Mark your calendars and budget for the CSWEA 21st Annual Education Seminar to be held on April 19, 2016 at Monona Terrace in Madison, WI. An exciting program focused on treatment plants of the future will be featured. This is an excellent, affordable event to learn about issues and technical advances from national and local experts. In addition, attendees will earn approximately seven (7) professional development hours (PDHs) for professional engineers and operator’s license requirements.

Who should attend?
Wastewater treatment plant managers and operators, process control specialists, designers, regulators, equipment suppliers, and students involved in wastewater treatment and/or biosolids management. Regulatory agency continuing education contact hours will be awarded.

Seminar location
The seminar will be held at the Monona Terrace Convention Center at One John Nolen Drive, Madison, Wisconsin.

Lodging
A limited number of rooms are available at The Madison Concourse Hotel, 1 W. Dayton St., Madison. The rooms have been reserved at a conference rate of $189 or $219 per night (plus tax) and will be held until March 23, 2016. For reservations, please call the hotel at 800-356-8293 and indicate your affiliation with CSWEA Education Seminar. Complimentary parking is available for hotel guests overnight and for the duration of the Education Seminar. The hotel is about 0.7 miles walking distance from the Monona Terrace Community and Convention Center. Of course, other accommodations are available in the Madison area.

See the CSWEA website for additional information http://www.cswea.org

New Webinar Registration Option
A new webinar registration option has been added for 2016. Registrants selecting this option will not attend the live event, but will be given access to online prerecorded seminar presentation files that will remain posted from July 1 to August 31, 2016. The webinar file will contain a split screen including video of the speaker and clear Microsoft PowerPoint® slides along with audio of each presentation.

21ST ANNUAL EDUCATION SEMINAR SPEAKERS

DR. GLEN T. DAIGGER
Ph.D., P.E., BCCEE, NAE. Professor of Engineering Practice, University of Michigan

DR. BRUCE RITTMANN
Ph.D., NAE. Professor of Environmental Engineering Practice, Arizona State University

DR. DANIEL ZITOMER
Ph.D., P.E., BCCEE. Director of the Water Quality Center Professor, Marquette University

DAVID ST. PIERRE
Executive Director, Metropolitan Water Reclamation District of Greater Chicago

KEVIN SHAFER
Executive Director, Milwaukee Metropolitan Sewerage District

LEISA THOMPSON
General Manager, Metropolitan Council Environmental Services

NICK MENNINGA
General Manager, Downers Grove Sanitary District

MENACHEM TABANPOUR
President, Nutrient Recovery and Upcycling, LLC.
TREATMENT PLANTS OF THE FUTURE
April 19, 2016 Madison Wisconsin

RECEPTION – APRIL 18
All seminar attendees are invited to a reception (cash bar) on Monday, April 18 from 5:30-7:00 p.m. at the Monona Terrace Convention Center. The seminar speakers will be available for networking and conversation.

SEMINAR – APRIL 19
8:00-8:10  Welcome
8:10-8:45  Flexibility and Adaptability are the Essential Elements of the Water and Resource Recovery Facility of the Future
Dr. Glen Daigger, University of Michigan

8:45-9:20  Maximizing Microorganism-based Resources From Used Water (Keynote)
Dr. Bruce Rittmann, Arizona State University

9:20-9:40  Q&A
9:40-10:00  Break
10:00-10:30  Should Anorexia Treatment Replace Activated Sludge?
Daniel Utterme, Marquette University

The activated sludge process is a time-tested, dependable method to remove BOD5, nitrogen and phosphorus. However, descriptions of more sustainable processes of the future often show anaerobic bioprocesses in place of activated sludge. This is because activated sludge often involves a high energy demand for aeration and high biosolids production rate. In contrast, anaerobic processes provide usable water and distribute biosolids on a much larger scale – with annual revenue streams ranging from $50 million to $75 million a year. An exciting algae growth accelerator has the potential to remove nutrients to a very low level while providing a return on investment that can be used to fund capital improvements. What does this future ultimately hold? Come explore the future, for the future is now.

10:30-10:50  The Future is Now
David St. Pierre, Metropolitan Water Reclamation District of Greater Chicago

It is an exciting time to work in the water utility business. The recent “Utility of the Future” publication outlines an idea that utilities will transform into resource recovery facilities. The MWRO’s strategic plan outlines goals to become energy neutral by 2023, recover phosphorus, provide reuse water and distribute biosolids on a much larger scale – with annual revenue streams ranging from $50 million to $75 million a year. An exciting algae growth accelerator has the potential to remove nutrients to a very low level while providing a return on investment that can be used to fund capital improvements. What does this future ultimately hold? Come explore the future, for the future is now.

10:50-11:10  So Really, Why Do We Strive to be a Utility of the Future
Kevin Shuler, Milwaukee Metropolitan Sewerage District

In our industry, there are many buzzwords that come and go. Some may think that “Utility of the Future” (UOTF) is just another one of these. I argue that it is not. Water utilities around the country are faced with shrinking revenues, rising costs, challenging regulatory approaches, and inflated customer expectations. UOTF is a set of initiatives that outlines approaches for the water industry that brings together the principles of “One Water” with our daily operational strategies. Many strategies are common sense, but linking them into unified approaches makes the roadmap toward a UOTF not only logical, but necessary.

11:10-11:30  Engaging the Organization and Region in the Transformation to Utility of the Future
Leisa Thompson, Metropolitan Council Environmental Services

In 2015, the regional planning agency, Metropolitan Council (MnC), wrapped up two years of high public engagement and adopted a 25 year vision called Thrive MSP 2040. The plan identifies key challenges that lie ahead-constrained fiscal resources, new demands stemming from demographic shifts, emerging environmental challenges, new regional planning priorities, and the increasing need for regional economic cooperation. Leisa Thompson will share how the Environmental Services division responded to the plan with their own engagement process (by developing a new organizational vision in 2014 followed by regional water plans in 2015 establishing a path forward to address the emerging environmental challenges and achieve the outcomes and principles of the regional vision.

11:30-12:00  Morning Q&A
12:00-1:00  Lunch
1:00-1:35  How We Can Use the Water We Produce
Dr. Gene Daigger, University of Michigan

Water is the most valuable product produced in a Water Resource Recovery Facility (WRRF). Uses can range from environmental enhancement and restoration to the production of potable water. In all cases, the concept of “fit for purpose” water, meeting product water requirement for specific uses, represents the evolving paradigm. Thus, it is necessary to understand the range of uses that WRRF product water may be put to, and the associated quality requirements and treatment approaches.

1:35-2:10  Recovering the Lost P in Used Water
Dr. Bruce Rittmann, Arizona State University

After recovery of the energy from used water, most of the N and P are released as inorganic forms that can be recovered for recycle to agriculture. This talk will focus on P recovery, although many of the principles also apply for N. An important take-home lesson is that traditional techniques for “P removal” will not work for P recovery. P recovery techniques that produce a product useful in agriculture include precipitation as struvite or hydroxyapatite and selective sudoatomizing bacteria. Each approach is described, and the relative pros and cons are discussed.

2:10-2:20  Q&A
2:20-2:40  Break
2:40-3:10  Energy Sustainability at the Downers Grove Sanitary District
Nick Menninga, Downers Grove Sanitary District

The Downers Grove Sanitary District has invested significant resources to improve its energy sustainability and independence from outside energy sources. The District equipment investments include a state-of-the-art highly efficient aeration system, HVAC equipment that uses digester gas and effluent water to significantly reduce energy demands to operate, efficient lighting, strategic VFD’s for pump modulation, and control system improvements that allow optimum operation. In addition, the District has installed a combined heat and power facility that converts digester gas into electricity and heat. Digester gas P can be recovered as enhanced high-strength waste that is generated locally, reducing hauling and disposal costs for customers who generate compatible high strength waste streams.

3:10-3:40  The Leading Edge of Phosphorus Recovery: A Brushite Recovery Pilot
Menachem Tabapanur, Nutrient Recovery and Upcycling, LLC

Nutrient Recovery and Upcycling, LLC (NRU) specializes in designing, researching, and developing systems that recover and upgrade low-grade resources into high value products. Nutrient Recovery and Upcycling, LLC, has built the next generation of phosphorus recovery with a pilot that recovers a valuable fertilizer mineral called struvite from anaerobic acid digesters. This technology demonstrates the ability of acid phase digesters to release phosphorus that can be recovered by our process leading to higher total phosphorus recovery rates at the optimal location to prevent struvite buildup.

3:40-4:10  Q&A
4:10-4:20  Closing Remarks

PLEASE REGISTER FOR THE ONE-DAY EDUCATION, LIVESTREAM EVENT OR WEBINAR OPTIONS

Visit our website: http://www.cwsa.org for more information and for ONLINE REGISTRATION AND PAYMENT

Purchase orders will not be accepted.

For additional information or for questions please email: cwsa@cwact.org