

BRBC Science Forum 2024

Wednesday May 8, 2024

Mount Royal University, Roderick Mah Centre for Continuous Learning
30 Mount Royal Gate SW, Calgary AB

Agenda (draft)

Time	Agenda Item
8:30 – 9:00	Registration and coffee
9:00 – 9:15	Welcoming remarks Nilo Sinnatamby, Science Forum Co-Chair
9:15 – 10:00	Keynote invited speaker: <i>Becoming Secure in an Insecure Water Future: the Urban Oasis Project</i> Dr. Norman Neumann, University of Alberta
Session 1A: Water Quality (Session Chair: _____)	
10:00 – 10:20	Demonstrating the value of microbial source tracking for assessing and mitigating public health risks from water. <u>Bryanne Rempel</u> , N. Ruecker, City of Calgary
10:20 – 10:40	Sensitivity Analysis of River Dissolved Oxygen Concentrations under Winter Conditions through Numerical Modelling. <u>Yifan Wu</u> , J. Blackburn, S. Kashyap, Y. She, & W. Zhang, University of Alberta and Alberta Environment and Protected Areas
10:40 – 11:10	Morning poster break (30 mins)
Session 1B: Water Quality (Session Chair: _____)	
11:10 – 11:30	Road Salt Impacts on Fish Creek Water Quality and Stormwater ReUse. <u>Bill Berzins</u> and B. Loudon, Aquen Canada Inc.
11:30 – 11:50	Taste and Odour Issues within the Bearspaw Reservoir: Evaluating Drivers of Geosmin Production to Maintain Drinking Water Quality. <u>Robert Fines</u> ¹ , E. Camm ² , N.J. Ruecker ² , M. Stone ¹ , M.B. Emelko ¹ , ¹ University of Waterloo and ² The City of Calgary.
11:50 – 12:10	Forestry and native trout – where are we going wrong? <u>Joshua Killeen</u> ¹ and D. Mayhood ² , ¹ Canadian Parks and Wilderness Society and ² FWR Freshwater Research Limited

12:10 – 1:10	Lunch
Session 2: Natural Assets (Session Chair: _____)	
1:20 – 1:40	City of Calgary Environmental Significant Areas and Natural Asset Valuation. Twyla <u>Kowalczyk</u> , Associated Engineering
1:40 – 2:00	Successes and Lessons Learned from 5 years of Monitoring Riverbank Bioengineering Projects in Calgary. <u>Mike Gallant</u> ¹ , C. Kipkie ¹ , N. Posada ² , R.Pierre ³ , K. Hull ⁴ , A. Dodd ⁵ , A. Evette, D. Jaymond, and M. Dusz ⁶ . ¹ Kerr Wood Leidal Associates Ltd., ² City of Calgary, ³ Terra Erosion Control Ltd., ⁴ Alberta Riparian Habitat Management Society, ⁵ Longview Ecological Ltd., ⁶ Univ. Grenoble Alpes, INRAE, France
2:00 – 2:20	Tools to Assess and Model Hydrological Effects of Climate Change and Wetland Management in Small Watersheds across the Prairies. <u>Lauren Miranda</u> ¹ , K. Shook ¹ , Z. He ¹ , C. Spence, C ² . Whitfield ¹ , ¹ University of Saskatchewan and ² Environment and Climate Change Canada
2:20 – 2:40	Estimating Spatial Distribution of Depression-Focused Groundwater Recharge in the Canadian Prairies. <u>Shihab Uddin</u> and M. Hayashi, University of Calgary
2:40 – 3:00	Afternoon break and poster session (20 mins)
Session 3: Climate Change (Session Chair: _____)	
3:00 – 3:20	Projection of climate change impacts on hydrometeorological processes in the Bow River Basin. <u>Elvis Asong</u> , Elvis, Z, Ph.D, and Pouya Khalili, Ph.D., Climalogik Inc.
3:20 – 3:40	Hydrological Behavior of the Bow River - an Eastern Slope River of Canadian Rocky Mountains in a Changing Climate. <u>Sepideh Kheirkhah</u> ¹ , J. He ¹ , C. Ryan ¹ , B. Newton ² , J. Birks ² , N. Taube ² . ¹ University of Calgary, ² Alberta Environment and Protected Areas
3:40 – 4:00	Hydrological behaviour of an unregulated river on the eastern slopes of the Rockies under historical climate change and variability. H. Sendhil ¹ , <u>Cuauhtémoc Tonatiuh Vidrio-Sahagún</u> ¹ , J. He ¹ , C. Ryan ¹ , B. Newton ² , J. Birks ² , N. Taube ² . ¹ University of Calgary, ² Alberta Environment and Protected Areas
4:00 – 4:15	Closing Remarks Nilo Sinnatamby, BRBC Science Forum Co-Chair

Posters

Visualizing Changes in Stream Temperatures along the Elbow River, Aukes, Pieter (rep): 2024 DATA200 Class1*, Dr. Pieter Aukes¹, Flora Giesbrecht², ¹Southern Alberta Institute of Technology, ²Elbow River Watershed Partnership.

Representation of alpine groundwater storage in mountain river hydrological models, Bearzot, Francesca¹, Brayden Ralph¹, Masaki Hayashi¹, Brandi Newton², ¹University of Calgary, ²Alberta Environment and Protected Areas

Seasonal and Spatial Variability of Methane and Carbon Dioxide Concentrations in Glacial Meltwater of the Canadian Rockies, Kersey, Crystal, University of Calgary

Using Steam for management of Creeping Bellflower (*Campanula rapunculoides*) during Riparian Restoration, a case study, Pare, Kate, Leaf Ninjas

Where does Calgary's river water supply really "come from"?, Sidharta, Caryn¹, Brandi Newton², Nadine Taube², Jianxun He¹, Jean Birks², and M. Cathryn Ryan¹, ¹University of Calgary, ²Alberta Environment and Protected Areas

Inter- and intra-species sensitivity of whole organism responses in fish to tertiary treated municipal wastewater treatment effluents. Marjan, Patricija^{1,2}, Christopher J. Martyniuk³, Maricor J. Arlos⁴, Mark R. Servos⁵, Norma J. Ruecker⁶, Markus Hecker¹, Kelly R. Munkittrick¹. ¹University of Calgary, ²University of Florida, ³University of Alberta, ⁴University of Waterloo, ⁵The City of Calgary, ⁶University of Saskatchewan.

A systematic framework for flood frequency analysis under stationary and nonstationary conditions. Cuauhtémoc Tonatiuh Vidrio-Sahagún, Jianxun He, Alain Pietroniro, University of Calgary.