

Sunday November 13

All Day

Workshop: Understanding Vulnerability within the Water Sector: Enabling Resilience **TRINITY BALLROOM I**

Workshop: Integrating Climate Risk into Infrastructure Management **TRINITY BALLROOM II**

6:00 pm

Opening Reception – off-site event to kick off the Conference at TIFF Light Box Theatre
Sponsored by the Embassy of Israel

Monday November 14

7:30 am

Registration and Breakfast – **sponsored by the City of Calgary**

8:30 am

Opening Plenary – Sponsored by the City of Toronto

Introductions and Welcome

Colwyn Sunderland, CWWA President

Toronto City Councillor Jaye Robinson, Chair Public Works and Infrastructure Committee

Robert Haller, Executive Director, CWWA

Rafael Barak, Ambassador of Israel to Canada

Keynote Address: The Water Brothers – Alex and Tyler Mifflin, creators of the Eco-Adventure series The Water Brothers



The Water Brothers is an eco-adventure documentary series following brothers, Alex and Tyler Mifflin, as they explore the world, uncovering the most important water stories of our time. What are the problems, and where are the solutions to help us better protect our most precious resource? Alex & Tyler take you on the search.

Alex and Tyler are passionate about the subject of water conservation and use their respective educations in film and environmental studies to create this award-winning series. Alex is the lead researcher, co-writer and co-host and Tyler is the co-host, director, videographer and co-producer. They share a love of travel and adventure, a passion for the subject and a powerful desire to communicate their passion to audiences, especially their own generation.

Join us as they recount their adventures, and discuss how we as an industry can put water centre stage on a local, national and international level.

10:00 am

Refreshment Break **sponsored by Hatch**

10:30 am

TRINITY BALLROOM I

A1: Wastewater:
Regulating the Sector

Moderator: Tony Van Rossum,
City of London

Working the Bugs Out –
Implementing WSER regulations
at the Kitchener WWTP

**Trevor Brown, Region of
Waterloo**

Alberta Capital Region
Wastewater Commission
(ACRWC) Experience with
Fisheries Act Violation

**Mike Darbyshire, Alberta
Capital Region Wastewater**

Examining the Emerging
Environmental Protection Policy
Convergence in the Ontario
Municipal Water, Wastewater
and Stormwater Sectors

**Edgar Tovilla, Ryerson
University**

TRINITY BALLROOM II

A2: Good Laboratory
Sampling and Practices

Moderator: Patsy Root, IDEXX

Microbiology in the 21st Century
– New Targets, New Methods,
New Sampling Strategies

**Susan Weir, Ministry of
Environment and Climate
Change**

Quantitative quality control of
culture media in the water
microbiology laboratory: making
the most of ISO 11133

Colin Fricker, CRF Consulting Ltd

Sampling drinking water is an
art. The experience of the Ville
de Montréal

**Laurent Laroche, Ville de
Montréal**

TRINITY BALLROOM III

A3: Energy and Water
Efficiency

Moderator: Megan Mc Combe,
Region of Peel

Energy Recovery from Pressure
Reducing Valve (PRV) Stations
Using Hydro-kinetic Turbines

**Jeff Knapp, Halifax Regional
Water Commission**

Potential for Water, Energy and
GHG Savings by Residential
Water Conservation Measures

**Helen Maguire, University of
Calgary**

Energy Savings and Hydraulic
Control through Pump
Operations: Field Data and
Observations

Johnathan Nault, HydraTek

TRINITY BALLROOM IV

A4: Climate, Risk and
Resilience: Resilient
Infrastructure

Moderator: Hiran Sandanayake,
City of Ottawa

Practical Resilience Metric for
Analysis of Infrastructure
Systems

**Professor Slobodan Simonovic,
University of Western Ontario**

Infrastructure and Planning
Approaches for More Resilient
Water Systems

**Bu Lam, Canadian Water
Network**

Update to the IDF Climate
Change Tool

**Dan Sandink, Institute for
Catastrophic Loss Reduction**

GRAND BALLROOM

A5: Infrastructure Session
#1

Moderator – Gail Petersen,
Fortig

Keynote speaker

**John Woodhouse, The
Woodhouse Partnership**

World renowned asset
management leader best known
for his leadership through the
ISO 55000 and PAS 55 standards

12:00 pm

Networking Lunch – **Sponsored by Peterborough Economic Development**
Special Screening of The Water Brothers episode 403 "The Big Leak"

1:30pm

TRINITY BALLROOM I

B1: Drinking Water – Providing Safe Water

Moderator: Laurent Laroche, Ville de Montreal

Tracking Wastewater Impacts on Sources of Drinking Water in a First Nations Community

Richard Herman, Trent University

Is it safe to drink? Residents' perceptions and hydrochemical characteristics of municipally-supplied tap water in the Valley area of the community of Happy Valley-Goose Bay, Labrador

Merline Fonkwe, Memorial University of Newfoundland

Hydrant storage conditions: considerations and recommendations for utilities
Rasha Maal-Bared, EPCOR Water Services

TRINITY BALLROOM II

B2: Research - Industrial Wastewater Treatment

Moderator: Clayton Tiedemann, EPCOR Water Services

Copper removal from a circuit boards industrial effluent using zero-valent iron (ZVI) packed columns

Aziz Gherrou, Centre des technologies de l'eau

Solar Photocatalytic Treatment of Oil Sands Process-Affected Water

Tim Leshuk, University of Waterloo

Vegetable and fruit wash-water treatments and prediction of water quality parameters for effluent requirements

Gurvinder Mundi, University of Guelph

TRINITY BALLROOM III

B3: Energy and Water Efficiency (2)

Moderator: Qing Zhang, Epcor Water Services

Energy Conservation in Water and Wastewater Treatment Facilities: Leveraging Measurement and Verification (M&V) and Funding Program
Indra Maharjan, Ontario Clean Water Agency

Energy Efficiency and Optimization – Beyond the Obvious

Peter Rüsçh, Hatch

Advancing Energy Efficient Water Delivery Service in Toronto

Jessie Cheng, Toronto Water

TRINITY BALLROOM IV

B4: Cyber Security

Moderator: Carl Yates, Halifax Water

Overview of findings for blended cyber/physical security assessments at water utilities

Mark Fabro, LoftyPerch

Cyber Security Scenarios for Water & Wastewater Treatment Plants

John Jaisaree, I2O Solutions

Update on cyber programs at Public Safety Canada, and the cyber resilience in Canadian water/wastewater

Frank Turbide, Public Safety Canada

GRAND BALLROOM

B5: Infrastructure Session #2 – International Lessons on Infrastructure Renewal

Moderator: Nancy Kodousek, Region of Waterloo

Panelists:

Rhonda Harris, Tata and Howard, Inc.

Norberto Levin, Levin Global, Argentina

Dr. Tim Watson, Totex Infrastructure Partners

3:00 pm

Refreshment Break **sponsored by Biolargo**

3:30 pm

TRINITY BALLROOM I

C1: Drinking Water: For First Nations and Small Communities

Moderator: Edith Phillips, City of Calgary

Changing Socioeconomic Institutional Constraints for First Nations Source Water Protection Capacity Building under the new 2013 First Nations Safe Drinking Water Act: we all can help and have a role to consider
Richard Herman, Trent University

Greater than the sum of its parts: A multifaceted approach to implementing water disinfection technologies for First Nation communities
Madjid Mohseni, RES'EAU WaterNET, University of British Columbia

The Elephant in the Room- managing infrastructure- centralized vs decentralized utilities in the Canadian landscape
Kevin Wong, Canadian Water Quality Association

Safe Drinking Water for First Nations – One Water in Canada?
Irving "Bing" Leblanc, Assembly of First Nations

TRINITY BALLROOM II

C2: Wastewater – from the pipe to the landfill

Moderator: Harsh Vashi, University of Calgary

Real-time measurement of residual polymer concentration and dewatering optimization: Lab and full-scale results
Banu Örmeci, Carleton University

The effect of ClO₂ on the digestibility of Returned Activated Sludge
Maciej Kowalski, University of Manitoba

Settleability and Detailed Organics Characterization of Food Wastes
Michael Keleman, Emerson Commercial & Residential Solutions

Grease Interceptors - Engineering with confidence; Solutions for the operational management of Fats, Oils, & Grease (FOG)
Andrew Bird, Canplas Industries Ltd.

Toilets are not garbage cans
Barry Orr, City of London

TRINITY BALLROOM III

C3: Water Efficiency Programs

Moderator: Steve Gombos, Region of Waterloo

Waterloo Region's New Water Efficient Business Certification Program
Steve Gombos, Region of Waterloo

Helping Businesses in York Region Conserve Water, Reduce Wastewater Loading, and Save Money
Lloyd Hipel, Enviro-Stewards Inc. and Bill Chihata, Regional Municipality of York

Water Smart Irrigation Professional (WSIP) training and certification program
Jeremy Harris, Peel Region

A Clear Perspective of Canadians and their Drinking Water
Mary Lou Mendro, Probe Research

TRINITY BALLROOM IV

C4: Climate, Risk and Resilience – Impacts of Climate Variability and Extreme Events

Moderator: Bobby Pettigrew, J.L. Richards & Associates Ltd.

Municipal Legal Liability
Ryan Zizzo, Zizzo Strategy

Impact of Climate Variability and Drought on Operations of Edmonton Drinking Water Treatment Plants
David Slubik, EPCOR Water Services Inc.

Water Quality Impacts of Climate Change
Helen Foster, Government of Australia

GRAND BALLROOM

C5: Infrastructure Session #3 – Canadian Infrastructure Panel

Moderator and leader – Colwyn Sunderland, Kerr Wood Leidal

What is the scene in Canada now and in the foreseeable future and what do we need to be considering?

Carl Bodimeade, Hatch Infrastructure

David Main, AECOM

5:45 – 6:30

CWWA Annual General Meeting (Trinity Ballroom I)

Evening

Taste of the Town – experience Toronto’s amazing dining with special discounts for our delegates

Tuesday November 15

7:30 am

Registration and Breakfast

8:30 am

TRINITY BALLROOM I

D1: Wastewater: Lagoons and Passive Treatment

Moderator: Robert Delatolla, University of Ottawa

Upgrading Lagoons for Phosphorus & Nitrogen Removal: Lessons from Sundridge, Ontario

Martin Hildebrand, Nexom

Performance of Selected Ontario Municipal Wastewater Lagoons in the Great Lakes Basin

Vince Pileggi, Ontario Ministry of the Environment and Climate Change

Getting the Ammonia out of Canada’s Icy Cold Lagoon-Based WWTPs

Martin Hildebrand, Nexom

TRINITY BALLROOM II

D2: Human Resources

Moderator: Nancy Kodousek, Region of Waterloo

Why Implement a Work Management System

Developing Leaders from Within

Olga Vrentzos, Region of Waterloo

Workforce Profile and Strategy Development

Ashifa Dhanani, BCWWA and Kalpna Solanki, Environmental Operators Certification Program

Peer to Peer Training

Joe McGowan, City of Cranbrook

TRINITY BALLROOM III

D3: Water Efficiency Programs (2)

Moderator: Qing Zhang, Epcor Water Services

City of Toronto On – Line Tool For Viewing Water Use

Carlo Casale, Toronto Water

Fusion Landscaping Research Study and Findings

Jeremy Harris, Peel Region

Practical Lessons for Water Efficiency in Commercial Kitchens
Mary Ann Dickinson, Alliance for Water Efficiency

TRINITY BALLROOM IV

D4: International Security Issues

Moderator: Ian Mcilwham, Region of Durham

Australian Government’s Criticality Assessment Project for the Water Sector
Helen Foster, Barwon Water, Australia

Alternative Water Supply – Drinking Water During a Water Crisis

Danny Lacker, Water Authority Israel

Emergency Preparedness & Management – Case Studies
Hildur Ingvarsdóttir, Veitur, Iceland

GRAND BALLROOM

D5: Infrastructure Session #4 – The Decision Making Process

Moderator: Bev Mollard, Ontario Clean Water Agency

Challenges in Achieving Sustainable Funding: Trends from the National Water and Wastewater Benchmarking Initiative

David Main, AECOM

Update on Sustainable Canadian Water Treatment Plants in 2020
Scott Foster, BI Pure Water (Canada) Inc

What is Big Data predicting for the next wave of Water Infrastructure Spending?
Ahmed Badruddin, WatrHub

10:00 am

Refreshment Break

10:30 am

TRINITY BALLROOM I

E1: Wastewater: Treatment Processes

Moderator: Banu Ormeci, Carleton University

Bench-scale evaluation of the combined use of peracetic acid and ultraviolet irradiation (UV) for wastewater disinfection

Natalie Linklater, Carleton University

Variability of pathogen and micro-pollutants load from a wastewater treatment plant under various weather condition

Samira Tolouei, Polytechnique Montréal

Hawkesbury: First IFAS plant in Canada

Bradley Young, Veolia Water Technologies Canada

TRINITY BALLROOM II

E2: International Experiences with Water Management

Moderator: Brian Jobb, Walkerton Clean Water Centre

Sharing Ontario's Drinking Water Management Internationally Public Consultation in Busan South Korea

John Presta, Regional Municipality of Durham

Water protection of pristine groundwater for drinking - Developing an understanding with the municipalities and the public in Iceland's capital area

Inga Dora Hrolfsdottir, Veitur Utilities

The Israeli experience in coping with water emergency situations

Danny Lacker, Water Authority Israel

TRINITY BALLROOM III

E3: Biosolids

Moderator: David Mutombo, Hatch

Public Education, Communications/Outreach – A Case Study in Consistency & Transparency

Kevin Litwiller, Lystek

Some New Approaches to Biosolids Management Planning

Dan Meagher, Region of Waterloo

Use of Best Management Practices in the Marketing and Management of a Biosolids Derived, Federally Registered Biofertilizer Product

Mike Dougherty, Lystek

TRINITY BALLROOM IV

E4: Climate, Risk and Resilience – Climate Data and Tools

Moderator; Bernadette Conant, Canadian Water Network

Climate Data Needs

Ellen Schwartzel, Environmental Commissioner of Ontario

Stormwater Charges as an Approach to a more Resilient Stormwater System (Using Mississauga's stormwater charge as a case study)

Victoria Kramkowski, City of Mississauga

Using Projections of Extreme Precipitation to Support Infrastructure Design

Dr. Xuebin Zhang, Environment and Climate Change Canada

GRAND BALLROOM

E5: Infrastructure Session # 5 - INNOVATION Adoption

Moderator: David Martin, Isle Utilities

Encouraging a Culture of Municipal Water Utility Innovation

Trish Johnson, WaterTap Ontario

Water Policy and New Technology: Examining the Connection

Mary Ann Dickinson, Alliance for Water Efficiency

Dave Henderson, XPV

TRINITY BALLROOM V

E6: Lessons from the field: Leading Practice in Stakeholder Engagement, Project Management and Procurement

Presented by the Green Municipal Fund

- **Joe McGowan, City of Cranbrook**
- **Jessica Peters-Palfi, City of Barrie**
- **Yves Labelle, Town of/ Ville de Kapuskasing**

12:00 pm

Networking Lunch and Special Screening of SustainableJobs - The Time Is Now

1:30 pm

TRINITY BALLROOM I

F1: Nutrient Removal and Management

Moderator: Tony Van Rossum, City of London

BloCord/Geotube solutions for nutrient removal at the source
Kevin Bossy, Bishop Water

LysteCarb – An Innovative, Alternative Carbon Source for BNR (Biological Nutrient Removal) Systems
Ajay Singh, Lystek

Barrie Strives to Protect Lake Simcoe via Ultra-low Nutrient Discharge
John Thompson, City of Barrie and Elvio Zaghi, Stantec

TRINITY BALLROOM II

F2: Drinking Water - Treatment Methods

Moderator: Steve Craik, EPCOR Water Services

Chloramination-Dispelling the Myth
Nelson Fok, Concordia University of Edmonton

UV AOP FOR Taste & Odour Removal – Comparing Low Pressure and Medium Pressure for a Full Scale Installation in Korea
Brian Topp, Wedeco, a Xylem Brand

Improved Membrane Pretreatment of High Hydrophobic Natural Organic Matter (NOM) Waters by Floatation
Bingjie Xu and Roberto M. Narbaitz, University of Ottawa

TRINITY BALLROOM III

F3: Wastewater and Energy Efficiency

Moderator: Kevin Reilly, H2O Innovation

How We Saved the Client Millions through Optimization in Energy Consumption at South Peel WWTPS
Lucyna Mroczek, Ontario Clean Water Agency

One Step towards Sustainability: Integrated Resource Recovery Strategy at Courtice WPCP
Maika Pellegrino, WSP Canada

Energy Efficiency and Process Optimization: Ontario Clean Water Agency Success Stories and Case Studies
Hank Andres, Ontario Clean Water Agency

TRINITY BALLROOM IV

F4: Emergency Management

Moderator: Helen Foster, Barwon Water, Australia

Physical Security Standard Implementation at Toronto Water Facilities
Roxane Krause and Michael Rust, City of Toronto

Self-defence/Workplace Violence/Security Awareness
Roxane Krause and Michael Rust, City of Toronto

RRAP Implementation
Carl Yates, Halifax Water

GRAND BALLROOM

F5: Infrastructure Session #6 – Data Management

Moderator: Ted Robbins, Capital Regional District

From Excel to the Cloud – How to Improve the Construction Management Process
Sam Stuart, Bentley

The Water Utility of Tomorrow – Utilizing Mobile Workforce for AMI Deployment Success
Julien Marin, Clevest

From Reactive to Active - Bringing Real-Time Monitoring to the Heart of Water Utility Operations and Asset Management
Cliff Jones, Syrinix

Smart Water: Finding Revenue, Saving Water & Deferring CAPEX
Graham Symmonds, FATHOM

TRINITY BALLROOM V

F6: The SALVO Process Workshop (Strategic Assets: Life Cycle Value Optimization)

Workshop hosted by John Woodhouse, TWPL

The SALVO Process (Strategic Assets: Lifecycle Value Optimization) is a comprehensive method for better decision-making in asset management. It is a unique combination of structured guidance, methods to capture and quantify expert knowledge, and analytical software tools to ensure that the best value decision is made.

3:00 pm

Refreshment Break – sponsored by IDEXX

3:30 pm

TRINITY BALLROOM I

G1: Wastewater: Stormwater Management

Moderator: Tony Van Rossum, City of London

Investigation of Transient Risks in DR&CW WWF Tunnel System
Djordje (George) Radulj, HydraTek

Moving from Grey to Green: Benefits and Pitfalls
Michael James, DeepRoot Canada Corp.

I-I Tracking vs. I-I Monitoring: Innovation in I-I reduction and basement flooding prevention studies
Farshad Salehzadeh, Cole Engineering Group Ltd.

Risk-Based Prioritization Process For Stormwater Systems
Adrian Lightstone and Isabelle Hemmings, WSP Parsons Brinckerhoff

TRINITY BALLROOM II

G2: Research- New Thinking for Sludge and Wastewater

Moderator: Clayton Tiedemann, EPCOR Water Services

Membrane bioreactor: membrane fouling control using aerobic granulation
Oliver Iorhemen, University of Calgary

Simultaneous nitrogen and phosphorus removal in air bubble SBR bioreactor
Roya Pishgar, University of Calgary

Aerobic Granular Sludge for North American Municipal Wastewater Treatment
Tanner Devlin, University of Manitoba

Municipalities Use of Innovative Enzymatic Method for the Determination of E.coli and Fecal Coliforms in Waste Waters and Reuse Waters
Gil Dichter, IDEXX

TRINITY BALLROOM III

G3: Forecasting Water Demand

Moderator: Jeffrey Knapp, Halifax Water

Creating a Disaggregated Residential Water Forecast
Heather Zarski, EPCOR Water Services

Revisions to the analysis of water meter data in support of conservation - A case study of the City of Vancouver parks system
Daniel Klein, University of British Columbia

AMI Propels City to Think Differently and Be Innovative
Lou Di Gironimo, City of Toronto and Dave Stoddart, Neptune Technologies

TRINITY BALLROOM IV

G4: Climate, Risk and Resilience – Flood Resilient Community Design

Workshop: Flood-Resilient Community Design: Facilitated Discussion of Best Practices for Building New Communities
Leader: Natalia Moudrak, Intact Centre on Climate Adaptation

The Intact Centre on Climate Adaptation (the ICCA) at the University of Waterloo is leading a project to establish best practices to reduce flood risk in new residential subdivisions (greenfield development). The ICCA is engaged in consultations with municipal engineers, insurers, mortgage lenders, developers, builders, real estate associations and others, nationally, to establish these best practices and to prioritize them. Session attendees will have a chance to review draft best practices for flood resilient community design and share their candid feedback through a facilitated discussion

GRAND BALLROOM

G5: Asset Management #6: Master Planning and Municipal Examples

Moderator: Mike Darbyshire, Alberta Capital Region Wastewater Commission

Greater Sudbury, a Unique Water and Wastewater Master Plan
Akli Ben-Anteur, City of Greater Sudbury

City of Guelph, Capital Planning Utilizing Asset Management Techniques
Sam Ziemann, C3 Water, a C3 Group Company and Arun Hindupur, City of Guelph

Utilities Kingston: Pipeline Asset Management Program
Mike Garaci, Pure Technologies

City of Edmonton Sanitary Servicing Strategy – A Developer Funded Success story for over 16 years
Khalid Aziz and Sid Lodewyk, City of Edmonton

TRINITY BALLROOM V

Israel's experience Preventing and Coping with threats on water Systems

6:00 – 7:00

Power Hour – Poster Session
Meet our poster authors, get a chance to ask them about their research.

7:30

Networking Reception. **Sponsored by EPCOR Water Services Inc.**

Wednesday November 16

7:30 am

Registration and Breakfast

7:30 am

Breakfast Roundtable on PIEVC (Public Infrastructure Engineering Vulnerability Committee) Workshop – Going beyond the training
This Workshop will be of special interest to those working on climate change issues, but all delegates are welcome to attend. **GRAND BALLROOM**

Breakfast Roundtable on Enabling Resilience Workshop – Feedback and Next steps
This Workshop will be of special interest to those working on utility security and emergency preparedness especially those who attended the Workshop on Sunday, November 13. All delegates are welcome to attend. **GRAND BALLROOM**

8:30 am

TRINITY BALLROOM I

H1: Wastewater:
Emerging Substances of
Concern

Moderator: Anrish, University of
Calgary

Occurrence and fate of
pharmaceutical and personal
care products (PPCPs) in a
northern wastewater treatment
lagoon, Whitehorse, Yukon
**Devon Yacura, University of
Alberta**

Advanced Oxidation Treatment
Methods for Tertiary Treatment
of ESOCs in Wastewater
Effluents
**Gopal Achari, University of
Calgary**

TRINITY BALLROOM II

H2: Research –
Miscellaneous

Moderator: Clayton Tiedemann,
EPCOR Water Services

A Combined Reed and Freezing
Bed Technology for Septage
Dewatering and Reuse in Cold
Climate Regions
**Chris Kinsley, University of
Guelph**

Copper Inhibition of Nitrifying
Biofilm Community: Sustainable
Treatment of Mining
Wastewaters
**Alexander Schopf, University of
Ottawa**

TRINITY BALLROOM III

H3: Infrastructure –
What’s in the Ground

Moderator: Colin Guthrie,
SanEco Tec Ltd.

Pilot Scale Test on the Impact of
In Situ Oil Sand Extraction
Methods on the Movement of
Water Soluble Organics and
Inorganics
**Xiaomeng Wang, Natural
Resources Canada**

Comprehensive Condition
Assessment Programs for PCCP
Watermains
**Allison Biggar, Pure
Technologies and Michael
Zantingh, City of Hamilton**

TRINITY BALLROOM IV

H4: Climate, Risk and
Resilience – Resilience in
Communities

Moderator: Guy Felio, RV
Anderson

Building Adaptation and
Resilient Communities Program
Ewa Jackson, ICLEI Canada

Climate Change Impacts and
Adaptation with First Nations in
Ontario
**Al Douglas, Ontario Centre for
Climate Impacts and Adaptation
Resources**

Water and Indigenous Health
Related to Climate Change
**Sherilee Harper, University of
Guelph**

GRAND BALLROOM

H5: Human Resources:
Building Utility Leaders

Moderator: Robert Haller,
CWWA

Eileen O’Neill, Water
Environment Federation

G. Tracy Mehan, American
Water Works Association

8:30 am

Chemical Fate Variability in Wastewater Treatment Systems
Jesse Shen, Environment and Climate Change Canada

Decision Support System for Evaluation of Urban Water System Metabolism Efficiency of Villiers Island
Vladimir Nikolic, Ryerson University

Development of a Closed Loop Water Recirculation Experimental System for the Study of Tuberculated Pipe and Drinking Water
Colin Guthrie, SanEcoTec Ltd.

10:00 am

Refreshment Break

10:30 am

TRINITY BALLROOM I

I1: Wastewater: Environmental Management

Moderator: Bruce Anderson, Queen's University

Promoting Excellence in Wastewater Treatment Plant Performance through Area Wide Optimization

Mark Anderson, Grand River Conservation Authority

Protecting Freshwater Lakes by Reducing Diffuse Agricultural Pollution with End-of-Field Technologies

Bruce Anderson, Queen's University

Optimization of the Red Deer Water Treatment Plant residuals outfall to allow treatment by-pass under highly turbid river conditions

Tara Roumeliotis, Hutchinson Environmental Sciences Limited

TRINITY BALLROOM II

I2: Research – Miscellaneous (2)

Moderator: Rasha Maal-Bared, EPCOR

The use UV-LED irradiated TiO2 membranes in the treatment of estrogenic compounds and their associated biological activity
Maricor Arlos, University of Waterloo

Using quantitative microbial risk assessment (QMRA) to evaluate risk of infection of workers at wastewater treatment plants
Rasha Maal-Bared, EPCOR

Algae as an indicator for pharmaceutical contamination of wastewater effluent in a freshwater system, Lake Simcoe
Cassandra E. Sinclair, Lakehead University

TRINITY BALLROOM III

I3: Managing Infrastructure

Moderator: Oliver Iorhemen, University of Calgary

Risk-based Leaks Repair Prioritization Model
Soliman Abu Samra, Concordia University

O&M Considerations for Pressure Sewer Systems
Keith J. McHale, Environment One Corporation

Leak Detection Model in Pressurized Water Pipelines Using Vibration Signals Measurement
Samer El Zahab, Concordia University

TRINITY BALLROOM IV

I4: Climate, Risk, and Resilience – Adaptation in Central Canada

Moderator: Bobby Pettigrew, J.L. Richards & Associates Ltd.

Toronto Green Streets
Patrick Cheung, Toronto Water

Upstream Infrastructure Providing Solutions on Marginal Farmland
Bryan Gilvesy, ALUS

Great Lakes Climate Change Adaptation Project
Ewa Jackson, ICLEI

GRAND BALLROOM

I5: Lead and Drinking Water (panel)

Moderator: Edith Phillips, City of Calgary

- Reid Campbell, Halifax Water
- Reneé Grosselle, City of Winnipeg
- Tracy Mehan, American Water Works Association
- Laurent Laroche, Ville de Montréal
- Graham Gagnon, Dalhousie University

12:00 pm

Lunch

Introduction: Robert Haller, CWWA

Keynote: Colin Perkel, Canadian Press journalist and author of "A Well of Lies" the story of Walkerton.

Closing Remarks from new CWWA President - Nancy Kodousek, Region of Waterloo

1:00 pm

Technical Tour departs from main lobby.