

Annual Conference 2007



Working Towards Sustainable Communities

2007 BCWWA Conference & Trade Show
PENTICTON • April 21 – 25, 2007

DRAFT TECHNICAL PROGRAM



BCWWA

BRITISH COLUMBIA WATER & WASTE ASSOCIATION

BCWWA 2007 CONFERENCE TECHNICAL PROGRAM

PRELIMINARY PROGRAM CHANGES MAY OCCUR

The technical side of the BCWWA Annual Conference for 2007 is shaping up nicely. We received about 140 excellent abstracts, authored by people from British Columbia and around the world, from which we agonizingly selected the papers you see below! The sessions were carefully selected to ensure that there would be a wide variety of topics that should appeal to every taste. At last years Conference the biggest complaint that we received was that there were so many interesting papers occurring at the same time that delegates had a tough time choosing which session to attend. We were appropriately flattered and have attempted a repeat performance again this year!

A great deal of the success of the Conference is due to the wide variety of interesting papers that are presented each year and I would like to personally thank every author who submitted an abstract this year, for without your papers there would be no Conference. This "Preliminary Programme" has been prepared for the Conference and I urge you to review it carefully. There may be changes if a presenter should be unable to attend for any reason but the core of the Conference should be essentially as shown. The unsung heroes of this and every Conference are those who prepare backup papers for use if for any reason a presenter should be unable to give their paper. A void in a session is a major concern to all and our backup presenters deserve a vote of thanks as they are our insurance policy. Thank You!

I look forward to seeing you all at the Conference this year!

Tim Forty, Technical Chair for the 2007 Conference.

You may wish to log on to the BCWWA website, at <http://www.bcwwa.org> to obtain more current information about the conference and the latest drafts of the "**Technical Programme**" and the companion document the "**Book of Abstracts**" both of which will be available for downloading shortly.

After the Conference you will be able to download pdf versions of all the presentations directly from the BCWWA website!

Monday, April 23, 2007 Afternoon Concurrent Sessions

Session 1: Salon "B"

Drinking Water: Supply and System Management

Moderator: Doug MacQuarrie, GVRD

- 1:35 - 2:10 pm** *West Vancouver Water Supply Business Plan* - Raymond Fung, District of West Vancouver, and Walt Bayless, Dayton & Knight Ltd.
- 2:15 - 2:50 pm** *Estimating Climate Change Impacts on Watershed Yield for the City of Nanaimo* - Michael MacLachy, Associated Engineering
- 3:10 - 3:45 pm** *Built to Last a Lifetime, But Then What? Welcome to Port Moody's Financially Sustainable Water Distribution System* - Brian Carter; City of Port Moody and David Main; Earth Tech
- 3:50 - 4:25 pm** *Commercial Divers and Remotely Operated Vehicles (ROV's) in Potable Water Systems* - Andrew Korek, Phoenix Marine Services

Session 2: Salon "C"

Small Drinking Water Systems

Moderator: Brian Thorburn, Epcor

- 1:35 - 2:10 pm** *Small Community Infrastructure, Community-of-Interest Web Site: A portal for infrastructure information from management issues to technical solutions* - Michael Zbarsky, Ministry of Community Services
- 2:15 - 2:50 pm** *Smaller Water Treatment Systems that Meet the New Requirements* - Scott Foster, BI Pure Water
- 3:10 - 3:45 pm** *Small to Solve Small Municipal Water Problems* - Ron Hallett, UV Pure Technologies
- 3:50 - 4:25 pm** *Implementing Water Treatment for Small Water*

Systems - What You Need to Know- Irfan Gehlen, Kerr Wood Leidal Associates

Session 3: Room 1

Local Government Infrastructure Funding Initiatives: Capacity Building and Advancing Sustainability

Moderator: Glen Brown, Ministry of Community Services

- 1:35 - 2:10 pm *Infrastructure Planning Grants: Integrating Sustainability Into Capital Plans* - Chris Jensen, Ministry of Community Services
- 2:15 - 2:50 pm *Capital Infrastructure Grant Programs (Part 1): Understanding Objectives and Linkages* - Glen Brown, Ministry of Community Services
- 3:10 - 3:45 pm *Capital Infrastructure Grant Programs (Part 2): Improving your chances for success* - Michael Zbarsky, Ministry of Community Services
- 3:50 - 4:25 pm *Capital Infrastructure Grant Programs (Part 3): Conditional Requirements, Including the Infrastructure Benchmarking Initiative and the Water Conservation Calculator* - Liam Edwards, Ministry of Community Services

Session 4: Room 2/3

Water Conservation

Moderator: Don McCallum, Gartner Lee

- 1:35 - 2:10 pm *Water Accountability and Loss Control Improvements in North America: A Progress Report* - Jamie Eichenberger, IKEN Services, (AWWA Water Conservation Committee)
- 2:15 - 2:50 pm *Water Conservation Through Proper Irrigation Practices* - Tom Vogler, Emco
- 3:10 - 3:45 pm *Driving Up the Value of Water: The Effects of End-User Behaviour* - Carolyn Stewart, City of Penticton
- 3:50 - 4:25 pm *Water System Planning - "The Westbank Story"* - Brian Jamieson, Westbank Irrigation District and Angela Zapp, Neptune Technology

Session 5: Room 6/7

Stormwater: System Evaluation and Management

Moderator: Conrad Pryce, Ministry of Environment

- 1:35 - 2:10 pm *Performance Evaluation Programs in the Pacific Northwest* - Sean Darcy, CONTECH Stormwater Solutions
- 2:15 - 2:50 pm *Integrated Stormwater Management Planning - Implementation for Rural Regional Districts* - Michael Florendo, Delcan, and Tom Field, Delcan
- 3:10 - 3:45 pm *BEYOND THE GUIDEBOOK: Making the Connection between Rainwater Management and Stream Health* - Jim Dumont, McEhanney and Kim A Stephens, Inter-Governmental Partnership
- 3:50 - 4:25 pm *Stormwater Management at an Okanagan Hillside Development* - Eric Morris, Kerr Wood Leidal Associates and Don Moore, Wesbild Holdings

Session 6: Room 5

Emerging Contaminants and Emerging Technologies

Moderator: Kelly Bush, UBC

- 1:35 - 2:10 pm *Closer to Zero - Water Quality Monitoring* - Geoff Hancock, Hancock Sigma Sensing
- 2:15 - 2:50 pm *Mass balance of eEDCs at a full scale BNR municipal wastewater treatment plant* - Marc P. Fernandez, University of Alberta
- 3:10 - 3:45 pm *STIP Scan - Multiple Wastewater Parameters with a Single Analyzer* - Ian Tell, Endress+Hauser
- 3:50 - 4:25 pm *Climate Change, Nitrous Oxide and Wastewater Management - Linkage and Significance* - Dean Shiskowski, Associated Engineering

Session 7: Community Centre Room 1

CAWQ Western Symposium

Moderator: Pierre Berube, UBC

- 1:35 - 2:10 pm *Activated sludge foaming: Dynamics of bacterial population and foam occurrence* - Thomas Hug, UBC
- 2:15 - 2:50 pm *Optimization of the Design and Operation of A UCT-Type*

- MEBPR Process* - Eman Al-Atar, UBC
- 3:10 - 3:45 pm *Phosphorus Recovery from Domestic Wastewater through Struvite Crystallization; Scale-up of Hydrodynamics in UBC Fluidized Bed MAP Crystallizer* - Md. Saifur Rahaman, UBC
- 3:50 - 4:25 pm *Biological Regeneration of Ion-exchange Resins Exhausted with Perchlorate* - Deborah J. Roberts, UBC Okanagan

**Session 8: Community Centre Room 2
Decentralized Wastewater Systems**

Moderator: Curt Kerns, CK Ventures

- 1:35 - 2:10 pm *Free Water Surface Constructed Wetland for Treating Restaurant Wastewater* - Curt Kerns, Wetlands Pacific
- 2:15 - 2:50 pm *Decentralized Wastewater Treatment Systems with Reclaimed Water Reuses - An Alternative to the Big Pipe?* - Mike Seymour, Focus Corporation and Jeffrey Fillipone, Golder
- 3:10 - 3:45 pm *Decentralized Wastewater Treatment: Beyond Tertiary* - Wilf Stefan, Seprotech Systems and Zaileen Rahim, Seprotech Systems
- 3:50 - 4:25 pm *Sustainable Wastewater Management* - Eric C. Pettit, UMA Engineering

**Session 9: Room 8
SCADA and Asset Management, Information Management and Critical Infrastructure Operations**

Moderator: Ron Bowman, Corix Utilities

- 1:35 - 2:10 pm *SCADA System Diagnostics and Preventative Maintenance* - Victor Wong, Dayton & Knight and Tom Dunn, Dayton & Knight
- 2:15 - 2:50 pm *Using SCADA Data and Predictive Models Together for New Management Functionality: How to Save 15% on Your Energy Bill Without Turning Out the Lights* - Benny Wan, Earth Tech and Devan Thomas, Earth Tech
- 3:10 - 3:45 pm *Eliminating Control & IT "Silos of Information" Using Business Intelligence Software to Optimize Municipal Water & Waste Operations* - John Joyner, City of Santa Rosa,

- and Paul Doroff, City of Santa Rosa
- 3:50 - 4:25 pm *Emergency Response: Operator; Critical Infrastructure Operator* - Vincent Chiew, City of Calgary

**Tuesday, April 24, 2007
Morning Concurrent
Sessions**

Session 10: Salon "B"

Drinking Water: Treatment

Moderator: Anthony Greville, Klearwater

- 8:20 - 8:55 am *Evaluation of Different High-Rate Filtration Scenarios to Treat Shuswap Lake Water* - A. Cristina Fonseca, Stantec
- 9:00 - 9:35 am *A Tale of Two Groundwaters: Village of Lumby Water Treatment Plant* - Matthew Henney, Associated Engineering
- 9:40 - 10:15 am *The Effect of Coquitlam Source Water Turbidity on UV and Ozone Treatment Efficiency* - Lynn Landry, GVRD
- 10:35 - 11:10 am *Impact of a Membrane Treatment Process Upgrade on Disinfection By-Product Formation in the Distribution System* - Kelly Bush, UBC
- 11:15 - 11:50 am *Magnetic Ion Exchange (MIEX-DOC) for the Treatment of Organic Laden or Coloured Waters: Over-Hyped or Under-Used ??* - Simon Breese, Earth Tech

Session 11: Salon "C"

Wastewater: Treatment

Moderator: David Lycon, Earth Tech

- 8:20 - 8:55 am *Building a System from Scratch: A Case Study of the Sooke Wastewater Collection System and Treatment Plant* - Tami Wetmore, EPCOR
- 9:00 - 9:35 am *Two-Stage Biological Aerated Filtration: A Case Study from Thunder Bay, Ontario* - Till Freihammer, Earth Tech
- 9:40 - 10:15 am *Wastewater Collection and Treatment Plant Odour*

- Control: Ultraviolet Based Systems - Installations and Performances* - George McGeachie, CONSULT GEO Consulting Engineering
- 10:35 - 11:10 am *Selection of Solids Dewatering Technology at J.A.M.E.S. WWTP* - Melvin Mayfield, City of Abbotsford, and Stella Chiu, Dayton & Knight
- 11:15 - 11: 50 am *The Use of Process Modelling to Optimize Sludge Thickening and Digestion in Sao Paulo, Brazil* - Barry Rabinowitz, CH2M HILL

Session 12: Room 1

Drinking Water: System Management

- Moderator: Carolyn Stewart, City of Penticton
- 8:20 - 8:55 am *Zone Metering for a Water Loss Assessment - A Case Study* - Neal Whiteside, Kerr Wood Leidal and Jude Pillai, City of Surrey
- 9:00 - 9:35 am *A New Era in Water Meter Installation and Billing Services* - Peter Coxon, Urban Systems and Victor Shopland, City of Fort St. John
- 9:40 - 10:15 am *UV Disinfection Implementation: UV Validation and Dose Monitoring Strategies* - Jim Cosman, Trojan Technologies
- 10:35 - 11:10 am *Strategy for Dealing with an E. coli Positive Water Sample* - Eileen Butler, GVRD
- 11:15 - 11: 50 am *Fire Flow Analyses For Optimal Network Improvement* - Werner de Schaetzen, GeoAdvice Inc.

Session 13: Room 2/3

Asset Management: Watching the bottom line

- Moderator: David Main, Earth Tech
- 8:20 - 8:55 am *One Municipalities Experience Starting an Asset Management Program - Part II* - John McMahon, City of New Westminster
John Weninger, Urban-Systems
- 9:00 - 9:35 am *Development of Deterioration and Sustainable Funding Models for Sewer Infrastructure in the Lower Mainland of B.C.*

- Karen Leung, UMA and Chris Macey, UMA
- 9:40 - 10:15 am *Quick And Dirty, Cheap And Dam Useful: Long Term Financial Planning For Sustainable Infrastructure On A Shoestring Budget* - Ian Rose-Innes, Dayton & Knight
- 10:35 - 11:10 am *What Do We Know About It? Leveraging infrastructure data for better decision making...* - Ross Homeniuk, UMA|AECOM
- 11:15 - 11: 50 am *Innovative and Financially Sustainable Water Treatment* - Brett deWynter, Earth Tech

Session 14: Room 6/7

Stormwater: Management

- Moderator: Poul Rosen, Urban Systems
- 8:20 - 8:55 am *The Richmond Olympic Speed Skating Oval and the Water Sustainability Games* - Colin Kristiansen, Delcan
- 9:00 - 9:35 am *Harmonizing Drainage and Irrigation Issues for the Farmer and the City* - Kelvin Carey, UMA and Hirod Gill, UMA
- 9:40 - 10:15 am *Richmond Flood Management Strategy* - Lloyd Bie, UMA and Wendy Yao, UMA
- 10:35 - 11:10 am *Tsunami Impacts and Storm water System Rehabilitation in Batticaloa Sri Lanka* - Ken Watson, City of Port Alberni (Team Leader for Batticaloa Storm Water Project)
- 11:15 - 11: 50 am *Tekmar Controls Facility: Integrating Low Impact Development Concepts to Create Energy Efficient Buildings - Lessons Learned from Four Years of Operation* - Mike Nolan, Kerr Wood Leidal

Session 15: Room 5

Wastewater: Operations and Management

- Moderator: Chris Town, Urban Syatems
- 8:20 - 8:55 am *B.C.'s First Approved Assurance Plan under the Municipal Sewage Regulation* - Jurek Janota-Bzowski, Kerr Wood Leidal
- 9:00 - 9:35 am *Don't Let Them Leave Before the Job is Done - An Operator's Perspective on*

- Start-up, Testing and Commissioning* - Gerry Stevens, Earth Tech
- 9:40 - 10:15 am *RDNO Chemically Enhanced Primary Treatment (CEPT) Facility for Septage with Sewer Discharge* - Leif Marmolejo, Associated Engineering
- 10:35 - 11:10 am *Wastewater Sampling Procedure Review or "What do you do if you can't get wastewater samples to a lab in time?"* - Pat Miller, Sun Peaks Utilities and Amber Lapshinoff, Sun Peaks Utilities
- 11:15 - 11:50 am *Archaeological Considerations - A Case Study of the Port Hardy WWTP Construction* - Tami Wetmore, EPCOR

**Session 16: Community Centre Room 1
CAWQ Western Symposium**

- Moderator: Parvez Fattah, UBC
- 8:20 - 8:55 am *Prediction of struvite precipitation potential using a chemical equilibrium model* - Md. Iqbal Hossain Bhuiyan, UBC
- 9:00 - 9:35 am *Does Giardia lamblia lose their infectivity during wastewater treatment processes? --- A field study* - Dong Li, University of Alberta
- 9:40 - 10:15 am *Comparing the Effectiveness of Two Carbon Dioxide Strippers to Reduce Operating Costs for Struvite Formation* - Nandini Sabrina, UBC
- 10:35 - 11:10 am *Investigation of Methanol-induced Biological Phosphorus Removal in a Laboratory-scale Biological Reactor* - Raphael Fugere, UBC
- 11:15 - 11:50 am *Ozonation of pulp and paper wastewater and its impact on molecular weight distribution of organic matter* - Daniel Medeiros, UBC

**Session 17: Community Centre Room 2
Water Sustainability: Convening for Action in British Columbia**

- Moderator: Kim Stephens, BCWWA, Water Sustainability Committee
- 8:20 - 8:55 am *Water - Choosing Sustainability for Life & Livelihoods* - Raymond Fung, BCWWA Water Sustainability Committee, and Lynn Kriwoken, MOE
- 9:00 - 9:35 am *Convening for Action on Vancouver Island: Towards Water Sustainability* - Eric Bonham, BCWWA Leadership Council, and Tim Pringle, Real Estate Foundation of BC
- 9:40 - 10:15 am *Convening for Action in Greater Vancouver: Celebrating Green Infrastructure* - Paul Ham, Green Infrastructure Partnership
- 10:35 - 11:10 am *Convening for Action in the South Okanagan: Water for Life and Livelihoods* - Ted van der Gulik, Ministry of Agriculture and Lands, and Meggin Messenger, Ministry of Community Services
- 11:15 - 11:50 am *WaterBucket - The Water Portal for British Columbia* - Michael Tanner, WaterBucket Website Partnership, and Lori Henderson, Ministry of Environment

**Session 18: Room 8
Analytical Technologies**

- Moderator: Claire Bayless, Dayton & Knight
- 8:20 - 8:55 am *A New Medium for Detection of E.coli and Total Coliform Bacteria in Potable Water* - Larry Chow, GVRD
- 9:00 - 9:35 am *Use of Colilert, Colilert-18 and Enterolert for the determination of E.coli, fecal coliforms and enterococci in Waste Waters* - Gil Dichter, IDEXX Laboratories
- 9:40 - 10:15 am *Using bacterial source tracking (BST) to identify sources of fecal pollution in 4 watersheds* - Cindy Meays, University of Victoria, Agriculture and Agri-Food Canada

- 10:35 - 11:10 am *The Use of UV Absorbance in Tracing the Source of Water in the Distribution System* - Rudy Pante, GVRD
- 11:15 - 11:50 am *Comparing seasonal distribution of pathogenic bacteria and their indicators in biofilms on different surface types in agricultural watersheds* - Rasha Maal-Bared, UBC

Tuesday, April 24, 2007
Afternoon Concurrent Sessions

Session 19: Salon "B"

Drinking Water: Supply

- Moderator: John Delver, Kerr Wood Leidal
- 1:40 - 2:15 pm *Applying BC's Comprehensive Drinking Water Source to Tap Assessment Process to the Comox Lake Water Supply* - Charmaine Enns, Vancouver Island Health Authority, and Graeme Faris, Regional District of Comox-Strathcona
- 2:20 - 2:55 pm *Utilizing Alpine Lakes for Drinking Water Storage* - Derek Bonin, GVRD
- 3:15 - 3:50 pm *Raw water quality and THM Formation Potential in two ultra-oligotrophic coastal BC reservoirs* - Ken Ashley, GVRD
- 3:55 - 4:30 pm *Cobble Hill Area Well Protection Plan* - Lee Ringham, EBA and Michele Lepitre, EBA

Session 20: Salon "C"

Wastewater Collection: Infrastructure Management

- Moderator: Angus English, Earth Tech
- 1:40 - 2:15 pm *Case Study - Rehabilitation of the Bear Creek Sewage Pump Station* - Richard Allegretto, City of Surrey, and Gurjit Sangha., Dayton & Knight
- 2:20 - 2:55 pm *I&I Rates and Sewer Infrastructure Age: Is There a Strong Correlation?* - Chris Johnston, Kerr Wood Leidal
- 3:15 - 3:50 pm *Consideration of Energy Efficiency in WTP Designs and Operation* - Mario Laurin, Associated Engineering

- 3:55 - 4:30 pm *Removal of toxicity-causing surfactants from a primary effluent - part a: controlled public education study* - Pierre R. Bérubé, UBC

Session 21: Room 1

Municipal Operations and Asset Management

- Moderator: Peter Takacs, UMA
- 1:40 - 2:15 pm *Impacts of New Highway and Bridge Programs in British Columbia on the Operations and Maintenance of Municipal Water and Sewer Utilities* - Tom Field, Delcan and Shaun Hodgins, Delcan
- 2:20 - 2:55 pm *Smart Process Analyzers and Asset Management Software: Discover the Benefits of Utilizing the Combination* - Brian LaBelle, Rosemount Analytical
- 3:15 - 3:50 pm *Master Diversity & Reduce Complexity with Field Device Tool* - Jason Riegert, Endress + Hauser
- 3:55 - 4:30 pm *Computer Assisted Transient Analysis in Water Systems* - Joel McAllister, Dayton & Knight

Session 22: Room 2/3

Wastewater: Management and Reuse

- Moderator: Paul Dufault, Associated Engineering
- 1:40 - 2:15 pm *Twenty-First Century Storm Water Management* - Remco Bergman, Specto Civil Technology
- 2:20 - 2:55 pm *Justice Institute Of B.C. - Maple Ridge Fire And Safety Training Centre - Intermediate Treatment of Oily Wastewater from Fire Fighter Training Exercises* - Brian Harrington, Dayton & Knight
- 3:15 - 3:50 pm *Divers, Dams, and Dolly's - Constructing a Pipe to the Peace* - Kevin Wiens, Urban Systems and Victor Shopland, City of Fort St. John
- 3:55 - 4:30 pm *The Successful Design and Performance of the UV Disinfection Facility at Calgary's 500,000 m3/d Bonnybrook BNR WWTP* - Paul Do, City of Calgary

Session 23: Room 6/7

Advanced Wastewater Treatment and P3

Moderator: Louise Huang, HKW Bulk Equipment

- 1:40 - 2:15 pm *The Effectiveness of Phosphorus Removal using Liquid Alum at Calgary's 72,000 m³/d Fish Creek UNOX WWTP* - Paul Do, City of Calgary
- 2:20 - 2:55 pm *Finding a long term solution to struvite accumulation in biological nutrient removal (BNR) plants* - Kazi Parvez Fattah, UBC
- 3:15 - 3:50 pm *Metal Inhibition of a BNR Process - Is Intuition the Right Response?* - Rick Bitcon, UMA
- 3:55 - 4:30 pm *Public/Private Partnerships - Delivering Value for Money* - Graeme Bethell, Corix Utilities

Session 24: Room 5

Biosolids: Processing and Recycling

Moderator: Jack Bryden, MOE

- 1:40 - 2:15 pm *Alternative Options for Biosolids Treatment* - Joanne Harkness, Urban Systems
- 2:20 - 2:55 pm *Pilot Testing of the Micronex System to Produce a Class A Biosolids* - Marco Fornari, City of Prince George and John Boyle, Dayton & Knight
- 3:15 - 3:50 pm *Inter-city collaboration: Producing wastewater biosolids as a valuable soil amendment at a new Okanagan composting facility through partnership between the Cities of Kelowna and Vernon* - Arash Masbough, Associated Engineering
- 3:55 - 4:30 pm *Sludge Thickening as a Method to Increase the Capacity of a Digestion Process - Don't Forget the Rheological Properties of the Sludge!!* - Jim Marx, Earth Tech

Session 25: Community Centre Room 1

CAWQ Western Symposium

Moderator: Sietan Chieng, UBC or Thomas Hug, UBC

- 1:40 - 2:15 pm *Exploring groundwater - surface water interactions using fluorescence spectroscopy, isotope, water quality and land use analyses* - Trudy Naugler, UBC
- 2:20 - 2:55 pm *Critical Factors for Ultrafiltration Indirect Integrity Monitoring* - Nicolas Beauchamp, UBC

- 3:15 - 3:50 pm *UV/H₂O₂ Advanced Oxidation-Applications in Drinking Water Treatment and Impacts on Natural Organic Matter* - Siva Sarathy, UBC
- 3:55 - 4:30 pm *Use and performance of BioSand filters installed in Posoltega, Nicaragua: a field evaluation* - Jason Vanderzwaag, UBC

Session 26: Community Centre Room 2

Wastewater: Governance

Moderator: Akemi Sui, Kerr Wood Leidal Associates

- 1:40 - 2:15 pm *Update on the Regulatory Review of the Municipal Sewage Regulation* - Catriona Weidman, MOE
- 2:20 - 2:55 pm *What the EOCP's Continuing Education Requirement Means to You* - Bob Smith, EOCP and Bill Hyslop, EOCP
- 3:15 - 3:50 pm *Draft CCME Canada-wide Strategy for Management of Municipal Wastewater Effluent - Update* - Catriona Weidman, MOE
- 3:55 - 4:30 pm *Using Environmental Management Systems to Link Operations to Governance and Commitments to Sustainability* - Giovanna Joanne Petrini, Gartner Lee

Session 27: Room 8

Small Wastewater Systems: Operation and Management

Moderator: Deborah J. Roberts, UBC Okanagan

- 1:35 - 2:10 pm *Seven Years Experience with USBF and Morer* - Pat Miller, Sun Peaks Utilities
- 2:15 - 2:50 pm *Lessons Learned in MBR Design at Ganges WWTP After 10 years of Operation* - Jeff Penny, GE Water and Process Technologies
- 3:10 - 3:45 pm *Cleaning solutions for water and waste-water treatment facilities* - Dave Ellwood, Newalta
- 3:50 - 4:25 pm *Conversion of Anaerobic Lagoons into Aerobic Cells and Improvements to Aerated Systems in Cold Climates* - Gerson Neiva, Dayton & Knight

Monday & Tuesday, April 23 and
April 24, 2007

Backup Papers For ALL Sessions

I would like to take this opportunity to personally thank the people, whose papers are listed below, who have gone to the trouble of preparing a paper for use as a backup just in case another presenter should be unable to present their paper for any reason. Without their thankless and often unrecognized efforts our Conference would be in disarray in the event of such a cancellation.

Thank you all!

Tim Forty, Technical Chair

- x:xx - x:xx xm* *On-Site Sodium Hypochlorite Generation for Disinfection of Water -*
Dom Sacco, BG Controls,
and Bill Kelly, Severn Trent
Services
- x:xx - x:xx xm* *Horizontal Directional
Drilling Installation Of
Segmented PVC Watermain
Pipe In Richmond, BC,
Canada -* James Young, City
of Richmond and Preston
Creelman, Royal Pipe
Systems
- x:xx - x:xx xm* *Breaking Path Dependence:
A Systems Approach to
Outdoor Water
Conservation -* Don Degen,
City of Kelowna, and Neal
Klassen, City of Kelowna
- x:xx - x:xx xm* *The Use of Soil
Amendments to Reduce
Water Consumption in Turf
and Horticultural
Applications -* Bernie
Neufeld, AquaFirst
Technologies
- x:xx - x:xx xm* *Understanding UV
Technology - Optimizing UV
Disinfection Systems Design
-* A. Cristina Fonseca,
Stantec
- x:xx - x:xx xm* *Successful Pilot Test of an
Advanced Effluent
Microfilter at Calgary's
500,000 m³/d Bonnybrook
BNR WWTP -* Paul Do, City
of Calgary
- x:xx - x:xx xm* *Olympic Gateway
Neighbourhood Utility*

- Modeling -* Lloyd Bie,
P.Eng., Senior Engineer,
UMA
- x:xx - x:xx xm* *Practical issues in Turbidity
Measurement -* Mac Booth,
Cleartech Industries
- x:xx - x:xx xm* *Design, Construction and
Repair of Potable Water
Reservoirs -* John Boyle,
Dayton & Knight
- x:xx - x:xx xm* *Successful Centrifuge Pilot
Testing of Calgary's
Anaerobically-Digested
Sludge -* Paul Do, City of
Calgary

WEDNESDAY TECHNICAL TRANSFER SESSIONS

Wednesday April 25, 2007 -
Technical Transfer Session

**Please note: Registration for these sessions is
additional to the full conference fee.**

**(Room assignment will be finalized at the
Conference)**

**Session 1: From Shop Floor to Top Floor:
Making Good Business Decisions
with Information Technologies
Moderator/Chair: Victor Wong,
Dayton and Knight**

SCADA systems have been an integral part of control systems since the very first was implemented. By definition, SCADA systems provide Supervisory Control and Data Acquisition to systems operators. This can be as simple as a switch to turn a pump on or a lamp to indicate that the pump is running. It can also be as complex as a distributed radio network, complete with PLC control and remote operation of pumpstations with graphical displays and historical data stored on computers in a central location, accessible by everyone in the organization.

Municipalities throughout British Columbia have SCADA systems installed on their water and/or

wastewater networks. Smaller municipalities may find it sufficient to have a simple “alarm callout” at each station that dials a pager or cell phone to indicate a problem with the station. Others, such as the GVRD, find it necessary to have the capability of remotely controlling stations using a graphical computer display that provides immediate feedback to the operator. Some municipalities may even have mobile SCADA nodes installed in their service vehicles to assist field operators during their maintenance routines.

The BCWWA SCADA & IT Committee was formed in 2003 to help BCWWA educate its members about SCADA systems and how they can be utilized in an organization. Our membership includes consultants, field technologists, vendors, and several other various technical backgrounds and occupations within the industry. The SCADA & IT committee has a broad and dynamic skill set that enables us to educate our industry colleagues.

Our first annual SCADA conference was held in Richmond in November 2004. This successful conference was attended by water and wastewater industry professionals from across British Columbia. Conferences in 2005 and 2006 shared the same success as our first, becoming bigger and better each year.

Our most recent conference, entitled “From Shop Floor to Top Floor: Making Good Business Decisions with SCADA”, was held in November 2006 and sought to educate attendees about how

they can most effectively implement and utilize their SCADA systems throughout all levels of their organizations. A day of presentations by industry professionals from around the world was complemented with an MSC trade show during the lunch break and a networking session at the end of the day.

The success of this conference, despite the snowy weather on November 27, 2006, encouraged us to hold a technical transfer session at the BCWWA Annual Conference. Our goal during the AGM is to build on the success of our November conference and present a higher-level overview of what SCADA systems can do for an organization. This Technical Transfer session will be geared toward upper management, and is designed to help them understand how their organization’s SCADA system can provide them with beneficial data that will help them make decisions about their engineering and financial projects.

Please join us on Wednesday April 25, 2007 for our Technical Transfer Session “***From Shop Floor to Top Floor: Making Good Business Decisions with Information Technologies***”.

All delegates attending must be registered for the Wednesday Technical Session. The member’s fee is \$175 + GST

Space for this session is limited so you are advised to register early.