

CONFERENCE PROGRAM



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RESIDUALS AND BIOSOLIDS CONFERENCE

June 18-21 / Oklahoma City, OK

[#BiosolidsConf](#)

wef.org/ResidualsBiosolids



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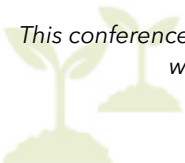
WEF Residuals and Biosolids Conference 2024

June 18-21, 2024
Oklahoma City Convention Center,
Oklahoma City, OK

www.wef.org/residualsbiosolids



*This conference is hosted by the Water Environment Federation in cooperation
with the Oklahoma Water Environment Association.*



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Dear Colleagues and Biosolids Enthusiasts:

On behalf of the Water Environment Federation and the Oklahoma Water Environment Association, we welcome you to Oklahoma City and the 38th Annual Residuals and Biosolids Conference!

We have been enthusiastically developing what we hope will be a truly fulfilling conference to remember. We would like to give a special thanks to WEF's super staffers, the WEF Biosolids Steering Committee, and the large number of dedicated volunteers working long hours and many early morning meetings to develop a diverse, topical, and engaging technical program. Additionally, we would like to thank all of you who submitted abstracts on your research. Without the volume and excellent quality of abstracts we received, there would not be a technical program to speak of. We would also like to offer our thanks to the generous support of our exhibitors, sponsors, and to you for supporting this conference and for being the voice for biosolids and organics management in the Americas and around the globe.

The WEF Residuals and Biosolids Conference 2024 continues the tradition of bringing the latest in biosolids research, technological advancements and proven applications in an interactive forum between academia, utilities and private operators, regulators, educators, science and engineering professionals, contractors, and manufacturers. In light of recent probing questions into the land application of biosolids from the standpoint of micro constituents and nutrient management on a U.S. national level as well as the local level in the state of Oklahoma, a sizable portion of the conference has been dedicated to informing and educating on the regulations, regulatory drivers and the potential implications if changes in land application rules are enacted. WEF and the volunteers for this conference care deeply for the environment and are at the forefront of discovering and advocating for the most practical ways of managing resources to ensure humanity and nature can coexist beneficially.

The conference will commence on Tuesday with focused workshops on upgrading biogas to natural gas, dewatering optimization, and fugitive methane abatement. This will be followed by an evening of fun and networking at the Friends of Biosolids Social Event hosted by OWEA.

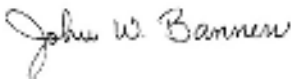
On Wednesday morning the Opening General Session will provide an official welcome to everyone as we kick off the technical program and exhibit components of the conference. As the business of residuals

and biosolids management continues to expand in its mission of resource recovery, our keynote speakers and morning presentations will cover a variety of topics in biosolids beneficial reuse and the future of the industry.

Wednesday afternoon through Friday will offer an excellent array of technical presenters. Presentations will cover the latest research and innovations in resource recovery, land management, planning and economics, and bioenergy. Be sure to stay late in the exhibit hall on Wednesday afternoon for a networking reception to continue the conversation with fellow conference attendees. Thursday will kick off with a tour to the Midwest City Composting facility and a variety of very informative technical sessions. Thursday afternoon will feature a second tour, this time to visit an aerobic digestion and dewatering facility. The program will close out on Friday with more informative topics such as economic and regulatory drivers and energy management.

Thank you for joining us in Oklahoma City to learn, develop, and work together as professionals to recover the valuable organic resources of our community and to help promote and educate our communities to partner with us in this most exciting journey. We know you will love the local flair of this year's WEF Residuals and Biosolids Conference.

Thank you and welcome to this 2024 Residuals and Biosolids Conference!



John Bannen



Sara Guzman



20
24

TABLE OF CONTENTS

Conference Committees	2
Registration	5
WiFi	5
Presenter and Moderator Information	5
Code of Conduct	6
Conference Safety and Security	7
Reception and Meal Functions	8
Community Meetings	9
Mobile App	10
Online Proceedings	10
Continuing Education	11
Sponsors	13
Sessions-At-A-Glance	15
Pre-Conference Workshops	17
Opening General Session	22
Technical Program	23
Technology Spotlight I	27
Technology Spotlight II	34
Facility Tour A	36
Technology Spotlight III	41
Facility Tour B	44
Poster Presentations	57
Exhibition Information	58
Exhibit Hall Floor Plan	59
Exhibitor Directory	60
Presenter-Moderator Directory	72
Conference Schedule-At-A-Glance	78
Upcoming WEF Events	79



20
24

CONFERENCE COMMITTEES



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Conference Co-Chair



Sarah Guzman
Black & Veatch
Conference Co-Chair

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20
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CONFERENCE COMMITTEES

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Eric Spargimino

CDM Smith

Jacqueline Yeh

Hazen and Sawyer

Lance Rodeman

BCR Environmental

Hollis Terry

Athens-Clarke
County



REGISTRATION

Badge Pickup and Registration will be located in Exhibit Hall C-D at the Oklahoma City Convention Center. Registration Hours are as follows:

Tuesday, June 18, 2024	7:30 a.m. - 5:00 p.m.
Wednesday, June 19, 2024	7:30 a.m. - 5:00 p.m.
Thursday, June 20, 2024	7:30 a.m. - 5:00 p.m.
Friday, June 21, 2023	8:00 a.m. - 11:30 a.m.

WIFI

Complimentary Wi-Fi is available in meeting rooms, lobbies, and public areas via the OKC Convention Center public network. No Password is required. Service is intended for casual internet access such as light browsing, email, text-based social media, etc.

PRESENTER AND MODERATOR INFO

All presenters, alternates, and moderators should pick up their conference badge at the Registration Desk and attend their assigned briefing.

Presenters and alternates participating Wednesday, Thursday, and Friday should attend their assigned briefing. Please attend only once unless speaking on multiple days. The Speaker Briefing and room schedule is as follows:

Wednesday, June 19 – Exhibit Hall C&D 7:45 a.m. – 8:15 a.m.
*Sessions 1 through 9

Thursday, June 20 – Exhibit Hall C&D 7:45 a.m. – 8:15 a.m.
*Sessions 10 through 27



20
24

CODE OF CONDUCT

WEF is committed to providing a professional, safe, and welcoming environment during its in-person and virtual events for all participants. WEF expects all attendees, moderators, panelists, and speakers to uphold our commitment to diversity and inclusion by helping us provide a positive environment for everyone.



*WEF Events Code of
Conduct*

As a participant you agree to the following:

- To treat all individuals with respect and create a collegial, inclusive, and professional environment.
- To value a diversity of views and opinions by communicating openly with respect for others.
- Not to verbally abuse any individual or to discriminate, harass, or intimidate on the basis of gender, race, gender identity and expression, sexual orientation, physical or mental disability, physical appearance, age, religion, national origin, veteran status, citizenship, or professional rank.

Anyone requested to stop unacceptable behavior is expected to comply immediately. WEF management may take any action deemed necessary and appropriate, including removal from the event (and any remaining portions thereof) without warning and without refund of registration fee.



*WEF Member Code of
Conduct*

Additionally, if you are a WEF member, you agree to uphold the WEF Member Code of Conduct while attending WEF events.

Reporting Concerns

To report a Code of Conduct violation, you may email the WEF Executive Director, at: executivedirector@wef.org.



20
24

CODE OF CONDUCT

WEF strongly encourages the use of social media to share your experiences at our event. This includes sharing interesting quotes or information, taking pictures with colleagues, and using the event hashtag: #BiosolidsConf. However, to protect intellectual property, videotaping, filming, or live-streaming of any technical session is prohibited. Any participant violating this policy must relinquish the media and may be removed from the conference. Also, promotional or commercial use of photographs taken at WEFTEC and other WEF conferences is strictly prohibited. If you are interested in content, materials, or products, please consider talking to the speaker who may provide the information or grant permission.

CONFERENCE SAFETY AND SECURITY

Oklahoma City Convention Center

100 Mick Cornett Drive, Oklahoma City, OK 73109

- Call 911 for life-threatening situations and fire (smoke, flames).
- For non-life-threatening, first-aid occurrences there will be a First Aid station in Exhibit Hall CD on level one for the duration of the conference.
- The official evacuation assembly area is at Scissortail Park. This is directly across Robinson Street from the main front lobby entrances.
- To contact the security department directly for security emergencies or concerns, call 405-431-7202 or 405-768-4615.

Omni Oklahoma City Hotel

100 West Oklahoma City Boulevard, Oklahoma City, OK 73109

- Call 911 if the situation is an emergency.
- If the matter is NOT an emergency, dial "0" from any Hotel phone or call 405-438-6500 then press "0" from your mobile phone, ask to speak to the Manager on Duty, and report the matter accordingly.



20
24

RECEPTIONS AND MEAL FUNCTIONS

Staff have arranged to have a variety of food options to accommodate vegan and vegetarian preferences. Please advise staff if you have additional special dietary requirements.

Networking Luncheons

Lunch will be provided for all registered attendees on both full days of the Residuals and Biosolids Conference. Use this opportunity to meet fellow participants from across the country and abroad while enjoying a luncheon.

Wednesday, June 19 and Thursday, June 20

Exhibit Hall C & D

11:45 a.m. - 1:30 p.m.

Friends of Biosolids Reception

Join conference attendees and the Oklahoma Water Environment Association for an evening of networking, featuring hors d'oeuvres and a cash bar. There is no cost to attend, but please RSVP at <https://shorturl.at/L2Pml>

Tuesday, June 18

UCO Boathouse at Riversport OKC

732 Riversport Dr, Oklahoma City, OK 73129

5:30 p.m. - 8:30 p.m.

WEF Networking Reception

Sponsored by: AtkinsRéalis

Join fellow attendees, speakers, and exhibitors in the Exhibit Hall to network and relax while enjoying a complimentary beverage and light hors d'oeuvres.

Wednesday, June 19

Exhibit Hall C & D

4:45 p.m. - 6:15 p.m.

Networking Breaks

Wednesday Networking Breaks Sponsored by: Komline-Sanderson

Take the opportunity to explore the exhibit hall without missing any technical sessions while enjoying a cup of coffee or tea.

Wednesday, June 19 and Thursday, June 20

Exhibit Hall C & D

10:00 a.m. - 10:45 a.m. and 3:00 p.m. - 3:45 p.m.

The Networking Break on **Friday, June 21** will take place outside each technical session room from 10:00 a.m. - 10:15 a.m.

COMMUNITY MEETINGS

Association of Biosolids and Byproducts Association Focus Group Meeting

Room 104

Wednesday, June 19, 10:00 a.m. - 10:45 a.m.

Bioenergy Technology Focus Group Meeting

Room 104

Wednesday, June 19, 11:45 a.m. - 12:45 p.m.

Biosolids Product Use & Communications & National Biosolids Partnership Focus Group Combined Meeting

Room 105

Wednesday, June 19, 12:30 p.m. - 1:30 p.m.

RBC Specialty Conference Focus Group Meeting

Room 105

Wednesday, June 19, 3:00 p.m. - 3:45 p.m.

Regional Biosolids Associations Representatives Small Group Meeting

Room 104

Thursday, June 20, 10:00 a.m. - 10:45 a.m.

Greehouse Gas Focus Group Meeting

Room 105

Thursday, June 20, 11:45 p.m. - 12:45 p.m.

Solids Separation Focus Group Meeting

Room 105

Thursday, June 20, 12:30 p.m. - 1:30 p.m.

Young Professionals Focus Group Meeting

Room 105

Thursday, June 20, 3:00 p.m. - 3:45 p.m.

WEF Residuals and Biosolids Community Meeting

Room 208

Friday, June 21, 7:00 a.m. - 8:00 a.m.



MOBILE APP

WEF is pleased to offer the 2024 WEF Residuals and Biosolids Conference Mobile App and mobile-friendly online planner.

Scan the QR code, or search “Residuals and Biosolids Conference” in the Google Play / Apple App Store.

Set up your My Show Planner account to save sessions, speakers, exhibitors, and sponsors.



Download the mobile app for the most up-to-date information.

ONLINE PROCEEDINGS

Conference proceedings consisting of manuscripts from all the technical presentations have been made available through an online portal. Advance registrants will receive an email with instructions on how to access the Residuals and Biosolids Conference 2024 online proceedings before the start of the conference. Onsite registrants will receive an email with instructions to access proceedings following the event’s conclusion.

Not attending this year’s Conference? Copies of proceedings may be ordered on Access Water after the conference ends. You may call 1-800-666-0206 or visit www.AccessWater.org to place your order.



20
24

CONTINUING EDUCATION

Continuing Education credits

Participating attendees will receive an email within 2 weeks after this event informing them when CE Credit files are available. Attendees will be able to download a certificate and transcript detailing their participation using the link provided. These details are also posted under events on www.WEF.org.

How Do I Receive Credit For this Conference?

To receive credit for participation in educational sessions, attendees will be required to scan their badge when entering and exiting each session room. Credits obtained during this event will be available using the link provided in the post event email and WEF site listed above.

Pre-Conference Workshops:

WEF offers Continuing Education Units (CEUs) for participation in workshops. One CEU is the equivalent to 10 hours of training or formal instruction. These are distributed for structured, relevant professional training above and beyond that of initial certification or employment in a particular field.

Technical Sessions:

WEF offers Professional Development Hours (PDHs) for participation in technical sessions. A PDH is defined as one hour spent engaged in an activity that contributes to the advancement or enhancement of professional skills or scientific knowledge of a professional engineer or operator.

General Contact Hours:

These credits are issued for participation in the Opening General Session, Technology Spotlights and in Facility Tours. A contact hour is defined as one hour spent engaged in an activity that contributes to the professional skills of the participant. Licensing boards will vary in approval of these sessions.

When Will I Receive Credits For this Conference?

Certificates and transcripts are available for download as soon as the CE Credit link is made available. WEF will send an email after the conference to inform attendees where they can obtain their credits. Please keep in mind that most state licensing boards require the individual licensees to report their continuing education credits.

Are WEF Continuing Education Credits Approved in My State?

Most state engineering boards will accept WEF event credits as issued by WEF. WEF will be happy to work with individuals and Member Associations for additional state or agency approvals upon request. In addition, WEF has been approved as a Training Provider through the following: The Florida Board of Professional Engineers, the New York State Department of Education, and the Ohio EPA.

Please visit www.wef.org for specific state approval information for each event.

CONTINUING EDUCATION

What Else Do I Need to Know?

WEF follows the International Association of Continuing Education and Training (IACET) guidelines along with strict state-specific CE Credit regulations. We strive to maintain these policies and procedures regarding our Continuing Education Program to meet with and receive state recognition of our events. WEF calculates education credits following a standardized method that is the most widely accepted by certification and licensing agencies. However, many states differ in the type and/or number of credits they will approve for educational events. Because of this, participants are responsible for exploring their state requirements and for ensuring that WEF conference credits are accepted.

Note: Educational Credits will not be recorded, and documentation will not be distributed unless the attendee is a confirmed registrant of this event and the proper steps are completed as indicated in the directions provided.

Service and Support:

WEF maintains a database of all continuing education files for a minimum of 7 years. You may contact WEF's Customer Service Team between the hours of 8:30 a.m. and 5:00 p.m. EST, Monday through Friday for questions related to WEF Programs - 1-800-666-0206 or csc@wef.org.

State Credit Calculations:

Each state licensing board has its own set of CE credit requirements. Some states use different acronyms for approved training credits. In most cases the credits issued by WEF can be converted to meet state specific requirements that vary from the system used by WEF. This is usually managed at the state level using the following conversion:

1.0 CEU = 10 Hours of session time

1.0 PDH = 1 Hour of session time

1.0 General Contact Hour = 1 Hour of session time

For example: **1.7 CEU Credits = 17.0 PDH** depending on individual state regulations.

**CEU will be converted to PDH credits for Workshops attended by Professional Engineers licensed in the state of New York (NYSED).*

Important: Sessions that are not related to professional practice, such as accounting/financial planning, basic Auto CAD, general office management, insurance, marketing, real estate, risk management, DE&I, etc. are not approved for CE credits by some state licensing boards, including the NYSED.

For more information regarding WEF's Continuing Education Program, please visit the Events & Education tab at www.WEF.org.

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OPENING GENERAL SESSION



20
24

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20
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SESSIONS-AT-A-GLANCE

Session Number	Session Title	Start Time	End Time	CE Credits
Tuesday, June 18				
WKSP A	Upgrading Biogas to Renewable Natural Gas	8:30 AM	5:00 PM	0.6 CEUs
WKSP B	Dewatering Optimization - Practical Ways to Improve Performance	8:30 AM	5:00 PM	0.6 CEUs
WKSP C	A Cradle-to-Cradle Approach to Fugitive Methane Quantification and Abatement	8:30 AM	5:00 PM	0.6 CEUs
Wednesday, June 19				
OGS	Opening General Session	8:30 A.M.	10:00 A.M.	1.5 GCHs
Session 01	Research and Innovation	10:45 AM	11:45 AM	1.0 PDH
Session 02	Young Professional Growth and Development Forum	10:45 AM	11:45 AM	1.0 PDH
Session 03	State of the Solids: The 100% Beneficial Reuse Program of the City of Columbus, Ohio	10:45 AM	11:45 AM	1.0 PDH
Session 04	The Fate of PFAS in Biosolids through Land Application, Incineration, and Thermal Treatment - Updates from Water Research Foundation Projects	10:45 AM	11:45 AM	1.0 PDH
TS I	Technology Spotlight I	12:45 PM	1:10 PM	
Session 05	Dewatering	1:30 PM	3:00 PM	1.5 PDH
Session 06	Resource Recovery and Sustainable Practices	1:30 PM	3:00 PM	1.5 PDH
Session 07	Outreach Updates: From State to Regional Solutions	1:30 PM	4:45 PM	2.5 PDH
Session 08	Resurgence of Sub-and Supercritical Wet Oxidation Technologies for Eliminating PFAS in Biosolids and Residuals with a Reduced Carbon Footprint	1:30 PM	3:00 PM	1.5 PDH
TS II	Technology Spotlight II	3:15 PM	3:40 PM	
Session 09	Emerging Issues	3:45 PM	4:45 PM	1.0 PDH

Session Number	Session Title	Start Time	End Time	CE Credits
Thursday, June 20				
Tour A	Modern Composting in Midwest City	8:00 AM	11:00 AM	3.0 GCHs
Session 10	Thickening	8:30 AM	10:00 AM	1.5 PDHs
Session 11	Greenhouse Gas Emissions at Wastewater Treatment Plants	8:30 AM	11:45 AM	2.5 PDHs
Session 12	Advancing Anaerobic Digestion	8:30 AM	11:45 AM	2.5 PDHs
Session 13	Thermal Hydrolysis Process	8:30 AM	10:00 AM	1.5 PDHs
TS III	Technology Spotlight III	10:15 AM	10:40 AM	
Session 14	Benefits and Approaches to Moving Dewatering into the Modeling Realm	10:45 AM	11:45 AM	1.0 PDH
Session 15	Dryer	10:45 AM	11:45 AM	1.0 PDH
Tour B	City of Edmond-Aerobic Digestion and Dewatering Facility Tour	1:00 PM	4:00 PM	3.0 GCHs
Session 16	Nutrient Considerations and Digestion	1:30 PM	3:00 PM	1.5 PDHs
Session 17	Land Application	1:30 PM	3:00 PM	1.5 PDHs
Session 18	Understanding Digester Rheology and Implications for Mixing and Operations	1:30 PM	3:00 PM	1.5 PDHs
Session 19	Carbonization	1:30 PM	3:00 PM	1.5 PDHs
Session 20	Nutrient Management Innovations	3:45 PM	4:45 PM	1.0 PDH
Session 21	Environmental Justice	3:45 PM	4:45 PM	1.0 PDH
Session 22	Anaerobic Digestion	3:45 PM	4:45 PM	1.0 PDH
Session 23	Dryers: The New, the Old, and the Safe	3:45 PM	4:45 PM	1.0 PDH
Friday, June 21				
Session 24	Program Drivers: Economics, Regulatory, and Market Considerations	8:30 AM	11:15 AM	2.5 PDHs
Session 25	Energy Management: From Production to Safety	8:30 AM	11:15 AM	2.5 PDHs
Session 26	Troubleshooting & Optimization	8:30 AM	11:15 AM	2.5 PDHs
Session 27	Case Studies & Lessons Learned	8:30 AM	11:15 AM	2.5 PDHs

PRE-CONFERENCE WORKSHOPS

Additional fees apply

Workshop A: Upgrading Biogas to Renewable Natural Gas

Tuesday, June 18

8:30 a.m. - 5:00 PM

Room 208

0.6 CEUs

- 8:30 a.m. Welcome & Introductions**
Silvia Fuentes, Washington Suburban Sanitation Commission;
Jeff Prevatt, Pima County RWRD
- 8:45 a.m. EPA Renewable Fuel Standard Program**
Erika Bailey, Raleigh Water; Blair Wisdom, Hazen and Sawyer
- 9:15 a.m. Gas Pipeline Requirements**
Erika Bailey, Raleigh Water; Blair Wisdom, Hazen and Sawyer
- 10:00 a.m. Networking and Coffee Break**
- 10:30 a.m. Lessons Learned**
- 12:00 p.m. Break for Lunch (provided)**
- 1:30 p.m. Biogas Upgrading Equipment**
Silvia Fuentes, Washington Suburban Sanitation Commission
- 2:15 p.m. Biogas Safety and Lessons Learned**
Jeff Prevatt, Pima County RWRD; Silvia Fuentes, Washington Suburban Sanitation Commission
- 3:00 p.m. Networking and Coffee Break**
- 3:30 p.m. Facility Design and Operation**
- 4:15 p.m. Final Group Interaction**
- 5:00 p.m. Workshop Adjourns**



**20
24**

PRE-CONFERENCE WORKSHOPS

Additional fees apply

Workshop B: Dewatering Optimization - Practical Ways to Improve Performance

Tuesday, June 18

Room 301 AB

8:30 a.m. - 5:00 p.m.

0.6 CEUs

- 8:30 a.m. Introduction and Review of Workshop Agenda and Goals**
Dave Oerke, Jacobs Solutions (Chair)
- 8:40 a.m. Use Survey Questions to Rank Dewatering Challenges for Attendees**
Stephanie Spalding, HDR (Co-Chair)
- 9:00 a.m. Polymer Interactions During Conditioning and Dewatering**
Matt Higgins, Bucknell University
- 10:00 a.m. Networking and Coffee Break**
- 10:30 a.m. Mechanical Optimization of Dewatering Equipment**
Adam Parmenter, HDR
- 11:00 a.m. Dewatering Optimization on the World's "Second Toughest Sludge" - Bend, Oregon**
Rashi Gupta, Carollo
- 11:30 a.m. Interactive Breakout Problem Solving Session with "what has worked" and lessons learned**
Stephanie Spalding, HDR
- 12:00 p.m. Break for Lunch (provided)**
- 1:30 p.m. Successful Start-Up and Dewatering Optimization on THP Digested Biosolids at HRSD**
Jeff Nicholson, HRSD
- 2:00 p.m. Review of Dewatering Planning and Optimization for ReWa**
Terry Goss, AECOM

Workshop B agenda continues on following page

PRE-CONFERENCE WORKSHOPS

Additional fees apply

Workshop B: Dewatering Optimization - Practical Ways to Improve Performance

Tuesday, June 18

8:30 a.m. - 5:00 p.m.

Room 301 AB

0.6 CEUs

Workshop B agenda continued from previous page

2:30 p.m. Interactive Breakout Session on O&M and Remaining Issues and challenges

Dave Oerke, Jacobs Solutions

3:00 p.m. Networking and Coffee Break

3:30 p.m. Polymer 101

Luke Plache, Velodyne Systems

4:00 p.m. Dewatered Solids Conveyance

Zwelani Ngwenya, Jacobs Solutions

5:00 p.m. Workshop Adjourns



**20
24**

PRE-CONFERENCE WORKSHOPS

Additional fees apply

Workshop C: A Cradle-to-Cradle Approach to Fugitive Methane Quantification and Abatement

Tuesday, June 18

Room 301 CD

8:30 a.m. - 5:00 p.m.

0.6 CEUs

- 8:30 a.m.** **Introduction - The State of Fugitive Methane**
David Ponder, U.S. Water Alliance
- 8:40 a.m.** **Drivers, Risks, and Regulations for Fugitive Methane**
Trung Le, Brown and Caldwell
- 9:05 a.m.** **Emerging and Available Quantification Technologies**
Cuihong Song, Princeton University
- 9:35 a.m.** **Technology Performance**
Sahar El Abbadi, Stanford University
- 10:00 a.m.** **Networking and Coffee Break**
- 10:30 a.m.** **Interactive Session: Technology Showcase featuring round robin presentations from Explicit, Qube, Konica Minolta, Sateletics, QLM**
Sahar El Abbadi, Stanford University; Trung Le, Embrey Bronstad, Brown and Caldwell
- 11:00 a.m.** **Open Floor Interactive Session**
- 12:00 p.m.** **Break for Lunch (provided)**
- 1:30 p.m.** **Practical Case Study 1 - Fugitive Methane Quantification and Source Identification**
Dante Fiorino, Brown and Caldwell
- 2:00 p.m.** **Practical Case Study 2 - Evaluating and Implementing Fugitive Methane Abatement Solutions**
Tyler Schweinfurth, City of Columbus



Workshop C agenda continues on following page



PRE-CONFERENCE WORKSHOPS

Additional fees apply

Workshop C: A Cradle-to-Cradle Approach to Fugitive Methane Quantification and Abatement

Tuesday, June 18

8:30 a.m. - 5:00 p.m.

Room 301 CD

0.6 CEUs

Workshop C agenda continued from previous page

- 2:30 p.m. Practical Case Study 3 - New Design Standards for Digestion Systems**
Tom Nangle, Brown and Caldwell
- 3:00 p.m. Networking and Coffee Break**
- 3:30 p.m. Tools Interactive Session: GHG Accounting and Financial Modeling, and Integrating Fugitive Methane Using the Tools of the Future - Emergence of Satellite Technologies**
Sahar El Abbadi, Stanford University; Trung Le, Brown and Caldwell
- 4:20 p.m. Research Debrief: NSERC: Integrating Multi-Scale Observations with Wastewater Process Simulations for Measuring, Monitoring, and Modelling GHG Emissions in Canadian Sewers and WRRFs**
Elsayed Elbeshbishy, University of Toronto
- 4:35 p.m. Q&A and Guided Discussion**
- 5:00 p.m. Workshop Adjourns**



**20
24**

OPENING GENERAL SESSION

Opening General Session

Wednesday, June 19

8:30 a.m. - 10:00 a.m.

Room 302

1.5 GCHs

- 8:30 a.m. Welcome and Introductions**
John Bannen, City of Oklahoma City, Conference Co-Chair
Sarah Guzman, Black and Veatch, Conference Co-Chair
- 8:40 a.m. WEF Welcome**
Tracy Ekola, WEF Board of Trustees
- 8:45 a.m. OK WEA Welcome**
Emily Rowland, OWEA President
- 8:50 a.m. City of Oklahoma City Welcome**
Shellie Chard, ODEQ
- 9:00 a.m. Plastic Pollution**
Mary Ellen Ternes, Earth & Water Law, LLC
- 9:30 a.m. Biosolids Role in Water/Energy Nexus**
Kenneth Wagner, Oklahoma State University
- 9:55 a.m. Closing**
- 10:00 a.m. Session Adjourns for Networking Break in Exhibit Hall**



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24

TECHNICAL SESSIONS

Session 01: Research and Innovation

Wednesday, June 19

10:45 a.m. - 11:45 a.m.

Room 208

1.0 PDHs

Moderators: Sarah Jones, Carollo; Joe Marino, Brown and Caldwell

10:45 a.m. Initial Results from PFAS Destruction Testing in Ultra High Temperature Ionic Gasification

Brandon Davis, Jim Henderson, Heartland Water Technology

11:15 a.m. Cleaning Up after the Pandemic: How Old and New Quaternary Ammonium Compounds Affect Anaerobic Digestion

Zihao Lu, Daniel Zitomer, Christopher Marshall, Marquette University; Anna Mahony, William Arnold, University of Minnesota-Twin Cities; Patrick McNamara, Black & Veatch and Marquette University

11:45 a.m. Session Adjourns for Luncheon



20
24

TECHNICAL SESSIONS

Session 02: RBC Young Professional Growth and Development Forum
Wednesday, June 19 **Room 209**
10:45 a.m. - 11:45 a.m. **1.0 PDHs**

Moderators: Sarah Guzman, Black & Veatch; Wick Warden, Allgeier, Martin & Associates

Speakers: Pooja Oberoi, Stantec; Felicia Morissette, Synagro; Gunner Mitchell, Pinellas County Government; Erik Larson, Vaughan

This session will feature a 60-min "Reverse Panel", where the following topics will be discussed:

- Developing a Resource Network,
- Professional Development and Career Guidance,
- Career or Professional Pathways in Water and Wastewater Engineering.



TECHNICAL SESSIONS

Session 03: State of the Solids: The 100% Beneficial Reuse Program of the City of Columbus, Ohio

Wednesday, June 19

10:45 a.m. - 11:45 a.m.

Room 301 AB

1.0 PDHs

Moderators: Joy Kotey, City of Oklahoma City; Albert Cox, MWRDGC

Speaker: Moss Birri, City of Columbus

The City of Columbus, Ohio commits to 100% beneficial reuse of its biosolids and achieves this goal through its diverse outlet portfolio and region-specific biosolids management strategies. Biosolids outlets include liquid land application, cake application for mine reclamation, off-site digestion, and the city-owned and operated Class A Biosolids Composting Facility. Learn about the management successes and challenges of these outlets and the program's future direction.

10:45 a.m. Overview of the City of Columbus and its Treatment Processes

10:55 a.m. Our Diverse Outlet Portfolio

- **10:55 a.m. - Liquid Land Application**
- **11:05 a.m. - Tree Farms**
- **11:15 a.m. - Off-site digesters**
- **11:20 a.m. - Compost Facility**

11:35 a.m. Wrap up + Q+A

11:45 a.m. Session Adjourns for Networking Luncheon



2024

TECHNICAL SESSIONS

Session 04: The Fate of PFAS in Biosolids through Land Application, Incineration, and Thermal Treatment - Updates from Water Research Foundation Projects

Wednesday, June 19

Room 301 CD

10:45 a.m. - 11:45 a.m.

1.0 PDHs

Moderator: Lynne Moss, Black & Veatch

10:45 a.m. PFAS Introduction & Regulatory Updates

Lynne Moss, Black & Veatch

10:50 a.m. WRF 5214 - Direct In Situ Measurement of PFAS Transformation & Leaching from Land-Applied Biosolids

Linda Lee, Purdue University

11:05 a.m. WRF 5111 - Studying the Fate of PFAS through Sewage Sludge Incinerators

Lloyd Winchell, Brown & Caldwell -

11:15 a.m. WRF 5211 Understanding the Value Proposition for Thermal Processes to Mitigate PFAS in Biosolids

Patrick McNamara, Black & Veatch and Marquette University

11:30 a.m. Panel Discussion



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24

TECHNOLOGY SPOTLIGHT

Technology Spotlight I

Wednesday, June 19

12:45 p.m. - 1:10 p.m.

*The two exhibitors listed below will each hold a 20-minute presentation once each. Participants are invited to attend a different presentation at each of the times listed below. Choose the presentation you would like to attend. Each presentation happens at the exhibitor's booth. Presentations kick off concurrently at: **12:50 p.m.** in each of the two booths.*

12:45 p.m.

Technology spotlight Introduction at entrance to exhibit hall

12:50 p.m.

2 Simultaneous Presentation A

Booth 729

Double your Cake solids in under 2 Minutes. A Performance Review of Elode Drying Technology

Devry Faddis, Charter Machine Company

Booth 802

The City of Marengo, IL Utilizes the Cleanb® to Significantly Improve Operation and Throughput Capacity

Lance Rodeman, BCR Environmental



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24

TECHNICAL SESSIONS

Session 05: Dewatering
Wednesday, June 19
1:30 p.m. - 4:45 p.m.

Room 208
2.5 PDHs

Moderators: Lance Rodeman, BCR Environmental; Ilke Erdogan, Stantec

- 1:30 p.m. Dewatering Benefits of SLG Technology at the McDowell Creek Wastewater Treatment Plant**
Anish Luthra, Kathryn Quaid, CDM Smith; Muriel Steele, Charlotte Water
- 2:00 p.m. Application of Measured Rheological Data for Improved Sludge Process Design**
Luke Thompson, Elaine Leonard, HDR
- 2:30 p.m. Knock Out, Drag Out Fight: Centrifuge vs. Belt Filter Press – Title for Best Dewatering Technology to Squeeze the Poop at William. E. Dunn Water Reclamation Facility!**
Shyam Sivaprasad, Manuel Moncholi, Jeovanni Ayala-Lugo, Simon Meikle, Stantec; Dean Lyons, Thomas Menke, Pinellas County Utilities; Pooja Oberoi, Stantec
- 3:00 p.m. Networking and Coffee Break**
- 3:45 p.m. Taking a Late Phase Detour: Dewatering System Redesign for the Plum Island WPCP**
Jacqueline Yeh, Ruth Borgmann, C. Bullard, Jared Hartwig, Hazen and Sawyer; Jonathan Walker, Gregory Hider, Charleston Water System
- 4:15 p.m. Enhancing Post-Treatment Efficiency of Temperature Phased Anaerobic Digestate through Combined Chemical Conditioning for Class A Biosolids Production**
Umme Sharmeen Hyder, Stantec and Toronto Metropolitan University; Ahmed Alsayed, Northwestern University; Elsayed Elbeshbishy, Joseph McPhee, Reshmi Misir, Toronto Metropolitan University
- 4:45 p.m. Session Adjourns for Networking Reception in Exhibit Hall**



20
24

TECHNICAL SESSIONS

Session 06: Resource Recovery and Sustainable Practices

Wednesday, June 19

1:30 p.m. - 4:45 p.m.

Room 209

2.5 PDHs

Moderators: Jeff LeBlanc, Denali; Eider Alvarez-Puras, Johnson Controls

1:30 p.m. Partnering with Local Sources of High Strength Wastes through a Co-digestion Program

Kevin Wegener, Ornella Sosa-Hernandez, Peter Schauer, Clean Water Services

2:00 p.m. Integrated Biosolids and Organics Management Strategy in the City of Windsor, Ontario, Canada

Christina Jung, Stantec; Eduardo Valdez, City of Windsor; Jian Li, Drury Whitlock, Stantec

2:30 p.m. Setting the Path for Resource Recovery at Iona Island with a 2100 Vision in Mind

C. Goss, AECOM; Marek Ratajczak, Richard Bitcon, Metro Vancouver; Joyce Chang, Kim Fries, Jacobs

3:00 p.m. Networking and Coffee Break

3:45 p.m. Optimizing Recovery and End Use of Gypsum in Super-Saturated RO Concentrate at PRWC Southeast Water Production Facility

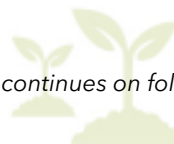
Christian Karavangelos, Carollo Engineers

4:15 p.m. Evaluating Phosphorus Recovery from Biosolids to Address Eutrophication in Florida

Sarah Guzman, Bernadette Drouhard, Mark Lang, Black & Veatch



Session 06 agenda continues on following page



TECHNICAL SESSIONS

Session 06: Resource Recovery and Sustainable Practices
Wednesday, June 19
1:30 p.m. - 4:45 p.m.

Room 209
2.5 PDHs

Moderators: Jeff LeBlanc, Denali; Eider Alvarez-Puras, Johnson Controls

Session 06 agenda continues from previous page

4:45 p.m. Session Adjourns for Networking Reception in Exhibit Hall

Alternate Feasibility Study for the Implementation of Hydrothermal Liquefaction in Southeast Michigan: Considering Environmental, Economic, and Social Aspects

Michael Thorson, Pacific Northwest National Laboratory; Xavier Fonoll Almansa, University of Texas at Austin; John Norton, Great Lakes Water Authority; Glen Daigger; John Willis, Brown and Caldwell; Shuyun Li, Pacific Northwest National Laboratory; Carol Miller, Wayne State University; Yuan Jiang, Pacific Northwest National Laboratory; Timothy Seiple; Andrew Marcus, Great Lakes Water Authority; Uriah Kilgore, Pacific Northwest National Laboratory



20
24

TECHNICAL SESSIONS

Session 07: Outreach Updates: From State to Regional Solutions

Wednesday, June 19

Room 301 AB

1:30 p.m. - 3:00 p.m.

1.5 PDHs

Moderators: Dan Ethington, Carollo; Matthew Jalbert, Trinity River Authority of Texas

1:30 p.m. Advocacy & Outreach in Biosolids Management

Megan Ross, SediVision, LLC

2:00 p.m. Managing Biosolids in Maine: Challenges and Potential Solutions

Bill Brower, Brown and Caldwell; Scott Firmin, Portland Water District; Tracy Chouinard, John Ross, Natalie Sierra, Brown and Caldwell

2:30 p.m. JEA's Measured Approach to Regional Biosolids Management with Drying: Setting a Trend for Utilities Concerned about Narrowing Management Options

Sudhan Paranjape, Carollo Engineers, Peter Blackley, Freddy Gonzalez, Bill Clendening, Brian Phillips, Jacksonville Energy Authority (JEA)

3:00 p.m. Session Adjourns for Networking and Coffee Break



2024

TECHNICAL SESSIONS

Session 08: Resurgence of Sub-and Supercritical Wet Oxidation Technologies for Eliminating PFAS in Biosolids and Residuals with a Reduced Carbon Footprint

**Wednesday, June 19
1:30 p.m. - 4:45 p.m.**

**Room 301 CD
2.5 PDHs**

Moderators: Richard Tsang, CDM Smith; Gavi Subramanian, Kennedy Jenks

In this session, participants will learn about the basics of sub-and supercritical thermal technologies, including hydrothermal carbonization (HTC), hydrothermal liquefaction (HTL), and supercritical water oxidation (SCWO). The focus will be on how these technologies can efficiently treat biosolids and residuals, with a particular emphasis on their potential to treat per-and polyfluoroalkyl substances (PFAS). Participants will gain insight into the energy balances of each technology, understand their advantages and disadvantages, and explore their capacity to reduce greenhouse gas (GHG) emissions related to traditional biosolids and residuals management.

1:30 p.m. Introductions to speakers and overview of session
Naomi Senehi, 374Water; Anne Sun, Hazen and Sawyer

1:45 p.m. Objective 1: Fundamentals: the basics of HTC, HTL, SCWO
Jeremy Taylor, SoMax; Michael Thorson, MicroBio Engineering/Pacific Northwest National Laboratory; Marc Deshusses, Duke University

2:45 p.m. Objective 1 discussion

2:50 p.m. Objective 2: PFAS treatment: current knowledge and research gaps of HTC, HTL, SCWO
Pooja Oberoi, Stantec

3:20 p.m. Networking Break

3:35 p.m. Objective 2 discussion



Session 08 agenda continues on following page



TECHNICAL SESSIONS

Session 08: Resurgence of Sub-and Supercritical Wet Oxidation Technologies for Eliminating PFAS in Biosolids and Residuals with a Reduced Carbon Footprint

**Wednesday, June 19
1:30 p.m. - 4:45 p.m.**

**Room 301 CD
2.5 PDHs**

Moderators: Richard Tsang, CDM Smith; Gavi Subramanian, Kennedy Jenks

Session 08 agenda continued from previous page

3:40 p.m. Objective 3: Energy balances: energy usage and recovery of HTC, HTL, SCWO

Jeremy Taylor, SoMax; Braden Crowe, MicroBio Engineering/Pacific Northwest National Laboratory; Sudhakar Viswanathan, 374Water

4:10 p.m. Objective 3 discussion

4:15 p.m. Panel discussion & closing remarks

Naomi Senehi, 374Water; Anne Sun, Hazen and Sawyer



20
24

TECHNOLOGY SPOTLIGHT

Technology Spotlight II

Wednesday, June 19

3:15 p.m. - 3:40 p.m.

The two exhibitors listed below will each hold a 20-minute presentation once each. Participants are invited to attend a different presentation at each of the times listed below. Choose the presentation you would like to attend. Each presentation happens at the exhibitor's booth. Presentations kick off concurrently at: **3:20 p.m.** in each of the two booths.

3:15 p.m. Technology Spotlight Introduction at entrance to exhibit hall
3:20 p.m. 2 Simultaneous Presentation A

Booth 519 Understanding Dryer Energy Requirements Within High Temperature Thermal Processes

Chip Pless, LCI Corporation

Booth 713 Dewatering Co-digested Biosolids and Source-separated organics; Challenge and Success.

Scott McKay, SMK Consulting in Fournier Booth



20
24

TECHNICAL SESSIONS

Session 09: Emerging Issues

Wednesday, June 19

3:45 p.m. - 4:45 p.m.

Room 301 AB

1.0 PDHs

Moderators: Patrick McNamara, Black & Veatch; Natalie Sierra, Brown and Caldwell

3:45 p.m. Harmonizing Thermal Pretreatment: Digestibility, Dewaterability, and Microbial Symphony in PFAS-Laden Sewage Sludge

Abir Hamze, Toronto Metropolitan University; Basem Reda, University of Alberta; Mohamed Zaghoul, Toronto Metropolitan University; Bipro Dhar, University of Alberta; Elsayed Elbeshbishy, Toronto Metropolitan University

4:15 p.m. Microplastics in Biosolids Treatment Stream: Abundance, Fate and Methodologies

Yian Sun, Mohammad Abu-Orf, Cayla Cook, Hazen and Sawyer

4:45 p.m. Session Adjourns for Networking Reception in Exhibit Hall

Alternate Microplastics: The Next Contaminant of Emerging Concern

Kaitlyn Hague



20
24

FACILITY TOUR

Additional fees apply

Tour A: Modern Composting in Midwest City

Thursday, June 20

8:00 a.m. - 11:00 a.m.

3.0 GCHs

Midwest City has successfully performed fully automated composting at their Northside Water Resources Recovery Facility since 2015. The City's Compost Facility at the WRRF uses a highly controlled in-vessel stabilization process, including a rail mounted turner/advancing machine, located within an industrial football field size building. The system utilizes automated temperature monitoring, control, and tracking to achieve a Class A product. Anaerobically digested and dewatered biosolids generated at the WRRF are blended with local yard waste in carefully designed ratios. Composting is accomplished without producing objectionable odors. Altogether, Midwest City sustainably recycles nutrients within the local community while diverting yard waste otherwise destined for disposal at the local landfill. The City sells out every batch of compost with waiting lists for the next batch. Conference attendees are invited to come and see modern composting in action.



20
24

TECHNICAL SESSIONS

Session 10: Thickening
Thursday, June 20
8:30 a.m. - 10:00 a.m.

Room 208
1.5 PDHs

Moderators: Tyler Hewitt, AtkinsRealis; Micah Blate, Hazen and Sawyer

8:30 a.m. Suspended Air Flotation (SAF) Thickening -- Suitability and Key Performance Drivers in Primary and Blended Solids Thickening Applications

Crystal Harness; [Caitlin Ruff](#), Black & Veatch; Cody Manley, John Bennett, Trinity River Authority of Texas; Eric Redmond

9:00 a.m. Thickening - Simple Process, Mixed Results

BJ Ward, [Mario Benisch](#), HDR

9:30 a.m. Increase in Biogas Production and Other Benefits Resulting from SLG-F Advanced Sludge Thickening and Sludge Conditioning Prior to Anaerobic Digestion at Worcester STW, UK

[Clementine Justier](#), Orege North America; [Hannah Belcher](#), Severn Trent

10:00 a.m. Session Adjourns for Networking and Coffee Break

Alternate Getting Our Poop in a Group: A Biosolids Regionalization Study in New England

Drury Whitlock, [Vanessa Borkowski](#), Stantec; Eric Spargimino, CDM Smith; Karla Sangrey, Upper Blackstone Clean Water; James McCaughey, Narragansett Bay Commission; Joshua Schimmel, Springfield Water & Sewer Commission



2024

TECHNICAL SESSIONS

Session 11: Greenhouse Gas Emissions at Wastewater Treatment Plants

Thursday, June 20

Room 301 AB

8:30 a.m. - 11:45 a.m.

2.5 PDHs

Moderators: Ashwin Dhanasekar, The Water Research Foundation; Jim Groman, Ovivo

8:30 a.m. Assessing Nitrous Oxide Emissions from a Demonstration-Scale Membrane Bioreactor Process

Ruth Spierling, Bruce Mansell, Raymond Tsai, Ariana Coracero, Los Angeles County Sanitation Districts; Joyce Lehman, Kiersten Melville, Alan Ronn, Metropolitan Water District of Southern California

9:00 a.m. Reduction of Nitrous Oxide Emissions from Biological Nutrient Removal Processes by Thermal Decomposition

Philip Pedros, Mott MacDonald; Omid Askari, West Virginia University; Hameed Metgalchi, Northeastern University

9:30 a.m. Evaluating the Sustainability Impacts of Replacing Multiple Hearth Furnaces with High Temperature Fluidized Bed Incinerators and PFAS Regulation Implications on Process Design

Gwyneth Jordan, Michael Theodoulou, Veolia Water Technologies & Solutions

10:00 a.m. Networking and Coffee Break

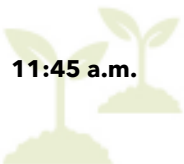
10:45 a.m. Next Generation Digestion for the Fugitive Methane Era

Tom Nangle, Dante Fiorino, Brown and Caldwell; Tyler Schweinfurth, City of Columbus

11:15 a.m. Biosolids Planning for an Uncertain Future – How Regulatory Drivers and Technology Developments are Influencing Long-Term Infrastructure Decisions

Pranoti Kikale, Eric Auerbach, Arcadis; Andy McClure, City of Toledo

11:45 a.m. Session Adjourns for Luncheon



2024

TECHNICAL SESSIONS

Session 12: Advancing Anaerobic Digestion

Thursday, June 20

8:30 a.m. - 11:45 a.m.

Room 301 CD

2.5 PDHs

Moderators: Raj Chavan, AtkinsRealis; Tracy Chouinard, Brown and Caldwell

8:30 a.m. A Regional Resource Recovery Facility Enhances Pinellas County's Approach to Biosolids and Organic Wastes Management Circularity

Gunner Mitchell, Pinellas County; Richard Tsang, CDM Smith

9:00 a.m. Comparing conventional anaerobic digestion with an innovative plug-flow digestion technology in North America

Andre Visser; Danny Traksel, Eddie Koornneef, Royal HaskoningDHV; Wayne Parker, University of Waterloo

9:30 a.m. Scalability of Anaerobic Digestion: Evaluating pilot scale operations for full-scale implementation for Metro Vancouver's advanced digestion concepts

Christopher Muller, Brown and Caldwell; Parisa Chegounian, Kelly Martin, Susanna Yik, Cristina Alexandre, Lillian Zaremba, Theresa Gregonia, Andrew Taverner, Metro Vancouver; Tyler Barber, Farokh Kakar, Michael Yesin, Brown & Caldwell

10:00 a.m. Networking and Coffee Break

10:45 a.m. Going the Extra Mile in Evaluating Digester Mixing Technologies for Existing Digesters

Rashi Gupta, Xiao Guo Carollo

11:15 a.m. How does scheduled maintenance affect the digester supervision through modeling? A practical approach

Constanza Sadino, Andres Donoso-Bravo, Fernando Zorrilla, Modela; Bastian Valdebenito, Felipe Hansen, ProCycla

11:45 a.m. Session Adjourns for Luncheon



2024

TECHNICAL SESSIONS

Session 13: Thermal Hydrolysis Process

Thursday, June 20

8:30 a.m. - 10:00 a.m.

Room 209

1.5 PDHs

Moderators: Greg Woodward, Burns & McDonnell; Samir Mathur, CDM Smith

8:30 a.m. Challenges of Simulating THP for a Real World Full-Scale Application. Are our commercial simulators giving the right message?

Thomas Tom Johnson, Adrian Romero, Jacobs; Blake Anderson, Kansas City Water; Julian Sandino, Jacobs

9:00 a.m. Co-Digestion and Thermally Hydrolyzed Food Waste and Waste Activated Sludge

Amr Ismail, Farokh laqa Kakar, Elsayed Elbeshbishy, Toronto Metropolitan University; George Nakhla, Western University

9:30 a.m. Growing Up Together Lessons Learned During Startup: Commissioning Sidestream Deammonification Concurrent with THP Digestion to Meet Strict Recycle Limits

Paul Le Bel, Amy Hanna, Matthew Vanhorne, Hazen and Sawyer; Robert Wierzbicki, PC Construction; Joseph Uglevich, Stantec

10:00 a.m. Session Adjourns for Networking and Coffee Break

Alternate: Alternate: Chemical and Hyper-thermal post treatment of Anaerobically Digested Cattle Manure for Enhanced Biogas Production

Basem Haroun, Mohamed El-Qelish, Western University; Farokh Laqa Kakar; Seyedehfatemeh Kianizadeh, Western University; Christopher Muller, Brown and Caldwell; Katherine Bell, Brown and Caldwell; George Nakhla, University of Western Ontario



2024

TECHNOLOGY SPOTLIGHT

Technology Spotlight III Thursday, June 20 10:15 a.m. - 10:40 a.m.

The two exhibitors listed below will each hold a 20-minute presentation once each. Participants are invited to attend a different presentation at each of the times listed below. Choose the presentation you would like to attend. Each presentation happens at the exhibitor's booth. Presentations kick off concurrently at: **10:20 a.m.** in each of the two booths.

10:15 a.m. Technology Spotlight Introduction at entrance to exhibit hall
10:20 a.m. 2 Simultaneous Presentation A

Booth 604 **PRI-TECH®: a chemical pill for biosolids headaches - case studies in peroxide regenerated iron for biosolids applications**
Ian Watson, USP Technologies

Booth 907 **Can (supercritical) water be the solution to our PFAS problem?**
Sudhakar Viswanathan, 374 Water



20
24

TECHNICAL SESSIONS

Session 14: Benefits and Approaches to Moving Dewatering into the Modeling Realm

Thursday, June 20

Room 208

10:45 a.m. - 11:45 a.m.

1.0 PDHs

Moderators: Greg Woodward, Burns & McDonnell; Stephanie Spalding, HDR

10:45 a.m. Moderator Introductions & Menti Voting
Dave Oerke, Jacobs

10:50 a.m. Benefits of Modeling Dewatering
Chris Wilson, HRSD

10:55 a.m. Case Study: Empire WWTP Dewatering Performance - Concept Development and Testing using Biowin and its State Variables
George Sprouse, Metropolitan Council

11:05 a.m. Concept Development to Estimate Polymer Demand and Cake Solids using State Variables from SUMO
Matt Higgins, Bucknell University

11:15 a.m. Modeling Approach III: SUMO Extended Model
Zwelani Ngwenya, Jacobs

11:30 a.m. Panel Discussion

11:45 a.m. Session Adjourns for Luncheon in Exhibit Hall



2024

TECHNICAL SESSIONS

Session 15: Dryer
Thursday, June 20
10:45 a.m. - 11:45 a.m.

Room 209
1.0 PDHs

Moderators: Bill Brower, Brown and Caldwell; Ruth Borgmann, Hazen and Sawyer

10:45 a.m. PFAS Assessment of a Rotary Drum Dryer
John Ross, Alex Seidel, Lloyd Winchell, Brown and Caldwell; Martha Wells, EnviroChem Services; Donald Song, Synagro Technologies

11:15 a.m. Tipping Fees Reach the Tipping Point: The Why, What, and How of the Summerville CPW Biosolids Upgrade Project
Thomas Vollmar, KCI Technologies

11:45 a.m. Session Adjourns for Luncheon

Alternate Thermal Treatment of PFAS with Gasification, Pyrolysis, Incineration, and Supercritical Water Oxidation (SCWO) - What is the Current Status?
Gwyneth Jordan, Levent Takmaz, Veolia; Lloyd Winchell, Brown and Caldwell



20
24

FACILITY TOUR

Additional fees apply

Tour B: City of Edmond-Aerobic Digestion and Dewatering Facility Tour

Thursday, June 20

1:00 p.m. - 4:00 p.m.

3.0 GCHs

The City of Edmond's Coffee Creek Water Resource Recovery Plant (CCWRRF) includes preliminary treatment (screening/grit removal), secondary treatment (aeration basins and clarifiers), tertiary treatment (filtration/disinfection), and solids stabilization (sludge lagoons). CCWRRF has been the process of Phase 1 of an expansion and improvements project that includes improvements to the liquid treatment and solids processing facilities that will increase the AAF capacity to 10 mgd and meet the new regulatory limit on nitrate. Modifications include new external anoxic zones and a mixed liquor recycle system to operate the secondary treatment facility with a Modified Ludzack-Ettinger process. The Phase 1 Expansion is anticipated to be completed in 2024 but several elements are already in operation including modifications to the solids processing facilities. The Phase 1 Expansion improvements will decommission the sludge lagoons and replace them with a new train that includes sludge screening, sludge thickening, aerobic digestion, sludge dewatering, and cake storage.



**20
24**

TECHNICAL SESSIONS

Session 16: Nutrient Considerations and Digestion
Thursday, June 20
1:30 p.m. - 3:00 p.m.

Room 208
1.5 PDHs

Moderators: Joy Kotey, City of Oklahoma City; Sarah Jones, Carollo

1:30 p.m. Phosphorus Sequestration in Biosolids, Nuisance Struvite Control via PAD and Chemical Addition to TH-AD Digestate, and Downstream Effects

Caitlyn Harris, Maya Garcia, HRSD; Dana Gonzalez, Carollo Engineers; Arba Williamson, Jeffrey Nicholson, BJ Ward, Holly Ann Matel, Charles Bott, Christopher Wilson, HRSD

2:00 p.m. Modeling Aeration and Phosphorus Removal and Lingering Precipitants in a Full-Scale Post-Aerobic Digester (PAD)

Sara Arabi, Nathan Brown, Stantec; Cole Sigmon, Christopher Marks, City of Boulder; Songheng Li, Mehran Andalib, Cody Charnas, Stantec

2:30 p.m. Anaerobic Digestion with Nutrient Control - What if your Digesters were the Sidestream?

Matthew Williams, Justin Wippo, Thermal Process Systems

3:00 p.m. Session Adjourns for Networking and Coffee Break

Alternate New Solids Processing Facility Helps WRRF Achieve Nutrient Reduction and Solids End/Use Disposal Goals

Kris Neifing, City of Edmond; Corinne Duckworth, Toshio Shimada, Carollo



20
24

TECHNICAL SESSIONS

Session 17: Land Application

Thursday, June 20

1:30 p.m. - 3:00 p.m.

Room 209

1.5 PDHs

Moderators: Nick Hines, Material Matters; Dan Ethington, Carollo

1:30 p.m. Evaluation of Innovative Biosolids Management Strategies with Considerations of Circular Water Economy
Yian Sun, Hazen and Sawyer; Christian Evans, Mark Teshima, Sylvis; Asa Lewis, Derya Dursun, Mohammad Abu-Orf, Micah Blate, Hazen and Sawyer

2:00 p.m. Sewage Sludge Incinerator Ash as a Phosphorus Fertilizer for Corn and Soybean
Persephone Ma, Carl Rosen, University of Minnesota, Twin Cities

2:30 p.m. Harnessing Biosolids to Reclaim Mine Lands: Case Studies from Appalachia
Ryan Cherwinski, Samuel Liebl, Denali

3:00 p.m. Session Adjourns for Coffee Break

Alternate Biosolids Land Application Efficiencies Through Automation
Nayeli Basulto, Lystek International Inc.; James Dunbar



20
24

TECHNICAL SESSIONS

Session 18: Understanding Digester Rheology and Implications for Mixing and Operations

Thursday, June 20

Room 301 AB

1:30 p.m. - 3:00 p.m.

1.5 PDHs

Moderators: John Kabouris, Stantec; Dustin Craig, CDM Smith

1:30 p.m. Introduction
Rashi Gupta, Carollo

1:35 p.m. Introduction to Digester Rheology and Implications for Mixing and Volume Expansion
Matt Higgins, Bucknell University

2:00 p.m. Digester Mixing Technologies "Lightning Round" & Open Discussion
Mohammad Shallouf, Anaergia; Haydon Christiansen, Ovivo;
Erik Larson, Vaughan

2:25 p.m. Modeling of Digester Mixing
Ed Wicklein, Carollo

2:50 p.m. Panel Discussion

3:00 p.m. Session Adjourns for Coffee Break



**20
24**

TECHNICAL SESSIONS

Session 19: Carbonization

Thursday, June 20

1:30 p.m. - 3:00 p.m.

Room 301 CD

1.5 PDHs

Moderators: Farokh Kakar, Brown and Caldwell; Jessica Calteux, Marquette University

1:30 p.m. **Pyrolysis Gas Thermal Oxidation: PFAS and Emissions Control**

John Ross, Lloyd Winchell, Mary Lou Romero, Farokh laqa Kakar, Brown and Caldwell; Alexandre Miot, Silicon Valley Clean Water; John Norton, Great Lakes Water Authority; Matt Magruder, Milwaukee Metropolitan Sewerage District; Katherine Bell, Brown and Caldwell

2:00 p.m. **The State of Full-Scale Implementation - Biosolids Pyrolysis and Gasification**

John Ross, DJ Wacker, Brown and Caldwell

2:30 p.m. **Intensification of Pyrolysis by Autothermal Operation**

Philip Pedros, Mott MacDonald; Tannon Daugaard, Iowa State University; Sean McKelvey, Philadelphia Water Department

3:00 p.m. **Session Adjourns for Coffee Break**



20
24

TECHNICAL SESSIONS

Session 20: Nutrient Management Innovations
Thursday, June 20
3:45 p.m. - 4:45 p.m.

Room 208
1.0 PDHs

Moderators: Raj Chavan, AtkinsRealis; Joy Kotey, City of Oklahoma City

3:45 p.m. Phosphorus Sequestration and Recovery with Brushite: Validating Chemical Equilibrium and Process Models with Case Studies

Sara Arabi, Art Umble, Shelley Trujillo, Stantec; Cole Sigmon, Christopher Marks, City of Boulder; Stantec Inc.; John Gage, Roberto Luna, City of Longmont; Thomas Worley-Morse, Metro Wastewater Reclamation District

4:15 p.m. WRF 5108 Acid+: A Novel Treatment Process Configuration for Simultaneous Process Intensification and Struvite Management

Christopher Muller, Brown and Caldwell; Ahmed Abouhend, Chul Park, University of Massachusetts; Dante Fiorino, Brown and Caldwell; Natalia Perez, NYCDEP; Krishnamurthy Ramalingam, The City College of New York; John Willis, Brown and Caldwell; Tyler Schweinfurth, City of Columbus; Ashwin Dhanasekar, The Water Research Foundation

4:45 p.m. Session Adjourns



20
24

TECHNICAL SESSIONS

Session 21: Environmental Justice
Thursday, June 20
3:45 p.m. - 4:45 p.m.

Room 209
1.0 PDHs

Moderator: Kathryn Crestani, Jacobs

This session will provide utility perspectives on different mechanisms for positively contributing to the communities in which our facilities are located. Speakers will address tangible community benefits, supporting DEI in our volunteer organizations, and workforce development for a pragmatic conversation about how to bring diversity, equity and inclusion (DEI) initiatives to life.

3:45 p.m. Community Benefits from Biosolids Reuse"
Albert Cox, Chicago MWRD

4:00 p.m. Update on Ohio Water Environment Association's DEI Committee"
Miyah Bayless, City of Dayton

4:15 p.m. Workforce development programs bring mutual benefits for communities and utilities
Speaker TBD

4:30 p.m. Panel Discussion

4:45 p.m. Session Adjourns



20
24

TECHNICAL SESSIONS

Session 22: Anaerobic Digestion

Thursday, June 20

3:45 p.m. - 4:45 p.m.

Room 301 AB

1.0 PDHs

Moderators: Ruth Spierling, Los Angeles County Sanitation Districts; Jim Dunbar, Lystek International

3:45 p.m. Investigating the differences of process performance and digestate physical properties between TPAD and conventional mesophilic digestion

Matthew Higgins, Labella Associates DPC; [Emma Guertin](#)

4:15 p.m. Achieving Class A Biosolids with Staged Thermophilic Anaerobic Digestion

[David Parry](#), Marialena Hatzigeorgiou, Jacobs; Jessica Johnson, Metropolitan Sewer District of Greater Cincinnati

4:45 p.m. Session Adjourns



TECHNICAL SESSIONS

Session 23: Dryers: The New, the Old, and the Safe
Thursday, June 20
3:45 p.m. - 4:45 p.m.

Room 301 CD
1.0 PDHs

Moderators: Lance Rodeman, BCR Environmental; Dieter Weinert, Huber Technology, Inc.

3:45 p.m. Biosolids Thermal Dryer Safety Fact Sheet - The Fundamentals for Managing Risks of Fires and Explosions
Webster Hoener, Black & Veatch; Jody Barksdale, Carollo Engineers

4:15 p.m. Live to Dry Another Day: Low Energy Residuals Drying
Paul Knowles, Hazen and Sawyer

4:45 p.m. Session Adjourns



TECHNICAL SESSIONS

Session 24: Program Drivers: Economics, Regulatory, and Market Considerations

Friday, June 21

Room 208

8:30 a.m. - 11:15 a.m.

2.5 PDHs

Moderators: Joy Kotey, City of Oklahoma City; Corrine Duckworth, Carollo

8:30 a.m. Assessing the Impact of Federal and State Regulations on Biosolids Beneficial Use

Nickolas Hines, Material Matters

9:00 a.m. Biosolids Management and Cryptic Currencies – Net Zero, Emerging Contaminants, and New Biosolids Markets

Roya Pishgar, Ruth Roxburgh, Jacobs; Christian Evans, SYLVIS; Mahna Mehrazaran, Jacobs; Mark Teshima, SYLVIS; Baha Hasasneh, Jacobs; David Curran, Steven Dimock, Deidre Barlett, Saif Molla, EPCOR

9:30 a.m. Biosolids Solutions Tailored to Fit Small Facilities

Julianne Amenta, Micah Blate, Hazen and Sawyer

10:00 a.m. Networking and Coffee Break

10:15 a.m. Unfreeze & Change: Nationwide Cost Survey Triggered by PFAS Provides Insights on Biosolids Best Management Practices for Clean Water Agencies

Henry Croll, Pooja Oberoi, Joan Oppenheimer, Nicole Stephens, Stantec; Emily Rimmel, NACWA; Donald Ryan; Art Umble, Stantec; Joseph Jacangelo

10:45 a.m. The Results of Replacing a Class A Biosolids Stabilization Technology to Gain Capacity and Save Money

Adam Parmenter, Gina MacPhee, HDR

11:15 a.m. Conference Adjourns

Alternate PFAS and Trace Contaminants Challenges to Beneficial Use of Biosolids and Compost

James Slaughter, Beveridge & Diamond



20
24

TECHNICAL SESSIONS

Session 25: Energy Management: From Production to Safety
Friday, June 21 **Room 209**
8:30 a.m. - 11:15 a.m. **2.5 PDHs**

Moderators: Tom Crowley, Carollo; Manny Moncholi, Stantec

8:30 a.m. A Comprehensive Case Study on Municipality Biogas Utilization: from Production Projection to Technology Selection

Yuan Fang, Drury Whitlock, Stantec; Chris Wilson

9:00 a.m. Energy Management at WRRFs - Is Hydrogen a Viable Alternative?

Dale Gabel, Carollo Engineers; Tracy Hodel, City of St. Cloud; James Flamming, Cirt of Cedar Rapids; Samuel Reifsnnyder, Brendan Wolohan, Carollo Engineers

9:30 a.m. From Sour to Sweet: Treating Biogas with High H₂S Concentrations

Adam Behr, Bryan Lisk, Hazen and Sawyer; Karloren Guzman, City of Tampa

10:00 a.m. Networking and Coffee Break

10:15 a.m. Digesters & Biogas - Safety From Hard Lessons-Learned

Yasmine Boudhaouia; Matthew Williams, Thermal Process Systems; Keith Albretsen

10:45 a.m. Full-scale Demonstration of Micro-Aeration for Hydrogen Sulfide Control at the Chambers Creek Regional Wastewater Treatment Plant

Christopher Muller, Brown and Caldwell; Karla Guevarra, Amanda Summers, Laurie Pierce, Parisa Shahbaz, Pierce County; Peter Zemke, Karina Woodland, Vicky Hollingsworth, Embrey Bronstad, Brown and Caldwell

11:15 a.m. Conference Adjourns



20
24

TECHNICAL SESSIONS

Session 26: Troubleshooting & Optimization

Friday, June 21

8:30 a.m. - 11:15 a.m.

Room 301 AB

2.5 PDHs

Moderators: Lance Rodeman, BCR Environmental; Rebecca Poole, Carollo

8:30 a.m. Understanding the Stability and Capacity of Full-scale Anaerobic Digesters Using a Bench-scale Test
Ornella Sosa-Hernandez, Peter Schauer, Clean Water Services

9:00 a.m. A Beautiful Biosolids Product in the Making: Dewatering Optimization and Aerobic Curing of Thermally Hydrolyzed Solids at HRSD's Atlantic Treatment Plant
Dana Gonzalez, Carollo Engineers; Jeffrey Nicholson, Christopher Wilson, Holly Anne Matel, Charles Bott, HRSD

9:30 a.m. Deployment of a Struvite-Control Optimization System at a Large Wastewater Treatment Plant
Chris Hill, Richard Waterous, Jenny Hansen, Kemira Water Solutions Inc.; Leo Pou, Carollo Engineers; Ricardo Colon, Kemira Water Solutions Inc.

10:00 a.m. Networking and Coffee Break

10:15 a.m. Acute Digester Heating Issue Uncovers Chronic Plant Ailment
John Maley, HDR

10:45 a.m. Reheating of Dried Biosolids: Causes and Mitigation Options for Drying Facilities
Sean Murnan, Synagro

11:15 a.m. Conference Adjourns

Alternate Troubleshooting VSR: A Multi-Approach Strategy Towards Significant Operational Savings
Giovanna Portioli, Muriel Steele, Charlotte Water

Alternate Using the Capillary Suction Time Test as a Tool to Support Operation of the Dewatering Process
Chris Maher, Ornella Sosa-Hernandez, Phoebe Wu, Clean Water Services

TECHNICAL SESSIONS

Session 27: Case Studies & Lessons Learned

Friday, June 21

8:30 a.m. - 11:15 a.m.

Room 301 CD

2.5 PDHs

Moderators: Dan Ethington, Carollo; Dieter Weinert, Huber Technology, Inc.

8:30 a.m. Biosolids Master Planning in Tulsa, Oklahoma to Develop a Sustainable Biosolids Management Program

Todd Williams, Adrian Romero, Tom Johnson, Jacobs; Lars Ostervold, Black & Veatch; Matt Vaughan, City of Tulsa

9:00 a.m. Developing a Regional Biosolids Master Plan for the North Shore Water Reclamation District

Joe Marino, Persephone Ma, Brown and Caldwell; Steve Waters, North Shore Water Reclamation District; Natalie Sierra, Brown and Caldwell; Travis Vodnik, Emily Prentice, North Shore Water Reclamation District

9:30 a.m. Commissioning of a Modern Centrifuge Solids Dewatering System

Chris Maher, Mike Gates, Dave Clements, Mike Idehara, Perry Sunderland, Clean Water Services

10:00 a.m. Networking and Coffee Break

10:15 a.m. Biosolids Pyrolysis and Gasification – Lessons Learned from Early Adopters

Jay Surti, Charles Winslow, Annika de Hesse, David Solley, GHD

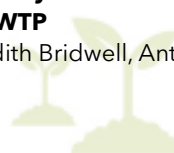
10:45 a.m. The Road to Resource Recovery - Equipment Procurement, Natural Gas Utility Negotiations, D3 RINs, and IRA Credits for an Enhanced Energy Recovery Project

Eric Auerbach, Nick Taylor, Arcadis; Jess Rosentel, Capital Region Water

11:15 a.m. Conference Adjourns

Alternate Preparing for the Future: WAS Only Indirect Thermal Drying at Manchester Creek WWTP

Ruth Borgmann, C Bullard, Meredith Bridwell, Anthony Young, Hazen and Sawyer



2024

POSTER PRESENTATIONS

Poster Presentations

Wednesday, June 19, 10:00 a.m. - 6:15 p.m.

Thursday, June 20, 10:00 a.m. - 3:45 p.m.

The following poster presentations will be set up for viewing in the exhibit hall during hall hours, including during networking breaks, luncheons, and receptions:

Individualized Economic Analysis of Hydrothermal Liquefaction for Wastewater Decarbonization

Michael Timko, Julian Bennett, Muntasir Shahabuddin, Andrew Teixeira, Nikolaos Kazantzis, Worcester Polytechnic Institute; Julia Faeth, RAPID Manufacturing Institute; Aidin Panahi, Andrew Charlebois, Alex Maag, Harold Walker, Worcester Polytechnic Institute

Recovery of Heavy Metals from Electronic Industry Waste Sludge by Bioleaching Process

Shen-Yi Chen, Tzu-Jung Yen, National Kaohsiung University of Science and Technology

Organic Carbon Fate and Pathogen Inactivation in Biosolids Produced using a Novel Alkaline Hydrolysis/Electrochemical Process

Esrat Eva, Texas Tech University

Effect of a Novel Alkaline Hydrolysis/Electrochemical Process in the Chemical Speciation of Trace Metals in Biosolids for Land Application

Andres Sanchez Garcia, Texas Tech University

Enhancing Post-Treatment Efficiency of Temperature Phased Anaerobic Digestate through Combined Chemical Conditioning for Class A Biosolids Production

Umme Sharmeen Hyder, Stantec & Toronto Metropolitan University



20
24

EXHIBITION INFORMATION

Exhibition Schedule

Wednesday, June 19	10:00 a.m. - 6:15 p.m. Exhibit Hall Open
	10:00 a.m. - 10:45 a.m..... Networking Break
	11:45 a.m. - 1:30 p.m.....Networking Luncheon
	12:45 p.m. - 1:10 p.m. Technology Spotlight I
	3:00 p.m. - 3:45 p.m..... Networking Break
	3:15 p.m. - 3:40 p.m. Technology Spotlight II
	4:45 p.m. - 6:15 p.m. Networking Reception
Thursday, June 20	10:00 a.m. - 3:45 p.m. Exhibit Hall Open
	10:00 a.m. - 10:45 a.m..... Networking Break
	10:15 a.m. - 10:40 a.m..... Technology Spotlight III
	11:45 p.m. - 1:30 p.m. Networking Luncheon
	3:00 p.m. - 3:45 p.m..... Networking Break

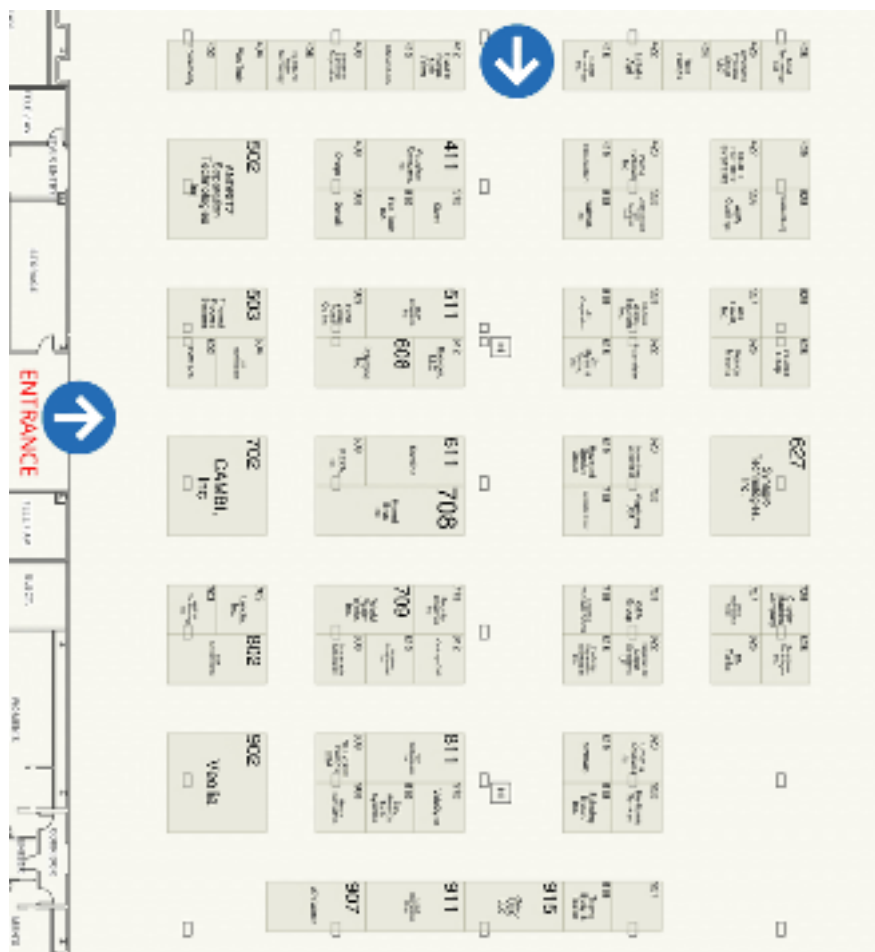
Individuals under 18 entering the Exhibition must be accompanied by a parent or guardian at all times. The parent or guardian must obtain a badge at registration and assume all risk and responsibility for the minor's safety.

Due to the proprietary nature of the displays, photography of displays and materials is forbidden without exhibitors' express permission.



20
24

EXHIBIT HALL FLOOR PLAN



EXHIBITOR DIRECTORY

As of May 29, 2024

For Company Descriptions, view Exhibitors in the mobile app.

374Water Booth 907

<https://374water.com/>
Phone: 501-509-9397
701 W Main St STE 410
Durham, NC 27701

A&W Coatings..... Booth 526

<https://awmain.com/>
Phone: 508-947-8937
5895 Shiloh Road STE 114
Alpharetta, GA 30005

Alfa Laval, Inc. Booth 527

<https://www.alfalaval.us/>
Phone: 713-934-3160
10470 Deer Trail Drive
Houston, TX 77038

Alpine Technology, Inc..... Booth 703

<https://www.alpinetechnology.com/>
Phone: 512-619-5916
1906 Winter Park Road
Austin, TX 78746-7624

American Process Group LLC Booth 426

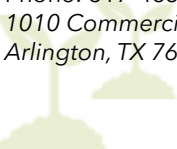
<https://www.amprocessgroup.com/>
Phone: 780-963-1484
1201 Pacific Avenue #600
Tacoma, WA 98402



ENGINEERED SUCCESS

ANDRITZ Separation Technologies Inc Booth 502

<https://andritz.com/>
Phone: 817-465-5611
1010 Commercial Blvd. S.
Arlington, TX 76001



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EXHIBITOR DIRECTORY

BCR Environmental Booth 802

<http://www.bcrinc.com/>
Phone: 904-819-9170 EXT 130
100 N. Laura Street
Jacksonville, FL 32202

BDP Industries, Inc Booth 511

<https://www.bdpindustries.com/>
Phone: 518-695-6851
PO Box 118
Greenwich, NY 12834-0118

Bio-Nomic Services Booth 922

<https://bio-nomic.com/>
Phone: 704-529-0000
530 Woodlawn St
Belmont, NC 28012

Boerger, LLC Booth 612

<https://www.boerger.com/>
Phone: 612-435-7300
2860 Water Tower Place
Chanhassen, MN 55317-8004

Brown Bear Corporation Booth 623

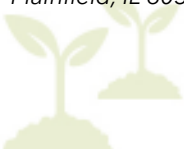
<https://www.brownbearcorp.com/>
Phone: 2248 Ave of Industry
2860 Water Tower Place
Corning, IA 50841

CAMBI, Inc Booth 702

<https://cambi.com/>
Phone: 484-318-8623
279 Great Valley Pkwy
Malvern, PA 19355-1308

CB&I Storage Tank Solutions LLC Booth 522

<https://www.cbi.com/>
Phone: 815-439-3118
14105 S. Route 59
Plainfield, IL 60544



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EXHIBITOR DIRECTORY

Centrisys/CNP Booth 812

<https://www.centrisys-cnp.com/>

Phone: 262-654-6006

9586 58th Place

Kenosha, WI 53144

Charter Machine Company Booth 729

<https://www.chartermachine.com/>

Phone: 732-425-7489

55 Wester Ave

Metuchen, NJ 08840

Cleanwater1 Booth 419

<https://www.cleanwater1.com/>

Phone: 724-814-3756

1901 W Garden Rd

Vineland, NJ 08360

Denali Booth 508

<https://www.denalicorp.com/>

Phone: 315-952-1538

3308 Bernice Ave

Russellville, AR 72802-8465

DN Tanks Booth 826

<https://www.dntanks.com/>

Phone: 855-368-2657

11 Teal Road

Wakefield, MA 01880

Dumpster-Veyor Booth 718

<https://www.cordellmfg.com/>

Phone: 757-880-1272

95 West Butler Ave

Chalfont, PA 18914

Ecoremedy Booth 402

<https://ecoremedyllc.com/>

Phone: 419-349-5402

960 Penn Ave

Pittsburgh, PA 15222



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24

EXHIBITOR DIRECTORY

EGGER Pumps & Iris Valves..... Booth 412

<https://www.eggerpumps.com/>

Phone: 478-250-9880

140 Willingham Drive

Juliette, GA 31046

Fab-Tech Inc..... Booth 510

<https://www.fabtechinc.com/>

Phone: 802-655-8800

480 Hercules Dr

Colchester, VT 05446

Flottweg Separation Technology, Inc. Booth 818

<https://www.flottweg.com/>

Phone: 859-448-2300

10700 Toebben Drive

Independence, KY 41051

Fournier Industries Inc Booth 713

<https://www.fournierdewatering.com/>

Phone: 418-423-4241

3787 West, Frontenac Boulevard

Thetford Mines, QC G6H 2B5

Franzenburg Booth 528

<https://www.frznbrg.com/>

Phone: 515-423-8982

2301 Dean Avenue

Des Moines, IA 50317

GEA Group Booth 723

<https://gea.com/>

Phone: (201) 767-3900

100 Fairway Court

Northvale, NJ 07647

Gryphon Environmental, Inc. Booth 810

<https://www.gryphonenv.com/>

Phone: 270-478-1040

838 Industrial Drive

Owensboro, KY 42301



20
24

EXHIBITOR DIRECTORY

Hayward Gordon Group Booth 619

<https://www.haywardgordon.com/>

Phone: 905-693-8595

5 Brigden Gate

Halton Hills, ON L7G 0A3

Heartland Water Technology Booth 406

<https://www.heartlandtech.com/>

Phone: 800-759-1758

831A Park Avenue

Murfreesboro, TN 37130

Heron Innovators Booth 908

<https://heroninnovators.com/>

Phone: 916-408-6601

10624 Industrial Avenue

Roseville, CA 95678

HUBER Technology, Inc. Booth 418

<https://www.huber-technology.com/>

Phone: 704-949-1010

1009 Airlie Parkway

Denver, NC 28037

Jim Myers & Sons, Inc. Booth 618

<https://www.jmsequipment.com/>

Phone: 704-554-8397

P.O. Box 38778

Charlotte, NC 28278

Kemira Water Solutions Inc..... Booth 523

<https://www.kemira.com/>

Phone: 678-819-4693

200 Galleria Parkway Suite 1500

Atlanta, GA 30339



Kiewit

Kiewit..... Booth 512

<https://www.kiewit.com/markets/water/>

Phone: 913-494-2087

8900 Renner Blvd

Lenexa, KS 66219



EXHIBITOR DIRECTORY



Komline..... Booth 611

<https://komline.com/>
Phone: 908-234-1000
12 Holland Ave
Peapack, NJ 07977

Konica Minolta..... Booth 626

<https://www.konicaminolta.us/>
Phone: 201-825-4000
101 Williams Drive
Ramsey, NJ 07446

Kraft Energy Systems..... Booth 427

<https://www.kraftpower.com/>
Phone: 330-830-4158
4039 Millenium Blvd SE
Massillon, OH 44646

Krofta Technologies..... Booth 719

<https://www.krofta.com/>
Phone: 225-916-4095
401 South Street
Dalton, MA 01227

Landia, Inc..... Booth 705

<https://www.landiainc.com/>
Phone: 919-466-0603
111 Triangle Trade Drive
Cary, NC 27513

LaSalle Agri..... Booth 422

<https://www.lasalleagri.com/>
Phone: 519-312-9569
7162 LaSalle Line
Watford, ON N0M 2S0

LCI Corporation..... Booth 519

<https://www.lcicorp.com/sludge-drying/thin-film-sludge-dryer>
Phone: 704-398-7571
4433 Chesapeake Dr
Charlotte, NC 28216



EXHIBITOR DIRECTORY

Lipp America Tank Systems..... Booth 910

<https://www.lipp-ats.com/>
Phone: 616-201-6761
29770 Hudson Dr
Novi, MI 48377

Lystek International Corp..... Booth 911

<https://www.lystek.com/>
Phone: 226-444-0186
125 McGovern Dr. Unit 1
Cambridge, ON N3H 4R7

Merrell Bros Inc..... Booth 708

<https://www.merrellbros.com/>
Phone: 765-438-7374
8811 West 500 North
Kokomo, IN 46901

NETZSCH Pumps USA Booth 809

<https://pumps-systems.netzsch.com/>
Phone: 484-356-3147
119 Pickering Way
Exton, PA 19341

NeutraTek Odour Solutions LP..... Booth 822

<https://neuratek.com/>
Phone: 403-453-4530
#305, 11979 - 40th Street SE
Calgary, AB T2Z 4M3

Orege..... Booth 409

<https://www.orege.com/>
Phone: 678-266-0486
100 Chamisa Rd.
Covington, GA 30016



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Ovivo USA LLC Booth 915

<https://www.ovivowater.com/>
Phone: 801-981-3070
4246 S Riverboat Rd Ste 300
Salt Lake City, UT 84123-2583



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EXHIBITOR DIRECTORY

Oxbo International Corp..... Booth 727

<https://oxbo.com/>
Phone: 608-745-2512
100 Bean Street
Clear Lake, WI 54005

Penn Valley Pump Co Inc Booth 509

<http://www.pennvalleypump.com/>
Phone: 215-343-8750
998 Easton Rd
Warrington, PA 18976-1800

Polydyne Inc Booth 608

<https://www.snf.com/locations/us/municipal-water-treatment/>
Phone: 912-880-2021
1 Chemical Plant Road
Riceboro, GA 31323

Prime Solution Inc Booth 423

<https://www.psirotary.com/>
Phone: 269-355-3793
610 S. Platt St.
Otsego, MI 49078

Putzmeister Booth 622

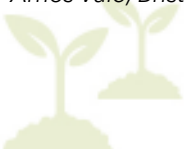
<https://www.putzmeisteramerica.com/>
Phone: 262-497-0292
1733 90th Street
Sturtevant, WI 53177

PWTech Booth 602

<https://www.pwtech.us/>
Phone: 410-238-7977
9004 Yellow Brick Road, Suite D
Rosedale, MD 21237

QLM Technology Ltd Booth 428

<https://www.qlmtec.com/>
Phone: 518-368-5586
470 Bath Road
Arnos Vale, Bristol BS43AP



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24

EXHIBITOR DIRECTORY

RDP Technologies Inc..... Booth 811

<https://rdptech.com/>
Phone: 610-650-9900
960 Brook Rd Suite 8
Conshohocken, PA 19428

REXA, Inc..... Booth 609

<https://www.rexa.com/>
Phone: 508-436-6528
4 Manley Street Building E
West Bridgewater, MA 02379

Roto Pumps..... Booth 424

<https://www.rotopumps.com/>
Phone: 803-833-4453
5889 S Garnett Rd
Tulsa, OK 74146

Schwing Bioset, Inc..... Booth 918

<https://www.schwingbioset.com/>
Phone: 715-247-3433
350 SMC Drive
Somerset, WI 54025-9050

Sentrimax Centrifuges (USA) Inc. Booth 828

<https://www.sentrimax.com/>
Phone: 949-606-2147
108 Sentry Drive
Mansfield, TX 92672

Serpentix Conveyor Corporation..... Booth 408

<https://serpentix.com/>
Phone: 303-430-8427
11821 Huron Street
Westminster, CO 80234-3423

Shincci-USA..... Booth 410

<http://www.shincci-usa.com/>
Phone: 949-244-2854
4743 E. 30th Place
Yuma, AZ 85365



20
24

EXHIBITOR DIRECTORY

Smith & Loveless Inc. Booth 823

<https://www.smithandloveless.com/>

Phone: 913-888-5201

14040 Santa Fe Trail Dr.

Lenexa, KS 66215

SPIRAC Booth 819

<https://www.spirac.com/>

Phone: 770-632-9838

75 Jackson Street, Suite 300

Newnan, GA 30263

Sustainable Generation Booth 808

<https://sustainable-generation.com/>

Phone: 312-315-7416

110 S Poplar St STE 400

Wilmington, DE 19801

Synagro Technologies, Inc. Booth 627

<https://www.synagro.com/>

Phone: 610-952-2390

435 Williams Court Suite 100

Baltimore, MD 21220-2888

Thermal Process Systems..... Booth 503

<https://www.thermalprocess.com/>

Phone: 765-714-7929

627 E 110th Ave

Crown Point, IN 46307

Travis Body & Trailer Booth 919

<https://www.travistrailers.com/>

Phone: 713-466-5888

13955 Spencer Rd

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<https://www.usptechnologies.com/>

Phone: 800-851-8527

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20
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<https://www.valmet.com/>
Phone: 720-503-2275
3720 Davinci Court Suite 300
Norcross, GA 30092

Vaughan Company, Inc. **Booth 411**

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<https://www.vaulteddeep.com/>
Phone: 316-303-7461
7513 South K14 Highway
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VeloDyne **Booth 912**

<https://velodynesystems.com/>
Phone: 303-530-3298
543 S Pierce Ave
Louisville, CO 80027

Veolia **Booth 902**

<https://www.veoliawatertech.com/expertise/municipal-solutions>
Phone: 919-677-8310
4001 Weston Parkway
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Vogelsang USA **Booth 722**

<https://www.vogelsang.info/en-us/>
Phone: 330-296-3820
PO Box 751
Ravenna, OH 44266

WesTech **Booth 404**

<https://westech-inc.com/>
Phone: 208-406-7721
3665 S. West Temple
Salt Lake City, UT 84115



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4000 SW 113th St

Oklahoma City, OK 73173



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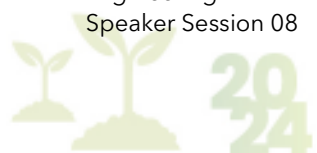
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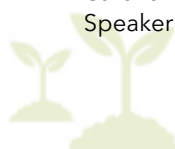
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Jacqueline Yeh

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20
24

CONFERENCE SCHEDULE AT-A-GLANCE

Tuesday, June 18

7:30 a.m. - 5:00 p.m. Registration
8:30 a.m. - 5:00 p.m. Workshops A, B, C

Wednesday, June 19

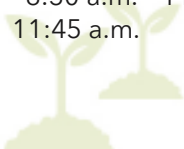
7:30 a.m. - 5:00 p.m. Registration
8:30 a.m. - 10:00 a.m. Opening General Session
10:00 a.m. - 6:15 p.m. Exhibit Hall Hours
10:45 a.m. - 11:45 a.m. Technical Sessions 1, 2, 3, 4
11:45 a.m. - 1:30 p.m. Networking Luncheon
12:45 p.m. - 1:10 p.m. Technology Spotlight I
1:30 p.m. - 3:00 p.m. Technical Session 7
1:30 p.m. - 4:45 p.m. Technical Sessions 5, 6, 8
3:15 p.m. - 3:40 p.m. Technology Spotlight II
3:45 p.m. - 4:45 p.m. Technical Session 9
4:45 p.m. - 6:15 p.m. Networking Reception

Thursday, June 20

8:00 a.m. - 5:00 p.m. Registration
8:00 a.m. - 11:00 a.m. Facility Tour A
8:30 a.m. - 10:00 a.m. Technical Sessions 10, 13
8:30 a.m. - 11:45 a.m. Technical Sessions 11, 12
10:00 a.m. - 3:45 p.m. Exhibit Hall Hours
10:15 a.m. - 10:40 a.m. Technology Spotlight III
10:45 a.m. - 11:45 p.m. Technical Sessions 14, 15
11:45 a.m. - 1:30 p.m. Networking Luncheon
1:00 p.m. - 4:00 p.m. Facility Tour B
1:30 p.m. - 3:00 p.m. Technical Sessions 16, 17, 18, 19
3:45 p.m. - 4:45 p.m. Technical Sessions 20, 21, 22, 23

Friday, June 21

8:00 a.m. - 12:00 p.m. Registration
8:30 a.m. - 11:45 a.m. Technical Sessions 24, 25, 26, 27
11:45 a.m. Conference Adjourns



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24

UPCOMING WEF EVENTS

Circular Water Economy Summit

July 15-17, 2024

Dallas, TX

<http://www.wef.org/CWEsummit>

WEFTEC

October 5-9, 2024

New Orleans, LA

www.weftec.org

WEF/AWWA Utility Management Conference

February 11-14, 2025

Dallas, TX

www.awwa.org/Events-Education/Utility-Management



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