

WEFTEC 2023 CALL FOR CONTENT

TOPICS AND AREAS OF INTEREST

All submitters will be required to select a topic when submitting both proposals and abstracts. The bullets found under each topic represent the program committee's areas of interest.

AIR QUALITY AND ODORS

- Air Quality Monitoring
- Collection Systems Odor Management
- WRRFs Odor Management
- Odor and Corrosion Control Technologies

ASSET MANAGEMENT, PROGRAM DEVELOPMENT, AND RELIABILITY STRATEGIES

- AM Program Development
- Risk/Criticality/Condition Assessments
- Performance Reporting
- Asset Reliability

BIOSOLIDS AND RESIDUALS

- Innovation in Dewatering Technology
- Understanding Grit Characteristics and Improvements in Management
- Co-digestion of HSW with Wastewater Solids
- Fate of PFAS in Biosolids

BUSINESS AND ORGANIZATIONAL TRANSFORMATION

- Data Management Strategies and Best Practices
- Systems Procurement and Implementation
- Data Analytics, Business Intelligence, Data Driven Decision Making, Dashboarding
- IT (specifically technology needs, governance, staffing needs, skills gaps, and procurement methods)

CLIMATE CHANGE ADAPTATION AND METRICS

- GHG Emissions
- Facility-wide Decarbonization
- ESG and Envision

COLLECTION SYSTEMS

- Collection Utility Operations Staff Certification and Training
- Private Property Challenges and Solutions
- Pressure Pipe Condition and Rehab
- Model versus Monitoring

DISINFECTION AND PUBLIC HEALTH

- Innovative Disinfection Technologies, Disinfectants, and Applications
- Wastewater-based Disease Surveillance and Pathogens
- Emerging Contaminants
- Public Health Policy and Regulations

DIVERSITY, EQUITY, AND INCLUSION

- Water/Environmental Stress, Equity, and Justice
- Multigenerational Workforce Issues
- DE&I Implementation Success and Failures
- Indigenous Peoples' Water Issues and Perspectives

EFFECTIVE UTILITY MANAGEMENT

- Workforce Issues (specifically retention, hiring, career progression)
- Rates, Finance, and Capital Planning

ENERGY MANAGEMENT AND OPTIMIZATION

- Thermal Processes
- Hydrogen Production from Biosolids
- Biogas Enhancement
- Innovation in Gas Clean-up Technology

ENERGY RECOVERY

- Thermal Processes
- Hydrogen Production from Biosolids
- Biogas Enhancement
- Innovation in Gas Clean-up Technology

FUTURE ISSUES AND GLOBAL INSIGHTS

- Water Energy Food Nexus
- Coastal Issues
- Circular Economy

INDUSTRIAL ISSUES AND TREATMENT TECHNOLOGIES

(industrial settings include food and beverage, downstream oil and gas/refining, upstream oil and gas, chemicals, petrochemicals, pharmaceuticals, power, mining and forest products)

- Achieving Sustainability Goals
- Industry-specific Challenges and Solutions
- Difficult-to-treat Contaminants in an Industrial Setting
- Unique Technology Applications for the Industrial Market

INSTRUMENTATION, PROCESS CONTROL, INTELLIGENT WATER SYSTEMS

- Sensor Maintenance and Quality Control
- Data Analytics for Process Optimization, Machine Learning, and Digital Twins
- Process Control
- SCADA and DCS Systems

MICROCONSTITUENTS, CONTAMINANTS OF EMERGING CONCERN, AND TRACE ORGANIC COMPOUNDS

- Pharmaceuticals and Personal Care Products
- Algal Toxins, Hormones, and Endocrine Disruptors
- Per-and Polyfluoroalkyl Active Substances (PFAS)
- Other Emerging Contaminants (including microplastics and nanomaterials)

ORGANIZATIONAL AND OPERATIONAL RESILIENCY AND SAFETY

- Disaster Recovery and Emergency Operations
- Employee and Public Safety
- Cybersecurity

PROJECT DELIVERY

- Alternative Project Delivery Methods
- Design Delivery Standards

PUBLIC COMMUNICATION AND OUTREACH

- Public and Stakeholder Engagement
- PFAS and Emerging Contaminants Communication
- Public Education Program Examples
- Communication Strategies (specifically for utilities without communication teams)

SMALL COMMUNITIES AND DECENTRALIZED SYSTEMS

- Financing Alternatives
- International/National Case Studies
- Staff Training

STORMWATER

- Flash Flooding in Urban Areas
- Environmental and Social Justice in Stormwater Settings
- Incorporating Climate Change Impacts in Stormwater Analytics/Design
- Remedies for GSI Design Issues

WATER REUSE

- Potable Reuse Planning and Implementation
- Maximizing Water Reuse Process Recovery
- RO Concentrate Management and Disposal
- Reuse Treatment Advances and Monitoring/Operations
- One Water Approach, Policy, and Regulations

WATERSHED MANAGEMENT

- Integrated Planning
- Regional Watershed Management
- Watershed-based Studies, Permitting, and TMDLs
- Water Quality Modeling

WET WEATHER ISSUES

- Wet Weather Treatment Process Technologies and Strategies
- Planning for Resiliency
- Chemically Enhanced Primary Treatment
- Impact of Wet Weather on Secondary Treatment

WRRF: LOW CARBON/ENERGY MAINSTREAM NUTRIENT REMOVAL

- Low DO BNR and Simultaneous Nitrification/Denitrification
- Shortcut Nitrogen Removal including Mainstream Partial Nitritation /Anammox and Partial Denitrification and Anammox
- Carbon Storage and Utilization for BNR
- Fermentation to Aid Biological Phosphorus Removal (Sidestream EBPR)

WRRF: LOW FOOTPRINT MAINSTREAM TREATMENT

- Membrane Bioreactors
- Biofilm and Hybrid Systems (e.g. MABR, IFAS, MBBR, BAF)
- Selective Wasting (i.e. hydrocyclones, surface wasting)
- Aerobic Granular Sludge and Continuous Flow Granulation Technologies
- Ballasted or Encapsulated Technologies

WRRF: MAINSTREAM NUTRIENT REMOVAL FUNDAMENTALS AND APPLICATIONS

- Case Studies for Full-Scale Design and Alternative Assessment
- Cost Evaluation and Alternatives Assessment
- Microbial Ecology for Biological Nutrient Removal
- Kinetic and Modeling Studies for Biological Nutrient Removal
- Chemical-based treatment (including P-removal)

WRRF: PRELIMINARY AND PRIMARY TREATMENT

- Screenings and Grit Removal
- Influent Pumping and Flow Equalization
- Chemically and Biologically Enhanced Carbon Diversion
- Alternative Primary Treatment Technologies (e.g. filtration, DAFs)
- Septage and FOG Management

WRRF: SECONDARY AND ADVANCED TREATMENT

- Aeration, Mixing Efficiency, and Technologies
- Clarifier Modeling and Advancements
- Tertiary Treatment Technologies for Solids/Liquids Separation
- Aerobic or Anaerobic Biological Treatment (non-nutrients)

WRRF: SIDESTREAM AND ALTERNATIVE NUTRIENT REMOVAL AND RECOVERY

- Sidestream Treatment Technologies (e.g., Partial Nitritation/Anammox, Post Aerobic Digestion, etc.)
- Phosphorus and/or Nitrogen Recovery
- Struvite Control
- Urine/Source Separation