

CWRA Alberta - IAH CNC Conference Program: Thursday, November 13, 2025

	Maple Leaf Room			
8:00	Arrival, coffee and pastries			
9:00	Opening remarks			
9:15	Keynote Speaker: Emily Quecke Transdisciplinary and Collaborative Community-based Approaches for Water Stewardship			
10:00	Break (Exhibitor and Poster viewing)			
	Maple Leaf Room		Glacier Room	
Session	Social and Cultural Dimensions of Water		Hydrologic and Hydrogeologic Modelling	
10:30	Cathy Ryan	Inclusion of Groundwater within Canada's Freshwater Monitoring	Peter John Thompson	Integrated Surface Water-Groundwater Modelling for Mine Water Management: Insights from Two Canadian Case Studies
10:48	Cynthia McClain	Elevating Groundwater in Canada's Freshwater Future: Advocacy, Policy, and Outreach	Amir Niazi	Hydrogeological Modeling Limitations and Solutions for Mine Sites in Permafrost Regions Under Climate Change
11:06	Braeden Toikka	Combining Science and Community Priorities to Strengthen Groundwater Governance	Rubaiat Sharmeen	Integrated Watershed Modeling for Mine Closure: An Assessment Framework
11:24	Isabel Jorgensen	Missed Connections: Accounting for Interactions between Groundwater and Surface Water in Water Allocation Reform	Stephanie Bringeland	Analysis of total water storage change with GRACE/GRACE-FO observations and coupled groundwater – surface water modelling in Southern Alberta
11:42	Rob Hough	Innovative Licence Transfers to Support Growth and Community Resilience in Water-Limited Basins	Nadine Taube	Groundwater levels in Alberta and their meteorological drivers
12:00	Lunch			
13:00	Dr. Mark Donner: Past Lessons, Future Impact: The Role of Water Innovation in Alberta's Evolving Economy			

Posters on Thursday

Jasmine Skirten	Groundwater Contribution to Proglacial Streams in the Canadian Rockies
Zoe Johnson	Changes in Fallow Field Snow Hydrology Across the Western Canadian Prairies
Sherry Heschuk	McClelland Lake Wetland Complex: A Tale of Two Fens
Dan Utting	Mapping Regional Groundwater Flow and Interaction with Surface Water in the Alberta-Northwest Territories Transboundary Region

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Session	Alberta Innovates: Supporting the application of water research and technology		Ecosystem Resilience and Source Water Protection	
13:30	Tegan Holmes	Alberta surface-groundwater interaction assessment: project overview	Alyssa Bourgeois	Balancing Ecological Protection in Mine-Affected Streams with Mining Operational Requirements
13:48	Jessica Liggett	Influence of shallow groundwater on surface water quality in the Bow, Oldman, and South Saskatchewan rivers	Elyse Bonner	Managing Harmful Algal Blooms: Strategies for Resilient Source Water
14:06	Kendall Marshall	Apportioning Bow River Discharge in an Eastern Slopes River	Dan Greenacre	Operational Flexibility and Habitat Protection: Case Studies on Applying Severity-of-Ill Effects Modeling to Sediment Management
14:24	Brian Smerdon	Vignettes illustrating how the post-glacial landscape shapes water cycle dynamics in the Edmonton region	Marcus Brunelle	Into Depths Unknown: Modeling a New Intake Location to Address Climate Change and Water Quality Challenges
14:42	Edwin Cey	Groundwater-surface connectivity across the spectrum in urbanizing watersheds		
15:00	Break (Exhibitor and Poster viewing)			
Session	Hydrologic and Hydrogeologic Modelling		Floods, Droughts, and Climate Extremes	
15:30	Jens Schumacher	What don't we know about groundwater surface water exchange?	Spencer Robertson	Bridging the Gap Between Flood Mapping and Emergency Response in Resource-Limited Communities
15:48	Michael Callaghan	Tracking surface water and groundwater contributions to flooding in an alluvial aquifer	Soren Poschmann	Groundwater Flood Mapping for Calgary's River Communities
16:06	Rahel Amare Kidanu	Short-term streamflow forecasting for the Oldman River	Nadie Rupasinghe	Identification of Snow Drought in the Bow River Basin Using Machine Learning Techniques
16:24	Shiv Khetarpal	Spatially Distributing 1D Groundwater Recharge Modelling Estimates Using Surface Morphology in Southern Alberta	Aruna Kumar Nayak	Antecedent Hydroclimatic Drivers of Groundwater Droughts in the Upper Reaches of the Bow River: Towards Early Warning and Management
16:42			Muhammad Qasim Mahmood	Climate and Human Impacts on Groundwater Sustainability in Prince Edward Island, Canada
18:00	Banquet Dinner			

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8:00	Arrival, coffee and pastries			
8:45	Panel Discussion: Moderated by Alison Deas (Alberta Innovates) Panelists: Dr. Caroline Aubry-Wake, University of Lethbridge Dr. Cathy Ryan, University of Calgary Dr. Jon Paul Jones, Suncor Scott Millar, North Saskatchewan Watershed Alliance			
10:00	Break (Exhibitor and Poster viewing)			
	Maple Leaf Room		Glacier Room	
Session	Groundwater – Surface Water Interactions		Social and Cultural Dimensions of Water	
10:30	Tony Lemay	Understanding groundwater-surface water interactions in the Oldman and Bow rivers in southern Alberta using geochemical and hydrogeological evidence	Fabian Grey & Zoey Wang	Water is Life: Collaborative Partnerships for Indigenous Water Stewardship in Alberta's Boreal Region - A Case Study
10:48	Mike Moncur	Baseline hydrogeochemistry of the Milk River revealed by the 2024-2025 diversion failure	Adam Norris & Rhonda Clarke-Gauthier	Watershed Management - by whose authority?
11:06	Avadhoot Date	The Role of Fractures in Groundwater Flow and Geochemical Evolution of the Milk River Aquifer	Withdrawn	Withdrawn
11:24	Jaxton Gray	Machine learning modeling of isotope tracers to expand streamflow source separations	Laura Sandhu	Securing Calgary's Water Future: A Collaborative Roadmap to 2100
11:42	Lucas Ogrins	Smelly Ponds: Unexpected role groundwater plays in stormwater quality and sulfur cycling	Rob Hough	Collaborative Water Sharing in Times of Drought: Lessons from Alberta's 2024 Water Sharing Memorandums of Understanding
12:00	Lunch			
1:00	Dr. Cynthia McClain and Jessica Lagroix: From surface to subsurface: How DataStream's open access platform is advancing freshwater knowledge			

Posters on Friday

Sampurna Nandy	Microbial Profiling for Groundwater Remediation: Enhanced Degradation of Petroleum Hydrocarbons & Chlorinated Ethenes
Julie Zettl	Canada's Aquifer Mosaic: Stitching Together Publicly Available Maps for More Resilient, Equitable Futures

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Session	Monitoring and Mapping of Water Systems		Climate Adaptation and Infrastructure Resilience	
13:30	Audrey Marie Hill	Advancing Groundwater Monitoring in Canada: Illustrative Hydrograph Analysis in Nova Scotia with R	Brendan Ray	Targeting the Calgary Buried Valley Aquifer: A Water Solution in the Bow Valley
13:48	Mikaela Geremia	Tracing Subsurface Connections: Case Studies of Field-Based Thermal Methods for Mapping Groundwater-Surface Water Mixing Zones at Industry Sites, from Point Profiles to Airborne Spatial Scales	Steve Sturrock	Open-Loop Geothermal Exchange: Developing a Low-Carbon Heating and Cooling System Using Groundwater in the Bow Valley
14:06	Alex Onojeghuo	Ephemeral Wetland Mapping Using High Resolution Optical and LiDAR Data in Southern Alberta with Deep Learning	Kayla Harris	Estimating Groundwater Contributions to Alpine Lake Water Budgets
14:24	Cynthia McClain	Mapping terrestrial and aquatic groundwater dependent ecosystems in Alberta's boreal forest	Kalina Malowany	A Delicate Balance: Mine Water Management Under Rapid Environmental Change in the North
14:42	Dayal Wijayarathne	Cumulative Impacts of Wildfires on Water Resources: Insights from Long-Term Monitoring and Hydrological Modelling	Stephanie Ishii	Central Ohio Water Study - Integrated Planning for People, Place, and Water Reuse
15:00	Break (Exhibitor and Poster viewing)			
Session	Contaminants and Water Quality		Contaminants and Water Quality	
15:30	Rafael Terada	Groundwater impacts around an oil and gas well with methane gas migration	David Rosen	Tracing PFAS in Public Water Systems: Monitoring and Source Identification Approaches
15:48	Nicholas Utting	Environmental impacts of alternative diesel leaks on groundwater	Natalie Kromrey	Re-surveying wastewater effluents discharging into receiving mainstem rivers in Southern Alberta
16:06	Withdrawn	Withdrawn	Alexander Laycock	Detection of Microplastics in Surface Water Conditions
16:24	Closing Remarks			