



**CWEA**

# AC19 Challenge Areas, Topics, and Session Types

## ANNUAL CONFERENCE CHALLENGE AREAS

We surveyed our members, local section leaders, technical committee leaders and top agency leaders to uncover the challenges our membership faces. These challenge areas are divided into two categories for the 2019 Annual Conference:

- Team Challenge Area sessions will bring many different professions or practice areas together. These sessions will cover important issues necessary to build utilities of the future. We would like these sessions to be fun, include audience interaction and tap into the wisdom and experience of our diverse audiences.
- Professional Challenge Area sessions will focus on discipline or practice area specific issues. During these professional development sessions, participants will improve their skills, build professional connections and share solutions.

*Proposals focused on these challenge areas will be given priority.*

TEAM CHALLENGE AREAS	
<b>Asset Management for Aging Infrastructure</b>	<b>Audience</b>
<ul style="list-style-type: none"> <li>• Condition assessment best practices for collection systems and/or treatment plants</li> <li>• Getting to data driven decisions</li> <li>• Risk evaluation tools and financial models</li> <li>• Condition monitoring / predictive and preventive maintenance (reliability centered maintenance/RCM, vibration or thermal analysis, six sigma)</li> <li>• CMMS program management, software selection and best practices</li> <li>• Building in resiliency for climate changes and the new normal</li> <li>• How to recover more resources through operations</li> </ul>	Field Crews Operators Maintenance Engineers Managers
<b>Co-digestion and Energy Resource Recovery</b>	<b>Audience</b>
<ul style="list-style-type: none"> <li>• Organics, FOG and food waste co-digestion – case histories for challenges and successes</li> <li>• Regulatory challenges for co-digestion of organics and food waste</li> <li>• Receiving and pre-conditioning of food waste and organic waste</li> <li>• Odor control challenges for food waste and organics waste receiving and processing</li> <li>• Biogas management and use (gas treatment, gas storage, co-gen, vehicle fuel, energy storage/batteries)</li> <li>• Financial models and tracking hidden costs</li> <li>• Manage risks and challenges</li> </ul>	Operators Engineers Managers

Leadership Training, Workforce Development and Succession Planning	Audience
<ul style="list-style-type: none"> <li>• Training for new supervisors and front-line leaders</li> <li>• Workforce development</li> <li>• Staff development, succession planning and training program success stories</li> <li>• Outreach for the next generation</li> <li>• SOP and training material development</li> <li>• Internship and apprenticeship program success stories</li> <li>• Developing/assessing trainee programs</li> <li>• Alternative project delivery and risk management</li> <li>• Fiscal responsibility and communicating the value of agencies</li> <li>• Targeting grants to make innovation cost effective (case studies)</li> </ul>	<p>Operators Engineers Managers</p>
Nutrient Management and Removal	Audience
<ul style="list-style-type: none"> <li>• Emerging technologies in mainstream nitrogen removal</li> <li>• Side stream nutrient removal</li> <li>• Phosphorus removal/recovery</li> <li>• Operational tactics for nutrient removal</li> <li>• Creative ideas and case histories in nutrient management</li> </ul>	<p>Operators Engineers Managers Regulators</p>
Regulators and the Regulated Can Succeed Together	Audience
<ul style="list-style-type: none"> <li>• SSS-WDR (Sanitary Sewer Systems – Waste Discharge Requirements) regulations today and future</li> <li>• Nutrient management</li> <li>• Toxicity policy and toxicity control</li> <li>• Reuse/IPR/DPR regulations</li> <li>• Preparing for the biosolids landfill ban and new food waste recycling requirements</li> <li>• Air quality regulations</li> <li>• Water/wastewater/AWT operator regulations</li> <li>• OSHA and worker safety regulations</li> <li>• Navigating regulations to implement innovative and environmentally sound projects</li> </ul>	<p>Engineers Managers Regulators</p>
Water Reuse Operations & Technology	Audience
<ul style="list-style-type: none"> <li>• Advanced Water Treatment (AWT) operations, maintenance and optimization <ul style="list-style-type: none"> <li>○ Operator certification updates</li> </ul> </li> <li>• Indirect and direct potable reuse (IPR/DPR) technologies and regulations</li> <li>• Advances in membrane technologies and innovations</li> <li>• Residuals management</li> <li>• Disinfection operations</li> <li>• Ozone/biologically active filtration</li> <li>• Advanced oxidation processes</li> <li>• Managing the impacts of declining flows</li> <li>• Developing local water resources / One Water</li> </ul>	<p>Operators Maintenance Engineers Managers Regulators</p>

<ul style="list-style-type: none"> <li>• Innovative partnerships</li> </ul>	
---	--

PROFESSIONAL CHALLENGE AREAS	
------------------------------	--

Biosolids	Audience
<ul style="list-style-type: none"> <li>• Advances in digestion</li> <li>• Dewatering optimization, polymers and technologies</li> <li>• Obtaining Class A</li> <li>• Land application and disposal alternatives</li> <li>• New technologies in biosolids management</li> <li>• Regulatory updates for biosolids</li> </ul>	<p>Managers Engineers Operators</p>
Collection Systems	Audience
<ul style="list-style-type: none"> <li>• Resiliency and preparing for big storms</li> <li>• Pipeline inspection, cleaning and management</li> <li>• Sewer lateral management</li> <li>• Managing inflow and infiltration (I/I)</li> <li>• Gravity sewers, force mains and pump station design and maintenance</li> <li>• SSO management success stories, spill estimating</li> <li>• Optimizing cleaning frequencies</li> </ul>	<p>Field crews Engineers Managers</p>
Laboratory	Audience
<ul style="list-style-type: none"> <li>• ELAP (Environmental Laboratory Accreditation Program)</li> <li>• TNI (The NELAC Institute) Module 2</li> <li>• Method update rule</li> <li>• Creating thorough SOPs and data sheets</li> <li>• Nutrients and the laboratory: science behind analysis and reporting involved</li> </ul>	<p>Laboratory staff</p>
Plant Maintenance – Best Practices	Audience
<ul style="list-style-type: none"> <li>• Pumps, pump stations and valves</li> <li>• Reliability centered maintenance (RCM)</li> <li>• Cathodic protection</li> <li>• Condition monitoring tools - vibration/thermal analysis/other</li> <li>• CMMS success stories</li> <li>• Instrumentation and controls innovations</li> </ul>	<p>Field crews Operators Managers</p>
Plant Operations – Challenges, Opportunities and Basic Training	Audience
<ul style="list-style-type: none"> <li>• Preliminary (fine screening)</li> <li>• Primary Treatment</li> <li>• Secondary Treatment</li> <li>• Tertiary Treatment</li> </ul>	<p>Operators Managers Engineers Managers</p>

<ul style="list-style-type: none"> <li>• Energy management</li> <li>• Disinfection</li> <li>• Odor Control</li> <li>• SCADA/instrumentation and process control</li> </ul>	
<b>Pretreatment &amp; Stormwater</b>	<b>Audience</b>
<ul style="list-style-type: none"> <li>• Pretreatment program case studies</li> <li>• Stormwater as a resource/LID/green design</li> <li>• Emerging contaminants and microplastics</li> <li>• Pretreatment standards for water reuse</li> <li>• Stormwater inspections</li> <li>• Collection system crews involved in stormwater maintenance</li> </ul>	Pretreatment (P3S) Engineers Managers
<b>Safety</b>	<b>Audience</b>
<ul style="list-style-type: none"> <li>• Confined space entry/rescue</li> <li>• Commercial truck safety/regulations</li> <li>• Fall protection</li> <li>• Trenching and shoring</li> <li>• Lock-out tag-out procedures</li> <li>• Electrical safety for non-electricians</li> </ul>	Field crews Operators
<b>Other</b>	

## ANNUAL CONFERENCE EXHIBIT HALL TOPICS

For those proposing an Innovation Learning Center in Exhibit Hall or Exhibit Hall Tour, the topics are as follows:

TOPIC AREAS	
<b>Asset Management for Aging Infrastructure</b>	<b>Audience</b>
<ul style="list-style-type: none"> <li>• Collection systems</li> <li>• Headworks</li> <li>• Primary</li> <li>• Secondary</li> <li>• Tertiary</li> <li>• Disinfection</li> <li>• Biosolids Management</li> <li>• Pumps and Systems</li> <li>• Automation and Instrumentation</li> <li>• Smart Water - Navigating the digital transformation of water utilities</li> <li>• Smart Water - Addressing integration and cybersecurity challenges</li> <li>• Smart Water - Resilience water systems</li> </ul>	All

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Smart Water - Real-time water quality monitoring</li> <li>• Smart Water - Smart water as a foundation for a smart city</li> <li>• Smart Water - Incentivizing smart water policy</li> <li>• Smart Water - Customer engagement</li> <li>• Other</li> </ul> |  |
|--|--|

## ANNUAL CONFERENCE SESSION TYPES

The following conference session types will be featured:

### Workshops (Full to Half Day)

- Participants engage in participatory discussions, interactive exercises, learning activities and/or case studies on a particular subject or skill
- Are participant-centered, highly interactive and may include some participant pre-work
- Cover topics and skills that are critical to the success of specific audiences and provide substantive training and opportunities for practice and critical discussion so that participants can immediately apply the workshop learning back in the workplace
- Full-day (5-6 hours) pre-conference workshops and half-day (2-3 hours) workshops will be offered

### Technical Sessions (50-Minutes)

- Presented by industry professionals who share case studies, lessons learned and overviews of technologies and design strategies
- Participants may engage in participatory discussions, interactive exercises, learning activities and/or are given time to ask questions and discuss the content with the presenter and peers
- Cover one topic in depth, rather than giving an overview of many topics
- Track Facilitator (CWEA member volunteer to be identified in December/January) will be present in technical sessions to help guide and encourage questions and discussions
- Are typically 50-minutes in length with 1 or 2 speakers

### Panel Session (50-Minutes)

- Feature a facilitated discussion about a specific topic, issue or hot topic amongst a selected group of panelists (3-4) who share differing perspectives or insights
- Questions for the panelists come from both the moderator/facilitator as well as the session participants

### Exhibit Hall Learning Center Presentation (15-Minutes with 5-Minute Q&A)

- Presented by representatives of exhibiting companies. *Presenters must represent an exhibiting company that has reserved/purchased an exhibit booth no later than October 31, 2018. For more information on the booths available in the exhibit hall, [click here](#).*
- Cover the best new technology and provides new information that will help attendees on the job
- Case studies, lessons learned, new tools, teaching new technical skills or sharing research results from pilot studies are all good discussion items – please do not give a direct product sales pitch! We are aiming for attendees to leave with knowledge they'll value.

### Exhibit Hall Tours (50-Minutes)

- Facilitator leads a tour group around the exhibit hall for stops at specific booths

- Facilitator organizes route and secures representatives of exhibiting companies to provide additional info and/or demos
- Tours will focus on a specific theme or topic area and will be conducted during the exhibit hall open hours