



Information, Infrastructure & Environment: What is our Water Legacy?



63rd CWRA National Conference | June 15 - 18, 2010 | The Hyatt Hotel | Vancouver, BC

FINAL PROGRAM

Time	Tuesday, June 15	Wednesday, June 16				Thursday, June 17				Friday, June 18			
		Stream 1	Stream 2	Stream 3	Stream 4	Stream 1	Stream 2	Stream 3	Stream 4	Stream 1	Stream 2	Stream 3	Stream 4
	Registration Desk Open 7:30 am	Registration Desk Open 7:30 am *** Speakers Breakfast 7:30 am (Regency B) ***				Registration Desk Open 7:30 am *** CSHS AGM (7:30 am start) *** *** Speakers Breakfast 7:30 am (Regency B) ***				Registration Desk Open 7:30 am *** Speakers Breakfast 7:30 am (Regency B) ***			
8:30	Technical Training Sessions Green Kenue (9 am to 3:30 pm) ADCP (9 am to 5:30 pm) Hydrology in R (1 pm to 4:30 pm) Environment Canada Data Explorer (4:30 pm to 6 pm) Aquarius Software (9 am to 12 pm) - 34th Floor -	Welcome and Plenary Session Plenary Speaker - Paul Whitfield (1 hour 15 min)				NASH Presentations 4	CANCID 1	Watershed Management 1	CSHS 1	Policy and Governance 4	Watershed Management 3	Aquatic Habitat 1	CSHS 5
9:45		35 min Coffee Break				35 min Coffee Break				35 min Coffee Break			
10:20		NASH Presentation 1	City of Surrey 1	Modeling and Analysis 1	Projects and Infrastructure 1	NASH Presentations 5	CANCID 2	Watershed Management 2	CSHS 2	Policy and Governance 5	Watershed Management 4	Aquatic Habitat 2	CSHS 6
12:00		Lunch Break (1 1/2 hours) Speaker: MLA John Slater - Regency C / D -				Lunch Break (1 1/2 hours) Speaker: Kristine Webber, Project WET - Regency C / D -				Meet at 12:15 pm for Tours			
13:30		NASH Presentations 2	City of Surrey 2	Modeling and Analysis 2	Projects and Infrastructure 2	NASH Poster Session	CANCID 3	Policy and Governance 2	CSHS 3	Technical Tours Students and Young Professionals (SYP) Tour (12:30 pm to 5:30 pm) Surrey Project Tour (12:30 pm to 5:30 pm)			
15:10		Dedicated Poster Session and Coffee Break (35 min)				Dedicated Poster Session and Coffee Break (35 min)							
15:45		NASH Presentations 3	Policy and Governance 1	(Ice) Modeling and Analysis 3	Projects and Infrastructure 3	NASH Workshop	CANCID 4 CANCID AGM (4:10 pm Start)	Policy and Governance 3	CSHS 4				
17:00		Exhibitor Hosted Meet-and-Greet (5 pm to 6 pm)				Exhibitor Hosted Meet-and-Greet (5 pm to 6 pm)				Exhibitor Hosted Meet-and-Greet (5 pm to 6 pm)			
	Meet-and-Greet (6 pm to 8:30 pm) - 34th Floor -	CWRA National AGM (5:30 pm to 7pm) - Stanley Room, 34th Floor - Students and Young Professionals (SYP) Event (Starts at 7 pm)				CWRA National Banquet (6 pm to 10 pm) - Regency C / D - Banquet Speaker: Ray Zahab Ultramarathon Runner, Adventurer & Social Sustainability Advocate				NASH = North American Stream Hydrographers CANCID = Canadian National Committee for Irrigation and Drainage CSHS = Canadian Society for Hydrological Sciences			



CWRA 2010 CONFERENCE - POSTER PRESENTATION SESSIONS

Session	Title	Authors
NASH Poster Session Thurs. June 17 (13:30 to 15:10)	Reconstructing the Natural Streamflow of La Grande Riviere, Quebec, Canada	Marco Hernandez-Henriquez, Theo J. Mlynowski, Stephen J. Dery
	Assessing 'Fitness for Purpose' for Hydrological Data	Paul Whitfield
	Review of Stream Gauging Standards	Ian McLaurin
	WMO Survey of Field Discharge Measurement Instrumentation and Techniques Used Operationally by National Hydrologic Services	Janice Fulford, Zsuzsanna Buzás
	Long-term monitoring to study multiple interacting environmental stressors. A case study from a temperate and boreal lake network in Quebec, Canada	Suzanne Couture, Christian Gagnon
	Understanding Natural Variability of Nitrate Concentrations in a Regional Groundwater Monitoring Network	Gwyn Graham, Diana Allen, Cindy Starzyk, Ian Urbanski
	World Hydrometry Today and Concerns for the Future	Reg Herschy
	A New Natural Flow Calculation Program for the Prairie Provinces Water Board (PPWB)	Nesa Ilich
	Hydroclimatic Classification and Annual Runoff Prediction for Ungauged Basins Using a Spatially Distributed Climatic Water Balance Model	Dan Moore, J.W. Trubilowicz, J. Buttle
	Hydrometric Monitoring Across the Canadian Pan-Arctic Region, 1950-2008	Theo Mlynowski, Stephen J. Déry, Marco A. Hernández-Henriquez
CWRA General Poster Session Wed. June 16 Thurs. June 17 (15:10 to 15:45)	Fresh water-related indicators in Canada: An inventory and analysis	Gemma Dunn, Karen Bakker
	Hyperconcentrated flow and associated risk: a hydrogeomorphological analysis of a forested alluvial fan, northern Gaspé Peninsula, Quebec	Marie-Audray Ouellet, Daniel Germain
	Environment Canada Water Availability Indicator (WAI) Initiative	Willard Boutot, Michel Villeneuve, Francis Savignac
	Multiobjective, Constrained Monte-Carlo Optimization and Uncertainty Estimation for the UBC Watershed Model	Scott Weston, Sean Fleming, Frank Weber
	Projected Climate Impacts on Snow Depths and Discharges in the Lake Winnipeg Watershed	Yonas Dibike, Terry Prowse, Rajesh Shrestha, Morgan Thompson
	A MCDA-aided expert system for adaptation analysis under changing climate - A case study for the reservoir management in Assiniboia Watershed, Canada	Renfei Liao, Gordon Huang, Dunling Wang, Hua Zhang, Xiaodong Zhang
	Towards Simulating Streamflow in Ungauged Basins Utilizing the isoWATFLOOD Hydrological Model: Analysis of Distribution Methods for Stable Water Isotopes within the Mackenzie River Basin	Carly Delavau, Tricia Stadnyk, Jean Birks, John Gibson, Yi Yi, Nicholas Kouwen
	Study of Dam Impact on Ground Water Storage	Mehemed Razzaghi
	Modelling the Odei River Basin: Forecasting Stream Flow for Hydroelectric Power Management	Phillip Slota, Carly Delavau, Tricia Stadnyk, Nick Kouwen, Kristina Koenig
	Climate Change Impacts on Runoff Generation in the Churchill River Basin	Trish Stadnyk, Steven Bohm, Kuang Yin Zhao, Phillip Slota, Nicholas Kouwen, Kristina Koenig
	Short-lead time streamflow forecasting by machine learning methods, utilizing numerical weather prediction and climate indices	Kabir Rasouli, William W. Hsieh, Alex J. Cannon, Carlos Gaitan
	Integrated Inexact Fuzzy Stochastic Programming Model for Multisource Water Resource Management under Uncertainty	Yumin Chen, Gordon Huang, Gongchen Li
	Managing the Effects of Climate Change on Drinking Water Supply in Small Prairie Communities	Gordon Huang, Dunling Wang, Hua Zhang, Xiaodong Zhang, Gongchen Li, Chunjiang An
	Development of a widely applicable reference condition model for rivers in Canada: A pilot study in Atlantic Canada	David Armanini, Wendy Monk, Lesley Carter, Donald Baird, Daniel Peters
	An Integrated Model for Water Availability Prediction under Climate Change	Atef Kassem, Ivana Vouk and Tamas Hamory
Penticton Irrigation Master Plan - Incorporating Climate Change Adaptation	Steve Brubacher	

CWRA 2010 CONFERENCE - NASH SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
NASH Presentation 1 Wed. June 16 (10:20 to 12:00)	Peak Stream Flow Determinations by Indirect Means	Greg MacCulloch
	Presentation on Index Velocity Methods for Winter Discharge Measurement	Dan Healy
	Automated Acoustic Observation of Snowpack Physical Properties	Nicholas Kinar, John Pomeroy
	Continuous monitoring of water quality in municipal stormwater detention ponds	Dunling Wang, Zheng Cui
NASH Presentations 2 Wed. June 16 (13:30 to 15:10)	Hydrologic Data Management	Cameron Butt
	Water Survey of Canada's Hydrometric Workstation Project: Towards Modern Hydrometric Data Production	André Bouchard
	Creating a Stream Reference Book for Canadian Rivers	Robert Newbury, Jeff Woodward, Mike Renouf
	The International Joint Commission's Binational Hydrographic Data Harmonization Initiative	Michael T. Laiffa, Ted R. Yuzyk
NASH Presentations 3 Wed. June 16 (15:45 to 17:00)	Hydroacoustic Doppler technology: a key element in the improvement of hydrometric data quality	Yves Choquette, Catherine Guay
	Field Estimates of Discharge Associated with Ice Jam Formation and Release Events	Karen Dow Ambtman, Faye Hicks
	The Use of Hydro-Acoustic Technologies to conduct River Discharge Measurements From Ice Cover	Jeff Woodward
NASH Presentations 4 Thurs. June 17 (8:30 to 9:45)	Monitoring and Forecasting River Flows with Basin-Scale One-Dimensional Hydraulic Models	Robyn Andrishak, Faye Hicks
	Into the Void: Predicting Streamflow in Ungauged Basins	Christopher Spence
	Variability and trends in streamflow input to Hudson Bay	Stephen Déry, Theo Mlynowski, Marco Hernández-Henriquez, Fiamma Straneo
NASH Presentations 5 Thurs. June 17 (10:20 to 12:00)	Developing a Framework for the Assessment of Uncertainty in Discharge	Paul Pilon, Marian Muste, Janice Fulford, Claudio Caponi
	Using the WMO Recommended Standardized Approach to Uncertainty of Discharge Measurements: A Laboratory Example	Janice Fulford
	Assessing the Performance of Flow Measurement Instruments and Techniques	Paul Pilon, Zsuzsanna Buzás, Janice M. Fulford, Patrick J. McCurry, Marian Muste, Claudio Caponi
	Assessing change in hydrometric methods	Stuart Hamilton

CWRA 2010 CONFERENCE - CITY OF SURREY SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
City of Surrey 1 Wed. June 16 (10:20 to 12:00)	Part 1 - The Development of a Strategic Plan for Lowlands Flood Control, Surrey, BC.	Vincent Lalonde, Jeff Arason
	Part 2 - The Implementation of the Strategic Plan for Lowlands Flood Control, Surrey, BC.	Vincent Lalonde, Jeff Arason
	Eugene Creek Diversion: Improving Drainage and Aquatic Habitat Together	Jeannie Lee
	Protecting Crescent Beach from Climate Change - A lot more than just raising dykes	Victor Jhingan
City of Surrey 2 Wed. June 16 (13:30 to 15:10)	Revitalizing a Neighbourhood through Storm Water Management	Carrie Baron
	Implementing Sustainable Development Concepts	David Hislop
	Boundary Bay Assessment and Monitoring Program	Lauren Petersen, Erin Riddell, Marlene Fuhrmann
	Riparian Planting for Natural Succession	Stephen Godwin

CWRA 2010 CONFERENCE – POLICY AND GOVERNANCE SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
Policy and Governance 1 Wed. June 16 (15:45 to 17:00)	Water Security: Emerging Debates in Policy and Academia	Christina Cook, Karen Bakker
	Moving Towards Water Security in Canadian Water Policy	Emma Norman, Karen Bakker
	Water Security: A New Framework for Water Governance	Karen Bakker, Diana Allen
Policy and Governance 2 Thurs. June 17 (13:30 to 15:10)	Rain and Snow: Stormwater Free For All?	Judy Stewart
	Groundwater and Surface Water Management in the Fraser Lowlands: Policy and Rights	Ryan Anaka
	Thinking Like a Watershed - Towards Ecological Governance in British Columbia	Oliver Brandes
	Building on Experience: Learning from the Lake Simcoe Watershed	Seanna Davidson
Policy and Governance 3 Thurs. June 17 (15:45 to 16:35)	Water Conservation Toolkit	Chris Jensen
	Safe Groundwater for BC First Nations	Ted Molyneux
Policy and Governance 4 Fri. June 18 (8:30 to 9:45)	The International Joint Commission's International Watersheds Initiative	Ted R. Yuzyk, Robert Reynolds
	Mandated collaboration as a strategy for environmental governance - A Case Study of the Niagara Peninsula Source Protection Area in Ontario	Katelyn Vaughan, Ryan Plummer, Rob de Loë
	Worth Every Penny - Conservation-Oriented Water Pricing in Canada	Oliver Brandes, Kirk Stinchcombe
Policy and Governance 5 Fri. June 18 (10:20 to 11:35)	The Influence of Stakeholder Values on the Acceptance of Water Reallocation Policy in Southern Alberta	Cameron Parrack
	Knowledge and collaboration: a case study of South Australian water allocation planning	Brent Taylor, Rob de Loe
	First Nations Water Governance: The Role of Traditional Knowledge in a Nation-to-Nation Context	Suzanne von der Porten

CWRA 2010 CONFERENCE – CSHS SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
CSHS 1 Thurs. June 17 (8:30 to 9:45)	The Utility of Monthly Water Balance Models	Hamish Weatherly
	Distributed Monthly Hydrological Modelling: A case for Water Supply Planning	Craig Sutherland, David Roche
	Predictive Water Balance Modeling: A Site-Wide Modeling Approach Using Variable Climate Conditions	Kate Patterson, Ian Callow, Len Murray
CSHS 2 Thurs. June 17 (10:20 to 12:00)	Ranked Regression Analysis: A Hydrologic Modelling Approach for Remote Watersheds	Kyle Terry, Craig Nistor, Jaime Cathcart
	Multivariate modeling of water temperature in the Okanagan watershed	Anik Daigle, Andre St-Hilaire, Daniel Peters, Donald Baird
	From watershed to lake: how much can a process-based biogeochemical model explain the carbon budget of Lake Simcoe.	Stephen Oni, Marlyn Futter, Peter Dillon
	Monitoring and Modelling Approaches for the International Upper Great Lakes Study	Ted R. Yuzyk, Syed M.A. Moin, Paul J. Pilon
CSHS 3 Thurs. June 17 (13:30 to 15:10)	Feasibility of a Binational Stream-Stats: Preliminary Assessment and Opportunities	Pete A. Steeves, Michael T. Laitta, Ted R. Yuzyk
	A 'horse race' intercomparison of process-oriented watershed models for operational river forecasting	Sean Fleming, Juraj Cunderlik, Wayne Jenkinson, Michael Thiemann, Barbara Lence
	Review of Hydrologic Models for Forest Management Applications	Jos Beckers, Todd Redding, Axel Anderson, Robin Pike, Arelia Werner
CSHS 4 Thurs. June 17 (15:45 to 17:00)	Assessing the Impact of Climate-Driven Landcover Changes on Streamflow and Hydropower Production in the Winnipeg River Basin	Shane Wruth, Tricia Stadnyk, Phillip Słota, Nicholas Kouwen, Kristina Koenig
	Future Climate Scenarios and Climate-induced Hydrologic Changes in the Lake Winnipeg Watersheds	Rajesh Shrestha, Yonas Dibike, Terry Prowse
	2050 Streamflow Impacts in Coastal vs. Interior Basins, British Columbia, Canada	Arelia Werner, Katrina Bennett, Markus Schnorbus
CSHS 5 Fri. June 18 (8:30 to 9:45)	Projections of Columbia River inflows to Mica dam under potential future trajectories of climate and glacier change	Sean Fleming, Dan Moore, Garry Clarke, Arelia Werner, Frank Weber
	Statistical Downscaling of Temperature Data Sets: A comparison of Methods Based on the STARDEX Indices	Carlos Gaifan, Kabir Rasouli
	Current and Future Water Budget for the Nicola Basin: Challenges for Growth in a Semi-Arid Environment	Jordin Barclay, David Sellars, Rod Smith
CSHS 6 Fri. June 18 (10:20 to 12:00)	Uncertainty in Hydrological Response of Small Prairie Watershed to Climate Change	Hua Zhang, Gordon Huang, Dunling Wang
	Teleconnections between Large-scale Climate Modes and the Hydroclimatic Data of BC Hydro Watersheds	Adam Gobena, Frank Weber, Sean Fleming
	Temporal Analysis of Extreme Precipitation Data for BC	Donald Burn, Kan Zhang, Paul Whitfield
	Val-Jalbert Hydro Project, Quiatchouan River, Quebec. Hydrological analysis based on partial series of on-site flow measurements	Jean Gauthier
	Non-stationary frequency distributions to improve high return period events estimation from rainfall-runoff models simulations	Ousmane Seidou, Ramsay Andrea, Nistor Ioan

CWRA 2010 CONFERENCE – MODELLING AND ANALYSIS SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
Modeling and Analysis 1 Wed. June 16 (10:20 to 12:00)	Fitzsimmons Creek Debris Flood Mitigation Part 1: Defining the Design Event	Matthias Jakob, Hamish Weatherly, Erica Ellis
	Study of Erosion and Sedimentation on the Milk River in Canada	Liv Hundal, Gary Beckstead, Sandi Riemersma
	Two-dimensional Hydrodynamic Modeling for Fish Habitat: Lessons Learned from the Lower Capilano River	Shafiqul Islam, Lorne Gilmour, Brent Burton
	A Flow Ramping Model for Watercourses Affected by Run-of-River Hydropower Development	Violeta Martin
Modeling and Analysis 2 Wed. June 16 (13:30 to 15:10)	An Investigation of the Partitioning of Groundwater Flow to Streamflow, Mountain Front Recharge Through Valley Alluvium, and Mountain Block Recharge in Mountainous Watersheds	Laurie A. Neilson-Welch, Diana M. Allen
	Assessment of Canada's River Hydrokinetic Power Potential	Wayne Jenkinson, Erika Klyszekjo, Melanie Nadeau
	Checking the Math: a review of MIKEFlood modelling following the recent flooding in the Lower Cowichan Valley, British Columbia	Vanessa O'Connor, David McLean, Tamsin Lyle, Kate Miller, Charlene Menezes
	A real-time debris-flow warning system for the District of North Vancouver	Matthias Jakob, Trevor Owen, Trevor Simpson, Fiona Dercole, Jozsef Dioszeghy
(Ice) Modeling and Analysis 3 Wed. June 16 (15:45 to 17:00)	Response of Arctic Lake Ice to Changing Climate: Historical Trends and Future Scenarios	Silvie Harder, Terry Prowse, Yonas Dibike, Terry Callaghan
	Measuring ice thicknesses along the Red River using Radarsat-2 satellite imagery	Karl-Erich Lindenschmidt
	A national-scale assessment of spring break-up on Canadian rivers	Simon von de Wall, Laurent de Rham, Terry Prowse

CWRA 2010 CONFERENCE – PROJECTS AND INFRASTRUCTURE SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
Projects and Infrastructure 1 Wed. June 16 (10:20 to 12:00)	Turning Innovative Water Conservation Planning into Action: Tools, Pilots and Lessons from Initiatives on the Ground	Susanne Porter-Bopp
	Thinking Outside the Pipe! - The Ottawa River Action Plan	Felice Petti
	Sustainable Neighbourhood Retrofit Action Plan (SNAP) Pilot Projects in the Toronto Region	Sonya Meek, Hamid Hafami, John Nemeth, Theresa MacIntyre-Morris, Judy Showers
	Partington Creek Integrated Stormwater Management Plan - Balancing Urban Development with Environmental Protection	Crystal Campbell
Projects and Infrastructure 2 Wed. June 16 (13:30 to 15:10)	As Good As New: The Available Tools for Maintaining Water Infrastructure in First Nations Communities	Danny Higashitani
	Fish Creek Stormwater Quality Retrofit Project – Heron Colony & Acadia Natural Area	Serge Bastien, Andrea Prozniak
	Long Term Performance of Bioretention Cells	Usman Khan, Dr. Caterina Valeo, Dr. Angus Chu, Bert van Duin
	Recognizing Progressive versus Cyclical Erosion on Shorelines	Rowland Atkins, K. Bruce Dean, Anibal Diaz
Projects and Infrastructure 3 Wed. June 16 (15:45 to 17:00)	Rethinking Urban Water Use in Canada	Robert Halliday
	Fitzsimmons Creek Debris Flood Mitigation Part 2: Concept and Construction	David Roche, Mike Currie, Mark Pritchard, Adrian Gygax, Andrew Pauli, Alex Strouth
	Climate Change Adaptation: A Hydrological Assessment of using Low Impact Development to Mitigate Future Flooding	Chris Jensen, Daniel Peters

CWRA 2010 CONFERENCE – CANCID SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
CANCID 1 Thurs. June 17 (8:30 to 9:45)	Development of Water Supply Functions for the Canadian Agricultural Sector	Seidou Ousmane, Philippe Crabbé
	Current irrigation management practices in relation to optimum crop water use in Alberta	Jennifer Nitschelm
	Evaluation of Irrigation Water Uses in Newfoundland and Labrador towards Sustainability of Water Resources	Abdel-Zaher Kamal Abdel-Razek
CANCID 2 Thurs. June 17 (10:20 to 12:00)	The Water Supply & Demand Project - How the Okanagan is preparing for climate change.	Anna Warwick Sears
	Water information management & communication tools supporting the Okanagan Water Supply & Demand Project	Clint Alexander
	Creating gridded historic and future climate datasets for the Okanagan Basin Water Supply Demand Study	Denise Neilsen, Alex Cannon, Bill Taylor, Guy Duke, Ted Van Der Gulik, Ron Fretwell
	Determining Current and Future Agriculture Water Requirements in the Okanagan	Ted van der Gulik, Denise Neilsen
CANCID 3 Thurs. June 17 (13:30 to 15:10)	Instream flow needs (IFN) for aquatic species in Okanagan tributaries	Marc Porter, Kim Hyatt, Todd Hatfield, Clint Alexander, David Marmorek, David Carr
	Regional Groundwater Study for Okanagan Water Supply and Demand Project	Jacqueline Foley, Doug Geller, Remi Allard
	Okanagan Basin Water Supply and Demand Study: Hydrology Study and Streamflow Naturalization.	Hugh Hamilton, Lars Uunil, Doug Edwards
	Developing and Calibrating a Basin Scale Hydrologic and Hydraulic Model to Evaluate Change, Mountain Pine Beetle Impacts, and Population Growth in the Okanagan Basin using an Integrated Watershed Modeling Approach	Patrick Delaney, Qiao Ying, Jeremy Kobor, Brian Guy Brian Guy, Hugh Hamilton
CANCID 4 Thurs. June 17 (15:45 to 16:10)	Opportunities and Reservations: Trading Water in the Okanagan	John Janmaat, Kasandra White

CWRA 2010 CONFERENCE – WATERSHED MANAGEMENT SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
Watershed Management 1 Thurs. June 17 (8:30 to 9:45)	Are all beaver dams beneficial for Burns Bog?	Mauricio Herrera, Gabor Vasarhelyi, Jackeline Luque, Sarah Howie
	Using Remote Sensing to Develop Riparian Health Information in Agricultural Watersheds of Manitoba	Ute Holweger, Jarrett Powers, Grant Wiseman, Melanie Dubois, Marilena Kowalchuk, Stephen Carlyle
	Management implications of rapid stream channel evolution downstream of receding glaciers, Coast Mountains, BC	Mike Miles, Sandy Allegretto
Watershed Management 2 Thurs. June 17 (10:20 to 12:00)	Regional assessment of source water quality: A case study in the headwaters of the Oldman River Basin, Alberta	Jocelyn Howery, Uldis Silins
	Adaptive Watershed Management of the Southern Athabasca Oil Sands (in-situ area) of Alberta	Margaret Scott, Jos Beckers, Jonathan Fennell
	Assessing Risk to Groundwater Quality: Testing an Integrated Risk Framework.	Mike W. Simpson, Diana M. Allen, Murray M. Journeay, Brett Korteling
	Indicators of Arsenic Contamination for Groundwater Risk Analysis	Rafael Cavalcanti de Albuquerque, Dirk Kirste, Diana Allen
Watershed Management 3 Fri. June 18 (8:30 to 9:45)	Surface Hydrology Effects Assessment of a Long Linear Development in Northwestern British Columbia	Greg Norton, Robert Hudson, Robert Larson
	Thinking Outside the Dike: Integrated Flood Hazard Management for the Lower Cowichan Valley	Tamsin Lyle, David McLean, Vanessa O'Connor, Kate Miller
	Why a Watershed?	Alice Cohen
Watershed Management 4 Fri. June 18 (10:20 to 10:45)	Overcoming challenges and celebrating success of Integrated Watershed Management Planning in Manitoba	Erin Shay

CWRA 2010 CONFERENCE – AQUATIC HABITAT SESSIONS (ORAL PRESENTATIONS)

Session	Title	Authors
Aquatic Habitat 1 Fri. June 18 (8:30 to 9:45)	Stream Temperature Variability over Short Channel Distances in Two Groundwater-Fed Streams	Mary Ann Middleton, Diana Allen
	Daily Water Temperature Forecast with a K-Nearest Neighbour Approach	Andre St.Hilaire, Taha Ouarda, Zoubeida Bargaoui, Anik Daigle, L. Bilodeau
	Dissolved Oxygen in the Bow River within the City of Calgary	Jianxun He, Beryl Zaitlin, Caterina Valeo, Catherine Ryan, Angus Chu
Aquatic Habitat 2 Fri. June 18 (10:20 to 12:00)	Baseflow Modelling in the Fraser Valley of BC: a Coupled Surface Water - Groundwater Study of the Bertrand Creek Watershed	Cindy Starzyk, Leslie Smith
	Relationships between Cheakamus River discharge and groundwater fed spawning channels: preliminary results from two years of monitoring.	Dan Mackie, Tyler Gray, Jacek Scibek, Ian Dodd, Brent Mossop
	Watershed-Scale Trend and Variability Assessment of Ecologically Relevant Streamflow Variables for the Athabasca River: Implications for Development	Daniel Peters, Wendy Monk, Donald Baird
	Protecting Fish Habitat in Development Projects - from Start to Finish!	Jennifer Harker