

## Under Western Skies 2016: Water — Events, Trends, Analysis

Mount Royal University  
Calgary, Alberta, Canada  
September 27 - 30, 2016

### Preliminary Program

**Tuesday, September 27**

8:30 – 5:00: **Registration** — Roderick Mah Centre for Continuous Learning (Foyer)

8:30 – 9:00: Coffee

**9:00 – 9:30: Commencement, Ross Glen Hall, Room EC1060**

9–9:10am: Paulette Fox, Kainai Nation, Treaty 7 Territory

9:10–9:15am: His Honour Richard Feehan, Minister of Indigenous Relations

9:15–9:20am: Mount Royal University President, David Docherty

9:20–9:25am: Co-Conveners Liam Haggarty and Robert Boschman

9:30 – 9:45: Coffee

**9:45 – 11:00: Keynote Address (Ross Glen Hall, EC 1060-1050)**

**Niigaanwewidam James Sinclair**  
University of Manitoba

#### **Learning from the Water: How to Build an Indigenous University**

With the move to "Indigenize" and "Decolonize" education underway in educational institutions across Kanata, what could an Indigenous university look like and why might we consider this possibility? What does teaching look like? What does research look like? What does service look like? How is an Indigenous university for everyone? This presentation will address these questions by drawing on Indigenous knowledge and ways of knowing learned from water and other aspects of the natural environment.

**Chair: John Fischer, Director, Iniskim Centre, Mount Royal University**

11:00 –12:30: **Parallel Sessions A (1 through 3)**

#### **1. Eco Health Panel: Part One (EC 1040)**

Chair: Sonya Jakubec (School of Nursing and Midwifery, Mount Royal University)

Ben Brisbois (University of Toronto; Canadian Community of Practice in Ecosystem Approaches to Health),

“Ecosystem approaches to health and their societal context: A political ecology of ecohealth knowledge in the Americas” (Authors: Ben Brisbois, University of Toronto; Andrés Burgos Delgado, Universidade de Brasília; Donald Cole, University of Toronto; Margot Parkes, University of Northern British Columbia; The EkoSanté Phase I Research Working Group)

Chris Buse (Project Lead, Cumulative Impacts Research Consortium, University of Northern British Columbia),

“Deploying ecohealth principles to promote an understanding of the cumulative impacts of resource development across northern BC”

Maya Gislason (Simon Fraser University) and Shayna Dolan (University of Northern British Columbia) on behalf of the Ecohealth Knowledge to Action Research Group, “Upstream is a Place: Experiences in Designing and Facilitating Ecohealth Workshops”

#### **2. Workshop: Sustainability Systems for Stakeholders and Energy: Morning Session (EC 1050)**

Workshop Leader: Connie Van der Byl (Director, Institute for Environmental Sustainability, Mount Royal University)

### **3. Rivers (EC 1060)**

Chair: Renae Watchman (Indigenous Studies, Mount Royal University)

Marcella LaFever (Communications, University of the Fraser Valley), “Indigenous Stories and the Fraser River: Intercultural Dialogue for Public Decision-Making”

Greg Lowan-Trudeau (University of Calgary), “A River Runs Through Me: Teaching, Learning, and Environmental Activism on the Banks of the Bow”

Paul Formisano (University of South Dakota), “Navajo Dam and the San Juan River: A Study of Conflict and Endurance”

12:30 – 1:30: Lunch

1:30 – 3:00: **Parallel Sessions B (4 through 7)**

### **4. Eco Health Panel: Part Two (EC 1040)**

Chair: Sonya Jakubec (School of Nursing and Midwifery, Mount Royal University)

Susan Jacoby (Nursing and Midwifery, Mount Royal University), “Waterbirth as a Human Right”

Sonya L. Jakubec (School of Nursing and Midwifery, Mount Royal University) and Don Carruthers Den Hoed (Alberta Parks), “‘It’s like I’m connecting with the blood going through my body’: Connecting health and wellbeing to parks and nature – from cradle to grave”

Lars Hallstrom (Director, Alberta Centre for Sustainable Rural Communities; Professor, Political Studies, Augustana; and REES (ALES), University of Alberta, Alberta, Canada), **Panel Discussant/Summary**

### **5. Workshop: Sustainability Systems for Stakeholders and Energy: Afternoon Session (EC 1050)**

Workshop Leader: Connie Van der Byl (Director, Institute for Environmental Sustainability)

### **6. Water Politics and Place (EC 1060)**

Chair: Jessie Loyer (Library, Mount Royal University)

Thomas Dyck (Geography, Wilfrid Laurier University), “Addressing Water Concerns in Southern Ontario: Insights from Local First Nations Contexts”

Reginald Whiten (President, Interraplan Inc.), “A Tale of Two Watersheds: Challenges and Prospects for Integrated Resource Planning in Canada’s North”

Steven Schnoor (Anthropology, McGill University), “Turning Water into Gold: The Hydrological Politics of Open-Pit Metal Mining” [Skype]

### **7. Workshop: Urban Childhood-Water Relations (EC 2075)**

Chairs: Narda Nelson (MA Student, School of Child and Youth Care, University of Victoria) and Nicole Land (PhD Student, School of Child and Youth Care, University of Victoria)

Stemming from an exhibit presented at the University of Victoria, this interactive workshop engages with the entangled politics that emerge when early childhood education and water-forest ecologies collide. As Canada becomes increasingly urbanized, children encounter complicated, colonized, and vibrant bio-worlds in their everyday lives. Situated within these complexities, children grapple with the political realities of inheriting and caring for animal, plant, and microbial water worlds amid the concrete, brick, and jurisdictional boundaries that also shape these worlds. Based on an inquiry project with early childhood educators and children in Victoria, British Columbia – a landscape defined by rain water, ocean ecologies, forest water systems, roaring rivers, and fresh water lakes – this workshop invites participants to imagine what it might mean to foreground water in early childhood education and pedagogy.

3:00 – 3:30: Coffee

3:30 – 4:45: **Plenary Panel** (Ross Glen Hall, EC 1050)

### ***The Most Precious Gift: The Right to Clean Water in First Nations***

Katherine B. Starzyk (Psychology, University of Manitoba), “How to Frame Water and Wastewater Issues on First Nations to Increase Public Support for Government Action”

Aimée Craft (Director of Research, National Centre for Truth and Reconciliation, UManitoba), “Anishinaabe nibi in aakonigewin: our legal responsibilities to water”

Melanie O’Gorman (Economics, University of Winnipeg), “Socio-economic Well-being and Water Infrastructure: An Analysis of the Regional Health Survey”

Chair: Melanie O’Gorman, Associate Professor, Department of Economics, University of Winnipeg

5:00 – 6:30: **Reception** – Ross Glen Hall, EC 1060

**Robert Sandford Book Launch: *North America in the Anthropocene* (Rocky Mountain Books)**

(<http://www.rwsandford.ca>)

UWS2016 Poster Session    Music by Indigenous flute artist, Jesse McMann-Sparvier    Cash Bar. Catering by Dana Hospitality

## Wednesday, September 28

9:00 – 10:30: **Parallel Sessions C (8 through 13)**

### **8. Climate Change and Water (EC 1050)**

Chair: Guy Greenaway (Senior Project Manager, Miistakis Institute)

Guy Greenaway (Senior Project Manager, Miistakis Institute), “Helping Communities Become Climate Resilient”

Mishka Lysack (Faculty of Social Work, University of Calgary), “A Topography of Climate Change Impacts on Water: A Primer for Politicians and Policy Developers for a Science-Based Climate Change Strategy”

Meredith Hamstead (Independent Consultant, thinkBright Environmental Innovations), “Transforming water conservation in rural communities: a tale of reliable data and great people driving advances in climate resilience”

### **9. Water Infrsystems (EC 1060)**

Chair: Eduard Epp (Architecture, University of Manitoba)

Eduard Epp (Architecture, University of Manitoba), “Flood Architecture: The Alberta Project”

Marcia Hale (Water Conflict and Governance - California Center for Sustainable Communities, UCLA), “The evolution of revolution: crisis and change within the Los Angeles urban water system”

Tricia Toso (Communications, Concordia University), “Missed Opportunities: Resistance to green infrastructure in the redesign of Montréal highways and roads” [Skype]

### **10. Water Futures and Imaginaries (EC 2065)**

Chair: Anita Girvan (Environmental Studies, University of Victoria)

Anita Girvan (Environmental Studies, University of Victoria), “Blue Carbon Imaginaries”

Julia Laplante (Anthropology, University of Ottawa), “Water Imagination in Anthropology” [Skype]

Millie Adam (Centre for Affordable Water and Sanitation Technology, Calgary), “Water as a Global Issue”

### **11. Indigenous Places: Species, Governance, Rights (EC 1040)**

Chair: Steve Kootenay-Jobin (Iniskim Centre, Mount Royal University)

Stephen Turner and Anna Boswell (English, Drama and Writing Studies, University of Auckland), “Inhabiting Waters: Indigenous Governance in Species Action”

Drew Ann Wake (University of British Columbia), “Thunder in our Voices: An Interactive Challenge”

Magdalena Butrymowicz (Law, Pontifical University of John Paul II, Krakow), “Aboriginal Fishing Rights in Rivers and Seas – Case Studies from Canada”

### **12. Literary Waters and Dreams (EC 2075)**

Chair: Mario Trono (English, Languages, and Cultures, Mount Royal University)

Michaela Keck (Institute of English and American Studies, Carl von Ossietzky University), “Dreaming and Drowning: Aquatic Insights from Roger Deakin’s *Waterlog*”

Chihuahua Chen (Independent Scholar, Taiwan), “Interpreting Toxins and Trans-corporeality: Chicana/o Body, Space, and Justice in *Under the Feet of Jesus*”

Micheline Maylor (English, Languages, and Cultures, Mount Royal), “The Consciousness of Water: Flow State, Poetic Consciousness, and the Poetic Mind”

**13. The Business of Water and Waterways (EC 2010)**

Chair: Janine MacLeod (Faculty of Environmental Studies, York University)

Kenneth Zimmerman (The History Business, Principal Business Historian), "The Business of Water: Will Markets Make It Better or Worse?" [Video]

Janine MacLeod (Faculty of Environmental Studies, York University), "Hydrologies of Consent: Water, Hegemony and the 'Flows of Capital'"

Halia Valladares Montemayor and Kelly Moorhead (Bissett School of Business, Mount Royal), "Northern Shipping Passages: Myth or Reality?"

10:30 – 10:45: Coffee

10:45 – 12:00: **Keynote Address** (Ross Glen Hall, EC 1050)

**Robert Sandford**

United Nations University Institute for Water, EPCOR Chair for Water and Climate Security

**Hot & Bothered: Water, Weather, and the Future of the Canadian West**

Population and economic growth, massive land-use and land cover changes, resource development and alterations we have made to the composition of the Earth's atmosphere have in tandem energized the global hydrologic cycle. Our warmer atmosphere now carries more water vapour which has triggered more frequent and far more intense extreme weather events. Entire ecosystems and the human and other populations that depend upon them are on the move in response to rising global temperatures and changing hydro-climatic regimes. The accelerated rate and manner in which water moves through the world's water cycle has resulted in changes in the Northern Hemisphere jet stream. We are only now beginning to realize the extent to which our social, economic and political stability are dependent upon relative hydrological predictability. If sustainability is to remain within our grasp under western skies, we need a new guiding narrative.

**Chair: Connie Van der Byl, Director, Institute for Environmental Sustainability, Mount Royal University**

12:00 – 1:00: Lunch

1:00 – 2:30: **Parallel Sessions D (14 through 19)**

**14. Parks and Protected Areas Research Group Workshop (EC 2075)**

Chairs: Kathleen Rettie (Geography, University of Calgary) and Dorothy Hill (Biology, Mount Royal University)

Learn more about the PPARG scope, goals and opportunities with speakers:

- Dorothy Hill (Department of Biology, Mount Royal University), "Engaging Citizens in the Protection of Parks and Species"
- Katie Morrison (Conservation Director, Canadian Parks and Wilderness Society), "The Role of Conservation NGOs in Parks and Protected Areas"
- Sonya Jakubec (School of Nursing and Midwifery, Mount Royal University) and Don Carruthers Den Hoed (East Kananaskis Area Manager, Alberta Parks), "Nursing in Nature"
- Dianne Draper and Kathy Rettie (Department of Geography, University of Calgary), "Experiential Learning"

**15. Prairie Histories of Water Use – and the Future (EC 2065)**

Chair: Joe Anderson (Humanities – History, Mount Royal University)

William Van Arragon (History, The King's University), "Toward the 'Ribbon of Green': Frederick G. Todd's 1907 Plan and the Creation of Edmonton's River Valley Parks System"

Shannon Stunden Bower (History and Classics, University of Alberta), "Mid-20th Century Irrigation on the Canadian Prairies"

Margot Hurlbert (Department of Justice Studies and Sociology and Social Studies, University of Regina), "Climate change instruments promoting adaptive governance"

**16. Treacherous Waters: Narrative Intersections of Materiality, Identity, and Politics (EC 1060)**

Chair: Ned Schaumberg (University of Washington)

Stephanie Hankinson (English, University of Washington), “Engaging Narrative as a Model for Adaptive Political Potential in Water Disasters: Evolutionary Aesthetics in *Beasts of the Southern Wild*”

Richard Watts (French, University of Washington), “Port-au-Prince’s Waters of Forgetfulness: Water and Cultural Memory in Haitian Fiction”

Ned Schaumberg (English and Environmental Studies, University of Washington), “Embracing the Inhuman: Water, Spirituality, and Selfhood in Linda Hogan’s *Solar Storms*”

Chelsea R. Grimmer (English, University of Washington), “Water for Detroit: Posthumanist and Historical Materialisms in ‘Black Lives Matter’”

**17. Reading Water (EC 1050)**

Chair: Micheline Maylor (English, Languages, and Cultures, Mount Royal University)

Rebecca Geleyn (English and Creative Writing, University of Calgary), “Fjorder: Folk Songs”

Evan Gromel (English and Creative Writing, University of Calgary), “‘The Repository of Unlived Things’: A Reading of a Creative Work”

Angela Waldie (General Education, Mount Royal University), “Rocky Mountain River Songs: A Reading”

**18. Industry and Water (EC 2010)**

Chair: Connie Van der Byl (Director, Institute for Environmental Sustainability, Mount Royal University)

Gopal Saha (Institute for Environmental Sustainability, Mount Royal University), “Investigation of Temporal Dynamics of Hydraulic Fracturing and Water Use: A Case Study from Northwestern Alberta, Canada”

Carlos Serralde (Institute for Environmental Sustainability, Mount Royal University), “Review of water management practices in Western Canadian shale developments”

Krzysztof Palka (Founder and CEO, AlwaysBLU), “Freshwater Conservation Strategies for the Energy Industry”

Bill Berzins (CEO, Fossil Water), “Case Studies – Sustainable Use of Water for Hydraulic Fracturing and Enhanced Oil Recovery”

**19. English Literary and Cultural Waters (EC 1040)**

Chair: Cliff Werier (English, Languages, and Cultures, Mount Royal University)

David Sigler (English, University of Calgary), “Utopian Water Tropes in Robert Merry’s ‘Ode to Folly’”

Andrew Kettler (History, University of South Carolina), “The Devil’s Element: Cultural Constructions of Metaphorical Brimstone and Sulfuric Instrumentality in Early Modern England”

Kenna Olsen (English, Languages, and Cultures, Mount Royal University), “‘Al watz wasted þat ever flote oþer flwe’: Middle English literary Flood representations and anxieties”

2:30 – 3:00: Coffee

3:00 – 4:15: **Keynote Address (Ross GlenHall, EC 1050)**

**John Pomeroy**

Canada Research Chair in Water Resources & Climate Change, University of Saskatchewan

**Our Water Future in Western Canada**

Ongoing changes in the climate of the Western Canada’s cold interior have already resulted in shorter snowcover duration, earlier spring melt, more temporally concentrated rainfall, glacier retreat, and changes to established patterns of extreme conditions such as flood and drought. The reduction of snowpacks and glaciers is a profound local impact that is having far-reaching consequences. These changes have had implications for regional ecosystems and communities through drought and heat stress, flooding and fire, for the ability of producers to grow food and for the capability of our rivers and streams to provide water for irrigation, communities and energy production while still maintaining ecological integrity. Future climate changes are likely to bring greater warmth and more severe cycles of drought and flood, along with unfamiliar weather patterns that ecosystems and water management systems are challenged by. This will be happening at the same time that Western Canada is expected to produce more food and energy and sustain a larger population and economy. Our ability to sustain our society and environment will depend on how we manage our water future. To improve our ability to anticipate and manage future water conditions in western Canada, our research has endeavoured to better understand and measure water processes on the drainage basin, improve their prediction, diagnose their sensitivities to change and improve water management strategies. By diagnosing recent extreme events such as the Alberta/BC floods of 2013, the Saskatchewan/Manitoba floods of 2014 and exceptionally warm and sometimes dry conditions that created drought and exceptional forest fire potential in 2015 and 2016 we can better understand how water is responding to climate change and how we must adapt our management and use of water to ensure future water security. The water prediction and management needed for the future will require adoption of whole river basin approaches, big data technologies, improved observations and computer models and integrated climate-water-human prediction systems that transcend boundaries of provinces, nations and scientific disciplines.

**Chair: David VanderZwaag, Canada Research Chair, Marine and Environmental Law Institute, Dalhousie University**

4:30 – 6:00: **Parallel Sessions E (20 through 25)**

**20. Parks and Protected Areas Research Group Poster Session (EC 1040)**

Chairs: Kathleen Rettie (Geography, University of Calgary) and Dorothy Hill (Biology, Mount Royal University)

**21. Engineering Water (EC 2065)**

Chair: Mishka Lysack (Faculty of Social Work, University of Calgary)

Anna Frank (Civil Engineering, University of Novi Sad), “Large Scale Rainwater and Flood Water Harvesting”

Mishka Lysack (Faculty of Social Work, University of Calgary), “Hydro as a Base Load for a Canadian Renewable Energy Grid: National Building through Renewable Energy Infrastructure in the Climate Change Era”

Israel Dunmade (Earth and Environmental Sciences, Mount Royal University), “Re-engineering Private Operated Water Supply System for Sustainability: A Case Study on Sango-Ota, Nigeria”

**22. Hydraulic Fracturing and the Public Interests in Energy and Water (EC 1060)**

**Cancelled**

**23. The Art of Water (EC 2075)**

Chair: Natalie Meisner (English, Languages, and Cultures, Mount Royal University)

Ju-Pong Lin (Interdisciplinary Arts, Goddard College), “Living Mud Ball in the Sea: Climate Colonialism in Taiwan”

John-Michael Warner (Contemporary Art, Kent State University), “Dirt: Underfoot Christo and Jeanne-Claude’s ‘Running Fence’”

Barbara Amos (Amos Art Projects, Calgary), “The Red Alert Project: Water, Art and Civic Engagement”

**24. Water and the Public Need to Know (EC 1050)**

Chair: Cecilia Åsberg (Gender Studies, Linköping University)

Emily Swanson (Anoka Technical College), “Pure Cleanser or Pervasive Poison?: Microplastics and Public Perceptions”

Cecilia Åsberg (Gender Studies, Linköping University), “Shallow Waters, Gotland Deep: Chemical Weapons, Toxic Embodiment, and the Deep Archives of the Baltic Sea”

Julie Lester (Political Science, Middle Georgia State University), “Murky Waters: Conservation, Environmental Justice, and the Politics of Pipelines”

**25. Engagement, Policy, Law (EC 2010)**

Chair: Shaun Fluker (Law, University of Calgary)

Eric Magrane (School of Geography and Development, University of Arizona), “An Art-Science Approach to Bycatch in the Gulf of California Shrimp Trawler Industry”

David Poulton (Principal, Poulton Environmental Strategies), “Can I Get a Water License to Help the Fish? The Case of the Water Conservation Trust of Canada”

Caroline Gottschalk Druschke (Natural Resources Science and Writing & Rhetoric, University of Rhode Island), “What Cyborg Fish Can Teach Us About Rhetoric, Ecology, and Engagement in the Anthropocene”

Shaun Fluker, “History, Biology, Law and Environmental Activism: The Case of Westslope Cutthroat Trout”

6:00 – 8:15: **Keynote Address and Reception** (Ross Glen Hall, EC 1050)

### **Kim Sturgess**

**Founder and CEO, Alberta WaterSMART**

#### **Collaborative Water Management in Alberta: The SSRB Adaptation Roadmap**

Alberta faces important water challenges including a growing economy, expanding population, and the increasing impact of this growth on the environment as weather and climate patterns shift. The recent experience of both floods and droughts has made climate variability a reality for residents in the South Saskatchewan River Basin (SSRB). Growth in southern Alberta in the face of fluctuating water supply underscores the need for adaptive management of this crucial resource. Watershed management and climate adaptation issues are complex and cannot be appropriately addressed by any single initiative or sector, making collaboration essential. Since 2010, a series of initiatives has brought together water managers and knowledgeable water users in each of the SSRB sub-basin to explore potential adaptation approaches. Building on prior modelling collaborations, this project integrated sub-basin models into one comprehensive model, and then used this model to develop and test adaptation strategies proposed by the collaborative. This presentation puts forward the resulting Adaptation Roadmap for Sustainable water management in the SSRB.

**Chair: Connie Van der Byl, Director, Institute for Environmental Sustainability, Mount Royal University**

## ***Under Western Skies 2016 Posters and Special Events/Projects***

**Joanna Skrajny (Alberta Wilderness Association), *Westslope Cutthroat Trout Conservation in Alberta* (Poster, Thursday, Sept. 29, 9 – 11 am)**

**Caroline Gottschalk Druschke (Natural Resources Science and Writing & Rhetoric, University of Rhode Island, *The Undamming of America: Media Discourse about Dam Removal and Hydro-Power Decision Making in the Northeastern USA* (Poster, Welcome Reception)**

**Zachary Lundgren (Environmental Rhetoric, East Carolina University), *The Water Cycle of the Anthropocene* (Poster, Welcome Reception)**

**Kathleen Rettie and Dorothy Hill (Mount Royal University) *Parks and Protected Areas Research Group Poster Session* (4:30 pm on Sept 28, EC2075)**

**Ju-Pong Lin (Goddard College), *Living Mud Ball in the Sea: Climate Colonialism in Taiwan***

**Dick Averbs (Curator and Artist), *Water Meter***

**Steven Hartman and Peter Norman (Sweden), *Bifrost Film Project* (Studio Interviews throughout the conference)**

**LETTERS TO THE WATER is a live art performance intervention by Devora Neumark that involves gathering letters of appreciation to and for water to be written by conference attendees. Your participation is vital to the success of this project, the results of which will be presented during session #38.**

## Thursday, September 29

9:00 – 10:30: **Parallel Sessions F (26 through 31)**

### **26. Education (EC 1060)**

Chair: Sonya Jakubec (School of Nursing and Midwifery, Mount Royal University)

Irene Friesen Wolfstone (Integrated Studies, Athabasca University), “Becoming Ecocentric: Narratives of Transformation”

Hartey Banack (Education, University of British Columbia), “Wild About Vancouver Outdoor Education Festival”

Krista Wunsch and Janelle Phillips (Mitford School, Cochrane AB), “Confluence – Student Leaders navigating the water challenges in our world”

### **27. Water Law and Jurisprudence (EC 1040)**

Chair: Shaun Fluker (Law, University of Calgary)

David VanderZwaag (Canada Research Chair in Ocean Law and Governance, Dalhousie University), “Governance of the Arctic Ocean Beyond National Jurisdiction: Cooperative Currents, Restless Sea”

Peter Neill (Director, World Ocean Observatory), “The Once and Future Ocean”

~~Oluwatoyin Adejonwo-Osho (School of Law, University of Lagos), “The Legal and Institutional Regime for Water Pollution in Nigeria: Imperative for Coordinated Legal, Institutional and Regulatory Framework”~~

### **28. South American Waters (EC 2075)**

Chair: Joe Pavelka (Health and Physical Education – Eco Tourism, Mount Royal University)

Lea Rekow (Director, Green My Favela, Rio de Janeiro), “Saving the Cerrado – the ‘water tank’ of Brazil”

Joe Pavelka (Health and Physical Education – Eco Tourism, Mount Royal University), “Canoes for Peru and the - Amazon’s Alto Madre River”

Fernanda Reichardt (Center for Nuclear Energy in Agriculture, University of São Paulo), “Upper Xingu Basin: socio-environmental demands in the agricultural frontier of the Amazon region”

Sophia Borgias (School of Geography and Development, University of Arizona), “A Right to Leave the River Dry? The Politics of River Sectioning in Chile”

### **29. Exploring Alberta's Energy Future: A Multi-Interest Lab Model (EC 1050)**

Chair: Lorelei L. Hanson, Associate Professor, Environmental Studies, Athabasca University

Matt Beck, Sustainability and Innovation Coordinator, Husky Energy

Michael Benson, Technical Specialist, National Energy Board

Lorelei L. Hanson, Associate Professor, Environmental Studies, Athabasca University

Gerardo Marquez, Project Manager, Alberta Electric System Operator

Audrey Mascarenhas, President and CEO, Questor Technologies

### **30. Film and Photography (EC 2065)**

Chair: Mario Trono (English, Languages, and Cultures, Mount Royal University)

Marc Fawcett-Atkinson (Human Ecology, College of the Atlantic), “Rio Chama: A Northern New Mexico Portrait”

Elizabeth Miller (Concordia University), “The Shore Line: A platform for dialogue, action and creative pedagogies around water”

Teresa Konechne (Independent Artist, Minneapolis), “Wicked Questions: art & conversation on climate & change”

**31. Geographies of Water (EC 2010)**

Chair: Enrique Avila López (Humanities and General Education, Mount Royal University)

Enrique Avila López (Humanities and General Education, Mount Royal University), “Water Issues in Spain”

Arivalagan Murugeshapandian (Madras Institute of Development Studies, India), “Taming the Tambraparni River: Reservoirs, Hydraulic Power Generation, and Raising Fish in South India”

Orli Sela (Taub Center for Israel Studies New York University), “A Land Flowing with Milk and Honey...and Water? The perception of water availability and its place in the state building effort, before and after the establishment of the State of Israel”

David Anokye Asamoah (CEO/Agronomist, International Assistance for Community Development, Ghana), “Women and Water for Development: A Practical Journey to Food Security and Poverty Reduction in Africa”

10:30 – 11:00: Coffee

11:00 – 12:15: **Keynote Address** (Ross Glen Hall, EC 1050)

**Chris Jordan**

Photographer and Filmmaker, Seattle, Washington

**In the Heart of the Pacific**

Seven years ago, photographic artist Chris Jordan traveled to Midway Island to witness a stunning and symbolic environmental tragedy: tens of thousands of baby albatrosses lie dead on the ground, their stomachs filled with plastic. The issue of ocean plastic pollution was reaching the public awareness for the first time, and Midway offered an astonishing and visceral view of the now legendary Pacific Garbage Patch. At the time, Jordan had no idea he would return to the island many times over several years, in what would turn out to be a life changing journey that has shifted his entire world view. In his presentation, he will show clips from his upcoming film, as well as sharing water and ocean-related images from his previous photographic series.

Chair: **Steven Hartman, Department of Humanities, Mid Sweden University  
Nordic Network for Interdisciplinary Environmental Studies**

12:15 – 1:30: Lunch

1:30 – 3:00: **Parallel Sessions G (32 through 37)**

**32. W.E.T: Water Ecologies in Theatre (EC 1050)**

Chair: Donia Mounsef (Drama, University of Alberta)

Donia Mounsef (Drama, University of Alberta), “Getting W.E.T: A Foggy History”

Stefano Muneroni (Drama, University of Alberta), “Troubled Waterscapes: Crossing the Mediterranean Sea in Contemporary Italian Plays”

Natalie Meisner (English, Languages, and Cultures, Mount Royal University), “In the Offing: Notes on the Research/Creation of a Play in Progress”

**33. Communication, Media, Transcripts (EC 2075)**

Chair: Sarah Pike (Comparative Religion and Humanities, California State University, Chico)

Conny Davidsen (Geography, University of Calgary), “Environment on the News: Canadian Media, ‘Threats’ and ‘Victims’”

Leanne Willson (The King’s University), “Climate communication efficacy and Canadian student attitudes on religion and climate change”

Helene Demers (Anthropology, Vancouver Island University), “Sitting with Water: Contemplative Practice in Post-Secondary Teaching”

**34. Wicked Waters (EC 1060)**

Chair: Gunilla Oberg (Institute for Resources, Environment and Sustainability, University of British Columbia)  
Serhiy Homonyuk (Sociology & Anthropology, Concordia University), “Containing risk: The politics of waste disposal in Hrybovychy, Ukraine”

Gunilla Oberg (Institute for Resources, Environment and Sustainability, University of British Columbia),  
“On the wickedness of sewage management”

**35. Alberta Waters and Lands (EC 1040)**

Chair: Amanda Williams (Communication Studies, Mount Royal University)

Katie Morrison (Conservation Director, Canadian Parks and Wilderness Society, Southern Alberta), “Albertans' Recreation and Wilderness Values”

Jaclyn Angotti (Education Director, Canadian Parks and Wilderness Society, Southern Alberta), “In the Know about the Bow”

Joanna Skrajny (Conservation Specialist, Alberta Wilderness Association), “Protecting our Headwaters: AWA's Recreational Monitoring Project in Alberta's Bighorn Wildland”

Amanda Williams (Communication Studies, Mount Royal University), “The Alberta oil sands: A critical exploration of sustainability metaphors in industry, government, not for profit and media dialogue”

**36. Narratives: Futures and Histories of Water (EC 2065)**

Chair: Randy Schroeder (English, Languages, and Cultures, Mount Royal University)

Charles Hepler (Mathematics and Computing, Mount Royal University), “Good and Bad Science in Portrayals of Near Future Dystopias: Does Accuracy Matter?”

Shoshannah Ganz (English, Memorial University), “Literary Representations of Dams and Damming in Japanese and Canadian Poetry and Prose” [Skype]

Nibedita Bandyopadhyay (Humanities and Social Sciences, Indian Institute of Technology, Kanpur), “Blood-stained Water: An Analysis of Socio-Political and Economic Dimensions of Hydraulic Symbols in Girish Malik's ‘Jal’ (Water) and Ruchir Joshi's ‘The Last Jet-Engine Laugh’” [Skype]

**37. Humanities Interventions (EC 2010)**

Chair: Geo Takach (Communications, Royal Roads University)

Joe Pavelka (Health and Physical Education – Eco Tourism, Mount Royal University), Screening of “Canoes for Peru” (19 mins.)

Dick Averts (Art, University of Calgary), “Water and Security in a Rapidly Changing World”

Steven Hartman (English, Mid Sweden University), “Public Interventions”

3:00 – 3:30: Coffee

3:30 – 5:00: **Keynote Address** (Ross Glen Hall, EC 1040–1060)

**Bruno Latour**  
Sciences Po, Paris

**Reset Modernity!**

In *Reset Modernity!* Bruno Latour offers to reset a few of the instruments that allow us to register some of the confusing signals sent by the epoch. Except what he is trying to recalibrate is not as simple as a compass, but instead the rather obscure principle of projection for mapping the world, namely, modernity. Modernity was a way to differentiate past and future, north and south, progress and regress, radical and conservative. However, at a time of profound ecological mutation, such a compass is running in wild circles without offering much orientation anymore. This is why it is time for a reset, a pause, to follow a new procedure and search for different sensors that could allow us to recalibrate our detectors, our instruments, to feel anew where we are and where we might wish to go.

**Chair: Ada Jaarsma, Philosophy – Humanities, Mount Royal University**

**Gaïa Global Circus (Paris)**

**Taylor Centre for the Performing Arts**  
Canadian Premiere

**6:30 Cash Bar, Lobby**

**7:00 Doors open, Bella Concert Hall**

**7:30 Performance**

**Open to the Public, Eventbrite**

**Friday, September 30**

9:00 – 10:30: **Parallel Sessions H** (38 through 43)

**38. Water Problems and Repairs (EC 2065)**

Chair: Sarah Pike (Comparative Religion and Humanities, California State University, Chico)

Amanda Nichols (Religion and Nature, University of Florida), “Thinking like the Mountains: The Impacts of Mountaintop Removal Mining on Water Resources and Ecosystem Sustainability”

Anna Frank (Civil Engineering, University of Novi Sad), “Defining Drought – A Case Study”

Rachelle Haddock (Project Manager, Miistakis Institute), “Putting Beavers to Work for Watershed Restoration”

Sandi Riemersma (Environmental Biologist, Palliser Environmental Services Ltd., on behalf of the Jumpingpound Creek Watershed Partnership), “Integrating people with science and policy: Staying the course and leading by example”

**39. Performance and Signaling (EC 1050)**

Chair: Natalie Meisner (English, Languages, and Cultures, Mount Royal University)

Colene Lind (Communication Studies, Kansas State University), “How Citizens Use Language to Signal Commitments in Environmental Decision-Making”

Devora Neumark (Interdisciplinary Arts, Goddard College), “Letters to the Water”

MJ Thompson (Art Education, Concordia University), “Ensemble Performance and Environmental Literacy”

**40. Water Histories (EC 2075)**

Chair: Joe Anderson (History – Humanities, Mount Royal University)

Eveline de Smalen (Rachel Carson Center, Ludwig-Maximilians-Universität München), “‘The Tide Had Turned’: Cultural Representations of the Rhine-Meuse Delta”

Lawrence Culver (History, Utah State University), “Misreading Western Skies: Climate, Water, and the Creation and Erasure of the ‘Great American Desert’”

Norah Bowman (Okanagan College, Kelowna), “Beyond Declension: Resistance and Renewal at Yuct Ne Senxlymetkwe”

**41. Rural Waters and Education (EC 2010)**

Chair: Melanie Rathburn (Biology and General Education, Mount Royal University)

Katie Morrison (Conservation Director, Canadian Parks and Wilderness Society, Southern Alberta), “A Collaborative Blueprint for Conservation of Alberta’s Southern Eastern Slopes”

Bikwibili Tantoh Henry (Geography and Environmental Studies, University of the Witwatersrand), “Community-based natural resources management in sub-Saharan Africa: Problematics of governance of rural water schemes in Northwest Cameroon”

Polly Knowlton Cockett and Bonnie Shapiro (Education, University of Calgary), “Basins, Berms, and Biodiversity: No Added Water”

**42. Film, Stills, and Flux (EC 1040)**

Chair: Mario Trono (English, Languages, and Cultures, Mount Royal University)

Chase Clow (Humanities, Dominican University of CA), “‘Creek’ in the Suburban Vernacular: A Photographic Exposé”

Mario Trono (English, Languages, and Cultures, Mount Royal University), “Oil and Water, Turner Valley, and Clint Eastwood’s *Unforgiven*”

Geo Takach (Communications, Royal Roads University), “Water, Resource Extraction and Contested Place-Identity in Alberta”

**43. Circulations and Rising Seas (EC 1060)**

Chair: Curt Whitaker (English and Philosophy, Idaho State University)

Jon Crylen (Film Studies, Coe College), “Cinema Cnidaria, or Marine Movies in the Age of Mass Extinction”

Christine Folch (Cultural Anthropology, Duke University), “Energy Integration and Eco-Currencies: Circulating Value in the Anthropocene”

Susanna Lidström (KTH Royal Institute of Technology; Visiting Researcher, Scripps Institution of Oceanography), “Sea-level rise in public science writing: history, science and reductionism”

10:30 – 10:45: Coffee

10:45 – 12:00: **Keynote Address** (Ross Glen Hall, EC 1050)

**Kathleen Dean Moore**  
**Rachelle McCabe**  
Oregon State University

**In a Time of Extinction, a Call to Life**

This performance piece is a collaboration between essayist/activist Kathleen Dean Moore and concert pianist, Rachelle McCabe. The performance weaves the spoken word into the movements of Rachmaninoff’s *Variations on a Theme of Corelli*. It’s a sometimes thunderous, sometimes heart-aching piece, and it carries a strong message straight into the listeners’ hearts - the lives on this planet are beautiful and worthy beyond measure, and we cannot, must not, destroy them at this rate and with this terrible disregard. It’s a call to life, a call to reverence, and a call to action.

**Chair: Karim Dharamsi, Chair, Department of General Education, Mount Royal University**

12:00 – 1:30: Lunch

1:30 – 3:00: **Parallel Sessions I (44 through 50)**

**44. Water Security and Activism (EC 2065)**

Chair: Dick Averns (Art, University of Calgary)

Michael Loadenthal (University of Cincinnati, Georgetown University, George Mason University, Hebrew Union College), “Structural Violence, Security, and Water Wars: Developing A Resource-Driven, Intractable Conflict Analysis” [Video]

Anthony Akpan (President, Pan African Vision for the Environment, Lagos, Nigeria), “The Urgency of Water Security: A Key Necessity for Understanding the Water SDG Interlinkages” [Skype]

Tashi Tsering (General Education, Mount Royal University), “Conflict and cooperation over Asia's most strategic river, the Brahmaputra”

Troy Vettese (New York University), “Tar Sands Activism and the New Greens”

**45. Waterways, Currents, Channels (EC 2075)**

Chair: Sharon Smulders (English, Languages, and Cultures, Mount Royal University)

Curt Whitaker (English and Philosophy, Idaho State University), “Living Waters: Pre-Industrial Waterways”

Sharon Smulders (English, Languages, and Cultures, Mount Royal University), “Against the Current: The Pacific Salmon and Children's Environmental Literature”

Jada Ach (English, University of South Carolina), “‘Toward the Edge of the Ditch’: Channeling Water through North American Literature”

**46. Nigeria's Water Management: Past and Present (EC 2015)**

Chair: Joseph Adelegan (School of Environmental Sciences, University of Venda, SA)

Edith Pat-Mbano and T. N. Onuoha (Urban and Regional Planning, Imo State University, Nigeria), “Assessment of water needs in Ezinihette community Imo State Nigeria”

John Adelegan (Lead City University, Ibadan, Nigeria), “Innovative Natural Treatment Systems for Brewery Industry Waste: A Cheaper and more Efficient Model for Africa”

Joseph Adelegan (School of Environmental Sciences, University of Venda, SA), “Novel Non-Sewered Sanitation Model: A Cheaper and More Efficient Option for Africa”

**47. Water Values and Law (EC 1060)**

Chair: Shaun Fluker (Law, University of Calgary)

Gwendolyn Blue (Geography, University of Calgary), “Water is Life: Conflicting Values and Meanings of Water in Formal Public Deliberation”

David Groenfeldt (Director, Water-Culture Institute, Santa Fe), “The Role of Charters in Operationalizing Water Ethics”

Reed D. Benson (School of Law, University of New Mexico), “Environmental Flows: Legal and Policy Issues in Western U.S. and Alberta”

David K. Laidlaw (Canadian Institute of Resources Law, University of Calgary), “Indigenous Water Rights in Alberta: The Example of Stoney Nakoda Nations”

**48. The Words We Have for Water (EC 1040)**

Chair: Richard Harrison (English, Languages, and Cultures, Mount Royal University)

Rita Wong (Emily Carr University and Center for Contemplative Mind in Society), “Humble Autonomy: the Poetics of a Participatory Water Ethic”

Larissa Lai (Canada Research Chair, English, University of Calgary), “Saturate/Dissolve: Water for Itself, Settler Responsibilities and Radical Humility”

Christine Stewart (English and Film Studies, University of Alberta), “‘As long as the sun shines, the rivers flow and the grass grows’: Thinking through water on Treaty 6”

Richard Harrison (English, Languages, and Cultures, Mount Royal University), “Poetry and Warning: Words from the Flooded House”

**49. Community Engagements and Education (EC 1050)**

Chair: Sonya Jakubec (School of Nursing and Midwifery, Mount Royal University)

Leon Cerdena (Critical Theory and Creative Research at the Pacific Northwest College of Art), "Towards an Integral Media Ecology" [Skype]

Sharon Meier MacDonald (Communications Coordinator, Ghost Valley Advocacy), "The Ghost's Story: A Community-Organizing Model of Change-making"

Catherine Fauvelle (University of Calgary), "Modelling habitat connectivity in the Saskatchewan Boreal Plain in planning for conservation and development"

**50. Water Histories and Storytelling (EC 2010)**

Chair: Jennifer Pettit (Humanities – History and Indigenous Studies, Mount Royal University)

Sean Atkins (Education, University of Regina), "'On this Side of the Watershed': Constructing and Contesting Watercourses in the Transformation of Indigenous and Euro-Canadian Hunting Landscapes in the East Kootenays, 1891 – 1905"

Conrad Scott (English and Film Studies, University of Alberta), "A Complicated Duality: Near-Future Water Speculations in Paolo Bacigalupi's *The Water Knife* and Thomas King's *The Back of the Turtle*"

3:00 – 3:30: Coffee

**3:00 – 4:00: Looking Ahead to *Under Western Skies 2018***

**Epigenetics and Environmental Trauma: An Interactive Roundtable (EC 1050)**

Chair: Ada Jaarsma (Humanities – Philosophy, Mount Royal University)

Ada Jaarsma (Humanities – Philosophy, Mount Royal University), "Epigenetics and Critical Philosophy"

Raja Singh (Director, Alberta Epigenetics Network)

Robert Boschman (English, Languages, and Cultures, Mount Royal University), "Epigenetics and Autobiographical and Place Narratives"

Katja Pettinen (General Education, Mount Royal University), "Epigenetics and Anthropology"

Mount Royal University Students, "Epigenetics and Learning"

4:00 – 4:15: Coffee

4:15 – 5:30: **Keynote Address (Ross GlenHall, EC 1050)**

**Madonna Thunder Hawk  
Beth Castle**

**The Oahe Dam and the Cheyenne River Sioux Reservation**

Lakota Activist Madonna Thunder Hawk and filmmaker and Native Studies professor Elizabeth Castle will co-present on the impact of the construction of the Oahe Dam and flooding of fertile bottomlands of the Cheyenne River Sioux Reservation in the 1960s. As part of a government project to harness hydroelectric power and provide flood control, The U.S. Army Corp of Engineers built dams along the Missouri River on Indian Reservations. Using film clips from the Sundance funded feature documentary film *Warrior Women*, Thunder Hawk and Castle will discuss how the sudden loss of her homeland generated a rage that was misdirected until she found her home as an activist in the American Indian Movement.

**Chairs: Renae Watchman, Indigenous Studies, Mount Royal University  
Mark Ayyash, Sociology, Mount Royal University**

**Reception in Honour of Maude Barlow\* (Ross Glen Hall, EC 1040)**

With an address by Maude Barlow: "Boiling Point"

Book Launch and Signing, *Boiling Point*

MC, Mike Quinn, Associate VP, Office for Research, Scholarship, and Community  
Engagement, Mount Royal University

5:30 Doors open, cash bar (2 free tickets with registration)

6:30 Welcome from Jeff Keshen, Dean of the Faculty of Arts, Mount Royal University

6:35 James Byrne, Professor, Department of Geography, University of Lethbridge

Introduction of Maude Barlow

Award Presentation by M. Quinn, R. Boschman, and J. Byrne

6:45 Presentation by Maude Barlow

7:15 Q &A

7:30 Resume mingling

8:00 Reception closes

Music by Indigenous flute artist, Jesse McMann-Sparvier

Catered by Dana Hospitality

\*Open to the public through Eventbrite