



2020 Annual Conference

CWEA ★ NWEA

AC20 Challenge Areas, Topics, and Session Types

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 2020 Annual Conference:

- Challenge Areas: Topics of interest for CWEA members and our highest priorities in selecting speakers
- Target Audiences and Interest Areas: Members we serve at AC and the topics they're interested in.

Proposals focused on these challenge areas will be given priority.

CHALLENGE AREAS	
Co-digestion and Energy Resource Recovery	Desired Presentation Types
<ul style="list-style-type: none"> • Organics, FOG and food waste co-digestion – case histories for challenges and successes • Regulatory challenges for co-digestion of organics and food waste • Receiving and pre-conditioning of food waste and organic waste • Odor control challenges for food waste and organics waste receiving and processing • Biogas management and use (gas treatment, gas storage, co-gen, vehicle fuel, energy storage/batteries) • Financial models and tracking hidden costs • Manage risks and challenges 	<ul style="list-style-type: none"> - Lessons learned - Case studies - Plant real world experience
Emerging Technologies	Desired Presentation Types
<ul style="list-style-type: none"> • Co-digestion • Nutrient removal • Emerging technologies in mainstream nitrogen removal • Biosolids management • Membranes UF, MF, NF, RO • Advanced disinfection technologies • Energy management (incl batteries, co-gen) • Resource recovery • Other ideas in addition to the ones listed above are welcome 	<ul style="list-style-type: none"> - Innovative research - Pilot studies - Success stories - Mobile exhibit hall tours

Leadership Training	Desired Presentation Types
<ul style="list-style-type: none"> • Training for new supervisors and front-line leaders • Communications • Leadership tools – soft skills, computer skills, public speaking • Leadership for the first time supervisor, transitioning • Fiscal responsibility and communicating the value of agencies • On-boarding new team members • Leadership during disaster/Emergency response • System outage coordination 	<ul style="list-style-type: none"> - Workshops - Real world experience - Team presentation - Lessons Learned - Agency programs
Nutrient Management and Removal	Desired Presentation Types
<ul style="list-style-type: none"> • Operational tactics for nutrient removal • Optimization strategies • O&M challenges • Instrumentation and process control 	<ul style="list-style-type: none"> - Lessons learned - Case studies - Plant real world experience
Regulations/Regulatory	Desired Presentation Types
<ul style="list-style-type: none"> • SSS-WDR (Sanitary Sewer Systems – Waste Discharge Requirements) regulations today and future • Toxicity policy and toxicity control • Reuse/IPR/DPR regulations • Air quality regulations • OSHA and worker safety regulations 	<ul style="list-style-type: none"> - Basics (101) of water/wastewater regulations - Overview of new initiatives - Impacts on workforce and agencies
Water Reuse	Desired Presentation Type
<ul style="list-style-type: none"> • Operations & Technology • Advanced Water Treatment (AWT) operations, maintenance and optimization <ul style="list-style-type: none"> ○ Operator certification updates • Disinfection operations • Ozone/biologically active filtration • Advanced oxidation processes 	<ul style="list-style-type: none"> - Basics (101) - Lessons learned - Case studies - Plant real world experience - Regulatory compliance
Operations 101	Desired Presentation Types
<ul style="list-style-type: none"> • Plan reading • P&ID • Basic electrical • Biological process control • Data collection and management • Pump maintenance • Collection system maintenance • Team collaboration and communication SLR 	<ul style="list-style-type: none"> - Basics (101) - Workshop - Interactive - Hands-on - Agency programs

Asset Management	Desired Presentation Types
<ul style="list-style-type: none"> • Condition assessment best practices for collection systems and/or treatment plants • Getting to data driven decisions • Condition monitoring / predictive and preventive maintenance (reliability centered maintenance/RCM, vibration or thermal analysis, six sigma) • How to recover more resources through operations 	<ul style="list-style-type: none"> - Lessons learned - Case studies - Best practices - Implementation success stories

TARGET AC AUDIENCES AND INTEREST AREAS	
Collection Systems	
<ul style="list-style-type: none"> • Resiliency and preparing for big storms • Pipeline inspection, cleaning and management • Sewer lateral management • Managing inflow and infiltration (I/I) • Gravity sewers, force mains and pump station design and maintenance • SSO management success stories, spill estimating • Optimizing cleaning frequencies 	
Engineering & Research	
<ul style="list-style-type: none"> • Emerging Technologies • Case studies • Design challenges • Success stories • Impacts of regulation • Start-up procedures and practices • Construction challenges • Project management 	
Electrical and Instrumentation	
<ul style="list-style-type: none"> • Cybersecurity • Process automation • Instrumentation and calibration skills • Software and SCADA systems • Control room design and operations • Data management • Managing data so it gets used • Control system upgrades and migrations • Control panel set-up and standardizations 	

Laboratory	
<ul style="list-style-type: none"> • ELAP (Environmental Laboratory Accreditation Program) • TNI (The NELAC Institute) Module 2 • Method update rule • Creating thorough SOPs and data sheets • Nutrients and the laboratory: science behind analysis and reporting involved 	
Plant Maintenance – Best Practices	
<ul style="list-style-type: none"> • Pumps, pump stations and valves • Reliability centered maintenance (RCM) • Cathodic protection • Condition monitoring tools - vibration/thermal analysis/other • CMMS success stories • Instrumentation and controls innovations 	
Plant Operations	
<ul style="list-style-type: none"> • Preliminary (fine screening) • Primary Treatment • Secondary Treatment • Tertiary Treatment • Energy management • Disinfection • Odor Control • SCADA/instrumentation and process control 	
Pretreatment & Stormwater	
<ul style="list-style-type: none"> • Pretreatment program case studies • Stormwater as a resource/LID/green design • Emerging contaminants and microplastics • Pretreatment standards for water reuse • Stormwater inspections • Collection system crews involved in stormwater maintenance 	
Safety	
<ul style="list-style-type: none"> • Confined space entry/rescue • Commercial truck safety/regulations • Fall protection • Trenching and shoring • Lock-out tag-out procedures • Electrical safety for non-electricians 	

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

Mobile 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 closer to the conference
- Tours will focus on a specific theme or topic area
- Will be conducted during the exhibit hall open hours on Wednesday and Thursday as well as when the exhibit hall is closed on Thursday