wefevents

RESIDUALS AND BIOSOLIDS TREATMENT TECHNOLOGY CONFERENCE

WORKSHOPS | MONDAY, MAY 11th | 8:30 AM – 5:00 PM

W01: Thickening and Dewatering Optimization – Getting Water Out of Sludge Efficiently

The workshop will focus on practical solutions to improve thickening and dewatering performance. The focus of the workshop will be municipal (primary and waste activated) sludge with discussions on achieving thicker solids, better solids capture, reducing polymer consumption, reducing O&M costs, and providing smaller or more efficient downstream solids handling processes. This workshop will be of primary interest to plant managers, superintendents, operators and maintenance staff from municipalities. Furthermore, this workshop topic is critical and timely to the industry since municipalities are getting more pressure to reduce their budgets or to "do more for less" in addition to addressing the challenges of increasing polymer, and solids processing cost.

Chair(s): Edward Fritz, *Jacobs*; Christine Hengel-Prom, *Black & Veatch*

8:30 AM	**Introduction and Interactive Survey** E.Fritz, *Jacobs*
8:45 AM	**Thickening and Dewatering 101** R.Gupta, *Carollo Engineers Engineers*
9:15 AM	**Thickening and Dewatering Equipment Basics** D.Fronhofer, *BDP Industries*
9:40 AM	**Interactive Session: Thickening and Dewatering Challenges Roundtable**
10:00 AM	**Networking Break**
10:30 AM	**Chemistry of Thickening and Dewatering: Coagulants** B.Offerman, *Kemira*
10:50 AM	**Chemistry of Thickening and Dewatering: Polymer Flocculants** P.Gallagher
11:10 AM	**Bench and Lab Testing Demonstrations** E.Fritz
11:20 AM	**Evaluation Criteria for Selecting Dewatering Technologies Tabletop Exercise**
12:00 PM	**Lunch**
1:30 PM	**Rheology of Thickened Sludge** E.Leonard, *HDR*
1:50 PM	**Cake Pumping and Storage** Z.Ngwenya, *Jacobs*
2:10 PM	**Protecting Equipment and Processes: Sludge Screening** C.Primm
2:30 PM	**Upstream and Downstream Considerations for Thickening and Dewatering**
3:30 PM	**Innovations in Thickening and Dewatering** D.Dursun, *Caliskaner Water*
3:50 PM	**Suspended Air Flotation** J.Knollenberg, *Heron Innovators*
4:00 PM	**Sludge Vision** R.Giguere
4:10 PM	**Granulator** J.Hanson, *GEA Group*
4:20 PM	**"What Is the Future of Thickening and Dewatering?"** R.Gupta

W02: Thermal Drying - State of the Practice, Advancements, and Future Applications
Given rising disposal costs and regulations, many utilities are considering biosolids drying to create sustainable solutions. This workshop will unite operators, technologists, and engineers to explore drying technologies, considerations for dryer implementation, and future areas of collaboration. Focus will be given to how dryers can be successfully integrated into existing utility programs and WRRFs and future considerations for drying technology advancement, including compatibility with PFAS treatment.
Chair(s): John Ross, *Brown and Caldwell*; Jody Barksdale, *Carollo Engineers*; Chip Pless, *WM*

8:30 AM	**Introduction and Workshop Objectives** J.Ross
8:35 AM	**First Interactive Session: Live Poll**
8:40 AM	**State of the Drying Industry** J.Ross
8:50 AM	**Dryer Facility Overview: Subsystems and Design Coordination** S.Murnan, *NEFCO*
9:15 AM	**Dryer Facility Construction: Builder Panel Discussion** J.Barksdale
9:40 AM	**Group Exercise: Identifying Implementation Lessons Learned**
10:00 AM	**Networking Break**
10:30 AM	**New Regional Dryer Facility: Crossroads, ME** C.Pless
10:55 AM	**Dryer Rehabilitation and Repair: JEA, FL** J.Barksdale
11:20 AM	**Dryer Modernization: MCES/Encina** W.Hoener, *Black and Veatch*
11:30 AM	**Group Exercise: Dryer Lifecycle Milestones**
12:00 PM	**Lunch**
1:30 PM	**Biosolids Drying: GHG Overview** B.Brower, *Brown and Caldwell*
2:15 PM	**GHG Opportunities with Pellet Reuse** C.Pless; K.Pointer, *Titan Cement*; F.Morrissette, *Blake Merrel*
2:40 PM	**Group Exercise: Dryer Optimization Measures** C.Pless
3:00 PM	**Networking Break**
3:30 PM	**Dryer Facility Environmental Impacts and Permitting** P.Burrowes, *Jacobs*
3:55 PM	**Emissions and Odor Control Technologies** A.Parmenter, *HDR*
4:30 PM	**Group Exercise: Environmental Control Measures** C.Pless
4:45 PM	**Workshop Closing** J.Ross

W03: (Half Day) Best Practices for Planning, Designing, and Operating Anerobic Digestion Systems
This workshop is centered on the planning, design, and operation of anaerobic digestion systems. Adaptive biosolids planning with a comparison of anaerobic digestion processes to provide key drivers and meet core objectives. Both conventional and high performing digestion processes will be discussed. Best practice digestion design will be covered including digester shape, mixing, heating, and methods to mitigate gas entrainment, foaming, and struvite deposition. Operation of digestion systems and their impact on gas production, dewatering performance, and biosolids quality will be presented and discussed.
Chair(s): Drury Whitlock, *Stantec*; David Parry, *Jacobs*

8:30 AM	**Opening Remarks & Workshop** D.Whitlock

8:40 AM	**Adaptive Planning** D.Parry; W.Barber, *CAMBI*; C.Poet, *DC Water*
9:30 AM	**Best Practice Design** M.Higgins, *Bucknell University*; A.Miot, *Silicon Valley Clean Water*; D.Whitlock
10:00 AM	**Networking Break**
10:30 AM	**Best Practice Design, Part II** M.Higgins; A.Miot; D.Whitlock
11:00 AM	**Digestion System Operations** D.Parry
12:00 PM	**Closing Remarks**

W04: Get the N Out - Fundamentals of Activated Sludge Biological Nitrogen Removal and Operation Troubleshooting Using Process Simulators

The workshop will provide an overview of the fundamental concepts associated with biological nitrogen removal as well as advanced topics commonly used at operating facilities. The presentation will cover each main concept followed up by process model simulations led by the instructors but performed by attendees to solidify the understanding of each topic. Several steady state simulations will be used to drive home concepts and demonstrate the benefits of various process control concepts.

Chair(s): Paul Dombrowkski, *Woodard & Curran*; Zachary Jackson, *North Texas Municipal Water District*

8:30 AM	**Welcome and Introductions**
8:40 AM	**Activated Sludge Fundamentals**
9:30 AM	**Secondary Clarifier Operation**
10:00 AM	**Networking Break**
10:30 AM	**Simulator Demonstration and Activated Sludge Exercises**
11:00 AM	**Nitrification Fundamentals**
12:00 PM	**Lunch**
1:30 PM	**Nitrification Simulator Demonstrations and Exercises**
2:00 PM	**Denitrification Fundamentals**
3:00 PM	**Networking Break**
3:30 PM	**Denitrification Demonstrations and Exercises**
4:15 PM	**Process Control Simulator Challenge**
4:45 PM	**Discussions on Simulator Based Training**
4:55 PM	**Conclusion**

W05 : From Data to Decisions - Building and Launching Digital Transformation Programs in Utilities

This workshop is designed to bring together practitioners, utility leaders, consultants, and researchers to explore practical frameworks for launching and advancing digital transformation programs in water utilities. The session focuses on how utilities can move beyond fragmented data environments toward integrated data ecosystems that support reliable metrics, operational insights, and more effective organizational decision-making.

Chair(s): Josh Goldman; Jeffrey Hlad, *Metro Water Recovery*

8:30 AM	**Introduction and Workshop Overview** J.Goldman; J.Hlad

8:45 AM	**Foundational Systems Integration** K.Fletcher, *Brown and Caldwell*
9:05 AM	**Facilitated Discussion**
9:20 AM	**Governance & Strategic Planning** B.Stanford, *Hazen and Sawyer*
9:40 AM	**Demonstrating Return on Investment (ROI)** M.Zimmerman, *SWAN*
10:00 AM	**Networking Break**
10:30 AM	**Facilitated Discussion**
10:45 AM	**Takeaway Capture 1** J.Goldman
11:00 AM	**Case Study: Large Utility Perspective** J.Sparks, *HRSD*
11:20 AM	**Case Study: Cross-Utility Implementation Lessons** P.Chandrasekeran, *Arcadis*
11:40 AM	**Case Study: Small Utility Perspective** A.Walkins, *City of Boise*
12:00 PM	**Lunch**
1:30 PM	**Facilitated Discussion**
1:45 PM	**Incremental Implementation Example** A.Menniti, *Clean Water Services*
2:05 PM	**Utility Implementation Reflection** M.Magruder, *MMSD*
2:25 PM	**The Future Utility** G.Karmous-Edwards, *Karmous-Edwards Consulting*
2:45 PM	**Applied AI Platform Example** K.Lesnik, *ETHOS*
3:00 PM	**Networking Break**
3:30 PM	**Implementation Perspectives: Emerging Digital Tools** D. Delaughter, *South Platte Renew*; J.Covarrubias, *SAWS*; E.Hung, *Trinity River Authority*; B.Johnson; H.Stewart, *Jacobs*
4:00 PM	**Applied Innovation Lightning Talks**
4:20 PM	**Interactive Digital Transformation Road-mapping Exercise**
4:40 PM	**Takeaway Capture 2: Workshop Synthesis**
4:50 PM	**Speaker Follow-up and Participant Networking**

W06: Lessons Learned from Ten Years of Sidestream Treatment

This workshop will cover lessons learned and opportunities for improving sidestream treatment at WRRFs. The morning portion of the workshop will focus on phosphorus management and recovery while the afternoon will focus on nitrogen and phosphorus co-management. Case studies of full-scale installations will be presentation. Topics that will be discussed include struvite formation mechanisms, fines recycling as well as impacts of pre-treatment and intensified digestion technologies on sidestreams management. Vendors will also be invited to provide an update of the latest and greatest offerings for managing sidestreams.

Chair(s): Jennifer Loconsole, *Black & Veatch*; Louis Ortenzio, *Hazen and Sawyer*

8:30 AM	**Introduction** P.O'Donnell, *Invent*
8:45 AM	**Phosphorus Recovery** L.Downing, *Black and Veatch*
8:55 AM	**Struvite Recovery** R.Cusick, *University of Illinois*
9:05 AM	**Utility Case Studies: Process Optimization Efforts at Metro Water Recovery** I.Avila, *Pima County*
9:25 AM	**Utility Case Studies: Pima County Perspectives on Struvite Management** J.Prevatt, *Pima County*

9:45 AM	**Utility Case Studies: Madison MSD's Experience with Ostara** M.Seib, *MMSD*
10:00 AM	**Networking Break**
10:30 AM	**Operational Scenario and Mitigation Approaches**
11:30 AM	**From P to N** C.Bott, *HRSD*
12:00 PM	**Lunch**
1:30 PM	**N Treatment** L.Ortenzio
1:45 PM	**Lessons From Multiple Years of DMX** D.Freeman, *Metro*; C.Bott
2:15 PM	**PAD and DMX Experience at TRA** E.Redmond, *Black and Veatch*
2:30 PM	**DMX on THP Reject, Part I** E.Bailey; A.Fuentes
3:00 PM	**Networking Break**
3:30 PM	**DMX on THP Reject, Part II** E.Bailey; A.Fuentes
4:00 PM	**Design Scenario and Vendor Approaches** L.Ortenzio; T.Dunaev; L.Li; C.Johnson
4:50 PM	**Closing Comments**

W07: Positioning for Reuse - Understanding Drivers, Strategies and Technologies for Enabling Potable and Non-potable Reuse

In this Workshop, participants will learn the basics of reuse and what to consider when implementing reuse projects, including the technical aspects of non-potable and potable reuse as well as regulatory considerations. Case studies from Reuse Master planning projects in the mid-west will be shared, with an emphasis on providing recycled water for data center cooling and other industrial applications. Potable reuse project examples will also be presented from across the U.S., including both Indirect potable reuse (IPR) and direct potable reuse (DPR), including recent learnings from DPR piloting in CA.

Chair(s): Greta Zornes, *CDM Smith;* Gaya Ram Mohan, *Hazen and Sawyer*

8:30 AM	**Introduction to the Topic and Team** G.R. Mohan; G. Zornes
8:50 AM	**Topic 1: Reuse 101** G. Zornes
9:15 AM	**Topic 2: Regulatory Overview** J.Mattingly, *WEF*
9:40 AM	**Topic 3: Lessons Learned from Reuse Case Studies** G.R.Mohan
10:00 AM	**Networking Break**
10:30 AM	**Topic 4: Reuse Program Overview** G.Janzen, *City of Wichita*; G.Salazar, *HRSD*; J.Kaberline, *Loudon*
11:30 AM	**Facilitated Discussion: Application Potential of Potable and Non-Potable Reuse**
12:00 PM	**Lunch Break**
1:30 PM	**Topic 5: The Latest on AWT Piloting** G. Salazar; E.Wood, *CDM Smith*; K.Bell, *Hazen and Sawyer*
3:00 PM	**Networking Break**
3:30 PM	**Topic 6: Operator Training and Full-scale Experience – Panel Discussion** G.Salazar; J.Kaberline; B.Angelotti, *CDM Smith*
4:30 PM	**Facilitated Discussion: Future of CBAT in the One Water**