8th Conference on Natural Channel Systems

NATURAL CHANNELS

Resilient River Corridors: Navigating Challenges, Opportunities and Change

2026 **Program**

June 8th - 10th, 2026

McMaster University

Hamilton, Ontario

Welcome and Co-Chairs' Remarks

Welcome to the 8th Conference on Natural Channel Systems. We are honoured to serve as co-chairs for this year's gathering and to welcome you to a program built around the theme **Resilient River Corridors: Navigating Challenges, Opportunities and Change**. For three decades, this conference has been a place where practitioners, researchers, students, Indigenous partners, contractors, and community members come together to share knowledge, test ideas, and strengthen the practical tools we use to care for river corridors. That spirit of collaboration is at the heart of everything we hope this conference will achieve.

This year's program is intentionally balanced to support learning, skills development, and relationship building. You'll find a mix of keynote presentations that frame big-picture challenges; concurrent technical sessions spanning geomorphology, aquatic ecology, sediment dynamics, restoration design, monitoring and adaptive management, urban stream rehabilitation, and governance; hands-on workshops and training in field methods and technical analysis; and field tours that showcase restoration projects and long-term monitoring in action. We've also included a strong early-career focus with student posters, a Young Professionals event (the Channel Changer Competition) a Mentorship Stream, including opportunities to network at the exhibit hall, social receptions, and the banquet. These elements are intended to spark practical conversations, highlight innovative solutions, and strengthen the networks that help us do better work together.

We have also included two special events that align with our theme of "navigating challenges": a Plenary Panel and a Forum. There will be a Plenary Panel to discuss the lessons learned over the past three decades of river restoration in Ontario, and includes a wide range of experts, including academics, contractors, engineers, biologists, and fluvial geomorphologists. To further discuss how we hope to navigate future challenges, we are also hosting the Natural Channels Initiative (NCI) Forum to invite conference attendees to discuss the potential paths forward for the organization. The Organization has operated on an ad hoc basis, with momentum that has ebbed and flowed over the years. The success of this next chapter depends entirely on the willingness of practitioners, researchers, and agency staff to step forward. This roundtable is an opportunity to gauge whether there is sufficient critical mass, in terms of enthusiasm, volunteer commitment, and organizational energy, to formalize the NCI.

As you dive into this conference, we want to share our hopes with you: what we hope you bring and take away. What do we want you to bring? Bring your curiosity, your practical experience, and a willingness to share both successes and lessons learned. Arrive with an open mind and a humble attitude – knowing that as scientists, and citizens, we can learn from past wrongs and work together to improve in the future. Reflect on your work, experiences, and interactions within our community, as these are what make our discussions useful and memorable. Engage across disciplines: engineers, ecologists, planners, Indigenous knowledge holders, contractors, students, and policy makers all bring perspectives that enrich the conversation. What we hope you take away are new technical insights, broader professional connections, and practical tools and relationship-building skills you can apply in your work. We also hope the conference helps you see opportunities for collaboration to build more resilient river corridors in the face of changing climates and land uses.

With appreciation,

Christina Bright (Toronto and Region Conservation Authority) & Cailey McCutcheon
Co-Chairs, 8th Conference on Natural Channel Systems

Christina Bright

Cailey McCutcheon

Conference Steering Committee

Sally-Beth Betts	Credit Valley Conservation (CVC)
Devin Coone	City of Toronto
Jeff Hirvonen	GeoProcess Research Associates
Patrick Padovan	GEO Morphix Ltd
Elli Papangelakis	McMaster University
Mariëtte Pushkar	Onterris

Sunday, June 7, 2026	
4:30 p.m. – 6:00 p.m.	**New River Professionals Event: The "Channel Changer" Competition** (Room M22)
6:00 p.m. – 10:00 p.m.	**Ice Breaker** taking place on the 1st floor of The Hub)
Monday, June 8, 2026	
7:15 a.m. – 8:30 a.m.	**Buffet Breakfast**
8:00 a.m. – 8:30 a.m.	**Registration, Coffee and Tea**
8:30 a.m. – 9:40 a.m.	**Introductory Remarks and Keynote Speaker Bob Goulais** (Room 127)
9:40 a.m. – 11:00 a.m.	**Concurrent Sessions I & J** (Rooms 124 and M16)
11:00 a.m. – 11:30 a.m.	**Refreshment Break with Exhibitors**
11:30 a.m. – 1:10 p.m.	**Concurrent Sessions C & K** (Rooms 124 and M16)
1:10 p.m. – 2:15 p.m.	**Lunch** (CENTRO@Commons)
2:15 p.m. – 3:15 p.m.	**Keynote Speaker Dr. Peter Ashmore** (Room 127)
3:15 p.m. – 3:45 p.m.	**Refreshment Break with Exhibitors**
3:45 p.m. – 5:25 p.m.	**Concurrent Sessions F & K** (Rooms 124 and M16)
5:30 p.m. – 7:30 p.m.	**Networking Event with Exhibitors – with cash bar and appetizers**
Tuesday, June 9, 2026	
7:30 a.m. – 9:00 a.m.	**Buffet Breakfast**
8:00 a.m. – 9:00 a.m.	**Registration, Coffee and Tea**
9:00 a.m. – 10:00 a.m.	**Keynote Speaker Dr. Karen E. Smokorowski** (Room 127)
10:00 a.m. – 10:30 a.m.	**Refreshment Break with Exhibitors**
10:30 a.m. – 12:10 p.m.	**Concurrent Sessions G & B** (Rooms 124 and M16)
12:10 p.m. – 1:30 p.m.	**Lunch** (CENTRO@Commons)
1:30 p.m. – 2:30 p.m.	**Plenary Panel: Three Decades of River Restoration: Lessons, Shifts, and the Future** (Room 127)
2:30 p.m. – 3:00 p.m.	**Refreshment Break with Exhibitors**
3:00 p.m. – 4:20 p.m.	**Concurrent Sessions H & B** (Rooms 124 and M16)
6:30 p.m. – 10:00 p.m.	**Banquet and Service Recognition Awards Ceremony [ticket required]** (The Hub)
Wednesday, June 10, 2026	
7:30 a.m. – 9:00 a.m.	**Buffet Breakfast**
8:30 a.m. – 9:00 a.m.	**Registration, Coffee and Tea**
9:00 a.m. – 10:00 a.m.	**Keynote Speaker Dr. Gary Brierley** (Room 127)
10:00 a.m. – 11:50 a.m.	**Concurrent Sessions D & A** (Rooms 124 and M16)
11:50 a.m. – 12:35 p.m.	**Networking Lunch Break with Exhibitors**
12:35 p.m. – 1:35 p.m.	**Natural Channels Initiative (NCI) Forum** (Room 127)
1:35 p.m. – 1:50 p.m.	**Closing Remarks** (Room 127)

Keynote Speakers

Monday, June 8, 2026 - 8:30 a.m.
Bob Goulais

Bob Goulais, President, Nbisiing Consulting

Bob Goulais is Anishinaabe from Nipissing First Nation. He is a sought after speaker, traditional teacher, facilitator and Master of Ceremonies, providing valuable cultural context and traditional knowledge to diverse audiences across Canada.

In 2015, he founded Nbisiing Consulting Inc. and specializes in Indigenous cultural competency training. He has personally trained over 8,000 individuals from public, private and not-for-profit sector teams over the course of 23+ years.

He describes himself as a lifelong public servant with a career spent in various roles with the Anishinabek Nation, the Assembly of First Nations, and the Government of Ontario. He has also served on Chief and Council, President and Chairperson of Native Men's Residence, President and Chairperson of the Ojibwe Cultural Foundation, and as a member of the Board of Directors for Humber College, Adler Professional Graduate School, and as a founding Board member of the Moccasin Identifier.

He is second degree member of the Three Fires Midewiwin Society and a committed advocate of advancing Indigenous ways of knowing and being.

Monday, June 8, 2026 - 2:15 p.m.
Dr. Peter Ashmore

Dr. Peter Ashmore, Professor Emeritus in Geography & Environment at the University of Western Ontario

Peter is a fluvial geomorphologist who is currently Professor Emeritus in Geography & Environment at the University of Western Ontario, where he has worked since 1988, with sabbatical leaves in Aotearoa, New Zealand and Victoria, BC. Prior to arriving at Western, he worked at Memorial University of Newfoundland, Environment Canada, and University of Saskatchewan, after completing his PhD at the University of Alberta. His research in fluvial geomorphology has included work on bedload and morphological dynamics in gravel-bed rivers, effects of urbanization on rivers, response of rivers in Canada to climate change, river restoration, and geomorphology of semi-alluvial rivers. His advisory work includes contributing to the International Joint Commission Upper Great Lakes Study on erosion of the bed of St Clair River, suspended sediment yields in large prairie rivers for Environment Canada, analyzing the potential effects of climate change on rivers in Canada for Geological Survey of Canada, and supporting the Ontario Natural Channel Systems initiative beginning in the 1990s. In Ontario, he has looked at the geomorphology of rivers in post-glacial landscapes, advised on various channel design and restoration projects, researched the multi-decadal effects of urbanization on rivers in GTA, and helped to develop tools for mapping and predicting network-scale impacts of urbanization.

Peter's keynote will reflect on developments in Natural Channels practice and policies in the context of the geomorphic setting, effects of urbanization, related recent research, and ideas for the future.

Keynote Speakers Continued

Tuesday, June 9, 2026 - 9:00 a.m.
Dr. Karen E. Smokorowski

Dr. Karen E. Smokorowski, Research Scientist, Fisheries and Oceans Canada

Karen Smokorowski received her BSc in biology from University of Toronto and her PhD from Trent University in watershed ecosystems. She joined Fisheries and Oceans Canada (DFO) in Sault Ste Marie, ON, in 1998. As a Research Scientist with DFO for over 27 years, Karen has been studying the impacts of human activities on fish and fish habitat, conducting science in support of the DFO Fish and Fish Habitat Protection Program in their administration of the *Fisheries Act*. Over the years she has conducted field-based empirical experiments ranging from the effects of whole-lake removal of woody habitat on fish productivity, to studying the long-term ecosystem effects of altering flow regimes at a hydropeaking hydroelectric dam, to testing the fish injury and mortality rates from entrainment through a new 'fish friendly' hydroelectric turbine design.

Karen's research and advice has provided credible scientific evidence that has significantly influenced legislative changes to the *Fisheries Act*, and has been pivotal in restoring lost protections, rebuilding fish populations, and incorporating modern safeguards. A significant portion of Karen's formal science advisory role in DFO has been to spearhead a paradigm shift in DFO-directed or facilitated monitoring of habitat offsets, banks or restorations. This work has culminated in the recent development of a Standardized Monitoring Framework that provides guidance for the design, implementation, and evaluation of habitat offsets, banks, and restorations, including the incorporation of learning to inform and improve project and program success.

Wednesday, June 10, 2026 - 9:00 a.m.
Dr. Gary Brierley

Dr. Gary Brierley, Professor and Chair of Physical Geography, University of Auckland, New Zealand

Gary Brierley is Professor and Chair of Physical Geography at the University of Auckland (Waipapa Taumata Rau) in Aotearoa New Zealand. He is co-developer, with Professor Kirstie Fryirs (Macquarie University, Sydney, Australia) of the River Styles Framework (Brierley & Fryirs, 2005). This coherent, open-ended (non-prescriptive), geomorphological approach to proactive, cost-effective river management was co-developed with river managers in Australia.

Supported by professional short courses, there has been significant uptake of the framework in various parts of the world (Fryirs et al., 2019, 2021). The underlying premise to 'work with nature, work with the river' moves beyond inherent limitations of 'command-and-control' management practices (Brierley & Fryirs, 2022). Building on these principles, collaborations with Māori colleagues in Aotearoa New Zealand respect the rights of rivers as living and indivisible entities (Brierley et al., 2019), embracing a multiple-knowledges lens that endeavours to 'Find the Voice of the River' (Brierley, 2020). Recent work outlines how Communities of River Practitioners (CoRPs) make best use of best available understandings in moves towards 'living generatively with living rivers' (Brierley et al., 2021, 2025).

Monday, June 8, 2026

9:40 a.m. - 11:00 a.m.

M1A – Room 124

Session I – Partnerships and Multidisciplinary Approaches

Leads: Elli Papangelakis (McMaster University) & Fred Dobbs (Nottawasaga Valley Conservation Authority & Trout Unlimited (Retired))

9:40 **Introducing the Watershed and Ecosystems Living Lab (WELL): Building a multidisciplinary outdoor lab to support river restoration teaching and research**
Elli Papangelakis, McMaster University

10:00 **Natural Awe Restoration: Revitalizing Eudora, AR Through Community-Led Design**
David Bidelspach, 5 Smooth Stones Restoration

10:20 **Naturalization of North Strasburg Creek – A Case Study in Multi-Disciplinary Approaches to the Restoration of Industrial Creek Corridors**
Jacob Ursulak, Aquafor Beech Limited

10:40 **Designing Large-Scale Fish Habitat Offsets for a Major Mine Development: A Multi-Disciplinary Approach**
Heather Amirault & Cody Jackson, Stantec Consulting Ltd.

M1B – Room M16

Session J – River Processes in Changing and Unique Environments

Leads: Christina Bright (Toronto and Region Conservation Authority) & Sally Betts (Credit Valley Conservation)

9:40 **How Deep Do Streams Scour? Insights from Small Meandering Channels**
Bryce Molder, GEO Morphix Ltd.

10:00 **Understanding sediment transport processes in the Credit River Watershed.**
Amy Nicoll, Credit Valley Conservation

10:20 **Investigating Changes to Bed Shear Stress in a Semi-Alluvial Channel Through a Mild Winter**
Christopher Giovino, GEO Morphix Ltd.

10:40 ***Protecting Water from Water: Assessing Braided System Bank Erosion Threatening Water Supply in a Mediterranean Climate**
Joshua Moraal & Jeff Doucette, GHD Limited

***Early career presentation**

11:30 a.m. - 1:10 p.m.

M2A – Room 124

Session C – Innovations in Construction & Implementation

Leads: Heather Amirault (Stantec Consulting Ltd.) & Mike Lawson (GEO Morphix Ltd)

11:30 **Finding Stable Gound and Passive Flow Management**
Kent Rundle, MLC Ecosystem Restoration Inc

11:50 **Woody Material – There's a lot at "stake"**
Christopher Pfohl, R.J. Burnside & Associates Limited

12:10 **Knowing What is Below Your Feet: The Importance of Geotechnical Data in Stream Projects**
Chase Konecny & Peter De Carvalho, Stantec Consulting,

12:30 **Return of the Salmon – Working in the Wet to Restore Fish Passage**
Lucas Warner, 5 Smooth Stones Restoration Inc.

12:50 **Assessing Floodplain Topographic Complexity in Large-Scale Corridor Restorations Using Particle Image Velocimetry**
Lindsay Davis, GEO Morphix Ltd.

M2B – Room M16

Session K – The Good, the Bad & the Ugly: Lessons Learned (Part 1)

Leads: Sally Betts (Credit Valley Conservation) & Cailey McCutcheon (Conference Co-Chair)

11:30 **Response of a Restored Wandering Channel to Ice Dam Formation and Failure on the Mad River**
Paul Villard, GEO Morphix Ltd.

11:50 **City-wide Creek Erosion Inventories: Methodologies of Risk Assessment and Prioritization for Municipal Management Programs**
Julia Howett, Onterris

12:10 **Reflection on Natural Channel Design over the Past 20 Years in the Credit Valley Watershed**
Rizwan Haq & Jon Nodwell, Credit Valley Conservation

12:30 **Practitioner Perspectives and Lessons Learned from Over 20 Years of Fluvial Geomorphic Monitoring at Toronto Pearson International Airport**
Matthew Iannetta, GeoProcess Research Associates Inc.

12:50 **Since 1976 – A Creek Contractor's Perspective on the Industry**
Jared Reinders, R&M Construction

Monday, June 8, 2026 Continued

3:45 p.m. - 5:25 p.m.

M3A – Room 124

Session F – Managing Competing Interests – Erosion Hazards & Ecological Diversity

Leads: Corey Dawson (Dalhousie University) & Nikan Momen (Stantec Consulting Ltd.)

3:45 – **When Does a Process Become a Hazard? Managing a System of Complex River Crossings**
Amber Garrett, Enbridge

4:05 – **Don River Restoration and Sanitary Sewer Overflow DWST-2**
Don McBrayne, Associated Engineering (Ont.) Ltd.

4:25 – ***Balancing erosion risk and habitat quality in a process-based restoration at a lake outlet**
Megan Iun, GHD Ltd

4:45 – ***Regulation of Shorewalls on the Nottawasaga River: Can Conservation Authorities Manage Conflicting Interests of Ecology, Engineering and Aesthetics?**
Nicole Vankooten, Nottawasaga Valley Conservation Authority

5:05 – ***Bridging Fish Passage and Infrastructure Needs: Lessons from Cross-Jurisdictional Watercourse Crossing Design Guidelines**
Nikan Momenbeitollahi, Stantec Consulting Ltd.

M3B – Room M16

Session K – The Good, the Bad & the Ugly: Lessons Learned (Part 2)

Leads: Sally Betts (Credit Valley Conservation) & Cailey McCutcheon (Conference Co-Chair)

3:45 – **Lessons Learned on Water Quality Treatment Wetlands for Phosphorus Reduction in an Urban Setting**
Paul Biscaia, Credit Valley Conservation

4:05 – **Sitlika Creek: the Bad, the Ugly and the Really Ugly**
Brad Fairley, 5 Smooth Stones Restoration Inc.

4:25 – **How to Solve a Sewer Issue – The Highland Creek Story from Watershed Scale to Project Implementation**
Jacob Ursulak & Chunying Zhao, Aquafor Beech Limited

4:45 – **Barefoot Box Culvert™ – 10yrs of Learning**
Christopher Pfohl, R.J. Burnside & Associates Limited

5:05 – **Fish Habitat Banking at DFO: Lessons learned and next steps**
Sarah Matchett, Fisheries and Oceans Canada

***Early career presentation**

Posters

Come learn about a few of the ongoing natural channel systems related research activities at McMaster University through these posters.

***Operator Bias in River Assessment Procedures and Geomorphic Techniques**
Authors: Nicole Carson* (McMaster University) & Elli Papangelakis (McMaster University)

***A Cross-Section of Erosion Hazard Challenges in Canada**
Authors: Priyanka Hire* (McMaster University) & Elli Papangelakis (McMaster University)

***Early career presentation**

Did You Know?

You Can Access Session Abstracts During the Conference

QR codes will be posted on signage outside of rooms 124 and M16 giving you access to the session abstracts.

Presentations Will Be Made Available Post-Conferece

Visit the Natural Channel Systems Conference website after the event to access speaker presentations (as available).

Tuesday, June 9, 2026

10:30 a.m. - 12:10 p.m.

T1A – Room 124

Session G – Management of Natural Channel Assets and Urban Infrastructure

Leads: Bill Snodgrass (City of Toronto (Retired)) & Daniel McCreery (City of Toronto)

10:30 **Management of Toronto's Watercourses over nearly three Decades**
Bill Snodgrass, City of Toronto, Retired

10:50 **Protection of Municipal Sewer and Water Assets Around Urban Watercourses**
Robert Chan, City of Toronto & Rob Amos, Aquafor Beech Ltd.

11:10 **Bridges (et cetera) Over Troubled Water: Region-Scale Erosion Hazard Screening to Support Municipal Asset Management**
Andrew Doherty, Stantec Consulting Ltd

11:30 **Watercourse Asset Management and DFO Habitat Banking: Kitchener's Model**
Nick Gollan, City of Kitchener & Sarah Matchett, Fisheries and Oceans Canada

11:50 **Municipal Watercourse Projects: Approaches and Cost Considerations**
Daniel McCreery & Devin Coone, City of Toronto

T1B – Room M16

Session B – Emerging Technologies & Modelling Solutions (Part 1)

Leads: Adeyemi Olusola (York University) & Jan Fransen (GEO Morphix Ltd.)

10:30 **A canopy variety hotspot metric to guide riparian forest planning and planting design decision-making**
Corey Dawson, Dalhousie University

10:50 ***Value of Information (VOI) Analysis of a Stream Power-Based Toolbox for Erosion Risk Assessment and Management**
Priyanka Hire, McMaster University

11:10 **Assessing Brook Trout habitat in a peri-urban headwater stream**
Ian D. Smith, University of Toronto

11:30 ***Non-Invasive Monitoring of Brook Trout to Support Adaptive Management in River Corridors**
Lexiang (Daniel) Hu, University of Toronto

11:50 ***Flood Susceptibility Mapping Using Hydrogeomorphology: A Case Study of the Humber River Basin, Ontario**
Jasper Wong, York University

***Early career presentation**

1:30 p.m. - 2:30 p.m.

Plenary Panel – Room 127

Three Decades of River Restoration: Lessons, Shifts, and the Future
Panelists: Bill Snodgrass, City of Toronto (Retired), Bruce MacVicar, University of Waterloo, Cam Portt, C. Portt and Associates, Harry Reinders, R & M Construction, Heather Amirault, Stantec Consulting Ltd., Sally Betts, Credit Valley Conservation
Moderated by: Mariëtte Pushkar, Onterris

3:00 p.m. - 4:20 p.m.

T2A – Room 124

Session H – Nature Based Infrastructure

Leads: Ivana Vouk (National Research Council Canada) & Sean Ferguson (National Research Council Canada)

3:00 **Managing Flood and Erosion Risk in Canadian River Systems using Nature-Based Infrastructure: A Canadian Guideline for Design and Implementation**
Sean Ferguson & Ivana Vouk, National Research Council Canada

3:20 **Floodplains are Nature Based Infrastructure**
Bruce MacVicar, University of Waterloo

3:40 **What Does Channel-Scale Nature-Based Infrastructure Aim to Do?**
Elli Papangelakis, McMaster University

4:00 **Erosion and Flood Management in Agricultural Streams: Nature-Based Infrastructure in the Nottawasaga River Watershed**
Laura Wensink & Don Little, Nottawasaga Valley Conservation Authority

T2B – Room M16

Session B – Emerging Technologies & Modelling Solutions (Part 2)

Leads: Adeyemi Olusola (York University) & Jan Fransen (GEO Morphix Ltd.)

3:00 **Hydrological Reconstruction of Flood Discharges Using Palaeostage Indicators in the Kaveri Gorge, Southern India**
Pramodkumar Hire, HPT Arts and RYK Science College

3:20 ***Thermal Regimes of Stormwater Management Ponds and Their Influence on Instream Temperatures**
Shauna Henderson, GEO Morphix Ltd

3:40 ***2D Hydraulic Modelling in the Consulting Environment: Practical Applications in River Restoration**
Lukas Mueller & Ahmed Siddiqui, GEI Consultants Canada Ltd.

4:00 ***Impacts of Dam-Induced River Flow Changes on Vegetation in the Draa River (Morocco): Insights from Hydrological Modeling and Remote Sensing**
Ali Meskour, Hassania School of Public Works

***Early career presentation**

Wednesday, June 10, 2026

10:00 a.m. - 11:50 a.m.

W1A – Room 124

Session D – Innovations in Interpreting River Complexity and Meaning

Leads: Roger Phillips (SLR Consulting) & Chris Pfohl (R.J. Burnside & Associates Limited)

10:00 **Classifying Complexity and Mapping Meaning in Fluvial Geomorphology**
Roger Phillips, University of Toronto & SLR Consulting

10:10 **Reframing the Definition of a "Watercourse": Implications for Interpretation and Assessment in Watershed Studies**
John McDonald, Onterris & Roger Phillips, SLR Consulting & University of Toronto

10:30 **Revisiting Proper Reach Delineation Protocols to Avoid Misguided Erosion Risk Management and Channel Restoration Initiatives**
Michael Brierley & Kelsey Serviss, SLR Consulting

10:50 **Time to Exposure: Methodology and Policy Approaches**
Kayla Goguen & Natasha Cyples, Onterris

11:10 **Improvements to the Rapid Geomorphic Assessment for Preliminary Evaluation of Channel Stability**
Robin McKillop, SLR Consulting

11:30 ***Linking mobility to morphology: Sediment transport characteristics along gravel-bed channel bedforms**
Michael G. Chislett, University of Waterloo

W1B – Room M16

Session A – Adaptive Management and Monitoring for Resilient River Corridors

Leads: Mark Heaton (Ministry of Natural Resources & Ontario Streams) & Jack Imhof (Ministry of Natural Resources & Trout Unlimited (Retired))

10:00 **Adaptive Management of the Mollie River Channel Realignment: A Case Study from the Côté Gold Project**
Matthew Iannetta & Cal Jefferies, GeoProcess Research Associates Inc.

10:30 **Largescale River Corridor Restoration: A Case Study of the Sheep River Watershed in Southern Alberta**
Liv Hundal, WSP Canada Inc.

10:50 **Alluvial Channel Design – Taplow Creek 8 Years Later**
David Kynaston, Aquafor Beech Limited & Diana Michalakos, Town of Oakville

11:10 ***Long-Term Monitoring of River Restoration Projects in South Ontario**
Kate Pearson, McMaster University

***Early career presentation**

12:35 p.m. - 1:35 p.m.

Natural Channels Initiative Forum – Room 127

Roundtable: The Future of the Natural Channels Initiative – Joining CWRA as an Affiliate
Moderated by: Jeff Hirvonen, GeoProcess Research Associates

In-kind Contributions

We extend our sincere gratitude to these organizations of the steering committee members for their in-kind contributions

Toronto and Region Conservation Authority

GeoProcess Research Associates

Credit Valley Conservation inspired by nature

McMaster University | School of Earth, Environment & Society

Toronto

Onterris

GEO Morphix®

Post-Conference Training Workshops

River Styles Framework (June 10 afternoon to June 11 morning)

Facilitated by **Dr. Gary Brierley** (University of Auckland, New Zealand), this intensive, interactive workshop introduces the River Styles Framework, a generic, generic-yet-adaptable approach to applied fluvial geomorphology. Developed in Australia and adapted for international landscapes like British Columbia, the framework provides a holistic, strategic blueprint for river management across four key stages:

1. **Catchment-Scale Analysis:** Mapping river character, behavior, and reach connectivity.
2. **Geomorphic River Condition:** Using evolutionary analysis to assess catchment health.
3. **Recovery Potential:** Predicting future recovery based on evolutionary trajectories.
4. **Management Applications:** Prioritizing cost-effective, "conservation-first" actions to monitor and achieve realistic target conditions.

Pertinent to the Canadian context, the framework excels at prioritizing regional-scale interventions while respecting ecological diversity. This hands-on session integrates multiple knowledge systems—including alignment with Indigenous framings—to foster "communities of river practitioners" capable of delivering proactive, evidence-based management that truly works with the river.

Designing with Wood & Field Trip to the Port Lands, Toronto (June 10 afternoon to June 11 afternoon)

Facilitated by **Marty Melchior** (Inter-Fluve) and **Ken Dion** (Waterfront Toronto), this workshop explores the theory and practice of utilizing engineered large wood in river and riparian wetland restoration. Designed for project owners, managers, and technical staff, the session provides a foundational understanding of the risks, knowledge, and experience required for successful implementation without offering formal design qualifications.

The workshop features a field trip to Toronto's Port Lands Flood Protection Project, a massive, grassroots-driven initiative transforming derelict brownfields into a multi-channeled, naturalized river valley. This project remediated contaminated lands, provided critical flood protection, and ecologically reconnected the Don River watershed with Lake Ontario.

The site tour covers:

- Historical context and initial site conditions.
- Planning, consultation, and approval processes.
- Technical construction aspects essential for implementing vital habitat features, including strategic wood and rock placement.

3-D Process Based Natural Corridor Design (June 10 afternoon to June 12 morning)

Led by **David Bidelspach** (5 Smooth Stones Restoration), this workshop focuses on 3-D Process-Based Natural Corridor Design (PB-NCD) for ecosystem restoration. It explores the evolution of channel design, moving from historical reference-based methods to modern tools that integrate geomorphology, floodplain connectivity, stormwater management, and optimization.

Using Ancaster Creek as a case study, participants will examine AutoCAD-based 3-D design, uncertainty analysis, cost estimation, and urban channel applications. The curriculum emphasizes practical construction methods, covering sediment control, equipment sequencing, and risk analysis through real-world Canadian restoration examples.

Beyond engineering, the workshop addresses future opportunities in ecosystem restoration, including funding, urban agriculture, community revitalization, and nature-based mental health initiatives. Collaborative breakout groups run throughout the session to encourage interactive problem-solving and preliminary restoration design development.

Events

The 2026 Natural Channels Conference is a dynamic celebration of innovation, collaboration, and community. The program introduces exciting new initiatives alongside beloved conference traditions, creating unforgettable opportunities for learning, networking, and inspiration.

The Mentorship Stream

Making its debut this year, the Mentorship Stream Program has been created to connect students and emerging professionals with experienced members of the natural channels community, to foster networking opportunities. The program received an incredible response, with more than 30 participants joining as mentors or mentees.

Prior to the conference, mentees were paired with mentors and encouraged to connect to discuss goals, industry questions, and strategies for making the most of the conference experience. Throughout the conference, these pairs are reuniting to dissect key sessions, exchange takeaways, and discuss practical ways to apply this newfound knowledge long after the closing remarks.

The New Professional Event: "The Channel Changer Challenge"

Another exciting addition to this year's conference is the inaugural Channel Changer Challenge — an immersive case study competition created specifically for students and early-career professionals.

This event started the conference off on Sunday evening. Participants were grouped into teams, tasked with tackling a complex riverine scenario that blended engineering challenges with environmental stewardship. From flood mitigation to habitat restoration, teams analyzed detailed site photos, maps, and data sets to develop innovative and resilient solutions.

Thank you to our "Experts" who volunteered their time to challenge this group of new professionals, improve their skills, collaborate across disciplines, and provide direct mentorship. The winning team will be announced at the conference closing session on Wednesday.

The 2026 Photo Contest

A vibrant river story can unfold in a single frame. The 2026 Photo Contest celebrates the landscapes, the science, and the people who bring our waterways to life. This competition gives our registrants the chance to showcase both their photographic talent and their passion for rivers. Submissions were received in two categories, **Riverine Landscapes** (showcasing breathtaking river environments and restoration efforts in action) and **River Caretakers** (celebrating the people behind the science).

The top three entries in each category are showcased at the conference on Monday and Tuesday, where attendees can cast their votes. Voting ends on Tuesday during the banquet. The canvas photos will be raffled off during the banquet for lucky winners to take home.

The Banquet

First introduced at the 2023 conference, our Banquet has quickly become a cherished tradition and the social highlight of the conference. Following its tremendous success, we are delighted to continue this celebration.

This year's banquet is a celebration of our community's hard work and creativity. We will present the 2026 prestigious Recognition of Service Award, honouring Dr. Peter Ashmore and Harry Reinders (see page 11 of this program to read about our awards recipients).

The evening will also celebrate the creativity showcased in the Photo Contest, feature a raffle for the finalist photo prints and live music from Shakey & the Bluenotes. We look forward to the memorable night of connection and celebration.

Award of Recognition

The Natural Channels Initiative recognizes outstanding individuals who have made significant contributions to natural channel systems. Through their efforts, they have demonstrated a commitment to advancing the field of natural channel systems through research, knowledge transfer, collaboration, implementation and/or innovation. Recipients have shown exemplary leadership, dedication, and personal commitment to natural channel systems.

Dr. Peter Ashmore

Peter is a fluvial geomorphologist who is currently Professor Emeritus in Geography & Environment at the University of Western Ontario, where he has taught and researched since 1988, with sabbatical leaves in Aotearoa New Zealand and Victoria BC. Prior to arriving at Western, he worked at Memorial University of Newfoundland, Environment Canada, and University of Saskatchewan, after completing his PhD at the University of Alberta.

His research in fluvial geomorphology has included field and experimental work on bedload and morphological dynamics in gravel-bed rivers, especially braiding, response of rivers to environmental change and watershed changes, river restoration and design, and geomorphology of semi-alluvial rivers.

Peter has supervised many MSc and PhD students and post-doctoral researchers who has gone on to professional and academic careers in fluvial geomorphology in Canada and internationally. His advisory work includes contributing to the International Joint Commission Upper Great Lakes Study on erosion of the bed of St Clair River, suspended sediment yields in large prairie rivers for Environment Canada, analyzing the potential effects of climate change on rivers in Canada for Geological Survey of Canada, and supporting the Ontario Natural Channel Systems initiative beginning in the 1990s.

In Ontario, he has looked at the geomorphology of rivers in post-glacial landscapes, advised on various channel design and restoration projects, researched the multi-decadal effects of urbanization on rivers in GTA, and helped to develop tools for mapping and predicting network-scale impacts of urbanization.

Harry Reinders

Harry Reinders, former President and General Manager of R&M Construction, has been an integral part of the company since its founding in 1976. Over his career, he gained extensive experience in creek restoration, slope stabilization, stormwater management pond rehabilitation, and shoreline protection, helping guide the industry toward more naturalized construction methods.

Harry worked his way through many roles within the Company, beginning as a Labourer and advancing to Equipment Operator, Site Supervisor, Estimator, and ultimately President and General Manager. Although now retired, he continues to offer guidance and insight on complex projects when needed.

He was also one of the founders of CANIECA and has participated in many committees and organizations to help promote better policy to help move stream restoration forward.

Outside of work, Harry and his wife are involved with their five children and their spouses, six grand children, and multiple not for profit organizations.

Acknowledgements

We want to extend our sincere thanks to the many people whose time and expertise make this program possible.

Please join us in thanking our keynote presenters: **Bob Goulais**, **Dr. Peter Ashmore**, **Dr. Karen Smokorowski** and **Dr. Gary Brierley**; this group includes expertise and perspectives, sharing insights from all parts of the river corridor.

We are deeply grateful to the trainers and workshop leaders who prepared hands-on sessions and practical training, including **Dr. Gary Brierley**, **Marty Melchior**, **Ken Dion** and **David Bidelspach**. Their willingness to share practical techniques, case studies, and lessons learned is essential to making this conference useful for practitioners at every career stage.

Additionally, we would like to thank **McMaster University** for hosting the conference; we are very happy to be on a campus that is actively undertaking river science research. With the School of Earth, Environment & Society's new Watershed and Ecosystems Living Lab (WELL), we look forward to a future generation of river scientists starting their journey right here.

We would like to extend our sincere thanks to Karen Anderson and Mario Maillet, our **Coordinators** at Allset Inc., whose guidance and dedication have been instrumental throughout every aspect of organizing this conference. Their support in leading two relatively inexperienced chairs and ensuring that new ideas were thoughtfully integrated into the traditions of this event has been invaluable.

We are also deeply grateful to the **Program Subcommittee** and the **Social Subcommittee** for their essential contributions. The Program Subcommittee not only developed our theme but also ensured that all the technical content aligned with it. The Social Committee played a key role not only in conceptualizing new and engaging events but also in coordinating and successfully executing them.

We extend our sincere thanks to the **Plenary Panellists**, whose perspectives are invaluable in helping us navigate future challenges with a clearer path forward.

Our appreciation extends to all **Session Leads and Moderators**, whose careful review and selection of abstracts ensured a well-structured and cohesive program. We also thank the **Student Volunteers**, whose efforts will ensure that every presentation runs smoothly and without technical difficulties.

Finally, we recognize the **Conference Steering Committee**—a remarkable group of practitioners who have contributed their energy and commitment to ensure this event comes together so successfully. While we may serve as leaders of this team, every individual contribution has been vital in shaping the program you see today.

The names of all volunteers who contributed to this effort are listed below.

Sincerely,
Conference Co-Chairs
Christina Bright and Cailey McCutcheon

Conference Steering Committee
Sally-Beth Betts[1], Devin Coone, Jeff Hirvonen, Patrick Padovan[1,2], Elli Papangelakis[1], and Mariette Pushkar

Conference Coordinators
Karen Anderson and Mario Maillet at Allset Inc.

Program Subcommittee
Corey Dawson, Mark Heaton, Jack Imhof, Bruce MacVicar, Daniel McCreery, Adeyemi Olusola, Chris Pfohl, Gerard Sullivan, Bill Snodgrass, and Alisha Sword

Social Subcommittee
Priyanka Hire, Josie Mielhausen, and Chloe Sondrup

Plenary Panellists
Heather Amirault, Sally-Beth Betts, Bruce MacVicar, Cam Portt, Harry Reinders, and Bill Snodgrass

Session Leads & Moderators
Heather Amirault, Corey Dawson, Fred Dobbs, Jan Franssen, Sean Ferguson, Mark Heaton, Jack Imhof, Mike Lawson, Daniel McCreery, Nikan Momen, Adeyemi Olusola, Chris Pfohl, Roger Phillips, Bill Snodgrass, and Ivana Vouk

New Professional Event Volunteers
Hazel Breton, Gary Brierly, Jan Franssen, Jeff Hirvonen, and Karen Smokorowski

Mentor Volunteers
Heather Amirault, Matt Iannetta, Cal Jefferies, Hossein Kheirkhah, Matthew Leung, Bruce MacVicar, Robin McKillop, Patrick Padovan, Roger Phillips, and Karen Smokorowski

Student Moderators & Volunteers
Ahmed Abdelaal, Jenny Cheng, Chloe DiLalla, Priyanka Hire, Ali Meskour, Erin Naguit, Thomas Nucci, Chloe Sondrup, Olive Thomas, and Tristan Wiley

NOTES:
1. Program Subcommittee Members
2. Social Subcommittee Members

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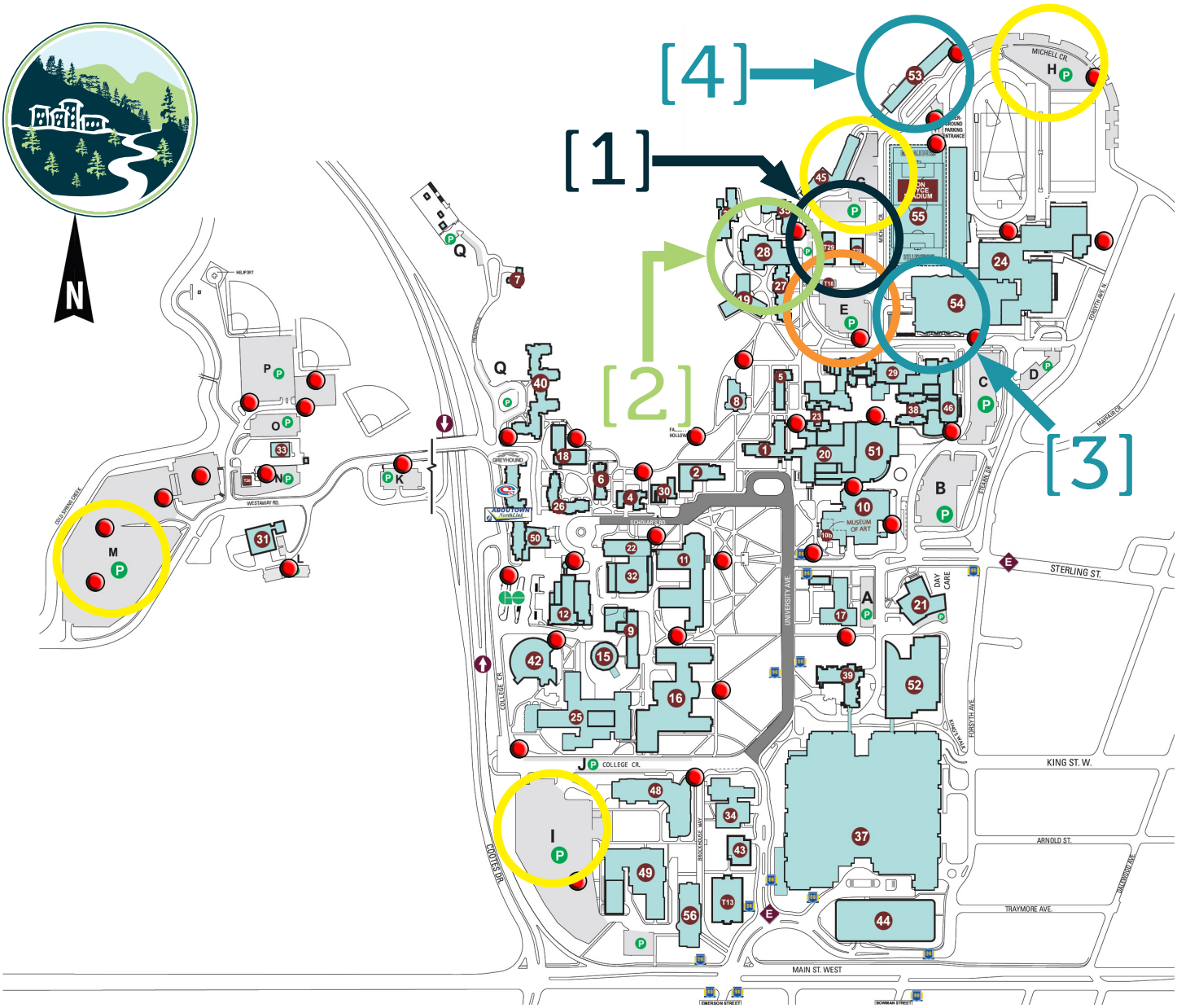
Notes



[1] Peter George Centre for Living and Learning

Main Conference Centre featuring Registration, Keynotes, Plenary and Concurrent Sessions, Exhibit Hall, Student Posters, Refreshment Breaks, and Mix & Mingle Event. One of the conference residence halls is also located here.

[2] CENTRO@ Commons

Breakfast will be served here on Monday to Wednesday. Lunch will be served here on Monday & Tuesday.

[3] The Hub

The Sunday Icebreaker Reception and Tuesday Banquet will be held here.

[4] Les Prince Hall

Conference resident hall.

Parking Lots

Lots G & H are available for delegate parking from Sunday through Tuesday evening. Lots I & M are available for delegate parking from Sunday through Friday.

Parking Lot E

Designated 30-minute drop-off and unloading area.