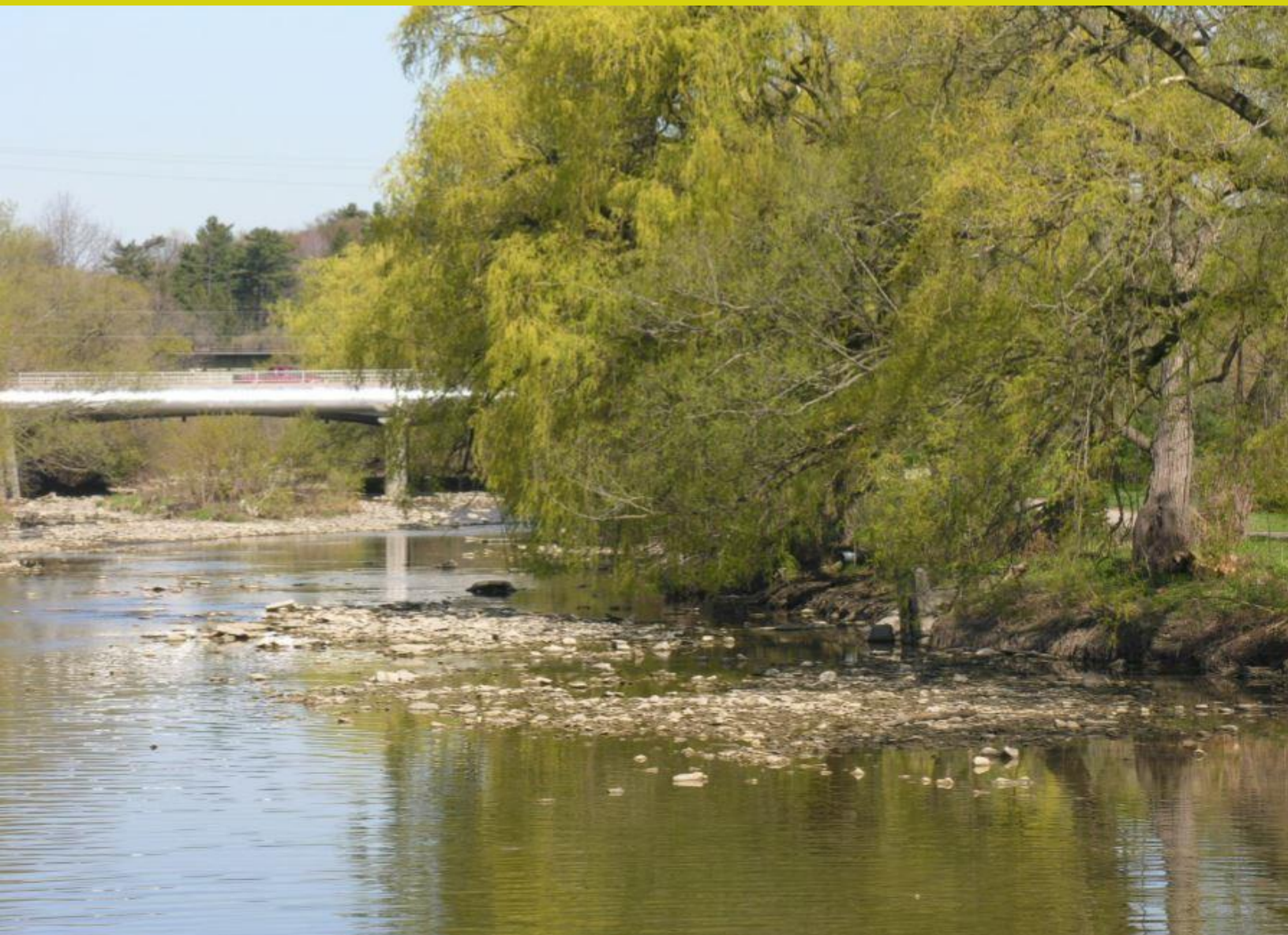


SERO 2016 Annual General Meeting

in Association with the Toronto and Region Conservation Authority

URBAN WATERFRONT RESTORATION: Lessons Learned



September 30 – October 1
Black Creek Pioneer Village, Toronto



in association with:



A MESSAGE FROM SERO

SER Ontario (SERO) is part of an international organization committed to the ecologically sensitive repair and management of ecosystems. While the focus of our efforts is the Ontario region, we strive to share ideas and initiatives across borders and around the globe. Our mission is to promote the practice of ecological restoration and provide educational opportunities and materials for members and for the community at large.

This event is focused on the process of ecological restoration in a unique environment: **the urban waterfront**. Much geologic and human history combines on the **waterfront** to create challenges and opportunities that are found **nowhere else**! Proceeds of the event will go to support the SERO Scholarship Fund that is awarded annually to a post-secondary student.

SERO and TRCA are excited to provide this opportunity for organizations and individuals to come together to learn and exchange experience. The day features presentations, student participation and networking culminating in casual beer tasting and light refreshments at an equally unique location: **Black Creek Pioneer Village in Toronto**. This will provide an excellent opportunity for students, scientists and practitioners to interact with authorities on coastal processes and restoration.

Kind regards,

Dale Leadbeater (dleadbeater@slrconsulting.com)

905 415-7248 ext 224

Symposium Committee and Education Coordinator, SERO

Jeff Warren (warrenj@mmm.ca)

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CONFERENCE AGENDA: Friday September 30th

- 8:30 Registration
- 9:00 Introduction
- 9:15 **David Crombie, Waterfront Champion** - In the Beginning: Planning the Inclusive Waterfront
- 10:15 **Wayne Reeves, Chief Curator, City of Toronto Historic Sites** - Nature, Culture & the Waterfront: A Dip into Toronto History
- 10:45 Break
- 11:00 **Ken Dion, Senior Manager of Special Projects, TRCA** - Setting Restoration Goals in the Context of Competing Interests
- 11:30 **Mark Bassingthwaite, Vice President, Water Management, Cole Engineering** Reconnecting Floodplains and Restoring Watercourses
- 12:00 Lunch
- 12:30 Annual General Meeting
- 1:00 **Gord MacPherson, Senior Manager Environmental Monitoring and Habitat Restoration, TRCA** - Bringing Back the Wetlands
- 1:30 **Sean Thomas, Professor, Forest Ecology and Silviculture, Faculty of Forestry, University of Toronto** – Biochar and Forest Restoration
- 2:00 **Moranne McDonnell** - Managing Landslides
- 2:30 Break
- 2:45 **Milo Strum/Bruce Pinchin, Shoreplan Engineering** - Near-coast Naturalization
- 3:15 **John Hall, Coordinator, Hamilton Harbour Remedial Action Plan** - Once and Future Great Lakes Waterfront

Poster Session

- 4:00 Beer Tasting; Socializing with hors d'oeuvres and soft drinks
- 6:00 Adjourn

COASTAL WETLAND TOUR: Saturday October 1st

- 8:00 Registration/Introduction
- 101 Exchange Avenue, Vaughan (TRCA parking lot)
- 8:30 Load buses and drive to Oshawa Second Marsh
- 9:20 **Arrival at Oshawa Second Marsh**
- David McLachlin, Biologist and Jennifer Lavigne, Conservation Specialist, Ducks Unlimited Canada
 - Robin Brand, Wetland Biologist, CLOCA
- 11:00 Load buses and drive to Tommy Thompson Park
- 12:00 **Arrival at Tommy Thompson Park**
- Ralph Toner, Senior Manager, Restoration Projects, TRCA
- 1:30 Load Buses and drive to Rattray Marsh
- 2:15 **Arrival at Rattray Marsh**
- Paul Biscaia, Program Coordinator, Wetland Restoration, CVC
- 3:45 Load Buses and Drive back to 101 Exchange
- 4:30* Arrive back at 101 Exchange Avenue

The tour will proceed rain or shine so please dress appropriately. Boxed lunches will be provided on the bus but feel free to bring additional water and snacks. There will be walking at all of the stops so please wear appropriate footwear. The trails are fairly even with the exception of the rock beach at Rattray Marsh. There are red ants at both Oshawa Second Marsh and Tommy Thompson Park so we recommend tucking pant legs into socks.

**We will keep to the schedule at the wetlands; however, there may be unexpected traffic delays throughout the day. Please allow for an end time of 4:30-5:00 PM.*

Society for Ecological Restoration (Ontario Chapter)

Toronto and Region Conservation

On behalf of the organizing committee:

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SPEAKER BIOGRAPHIES & ABSTRACTS



THE HONOURABLE **David Crombie, P.C., O.C., O. ONT;**

David Crombie has served as mayor of Toronto, member of parliament and federal cabinet minister. He is the former president and CEO of the Canadian Urban Institute and founding chair of the Waterfront Regeneration Trust.

He has received honorary degrees from the University of Toronto, University of Waterloo and Seneca College.

David Crombie is president of David Crombie and Associates Inc. and currently serves as chair of the Advisory Council for the Nuclear Waste Management Organization (NWMO) and chair of the Toronto Lands Corporation.

David Crombie is chancellor emeritus of Ryerson University and an honorary fellow of the Royal Architectural Institute of Canada. He has been appointed to the Order of Ontario and as an officer to the Order of Canada.

In the Beginning: Planning the Inclusive Waterfront

David Crombie focused attention on shoreline issues in the late 1980s when he headed the Royal Commission on the Future of the Toronto Waterfront and later founded the Waterfront Regeneration Trust. Recently the expanded 1,600 km waterfront trail was unveiled with the “waterfront czar” in attendance. Mr. Crombie underscored the complex, but poorly understood, social and ecological links between the lakeshore and the city's ravines and rivers. He will provide his reflections on the genesis of a Toronto-grown approach to waterfront restoration, engagement of citizens and industry alike and the future of this world-class Phoenix that has risen from the ashes of a century of neglect.

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SPEAKER BIOGRAPHIES & ABSTRACTS



Wayne Reeves **Chief Curator, Museum and Heritage Services –** **City of Toronto**

Wayne Reeves is Chief Curator for City of Toronto Museums & Heritage Services, where he manages the City's artifact, fine art and archaeological collections and helps shape major exhibitions at Toronto's ten community museums. He is also a historical geographer, who has written and lectured extensively about the long-term interplay between nature and culture, often through the

lens of water. He is currently working on a book about Toronto's natural parklands with photographer Robert Burley.

Nature, Culture, & the Waterfront: A Dip into Toronto History

Toronto's relationship to water and the land/water interface has changed dramatically and constantly since the time of continuous settlement in 1793. Until recently, the balance between nature and culture tipped steeply toward the latter. The landscape was reshaped as Toronto adopted an engineered approach to its water amid efforts to control and manage it, usually to achieve economic goals. Community advocacy on behalf of nature on the waterfront is less than 40 years old, and habitat rehabilitation projects began only in 1992. Increased and sustained focus on the environment is rebalancing the interplay between nature and culture.

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SPEAKER BIOGRAPHIES & ABSTRACTS



Ken Dion

Sr. Project Manager of Special Projects –Toronto and Region Conservation Authority (TRCA)

Ken Dion is the Senior Manager - Special Projects in the Project Management Office of TRCA. Ken's career in the field of ecosystem restoration began with an 8 month internship with BC's Steelhead Society Watershed Restoration Corporation, in 1998. This internship position culminated in the design and construction oversight of over-wintering salmon habitat within the floodplain of Slesse Creek near Chilliwack, BC.

In late-1998, Ken moved to Toronto and was employed by Ontario Streams, until March 2001. Some of the projects that he managed at Ontario Streams included the Rouge Marshes Naturalization Project, barrier mitigation projects in Cachet Creek and at the mouth of the Humber River, and he was the project lead for a multi-firm full sub-watershed restoration project on a tributary of the Little Rouge near Beare Road, Markham.

In 2001, Ken moved to TRCA as a project coordinator for the Mimico Waterfront Linear Park EA. Since then, he has managed several large-scale, multi-proponent Environmental Assessment projects including the Lakeview Waterfront Connection Project (in partnership with Credit Valley Conservation and the Region of Peel), the Don Mouth Naturalization and Port Lands Flood Protection Project (with Waterfront Toronto and the City of Toronto), and the Lower Don River West Remedial Flood Protection Project (LDRW Project). In addition to these multi-faceted EAs, Ken has overseen the construction of a railway bridge lengthening project over the Don River at Union Station, Toronto (as part of the LDRW Project). Currently, Ken is overseeing TRCA's involvement in the design and implementation of the Port Lands Flood Protection Project in collaboration with our project partners, and remains the manager for the Lakeview Waterfront Connection Project as it proceeds with construction.

Setting Restoration Goals in the Context of Competing Interests

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SPEAKER BIOGRAPHIES & ABSTRACTS



Mark Bassingthwaite
Water Resources Engineer, V.P. of Water
Management – COLE Engineering

Mark Bassingthwaite is a Professional Engineer who graduated from Water Resources Engineering at the University of Guelph, Ontario. Mark is the Vice President of Water Management at Cole Engineering Group Ltd., a multi-disciplinary consulting engineering firm located in Markham, Ontario. Mark's professional interests are design of works in water bodies and watercourses, with a particular interest in wetland restoration.

Reconnecting Floodplains and Restoring Watercourses

This presentation will cover some lessons learned through several watercourse restoration projects that involved modifications to floodplains in conjunction with watercourse realignment or restoration due to erosion.

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SPEAKER BIOGRAPHIES & ABSTRACTS



Gord MacPherson

Senior Manager Environmental Monitoring and Habitat Restoration–TRCA

Gord MacPherson is Senior Manager Environmental Monitoring and Habitat Restoration: trucks, boats, tractors, wetlands, streams and forests are his life. The tireless TRCA veteran has had his hand in the creation of some of the most spectacular green spaces in the GTA. Two of his favourites are cell one at Tommy Thompson Park and Corner

Marsh, part of Duffins Marsh in the City of Pickering. Gord and his team scour the GTA looking for places to locate bird boxes and to build special habitats for snakes and other reptiles and amphibians. When he's not building wildlife habitat for our wild critters, you can find Gord quietly fishing. And some of his favourite places are right here in the big city.

Bringing Back the Wetlands

When Gord joined the TRCA, the Lake Ontario Waterfront had suffered endless loss of wetland habitat as discussed by Wayne Reeves earlier. It became Gord's mandate to recreate wetlands in hostile environments using science that was evolving as he built. Tommy Thompson Park, Duffins Marsh, Etobicoke waterfront and the Toronto Islands: all became Gord's playground where they tackled challenges that ranged from toxic soils, competition from boaters, carp – the wetland nemesis and climate change. Most recently he has been tracking a Blanding's turtle found on the waterfront! A symbol that he and his staff have created a legacy for us all.

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SPEAKER BIOGRAPHIES & ABSTRACTS

Sean Thomas, Deputy director, Undergraduate Coordinator, and Professor, Forest Ecology and Silviculture, Faculty of Forestry, University of Toronto

Dr. Thomas has been preoccupied with the comparative biology of trees and forest responses to the intentional and accidental impacts of humans for some 25 years. Sean has been at the University of Toronto since 1999, and is currently appointed as an NSERC Industrial Research Chair in Biochar and Ecosystem Restoration. Dr. Thomas' research focuses on how trees and forests respond to human impacts – intentional impacts through forest management, and unintentional impacts via local, regional, and global changes in the environment. In this effort, he tries to link an understanding of functional ecology and ecophysiology of trees (“how trees work”) to patterns of growth, mortality, recruitment, reproduction, at the population scale, to patterns community composition, and to ecosystem processes, in particular carbon flux (“how forests work”). Sean Thomas' lab is currently involved in projects in temperate and boreal forests in Canada, and tropical forests at a variety of sites.

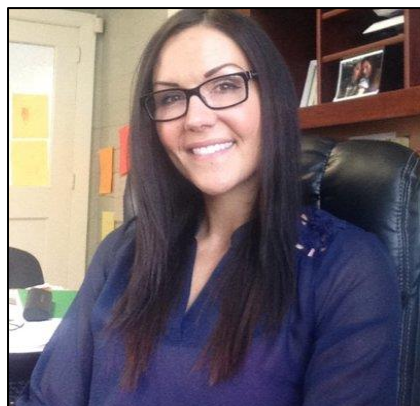
Biochar and its Potential in Canadian Forestry

Throughout the boreal forest region and indeed much of Canada, fire is the primary natural “disturbance agent” — the means by which older forest stands are naturally replaced by younger stands. The situation immediately after a fire can appear quite unpromising: charred remains of canopy trees and loss of understory vegetation, including regenerating trees. However, an observation familiar to many foresters is that post-fire stands “green up” remarkably quickly. A few years after a moderate-intensity fire, understory vegetation is generally thick and future canopy trees are growing vigorously.

A number of processes contribute to post-fire regeneration and rejuvenation. Many tree species show adaptations to survive fire events (e.g., thick insulating bark, high belowground storage), or to regenerate by seed following fire (e.g., the serotinous cones of Jack Pine). In addition, nutrients previously stored in living parts of trees have been released into the system, and soil temperature is increased by a reduction in litter. However, something much less obvious also contributes to post-fire forest rejuvenation: namely, a phenomenon that has been termed the “charcoal effect”. In experiments in the 1990s in Scandinavia, additions of charcoal to soils were shown to increase nitrogen uptake and growth of some trees, and result in a proliferation of understory vegetation. Dr. Thomas will discuss his research and its potential to enhance forest resources under assault by acid rain effects and climate change. For further reading see: <http://www.silviculturemagazine.com/articles/winter-2013/biochar-and-its-potential-canadian-forestry>

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SPEAKER BIOGRAPHIES & ABSTRACTS



Moranne McDonnell

Associate Director of Engineering Projects, Restoration and Infrastructure Division–TRCA

Moranne McDonnell is a certified engineering technologist and environmental professional with more than 16 years of experience in the identification and assessment of erosion and slope instability hazards, as well as the design and construction of stream, valley and bluff restoration works. Moranne is currently the Associate Director of Engineering Projects with TRCA's Restoration & Infrastructure Division, and with her

team of approximately 80 staff, manages TRCA's Erosion Management Program working across TRCA's jurisdiction to mitigate erosion hazards threatening public safety, municipal infrastructure and private property.

Managing Landslides

Competing interests along Toronto's waterfront to preserve the geological significance and ecological function of the Scarborough Bluffs, while working to protect existing development and improve public access, requires a thoughtful and balanced approach that recognizes the interconnectedness between human well-being, the economy, and the natural environment.

As leaders in environmental restoration and erosion hazard mitigation, TRCA's approach to managing landslides is highly site specific and can range from "do nothing" to intensive slope stabilization works, recognizing that each sector of the waterfront is unique.

In this presentation, highlights from key sectors along the waterfront will be discussed to illustrate the different approaches that TRCA has taken over the years to balance risk management and ecological integrity, and the lessons learned along the way.

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SPEAKER BIOGRAPHIES & ABSTRACTS

Shoreplan Engineering Ltd.

Milo Sturm

President and Principal

Milo Sturm is the President and Principal of Shoreplan Engineering Inc. For over 35 years he has prepared shoreline management plans, designed recreational waterfront projects and administered multidisciplinary coastal projects that include restoration of the Lake Ontario coast at from Hamilton to Cobourg and points between.

Bruce Pinchin

Sr. Engineer

Bruce Pinchin is a Senior Engineer with expertise in the construction of coastal structures ranging from artificial beaches to breakwaters, revetments and seawalls. His projects include locations in the Great Lakes, Beaufort Sea, the Canadian Atlantic Coast and the Caribbean. Most recently he modelled the wave and sediment transport conditions for Lakeview Waterfront Park located on the former Ontario Power Generation lands.

Near-coast Naturalization

Restoration of aquatic habitat and near-shore beaches and dune systems is a unique challenge in coastal systems. Milo and Bruce will discuss their experiences in assessing and managing these unique ecosystems.

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SPEAKER BIOGRAPHIES & ABSTRACTS



John Hall

Hamilton Harbour Remedial Action Plan (RAP) Coordinator – Conservation Halton

John has over forty years of active participation in watershed and waterfront planning. He pioneered efforts to protect environmental features, developed public policy; led teams authoring watershed and waterfront plans. From 1992 - 99, as Project Manager for Fish & Wildlife Habitat Restoration for Hamilton Harbour and Cootes Paradise

he guided projects involving 9 sites through planning, design, environmental assessment and construction. John moved to the RAP Coordinators position for Hamilton Harbour in 2000. He led the updating of the Hamilton Harbour Remedial Action Plan and presently leads an implementation team of 18 agencies.

John is a Registered Professional Planner. He has consulted on his work and won awards nationally and internationally.

Once and Future Great Lakes Waterfront (*Hamilton Style*)

This presentation will trace the evolution of the Hamilton Harbour shoreline from an ecological perspective. What did we have? How did it change? What are we trying to regenerate? The experience of remedial action planning, fish and wildlife restoration and the recent development of the Cootes to Escarpment EcoPark System will be highlighted. Lessons learned and their implications for the future for Great Lakes waterfronts will be drawn.

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Urban Waterfront Restoration: Lessons Learned