

## SUNDAY, NOVEMBER 4

12:00	Early Registration (Foyer)
12:00	Smart Water Networks Workshop
6:30 – 8:30 pm	Opening Reception – Hôtel Bonaventure Montréal (Salon Ville- Marie) Enjoy networking and socializing with old friends and new  <b>SPONSORED BY EPCOR</b>

## MONDAY, NOVEMBER 5

7:30 am	Breakfast (St-Laurent 2) and Registration (Foyer)  <b>BREAKFAST SPONSORED BY RESPONSIBLE CHOICE</b>
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8:30 am	<b>OPENING PLENARY</b>  <b>SPONSORED BY THE GOVERNMENT OF QUÉBEC</b>
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Room	Montréal Ballroom 4/5
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Welcome from Diana Qing Tao, CWWA President  
Welcome from Mr. Sylvain Ouellet, Vice-president of Executive Committee at the City of Montréal  
Welcome from Chantal Morissette, Montreal Water (confirmed)  
Logistics from Robert Haller  
Introduce EPCOR speaker and thank for sponsoring Sunday Night (speaker to be named)  
EPCOR to introduce keynote speaker

### KEYNOTE SPEAKER



#### **STEPHEN SZUCS - GETTING TO THE POINT**

In a world of invisible problems this presentation will explore methods to engage society and create waves of change.

#### **ABOUT STEVE**

Recognizing our global need to transition to sustainable practices, Stephen founded SustainableJoes as a passion project in 2013.

Since inception, Stephen has lived off-grid, zero waste, cycled across the continent, produced a sustainability focused documentary, developed sustainable products, and created a sustainability centric podcast; all in an effort to empower 'Everyday Joes' (Joseph & Joanne) to take meaningful action when it comes to sustainability

10:00 am	Refreshment Break (St-Laurent 2)				
10:30 am	A1 - BIOSOLIDS	A2- WATERSHED PROTECTION	A3 – BEST PRACTICE PROGRAMS OF NATIONAL INTEREST	A4- WATER CONSERVATION	A5 - WATER SECTOR CYBER SECURITY
Room	Montréal 3	Montréal 6	Montréal 5	Montréal 4	St-Laurent 5/6
	<p><u>Moderator:</u> Michael Payne, Black Lake Environmental</p> <p>Biosolids Management in Circular Economy: Lessons From Around the World Banu Ormeci, Carleton University</p> <p>Leveraging IAP2 Training for Community Engagement in Biosolids Management Sarah Mason-Renton, Lystek International Inc.</p> <p>Brown to Green: A Reclamation Success Story Michael Payne, Black Lake Environmental</p>	<p><u>Moderator:</u> Yves Comeau, Ecole Polytechnique</p> <p>Moving Towards Autonomous Online Monitoring of E. coli for Source Water Protection: The Link with Hydrometeorology, Catchment Characteristics, Pathogens and Micropollutants in Drinking Water Supplies Jean-Baptiste Burnet, Polytechnique Montréal</p> <p>Advances in Microbial Source Tracking for Comparative Assessment of Wastewater, Cattle, and Seagull Fecal Contamination in the Great Lakes and St. Lawrence River Tom Edge, Environment and Climate Change Canada</p> <p>False Negative E. coli Results in Drinking and Recreational Water</p>	<p><u>Moderator:</u> Diana Qing Tao, Tetra Tech</p> <p>The First Nations Infrastructure Resilience Toolkit: Development, Application and Capacity Building -Guy Felio, Stantec</p> <p>Manitoba Drought Management Strategy on the PVWC Regional Water System Jeff O'Driscoll, Associated Engineering and Greg Archibald, Pembina Valley Water Cooperative</p> <p>Reports and Perspectives Learned from Performance Audits of Local Government's Role in Ensuring Clean Drinking Water in B.C. Lori Berndt, BC Auditor General for Local Government</p>	<p>(simultaneous translation)</p> <p><u>Moderator:</u> Mary Ann Dickinson, AWE</p> <p>A Revolutionary New Approach to Pipe Leak Detection and Location Jon Crowther and Van Hao Nguyen, Sensor UK</p> <p>An Update on AWE Activities: WaterSense, Report Card Mary Ann Dickinson, Alliance for Water Efficiency</p> <p>Quebec Water Efficiency Strategy and a Comparison with North American Results (presented in French) Mathieu Laneuville and Pierre-Olivier-Kwemi, Ministry of Municipal Affairs (eligible Phillip H. Jones Award)</p>	<p><u>Moderator:</u> Ryan Hunt, Public Safety Canada</p> <p>WaterISAC: A Water Security Partnership and Resource Michael Arceneaux, WaterISAC (USA)</p> <p>Overview of National Critical Infrastructure and Cyber Security Initiatives and Potential Application for the Water Sector Ryan Hunt, Public Safety Canada</p> <p>Securing the SCADA Interconnect: Implementing Cybersecurity After the Assessment Bob George, TetraTech</p>

		Colin Fricker, CRFConsulting			
12:00 pm	Lunch (St-Laurent 2)				
1:30 pm	B1 - BIOSOLIDS	B2 - WASTEWATER TREATMENT RESEARCH	B3 - SMALL COMMUNITIES AND FIRST NATIONS CHALLENGES	B4 - THE NEW WORKFORCE – DIVERSITY, INCLUSIVITY, YOUTH (simultaneous translation)	B5 - POLICIES AND STANDARDS AS TOOLS FOR RISK MITIGATION
Room	Montréal 3	Montréal 6	Montréal 5	Montréal 4	St-Laurent 5/6
	<p><u>Moderator:</u> Michael Payne, Black Lake Environmental</p> <p>Third Party Agronomic Trials Evaluate Biosolids-Derived Biofertilizer for Corn Production Mike Dougherty, Lystek International Inc.</p> <p>Project Evaluation Using an Objectives-Based Approach to Promote Community Engagement: A Biosolids Case Study Sabrina Stanlake-Wong, Dillon Consulting LTD</p> <p>The Canadian Biosolids Network: A Cooperative Future Michael Payne, Black Lake Environmental</p>	<p><u>Moderator:</u> Elsayed Elbeshbishy, Ryerson University</p> <p>Wastewater Treatment Upgrade in St. Thomas, Ontario: NPV Analysis Finds 40% in Cost Savings Rick Mosher, Lystek International Inc,</p> <p>Struvite Reduction in Canadian WWTP Bill Carroll, HydroFLOW Canada</p> <p>Wastewater Treatment Plant Efficient Management at the Age of IIoT Technology/Industry 4.0 Harold Wagenknecht, Kaeser Compressors Canada</p>	<p><u>Moderator:</u> O.S., Thirunavukkarasu, Water Security Agency</p> <p>Trihalomethanes in Water Treatment Plants and Distribution Systems in Three First Nation Communities in Manitoba, Canada Geethani Amarawansa, University of Manitoba (eligible Phillip H. Jones Award)</p> <p>Indigenous Services Canada and Clean Drinking Water for First Nations Nelson Ferguson, Indigenous Services Canada</p> <p>Assembly of First Nations – Programs Update Caleb Z. Behn, Assembly of First Nations</p>	<p><u>Moderator:</u> Nadia Koukui, CAWQ and IWA Young Professional</p> <p>Panelists: Nadia Koukui, CAWQ and IWA Young Professional</p> <p>Christine Hill, Cole Engineering</p> <p>Kalpna Solanki, Environmental Operators Certification Program</p> <p>Sam Berton, Ontario Clean Water Agency</p>	<p><u>Moderator:</u> Natalia Moudrak, Intact Centre</p> <p>Report on Climate Change Policy Development in the 50 States and how it is Affecting the Water and Wastewater Industry Mary Ann Dickinson Alliance for Water Efficiency</p> <p>Flood Resilient Design Guidelines: New and Existing Communities in Canada Natalia Moudrak, Intact Centre on Climate Adaptation (eligible Phillip H. Jones Award)</p> <p>Policy, Legal and Liability Issues related to Stormwater and Climate Change Joanna Kyriazis,</p>

					Zizzo Strategy (eligible Phillip H. Jones Award)
3:00 pm	Refreshment Break (St-Laurent 2)				
	SPONSORED BY IDEXX				
	C1 - DRINKING WATER CONTAMINANTS	C2 - WASTEWATER TREATMENT RESEARCH	C3 - WATER AND ENERGY EFFICIENCY - INNOVATIVE THINKING	C4 - REGULATIONS IN THE WATER SECTOR (simultaneous translation)	C5 - MUNICIPAL PLANNING FOR CLIMATE CHANGE
Room	Montréal 3	Montréal 6	Montréal 5	Montréal 4	St-Laurent 5/6
3:30 pm	<p><u>Moderator:</u> Klas Ohman, Associated Engineering</p> <p>Occurrence of UCMR Chemicals in Drinking Water Materials and Chemicals Kathryn Foster, NSF International</p> <p>DBPs in Drinking Water-Formation, Fate and Treatment O.S., Thirunavukkarasu, Water Security Agency</p> <p>Cyanobacteria Cell Accumulations and Cyanotoxins in Low-Risk Drinking Water Treatment Plants Husein Almuhtaram, University of Toronto (eligible Phillip H. Jones Award)</p>	<p><u>Moderator</u> - Yves Comeau, Polytechnique Montreal</p> <p>Simultaneous Treatment of Leachates and Landfill Gas (CH4) by a Passive Biofiltration Process Well Adapted for Nordic Regions Rino Dubé, Centre de recherche Industrielle du Québec</p> <p>Energy-Efficient Wastewater Treatment In a Horizontal Flow Bioelectrochemical Anaerobic System Boris Tartakovsky, National Research Council Canada</p> <p>Development of a 'Next-Generation' Nitrification Inhibition Assay using a Diverse Microorganism Soft Sensor Technology</p>	<p><u>Moderator:</u> Rebecca Dziedzic, AECOM</p> <p>Water Reuse Opportunities in the ICI Sector Lloyd Hipel, Enviro-Stewards Inc and Bill Chihata, York Region</p> <p>York Region Water Reuse Research Demonstration Project Theresa MacIntyre-Morris, York Region</p> <p>Energy Neutrality for the Whole Water Cycle and High-Water Efficiency Mads Warming, Danfoss VLT Drives A/S</p> <p>An Analysis of the Benefits of Water Efficiency Infrastructure Investments to the National Economy</p>	<p><u>Moderator</u> – Caroline Sanchez-Valero, Réseau Environnement</p> <p>La protection des sources d'eau potable au Québec Philippe Grégoire, Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (eligible Phillip H. Jones Award)</p> <p>Les contaminants d'intérêt émergent dans l'eau potable au Québec : principaux suivis réalisés par le Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques</p>	<p><u>Moderator:</u> Hiran Sandanyake, City of Ottawa</p> <p>Stormwater Integrated Resource Planning: EPCOR's Approach to Stormwater Management in Edmonton Susan Ancel, EPCOR</p> <p>Progressive Water Management Strategies in Support of a Progressive Planning Process Ron Scheckenberger, Wood and Arun Hindupur, City of Guelph</p> <p>Innovative Solution for Urban Flood Mitigation: Planning, Monitoring, Control and Forecasting Diana Qing Tao, Tetra Tech</p> <p>Storm Warts: The Floods Awaken – A New Hope for</p>

	Assessing the Impact of Peak Events on Antibiotic Resistant Escherichia coli in the Drinking Water Treatment Process Claire Gibson (eligible Phillip H. Jones Award) and Hend Salem, McGill University	Patrick Morkus, McMaster University (eligible Phillip H. Jones Award)  Nitrifying moving bed biofilm reactor performance at elevated municipal concentrations and exposure to low temperature and cold-shock Warsama Ahmed, University of Ottawa (eligible Phillip H. Jones Award)	Mary Ann Dickinson, Alliance for Water Efficiency	Anouka Bolduc, Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques  Outils d'accompagnement pour les petits systèmes de distribution d'eau potable Donald Ellis, Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques  Comparison of the Ontario and Quebec Regulatory Approaches For Source Water Protection: The Ottawa And Montréal Experience Marie-Claude Besner, City of Montréal, Service de l'eau	Cost-Effective Investment in Flood Management Infrastructure Robert Muir, City of Markham
5:30 pm	Power Hour (St-Laurent 2)				
6:00 pm	CWWA Annual General Meeting (St-Laurent 8)				
6:00 pm	CAWQ Annual General Meeting (Outremont 6)				
Evening	Night on the Town. Go out and explore our host city, from old Montréal, to famous Catherine Street there are many unique dining options. We encourage our sponsors and exhibitors to consider hosting dinners for potential and new clients. CWWA staff is happy to help with logistics.				
TUESDAY, NOVEMBER 6					
7:30 am	Breakfast (St-Laurent 2 ) and Registration (Foyer)				
	D1 - LEAD IN DRINKING WATER	D2 - WASTEWATER AND SLUDGE – EMERGING CONTAMINANTS	D3 - INNOVATIVE WASTEWATER MANAGEMENT SOLUTIONS	D4 - PUBLIC PRIVATE PARTNERSHIPS	D5 - EMERGENCY RESPONSES AND SAFE INDUSTRIAL IOT SOLUTIONS
Room	Montréal 3	Montréal 6	Montréal 5	Montréal 4	St-Laurent 5/6

8:30 am	<p><u>Moderator:</u> Klas Ohman, Associated Engineering</p> <p>Testing Orthophosphate as a Corrosion Inhibitor for Managing Lead in Edmonton's Drinking Water Wendell James, EPCOR Water Services</p> <p>Evaluating Drinking Water Lead Sampling Protocols and Proposed Regulations Sheldon Masters, Corona Environmental Consulting &amp; ESPRI (eligible Phillip H. Jones Award)</p> <p>Detection and Replacement of Lead Service Lines in the City of Montréal Alicia Bannier and Manli Joelle Chen, City of Montréal (eligible Phillip H. Jones Award)</p>	<p><u>Moderator:</u> Aaron Boulton-Chaykowski, City of Calgary</p> <p>Effects of Chlorine, Peracetic Acid and UV Disinfection on Antibiotic Resistant E. Coli Isolates in Wastewater Cameron Macdonell, Carleton University (eligible Phillip H. Jones Award)</p> <p>Monitoring Chemical Substances in Canadian Municipal Wastewater Shirley Anne Smyth, Environment and Climate Change Canada</p> <p>Development and Application of a Novel Approach to Remove Contaminants of Emerging Concerns from Wastewaters Muhammad Faizan Khan, University of Calgary (eligible Phillip H. Jones Award)</p>	<p><u>Moderator:</u> Ed von Euw, Metro Vancouver</p> <p>Wastewater to Wheels to Wings Paul Kadota, Metro Vancouver and Kel Coulson, Parkland Fuel Corporation</p> <p>Development of Evidence-Based, Risk-Informed Asset Management Strategy for the Region of Peel Wastewater Collection System Edgar Tovilla, Region of Peel and Peiyuan Lin, Ryerson University</p> <p>How "Intelligent" is our Wastewater System? Toronto's Journey Toward Better Management of Sensors and Data Emily Zegers, City of Toronto</p>	<p><u>Moderator:</u> Nancy Kodousek, Region of Waterloo</p> <p>P3s for Municipal Water and Wastewater: What's Happened and What's Next Chris Baisley, Deloitte LLP</p> <p>PPPs in Water Projects: Experiences, Pitfalls and Benefits from 2 Different Projects Quentin Olivier, BESIX</p> <p>EPCOR Regina Wastewater Treatment Plant Upgrade Project: A Successful Example of a P3 to Design, Build, Finance, Operate and Maintain Vicki Campbell, EPCOR Saskatchewan Operations</p>	<p><u>Moderator:</u> Bradley Cooper, City of Ottawa</p> <p>Advancing Water Utilities with Safe and Secure Industrial IoT Solutions Goran Novkovic. City of Toronto</p> <p>Wood Buffalo in Recovery: A Threat, A Hug, and a Conversation Dana Woodworth. Associated Engineering</p> <p>Wildfire Response: Fort McMurray Water Management &amp; Recovery Efforts Steven Justus. Associated Engineering</p>
10:00 am	Refreshment Break (St-Laurent 2)				
	E1 - LEAD IN DRINKING WATER	E2 - WASTEWATER AND SLUDGE – EMERGING CONTAMINANTS	E3 - WASTEWATER MANAGEMENT	E4 - EXCELLENCE IN UTILITY MANAGEMENT	E5 - RISK AND RESILIENCE IN WATER SUPPLY AND DISTRIBUTION
Room	Montréal 3	Montréal 6	Montréal 5	Montréal 4	St-Laurent 5/6
10:30 am					

	<p><u>Moderator:</u> Michele Grenier, Ontario Water Works Association</p> <p>Get the Lead Out: Lessons Learned from the Early Days of Implementing a Comprehensive Lead Service Line Replacement Program Reid Campbell, Halifax Water</p> <p>Impact of Lead Service Line Replacements and Consumer Exposure in 6 Utilities Using Results from Sequential Sampling Elise Deshommes, Polytechnique Montréal</p> <p>Lead and Copper Sampling in Schools and Large Buildings: Implications for Exposure and Regulations Evelyne Doré, Polytechnique Montréal (eligible Phillip H. Jones Award)</p>	<p><u>Moderator</u> -Banu Ormeci, Carleton University</p> <p>Prediction for Chemical Removal Rate in Activated Sludge Plants Jesse Shen, Environment and Climate Change Canada</p> <p>Supercritical Water Oxidation for Sludge Treatment and Removal of Emerging Compounds Banu Ormeci, Carleton University</p> <p>Psychrophilic Anaerobic Digestion of Ozone Pre-treated Waste Activated Sludge Xuan Lin, McGill University (eligible Phillip H. Jones Award)</p>	<p><u>Moderator:</u> Emily Zegers, Toronto Water</p> <p>The City of Wilmington Sewer Shed Management Story: Long Term Control Planning, Real Time Control System Implementation and Hydraulic Detailed Modeling with 2-D Capabilities Luc Robitaille, Tetra Tech</p> <p>The Good Story Behind Montréal Flushgate that you Never Heard About: How Montréal Manages its Interceptor Tunnels Martin Pleau, Tetra Tech</p> <p>Grand River Watershed-wide Wastewater Optimization Program Status Component: 5 Years of Successes and Challenges Kelly Hagan, Grand River Conservation Authority</p>	<p>Workshop being led by Valerie Jenkinson, CEO, World Water &amp; Wastewater Solutions Ltd.</p> <p>This Workshop will give an overview of the AWWA/WEF developed EUM program and its relevance in Canada as a powerful set of tools for operational improvement and leadership development.</p>	<p><u>Moderator:</u> Heather Zarski, Epcor</p> <p>Environmentally Responsible Practices and Processes of CIPP Watermain Rehabilitation Geoff Britnell FER-PAL Infrastructure (eligible Phillip H. Jones Award)</p> <p>Developing a Water Quality Master Plan to Guide Future Upgrades at Union Water Vincent Laplante, Associated Engineering (eligible Phillip H. Jones Award) and Rodney Bouchard, Union Water Supply System</p> <p>Assessing the Vulnerability of Water Supply Networks to Climate Change: A Methodological Guide Katherine Pineault Ouranos</p>
12:00 pm	Lunch (St-Laurent 2)				
	F1 - LABORATORY AND ANALYTICAL PRACTICES	F2 - WATER LOSS AND RESILIENCE	F3 - MANAGING YOUR IN GROUND INFRASTRUCTURE	F4 - FACILITY OPTIMIZATION	F5 - SUSTAINABLE ADAPTATION APPROACHES
Room	Montréal 3	Montréal 6	Montréal 5	Montréal 4	St-Laurent 5/6
1:30 pm					



	<p><u>Moderator:</u> Laurent Laroche, Ville de Montreal</p> <p>Microbiology Laboratories: Tips for Successful Audits Patsy Root, IDEXX</p> <p>Microbial Non-Detects: How they Should be Reported and Why it Matters Alex Ho Shing Chik, University of Waterloo (eligible Phillip H. Jones Award)</p> <p>Flow Cytometric Virus Enumeration: Simple, Or is it? Elena Dlusskaya, University of Alberta</p> <p>Mitigating Risk to your Water Utility with ISO/IEC 17025:2017 Andrew Adams, Canadian Association for Laboratory Accreditation</p>	<p><u>Moderator:</u> Qing Zhang, EPCOR</p> <p>Measuring the Resilience of Canadian Water Systems Rebecca Dziedzic, AECOM</p> <p>Case Study: Modelling Transients Using InfoSurge Emma Thompson, C3 Water Inc (eligible Phillip H. Jones Award)</p> <p>The Economics of Water Loss Dewi Rogers, iWED Ltd.</p>	<p><u>Moderator:</u> Clayton Tiedemann, EPCOR</p> <p>How Critical are your Pipes? Sam Ziemann, C3 Water</p> <p>The Future of a Sustainable Water Infrastructure: Utilizing Life Cycle Assessment for a Comparative Analysis of Pipe Materials Tad Radzinski, Sustainable Solutions Corporation</p> <p>An Overview of a Pipeline Condition Assessment Program, From Program Inception to First Results: City of Saskatoon Mike Garaci, Pure Technologies and Stephen Wood, City of Saskatoon</p>	<p><u>Moderator:</u> Benoit Barbeau, École Polytechnique du Montréal</p> <p>How to Excel in Water Utilities Operation? Results from 15 Years of Optimization Alain Lalumière, Réseau Environnement</p> <p>Facility Performance and Resiliency through Optimization Sangeeta Chopra, Ontario Clean Water Agency</p> <p>Drinking Water Network Optimization of Montreal Jean Lamarre, Ville de Montréal</p>	<p><u>Moderator:</u> Susan Ancel, Epcor</p> <p>Risk and Return on Investment Tool for Water Infrastructure Amna Tariq, Credit Valley Conservation Authority and Emma Hartnett, Risk Sciences International</p> <p>Bridging the Gap between Asset Management and Climate Change Aman Singh and Akeel Ali, GHD</p> <p>A City-wide Flood Risk Profile Bradley Cooper and Hiran Sandanayake City of Ottawa</p>
3:00 pm	Refreshment Break (St-Laurent 2)				
	G1 - STANDARDS	G2 - WATER TREATMENT RESEARCH	G3 - WATER CONSERVATION PROGRAMS	G4 - FACILITY OPTIMIZATION	G5 - CYBER SECURITY
Room	Montréal 3	Montréal 6	Montréal 5	Montréal 4	St-Laurent 5/6
3:30 pm		<p><u>Moderator:</u> Mathieu Laneuville, Ministère des</p>	<p><u>Moderator:</u> Aaron Boulton-Chaykowski, City of Calgary</p>	<p><u>Moderator:</u> Vicki Campbell, Epcor</p>	Cyber Security and the Water Sector



	<p><b>Moderator:</b> Roland Richard, Atlantic Canada Water Works Association</p> <p>Is There Value in Creating and Establishing a Municipal Wastewater and Stormwater Environmental Management Standard? Edgar Tovilla and Kernaghan Webb, Ryerson University</p> <p>Environmental Technology Verification (ETV): Protecting Canadians, our Resources and the Environment Through Innovation Christine Scott, Standards Council of Canada</p> <p>Non-Sewered Sanitation Devices: A New ISO Standard for the Reinvented Toilet Edward Osann, Natural Resources Defense Council and Roland Richard, CWWA</p> <p>Facility Classification Models: An Update from BC Kalpna Solanki, Christine Scott, Standards Council of Canada</p>	<p>Affaires municipales et de l'Occupation du territoire (Québec)</p> <p>A System-Specific, Critical Control Point-Based Approach for Managing the Risk of Pathogen Passage Through Chemically-Assisted Filtration Processes in Toronto Kristina M. Lee, University of Waterloo</p> <p>A Longitudinal Look at a Sustainable Disinfection Technology Using Stabilized Hydrogen Peroxide for Aging Drinking Water Infrastructure Yamuna Vadasarukkai, SanEcoTec Ltd (eligible Phillip H. Jones Award)</p> <p>Assessing the Risks of Pipeline Spills on Drinking Water Intakes: The Case Study of 27 Canadian Drinking Water Intakes Michèle Prevost, Polytechnique Montreal</p>	<p>The Beginning of an Ontario Municipality's Evolution to Water Loss Management Fabian Papa and Deepak Panjwani, HydraTek &amp; Associates</p> <p>Water for the New Normal: Water Use Restrictions and Climate-sensitive Water Demand Trajectories in Canadian Cities Sara Finley, University of Waterloo</p> <p>Water Conservation on the "Wet" Coast: An Innovative and Collaborative Approach to Updating Metro Vancouver's Watering Restrictions Colwyn Sunderland, KERR WOOD LEIDAL, Nermine Tawfik and Nimet Alibhai, Metro Vancouver</p> <p>Right-Sizing Edmonton's Design Standards due to Declining Water Demands Heather Zarski, Epcor</p>	<p>Transforming Water Infrastructure Through Actionable "Smart" Insights R. Mark Palmer and Eric Palmer, GREENLAND International - Consulting Engineers</p> <p>Smart Utility 2.0: Application of Real Time Control to Optimize Your System Diana Qing Tao, Tetra Tech</p> <p>Optimization of Capital Program Delivery Nancy Koudusek, Regional Municipality of Waterloo and Sandra MacGillvary, Valency Inc.</p>	<p>Mark Fabro. LoftyPerch</p> <p><b>TABLE TOP EXERCISE</b></p> <p>An interactive facilitated discussion hosted by Public Safety Canada to explore the collaborative GC/CI response to a cyber security incident affecting the water sector Robert Pitcher. Public Safety Canada</p>
7:00 pm	<b>Fun Night</b>				

Fun Night at Times Supper Club! Join us for a fun evening of networking Montreal style! From Montreal cuisine, including hors d'oeuvres to smoked meat and poutine to the most amazing entertainment by Quebec's renowned Painchaud Family, this will be a night to remember! The show itself starts at 9:00 p.m., so be sure to stay to see their amazing talent. Dress is comfortable casual. Located just 3 blocks away at 887 St. Jacques St., it is an easy 5 minute walk. Please see the conference app for directions.

**SPONSORED BY GRANDE WATER MANAGEMENT SYSTEMS AND TETRA TECH**

## WEDNESDAY, NOVEMBER 7

7:30 am Registration (Foyer) and Breakfast (St-Laurent 2)

	H1 - LEGIONELLA AND COOLING TOWERS	H2 - WATER RESEARCH	H3 - STORMWATER MANAGEMENT	H4 - COMMUNICATING TO THE PUBLIC	
Room	Montréal 3	Montréal 6	St-Laurent 5/6	Montréal 4/5	
8:30 am	<p><u>Moderator:</u> Patsy Root, Idexx</p> <p>Effective Routine Monitoring to Manage Legionnaires' Disease Reduction Patsy Root, IDEXX</p> <p>Metagenome Sequencing Reveals a Cooling Tower's Microbiota Restricting the Growth of Legionella pneumophila Sebastien Faucher, McGill University</p> <p>Legionella pneumophila and the Microbial Composition of Cooling Towers in Quebec, Canada Kiran Paranjape, McGill University</p>	<p><u>Moderator:</u> Viviane Yargeau, McGill University</p> <p>Hybrid Hollow Fibre NF- Calcite Contactor as a Point of Entry Treatment Method to Remove Mn, Fe, Hardness and NOM from Domestic Groundwater Supplies Benoit Barbeau, Polytechnique de Montréal</p> <p>Photocatalytic degradation using functionalized TiO2 nanoparticles with Graphene under UV-LED illumination: Optimization using response surface methodology Azar Fattahi, University of Waterloo</p>	<p><u>Moderator:</u> Ed von Euw, Metro Vancouver</p> <p>Smart Blue Roof Applicability in the IC&amp;I Sector for Climate Change Adaptation Bernadeta Szmudrowska, Credit Valley Conservation Authority (eligible Phillip H. Jones Award)</p> <p>Eastgate Park Underground Stormwater Management Facility Mark Bassingthwaite, Cole Engineering Group Ltd and Vivek Sharma, ADS Pipe Canada</p> <p>Biogenic Sulfide Production in Stormwater Retention</p>	<p><u>Moderator</u> – Todd Latham, Publisher, Water Canada magazine</p> <p>Panelists:</p> <p>Adam Krantz, National Association of Clean Water Agencies</p> <p>Liana Kreamer, Canadian Water Network</p> <p>Evan Pilkington, BlueW</p> <p>Pierre Béland, Aqua Hacking</p>	

	(eligible Phillip H. Jones Award)	(eligible Phillip H. Jones Award)  Water Conservation and Pipe Materials Type Influence DBP Formation, Corrosion and Disinfectant Decay Sheldon Masters, Corona Environmental Consulting & ESPRI (eligible Phillip H. Jones Award)	Ponds: Causes, Effects and Remediation Options Patrick D'Aoust, University of Ottawa (eligible Phillip H. Jones Award)		
10:00 am	Refreshment Break (St-Laurent 2)				
	I1 - LEGIONELLA AND COOLING TOWERS	I2 - WASTEWATER TREATMENT RESEARCH	I3 - WASTEWATER MANAGEMENT	I4 - SUSTAINABILITY AND PRICING	
Room	Montréal 3	Montréal 6	St-Laurent 5/6	Montréal 4/5	
	<p><u>Moderator:</u> Patsy Root, Idexx</p> <p>Impact of Premise Plumbing Commissioning Procedure on Microbial and Chemical Water Quality in Large Buildings Emilie Bédard, École Polytechnique Montréal</p> <p>Study of the Dynamics of L. pneumophila Colonization of a Model Cooling Towers in Relationship with Resident Microbiota</p>	<p><u>Moderator:</u> Qing Zhang, EPCOR</p> <p>Characterization of Extracellular Polymeric Substances (EPS) in a Submerged Aerobic Granular Sludge Membrane Bioreactor (AGMBR) Oliver Iorhemen, University of Calgary</p> <p>Integrating Ozonation with Lagoon Treatment to Improve Wastewater Quality</p>	<p><u>Moderator:</u> Paul Drca, City of Windsor</p> <p>Bridging the Gaps between Design and Operation of Wastewater Treatment Plants for Effective Nitrogen Removal Jianping(John) Zhang, Ontario Clean Water Agency</p> <p>Integrating a Fault Detection Method in a Monitoring System for Wastewater Quality</p>	<p><u>Moderator:</u> Colwyn Sunderland, Kerr Wood Leidal</p> <p>Only the Pipes Should be Hidden Jonathon Arnold, Ecofiscal Commission (eligible Phillip H. Jones Award)</p> <p>Balancing the Books: Financial Sustainability for Canadian Water Systems Bu Lam, Canadian Water Network</p>	

	<p>Adriana Torres Paniagua, McGill University (eligible Phillip H. Jones Award)</p> <p>A Comparison Study of the Growth of Opportunistic Pathogens in Two Drinking Water Systems Jennifer Clancy, ESPRI</p>	<p>Beauregard Schlageter, McGill University (eligible Phillip H. Jones Award)</p> <p>Control Implementation Matters: Discovery and Correction of Poorly Implemented DO Control Leads to Greater Process Stability and Less Risk John Copp, Primodal Inc</p>	<p>Romain Philippe, Université Laval/modèleEAU (eligible Phillip H. Jones Award)</p> <p>Small Wastewater Plant with no Redundancy: What Do You Do? Case Study: The Azilda WWTP Chris George, R.V. Anderson Associates Limited and Akli Ben-Anteur, Greater Sudbury</p>	<p>Using Better Data to Address Climate Change Infrastructure Vulnerabilities Tyler Sutton, Public Sector Digest (eligible Phillip H. Jones Award)</p> <p>It's Not Just Math: How Water Rates Drive Policy and Shape Your Community's Future Kirk Stinchcombe, Econics</p> <p>Panel Discussion</p>	
12:00 pm	<p>Lunch (Montréal 4/5)</p> <p>Closing Plenary Panel Discussion – Climate Change</p> <ul style="list-style-type: none"> <li>• Moderator, Hiran Sandanayake, City of Ottawa</li> <li>• Alain Charron, Ville de Montreal</li> <li>• Carl Yates, General Manager, Halifax Water</li> <li>• David Duckworth, General Manager, Calgary Water</li> <li>• Annette Kopec, Manager, Capital Programming &amp; Facility Asset Planning, Toronto Water</li> </ul>				