sunday, October 1

Teams of five to six wastewater industry professionals will compete for prizes and glory in a process modeling competition at the Game-Based Modeling Workshop. Teams will work together to optimize, strategize, and execute operation techniques in five different simulation platforms. Each platform (BioWin, GPS-X, SIMBA#, Sumo, and WEST) will present an existing facility process model with unique objectives and restrictions. New modelers will be exposed to the capabilities of process simulators with a focus on problem-solving during this very interactive workshop.

Price: \$240 members, \$270 non-members*

W07 Wastewater Microbiology

Sunday, October 1

Facility operators, managers, and engineers will use staining techniques and phase-contrast microscopes to analyze floc and identify protozoa, metazoa, and filaments, thereby developing practical information to help these professionals control their processes. This lecture will discuss types of microorganisms, environmental factors affecting the microorganisms, and metabolism and growth characteristics that may affect participants' processes. This combination of learning styles will enable participants to help with related process control problems at their facilities.



Price: \$240 members, \$270 non-members*

W08 Activated Sludge and Biological Nutrient Removal Process Control: Hands-On in the Real World

Sunday, October 1

Leading practitioners will present this comprehensive workshop and share their experiences in an interactive environment. Presenters will cover the basics of activated sludge and biological nutrient removal (BNR). They will focus on overcoming practical design problems that have plagued many systems. Process control parameters, side-stream considerations, and tips for identifying microorganisms and establishing a healthy biomass will be part of the day's demonstrations. The format is informal, and real-life examples and questions are welcomed. Please note, this workshop is held outdoors at a water resource recovery facility.

Price: \$250 members, \$280 non-members*

W09 Dewatering Optimization

Sunday, October 1

This workshop will focus on practical solutions to increase dewatering performance, including drier cake solids, better solids capture, reduced polymer consumption, and reduced operations and maintenance costs for untreated sludge, aerobically digested biosolids, and anaerobically digested biosolids. The workshop will be of primary interest to facility managers, superintendents, and operators and maintenance staff from municipalities who need to "do more for less."

Price: \$210 members, \$240 non-members*

W10 Inflow and Infiltration Program Management: Strategic Approaches for Meaningful Reduction

Sunday, October 1

Given the complex and widespread nature of the problem, successful utilities have approached inflow and infiltration (I/I) remediation within a programmatic framework that maximizes cost-effectiveness through prioritized remediation efforts that align with the objectives of other management programs. Workshop attendees will learn about the strategic methods successful I/I programs use to focus actions that result in measurable progress toward meeting objectives. Attendees will also collaboratively share their experiences and discuss both successes and challenges.



Price: \$240 members, \$270 non-members*

W11 Design and Implementation of Membrane Bioreactors in Water Recycling

Sunday, October 1

Membrane bioreactors (MBRs) are powerful tools for enabling water reuse in both municipal and industrial applications due to the simplified process, effluent quality produced, and economics. This workshop will engage participants in interactive activities with leading experts in the industry and will provide a complete understanding of how to implement MBRs in both non-potable and potable reuse projects.

Price: \$210 members, \$240 non-members*

W12 Applying Resilience and Implementing Practical Applications in a Changing Climate

Sunday, October 1

The effects of climate change are felt today in communities across the country and increasingly test utilities' resilience. This workshop will provide a method for participants to evaluate the effect of the changing climate and visualize "what-if" scenarios that are outside of their direct experience. Participants will evaluate options for constructive action to adapt to climate changes already occurring and those to come. The workshop will also provide examples of implementation measures.

Price: \$210 members, \$240 non-members*

W13 Equity in Utility Ratemaking: Math or Affordability?

Sunday, October 1

This workshop will provide participants with an opportunity to explore utility ratemaking and ways to address the big questions of equity, affordability, and policy. Participants will break out into small groups to contemplate utility, social, and economic issues and develop rate design and communications solutions.

Price: \$105 members, \$135 non-members*

W14 Learning to Communicate

Sunday, October 1

Expert water communicators will lead the workshop on how to effectively present information about water through storytelling and connection with audiences. Participants will learn best practices directly from subject matter experts through interactive activities. Throughout the session, participants will prepare presentation materials using the lessons and takeaways from the speakers to improve their skills. This workshop is recommended for anyone looking to improve their skills in preparing technical presentations and delivering them to diverse audiences.

Price: \$105 members, \$135 non-members*

W15 Facility Tours: Communicating With Public Officials and the General Public

Sunday, October 1

Bad news headlines should not be the reason the public wonders where their wastewater goes. Facility tours provide good publicity and are educational and empowering. This workshop focuses on exchanging practical information from seasoned experts (an operator, an engineer, and an educator) to participants who are new to giving facility tours and/or those who already give tours but desire to make lasting connections with their communities.

Price: \$115 members, \$145 non-members*



Information as of April 18, 2023

W16 Measuring and Reducing Water Resource Recovery Facility Greenhouse Gas Emissions

Sunday, October 1

Participants will learn how to calculate greenhouse gas (GHG) emissions and sinks for their water resource recovery facilities (WRRFs) using standard industry models and will gain insight to the best strategies to optimize WRRFs to reduce their carbon footprint. Participants will (1) learn about the basics and latest policies and research relevant to GHG accounting and (2) engage in hands-on GHG accounting and reduction exercises.

Price: \$240 members, \$270 non-members*

W17 Energy Project Savings: Did it Turn Out Like You Thought?

Sunday, October 1

This workshop will present common issues with estimating projected savings and measuring actual energy savings using research conducted under a recent Water Research Foundation (WRF) project (WRF 5091). The WRF project compared forecasted versus actual energy savings of 30 water/wastewater energy projects and developed a standardized evaluation spreadsheet, which will be used by workshop participants in sample project evaluations to (1) document pre-project economic feasibility and (2) evaluate the project through postconstruction measurement and verification of energy performance.

Price: \$240 members, \$270 non-members*

You will be able to add workshops, for an additional fee, when registering for WEFTEC. WEFTEC registration is *not* required to attend workshops. Fees for students are available.

Visit www.weftec.org/register to get started.