

**WCW Conference - Calgary Alberta**  
**September 21 – 24, 2010**  
**Technical Sessions**

<b>WEDNESDAY</b>				
<b>10:10 – 11:00</b>	<b>Government Affairs</b> Rooms 201/202/203/204 <i>Moderator: Alan Pentney</i>		<b>The Australian Experience</b> Hyatt Imperial Room <i>Moderator: Ian Wright</i>	
	Government Affairs Session		Climate Resilient Water Supplies in Southeast Queensland, Australia <i>David Solley</i>	
<b>11:00 – 2:00</b>	<b>LUNCH BREAK</b>			
<b>2:00 – 2:30</b>	<b>Project Delivery</b> Room 209 <i>Moderator: Doug Olson</i>	<b>Water Quality</b> Room 206 <i>Moderator: John Herbert</i>	<b>Conveyance &amp; Pumping</b> Rooms 203/204 <i>Moderator: Don Burgess</i>	<b>Wastewater Technology &amp; Innovation</b> Rooms 201/202 <i>Moderator: Nigel Slater</i>
	From Conventional to Membranes - An Operational Approach <i>Rick Deans</i>	Disinfection By-Products in Drinking Water: A Case Study on Calgary, Alberta <i>Mei Chen</i>	Anderson Road Sanitary Trunk Study: A Review of Sanitary Sewer System Capacity Under Extreme Wet Weather Conditions <i>Geoffrey Schulmeister</i>	Proposed Wastewater Systems Effluent Regulations <i>Amanda Lwanga-Thomson</i>
<b>2:30 – 3:00</b>	Design & Construction of a WTP in an Environmentally Sensitive Area <i>Garry Drachenberg</i>	Haloacetic Acids and THM Formation Potential – Testing Methodology and Data from Saskatchewan Systems <i>Wo Yuen</i>	Currie Distribution Reservoir Upgrades - Case Study <i>Julie-Marie Pouliot</i> <i>Wilf Dumont</i>	Back to Basics for Good WWTP Performance <i>A. Warren Wilson</i>
<b>3:00 – 3:15</b>	<b>WATER BREAK</b>			
<b>3:15 – 3:45</b>	<b>Project Delivery</b> Room 209 <i>Moderator: Doug Olson</i>	<b>Water Quality</b> Room 206 <i>Moderator: John Herbert</i>	<b>Wastewater Collection Systems</b> Rooms 203/204 <i>Moderator: Don Burgess</i>	<b>Wastewater Technology &amp; Innovation</b> Rooms 201/202 <i>Moderator: Nigel Slater</i>
	Using Three Dimensional Software for Process Design <i>Matthew MacPhail</i>	Corrosion Leads Lead to Tap: An Update of Lead Survey Studies by the City of Calgary <i>Jian Fu Deng</i>	Nose Creek Sanitary Trunk Sewer Upgrade – Phase A <i>Francis Rozsa</i>	Implementing Innovative Process Design for the Rural Municipality Of Headingley Wastewater Treatment Facility Upgrade <i>Saibal Basu</i>
<b>3:45 – 4:15</b>	Alliance Relationship Contracting: A New Delivery Method for the North American Water Industry <i>Stuart Torr</i>	Groundwater Chlorination: Where Do You Fit on the Curve? <i>Alvin Beier</i>	Infiltration and Inflow Modeling: A State-of-the Art Review <i>Jim Dumont</i>	City of Winnipeg North End Water Pollution Control Center – Raw Sewage Pump Replacement: Challenges Of Upgrading Equipment and Infrastructure To Current Standards <i>Matthew Maciejewski</i>
<b>4:15 – 4:45</b>	Guidelines for the Design, Procurement and Construction of Large Diameter Transmission Pipe in the City of Calgary <i>Chris Macey</i>	The Journey Of Microbiological Monitoring For Ensuring Safe Drinking Water* <i>Marty Allen</i>	Building Dynamic Models of Complex Hydraulic Structures in Wastewater Collection Systems - Case Studies <i>Eymond Toupin</i>	Calgro an Evolving Municipal Biosolids Program <i>Grace van Melle</i>

## THURSDAY

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	<b>Instrumentation &amp; Controls Room 209 Moderator: Ian Wright</b>	<b>Water Technology &amp; Innovation Rooms 203/204 Moderator: Paul Wobma</b>	<b>Storm Water Management Room 206 Moderator: David Atkinson</b>	<b>Wastewater Technology &amp; Innovation Rooms 201/202 Moderator: Mike Whalley</b>	
<b>8:30 – 9:00</b>	The Past, Present, and Future of Real Time Controls in Edmonton's Combined Sewer System <b>Angela Steward</b>	The Use of UV / Peroxide for Treatment of Micropollutants in Drinking Water <b>Rob Haas</b>	The City of Calgary Stormwater Quality Retrofit (SWQR) Program <b>Ian Morley</b>	Advanced Sludge Degritting - A Cost Effective Solution to Abrasives Removal <b>Pat Herrick</b>	
<b>9:00 – 9:30</b>	Alarm Management: Edmonton Water Treatment Plants <b>Abhishek Bhargava</b>	Got Gas? Relief Through the Effective Design & Construction of Onsite Sodium Hypochlorite Facilities <b>Matt Henney</b>	Coventry Hills Stormwater Quality Retrofit Wet Pond <b>John Grainger</b>	Building the Business Case - Conceptual Design of the Bonnybrook Wastewater Treatment Plant Headworks Upgrade <b>Max Wong</b>	
<b>9:30 – 10:00</b>	Sustainable Real-Time Water Utilities: <b>Darrol Weiss</b> <b>Dean Henley</b>	Use of Ion Exchange Pretreatment for THM Compliance at Hudson Bay, SK <b>Barbara Martin</b>	Shepard Wetland - The Largest Constructed Wetland in Canada – Reflections on the Construction and Commissioning Phases <b>David Taylor</b>	Commissioning of Pine Creek WWTP <b>M. Kim Fries</b>	
<b>10:00 – 10:30</b>	<b>COFFEE BREAK</b>				
	<b>Instrumentation &amp; Controls Room 209 Moderator: Ian Wright</b>	<b>Water Technology &amp; Innovation Rooms 203/204 Moderator: Paul Wobma</b>	<b>Storm Water Management Room 206 Moderator: David Atkinson</b>	<b>Wastewater Technology &amp; Innovation Rooms 201/202 Moderator: Mike Whalley</b>	<b>Utility Management Room 205 Moderator: Corinne Arkell</b>
<b>10:30 – 11:00</b>	Water Treatment Plant Dechlorination: Advancement in Chemical Injection Control Technology <b>Matthew McCrank</b>	Using Zeta Potential to Improve Filtration Performance <b>David Pernitsky</b>	Treatment Design Optimization of a Stormwater Pond Using Computation Fluid Dynamics and Biochemical Analyses <b>Margarita Houston</b>	Pilot Test of High Rate Tertiary Filtration Process For Phosphorous Removal <b>Mark Murphy</b>	Maintaining a Skilled Workforce Using A Competency Management System: A City Of Calgary Water Utility Case Study <b>Melanie Clark</b>
<b>11:00 – 11:30</b>	Optimizing Biological Nutrient Removal Through Instrumentation <b>Bob Dabkowski</b>	Working Through a Significant Chemical Regime Change at Calgary's Two Water Treatment Plants <b>Jason Sinclair</b>	Concurrent Dual Drainage Modeling of Urban Watersheds <b>Andrew Wiens</b>	Three Years of Operation of the Steinbach SAGR Facility Confirms the Viability for Cold Temperature Post-Lagoon Nitrification <b>Martin Hildebrand</b>	A Water And Wastewater Operations Career Attraction Project As A Catalyst In Support Of Workforce Renewal <b>Edith Phillips</b> <b>Del Morrison</b> <b>Michael Aherne</b>
<b>11:30 – 12:00</b>	Automatic Sludge Age Control: Wasting Pounds Instead of Gallons <b>Bob Dabkowski</b>	Winter Operation with Optimized Chemical Doses at Edmonton's Rosedale Water Treatment Plant <b>Saifuddin Molla</b>	Bioretention Cell Efficacy In Calgary: Results From Field And Laboratory Studies <b>Usman Khan</b>	Fort Resolution Wastewater Management Study <b>Ken Johnson</b> <b>Tricia Hamilton</b>	Can You Hear Your Customers, Getting Community Input on Service Levels <b>Greg Chartier</b>

12:00 – 1:30	LUNCH BREAK			
	<b>Utility Management 2 Room 209</b> <i>Moderator: Alan Pentney</i>	<b>Water Technology &amp; Innovation 2 Rooms 203/204</b> <i>Moderator: Jason Sinclair</i>	<b>Linear Infrastructure Maintenance Room 206</b> <i>Moderator: David Taylor</i>	<b>Odour Control Rooms 201/202</b> <i>Moderator: Ryan Roberts</i>
1:30 – 2:00	Implementation of ISO 14001 within The City of Calgary, Water Services: Exploring the Benefits and Challenges <b>Natasha Kinloch</b>	Maximizing Treatment Plant Water Efficiency in a Closed Watershed <b>Anita Selinger</b>	The New CSA Guideline for Sewer Defect and Distress Coding: Moving Forward <b>Ross Homeniuk</b>	Membranes For Odour Control? - A Case Study on a New Approach for the Clovis Water Reuse Facility <b>Trevor Jones</b>
2:00 – 2:30	Application of Spatial Database Models For Data Management On Engineering Projects <b>Candice Gottstein</b>	Slow Sand Filtration - Demand Operated and Cleaned Using Backwash <b>David Manz</b>	Large Diameter Interceptor Inspection and Analytical Assessments Using Multi-Sensor Technologies <b>Chris Macey</b>	Superoxygenation For Odour Control At Harbour Landing Forcemain <b>Alex Munoz</b>
2:30 – 3:00	Developing a Sustainable Service Based Asset Management Plan, Getting from A to Z <b>Greg Chartier</b>	"Pay Me Now Or Pay Me Later" - The Role Of Raw Water Reservoir Management On Treatment Implications <b>Sutha Suthaker</b>	Determining Operational Vulnerabilities in Gravity Wastewater Sewer Systems <b>David Enns</b>	Odour Control for the Pine Creek WWTP: From Pre-Design to Optimization <b>Catalina Nadeau-Bonilla</b>
3:00 – 3:15	COFFEE BREAK			
	<b>Utility Management 2 Room 209</b> <i>Moderator: Alan Pentney</i>	<b>Water Technology &amp; Innovation 2 Rooms 203/204</b> <i>Moderator: Jason Sinclair</i>	<b>Linear Infrastructure Maintenance Room 206</b> <i>Moderator: David Taylor</i>	<b>Reclamation &amp; Reuse Rooms 201/202</b> <i>Moderator: Ryan Roberts</i>
3:15 – 3:45	Applying PAS-55 Principles – Water Wastewater Case Study <b>James Nesbitt</b>	Membrane Treatment - Using New Technologies in New Ways <b>Don Burgess</b>	Utilidor Replacement in Inuvik, NWT <b>Ken Johnson</b>	Technical Considerations for the Reclamation & Reuse of Bonnybrook Effluent <b>A. Warren Wilson</b>
3:45 – 4:15	The Improvement of Municipal Water Use Data Collection Methods to Facilitate Water Conservation Measures <b>Allisha Sordi</b>	Membrane Application for Organic Control <b>Rudy Chan Samantha Simpson</b>	Condition Assessment of Large Diameter Water Transmission Mains <b>Marshall Gibbons</b>	Water Treatment & Reuse at a Fire Training Facility <b>Sutha Suthaker</b>
4:15 – 4:45	OurWinnipeg: Phase 1 - Infrastructure Review <b>Andy Nagy</b>	The "Green" Water Treatment: Northern Sunrise Regional WTP Design <b>Hwei Suan</b>	A New Direction for the City of Winnipeg Water Main Cleaning Program <b>Jon Goodbrandson</b>	Technical, Economic, Environmental and Social Challenges Associated with Large Scale Desalination and Reuse Schemes <b>David Griffiths</b>

## FRIDAY

	Global Perspective Room 206 <i>Moderator: Jason Sinclair</i>	Trenchless Technology Room 209 <i>Moderator: Ian Morley</i>	Water Resource Management Rooms 203/204 <i>Moderator: Corinne Arkell</i>	Wastewater Technology & Innovation 2 Rooms 201/202 <i>Moderator: A. Warren Wilson</i>
<b>8:30 – 9:00</b>	The Formation and Development of CAWST, the Centre for Affordable Water and Sanitation Technology <b>Shauna Curry</b>	Trenchless 101 <b>Dan Willems</b>	Multi-Criteria Decision Making In Environmental Engineering Projects <b>Juliana Tang</b>	Tertiary Effluent Filtration at Pine Creek WWTP <b>Prasanna (Lal) Amatyia</b>
<b>9:00 – 9:30</b>	Water For People's World Water Corps - Volunteers Making a Difference <b>Bill Skinner Tom Reinders</b>	Planning and Designing Major Infrastructure in Urban Areas <b>Duane Strayer</b>	A Holistic Approach to Protecting The Watershed <b>Stephanie Neufeld</b>	City of Lethbridge - WWTP Digester Gas Cogeneration System <b>Jim MacDonald</b>
<b>9:30 – 10:00</b>	Improving the Use Of Data For Local Government Infrastructure Planning in Northern Ghana <b>Jody Rechenmacher</b>	Sheep River Watermain Crossing <b>Juan Morales</b>	Integrated Water Management Planning: A Comprehensive Approach To Managing Water and Infrastructure In the Local Government Context <b>Glen Shkurhan</b>	Bonnybrook WWTP- VFA Upgrade Via Retrofit <b>Calvin Wong</b>
<b>10:00 – 10:30</b>	<b>COFFEE BREAK</b>			
	Global Perspective Room 206 <i>Moderator: Jason Sinclair</i>	Trenchless Technology Room 209 <i>Moderator: Ian Morley</i>	Regional Systems Rooms 203/204 <i>Moderator: Corinne Arkell</i>	Wastewater Technology & Innovation 2 Rooms 201/202 <i>Moderator: A. Warren Wilson</i>
<b>10:30 – 11:00</b>	Gippsland Water Factory, Victoria, Australia <b>Kim Fries</b>	Trenchless Upgrading of Lynnwood Neighbourhood Storm and Sanitary Systems <b>David Yue</b>	Re-use of Existing Infrastructure in Regional Water Systems <b>Jeff Fetter</b>	From Chlorination to UV Disinfection: A Retrofit Case Study <b>Ida Soh</b>
<b>11:00 – 11:30</b>	Providing Safe Drinking Water in Uganda <b>Chris Town</b>	Metro Vancouver – 2009 Highbury Siphon Rehabilitation (Phase 1) <b>Mark Brand</b>	Design, Construction and Commissioning the East Calgary Regional Water Pipeline <b>Shawn Pillai Mark Ruault</b>	City of Saskatoon H.M. Weir Pollution Control Center – Struvite Formation In Anaerobic Digesters With Hydraulic Mixing <b>Matthew Maciejewski Joe Zimmer</b>
<b>11:30 – 12:00</b>	Turbidity Reduction by Ultrafiltration (A Case Study) <b>Baha Hasasneh</b>	A Tale of Two Tunnels: The City of Calgary Beddington Creek South Sanitary Upgrades – A Case Study <b>Mark Draper</b>	Vermilion River Regional Water System Business Case Analysis <b>Golnaz Azimi</b>	UF Membranes For The Achievement of Limit of Technology Effluent Phosphorous Concentrations <b>Jeff Penny</b>