

Designing for Tomorrow



A summit on the future of stormwater management in Alberta

*Hear the latest and have your
say on future directions*

March 12 and 13, 2018

Carriage House Inn, Calgary

\$275 per day; \$225 per day for ALIDP Partners

Brought to you by the:



For councillors, municipal staff, planners, policy makers, landscape architects, architects, biologists, engineers, ecohydrologists, ecologists, asset managers, operations and maintenance staff, builders, developers, contractors, academia, NGOs, interested citizens.
Your perspective matters.



Source: BlatchfordEdmonton.ca



Source: <http://www.theanchor.ca/2013/mayor-says-residents-use-ponds-at-their-own-risk-as-they-always-have/>



Credit: Harmony Developments

We
expect a
lot from
our
ponds
and
wetlands

It's time to talk. In the beginning...



Ponds were introduced into the stormwater management toolbox in the late 1970s in Alberta for the purpose of **controlling peak flows**. Later, in 2001, they were required to be designed to also **capture sediment**. They are assumed to **provide treatment** for other contaminants.

Citizens expect ponds and wetlands to be **amenities** for visual pleasure and recreation. Altogether, this makes for a pretty tall order.

March 12: TECHNICALLY SPEAKING

With Calgary and Edmonton having **upwards of 400 ponds** to take care of, and more on the way throughout the province, we need to do our best to **optimize** these features.

The Alberta Community Resilience Program has **new stormwater guidelines** and some projects to highlight.

Operations and maintenance workers have begun to assemble their observations on **what works and what doesn't**.

Research is revealing insights on some of our challenges with **algae, odour, salt, mobilization of contaminants, habitat degradation, maintenance, access, and what to do with all that captured sediment**.



Let's discuss. How are we doing? How do we compare on the world stage? Where do we go from here? Performance is just part of the story...

March 13: IT'S ABOUT VALUES



Can ponds and wetlands be a one-size-fits-all answer or **does the toolbox need to evolve and, if so, how?** How do we keep it **affordable**? What does life cycle analysis tell us? There is a **new reuse policy** on the horizon, and we have choices to make in the light of **urban expansion** and **densification** and increased **climatic variability**. Are we prepared to continue to **lose wetlands** (or see them heavily impacted)? How can we use land as efficiently as possible?

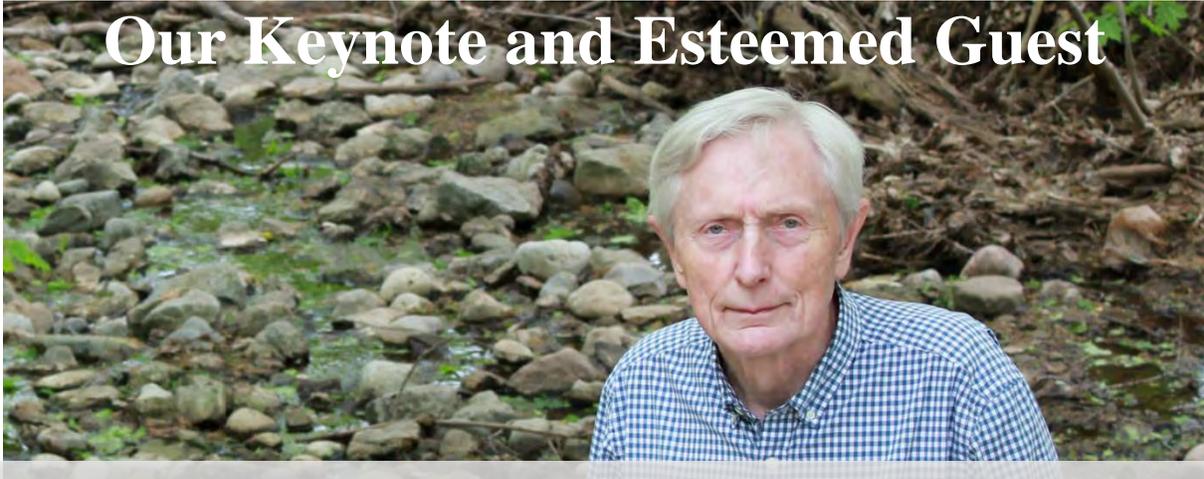
How can recreational, community and ecological expectations be met? These are more than technical issues, they are questions about our values and priorities as a society.

WHAT DO YOU THINK?

There is **more than one direction forward**. Bring your **perspective** and participate in **this landmark conversation** between multiple sectors, including government, industry and academia. Don't miss this opportunity.



Our Keynote and Esteemed Guest



Jiri Marsalek

Emeritus Scientist - formerly Head, Urban Water Management Section Water Science and Technology Directorate, Environment and Climate Change Canada; and Professor of Urban Water, Lulea University of Technology (LTU), Lulea, Sweden

Contributing to Environment Canada's mandate to ensure water resources and aquatic ecosystems are conserved and protected.

- Total management of the urban water cycle, with emphasis on system sustainability and resilience
- Sustainable storm water management for low impact development and aquatic habitat protection
- Accumulation and transport of road salts in urban drainage systems and mitigation issues

PROFESSIONAL ACTIVITIES / INTERESTS

Professor of Urban Water, LTU, supervising PhD research on urban drainage in cold climate and climate change impacts on urban drainage

Member of the Program Management Committee of The Canadian Water Network aiming to create a national partnership in innovation in the water sector

Secretary and former chair of the IAHR (International Association for Hydraulic Engineering and Research) and IWA (International Water Association) Committee on Urban Drainage

PROFESSIONAL AWARDS

Environment Canada Citation for Excellence in Research (2005)

Two honorary doctorates from Lulea University of Technology and University of Aalborg (2006-08)

Honorary life-time member of IWA in recognition of contributions to IWA and the water sector(2011)

Career-Long Achievement in Urban Drainage Management, granted by IWA and IAHR, 2017

SELECTED PUBLICATIONS

Marsalek, J. 2003. Road salts in urban storm water: [An emerging issue in storm water management in cold climates](#). *Wat. Sci. Tech.* 48(9):61-70.

Marsalek, J., B. Jimenez-Cisneros, M. Karamouz, P.-A. Malmqvist, J. Goldenfum and B. Chocat. 2008. *Urban water cycle processes and interactions*. ISBN: 978-92-3-104060-3. Taylor and Francis, Leiden; and UNESCO Publishing, Paris.

Wagner I., J. Marsalek and P. Breil (ed.). 2008. *Aquatic habitats in sustainable urban water management: Science, policy and practice*. Taylor and Francis, Leiden; ISBN: 978-92-3-104062-7

Frost, P.C., Song, K., Buttle, J.M., Marsalek, J., McDonald, A., Xenopoulos, M.A. (2014). Urban biochemistry of trace elements: What can the sediments of stormwater ponds tell us? *Urban Ecosystems*, 18, 763-775.

Borris, M., Leonhardt, G., Marsalek, J., Osterlund, H., Viklander, M. (2016). Source-based modelling of urban stormwater quality response to the selected scenarios combining future changes in climate and socio-economic factors. *Environmental Management*, 58(2), 223-237.



Program

DAY 1 March 12, 2018

No.	Time	Topic	Presenter
SETTING THE STAGE			
1	8:45am – 9:00am	Welcome Remarks and Greetings	
2	9:00am – 9:30am	Why are we here? The evolving role of ponds & wetlands in stormwater management. Tradeoffs and Opportunities.	Bert van Duin , M.Sc., P.Eng., Drainage Technical Lead City of Calgary Water Resources, Infrastructure Planning; and Chair, CSA Green Infrastructure for Stormwater Management Committee
3	9:30 am – 10:00 am	Design vs. Actual Performance Part 1 Does the research show that we are getting what we think we're getting? How does Alberta stack up to other places globally?	Jiri Marsalek , Prof., P.Eng., Emeritus Scientist, Environment and Climate Change Canada, Burlington, ON; and Professor of Urban Water, Lulea University of Technology, Lulea, Sweden
10:00am – 10:30am – BREAK			
MANAGING PONDS AND WETLANDS NOW			
4	10:30 am – 11:15am	Case Study – City of Calgary Pond & Wetland Asset Maintenance & Management Program	Thant Aung-Kyaw , P.Eng, Infrastructure Engineer, City of Calgary Water Resources Asset Planning
5	11:15am – 12:00pm	Sediment Management: what is in it, when and how do we take it out, and what do we do with it?	Francine Kelly-Hooper , Ph.D., Sr. Soils Scientist, CH2M Hill Kitchener, ON
12:00pm – 1:15pm – LUNCH			
5	1:15pm – 2:00pm	Algae Control: where are we at?	Stephen Goudy , Ph.D., President, Limnos, Calgary
MANAGING PONDS AND WETLANDS IN THE FUTURE			
6	2:00pm – 2:45pm	New Alberta Research on ponds and wetlands • Ice, water quality and algae • Stormwater reuse monitoring – early results	Mark Loewen , Ph.D., Dept. of Civil and Environmental Engineering, University of Alberta Norm Neumann , Professor, School of Public Health, U of A
2:45pm – 3:00pm – BREAK			
7	3:00pm – 4:20pm	• Highlights from the Alberta Community Resilience Program's New Stormwater Guidance • Rapid-fire round of case studies and industry innovations	Various presenters
PERFORMANCE			
8	4:20pm – 4:50pm	Design vs. Actual Performance Part 2	Jiri Marsalek
EXHIBITORS IN THE ROOM PLUS EXHIBITORS LOUNGE THROUGH THE DAY CASH BAR RECEPTION following the program until 7:00 PM			

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Designing for Tomorrow

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DAY 2 March 13, 2018

No.	Time	Topic	Presenter
POLICY DEVELOPMENT			
9	8:30am – 9:15am	Wetland protection in Alberta: the link between avoidance/ mitigation/ compensation and stormwater management servicing strategies – achieving resilience	Matthew Wilson , Alberta Environment and Parks Bert van Duin Speaker TBD, Native Plant Solutions
10	9:15am – 10:00am	Ponds, Wetlands and Reuse: Forthcoming policy and procedures	Joey Hurley , Alberta Environment and Parks Lee Hang , City of Calgary Water Resources Regulatory Affairs and Compliance Norm Neumann
10:00am – 10:30am – BREAK			
COMMUNITY VALUES			
11	10:30 am – 11:15am	How do ponds and wetlands add value to our Alberta communities? A developer's perspective	BILD Calgary
12	11:15am – 12:00pm	Opportunities and inspiration for enhanced aesthetics in the configuration of our ponds and wetlands	Robby Bryant HDR , Atlanta by phone
12:00pm – 1:15pm – LUNCH			
WHERE DO WE GO FROM HERE?			
13	1:15pm – 2:15 pm	Protecting and enhancing ponds and wetlands – the role of Low Impact Development; wetland compensation potential of LID	ALIDP
14	2:15pm – 2:45pm	SMALL GROUP DISCUSSION – What would you like to see happen?	Facilitated
2:45pm – 3:15pm – BREAK			
15	3:15pm – 4:15pm	PANEL DISCUSSION – Tradeoffs and Opportunities: What do we need to improve, change, or stop doing in the future?	Broad Invited Panel
16	4:15:pm – 4:45pm	WRAP-UP - Where do we go from here? Summary of 'What we Heard' and Next Steps to keep the conversation going	
EXHIBITORS IN THE ROOM			

REGISTER NOW at
<https://dftsummit2018.eventbrite.ca>

One-day registration:
 \$225 for partners, \$275 general registration.
 Exhibit booths for both days of the summit together: \$375 plus one registered attendee.

Sponsorships are available, please contact the office leta@alidp.org

While every effort is made to ensure accuracy, we reserve the right to substitute content or presenters if circumstances necessitate.

CHECK OUT THE CONCURRENT AND POST-SUMMIT TRAINING PROGRAM (details on the following pages)

March 12 **Introduction to Erosion and Sediment Control for Urban Construction Sites** 2 slots to choose from AM or PM

March 13 and 14
Certified Inspector of Sediment and Erosion Control has its own registration and information page at:
<https://sustainabletechnologies.ca/events/certified-inspector-sediment-erosion-control-calgary/>

March 14 **Introduction to Stormwater Management AM**
Introduction to Low Impact Development PM

The Alberta Low Impact Development Partnership is pleased to present:

ESC1-INT: Introduction to Erosion and Sediment Control for Urban Construction Sites

Date: Monday, March 12, 2018



Times: TWO SESSSIONS:
8:30 am - noon OR
1:00 pm to 4:30 pm
Fee: \$185 plus GST
Level: Beginner/Refresher
Venue: Carriage House Inn,
9030 Macleod Trail S
CALGARY

Are you new to the erosion and sediment control field or want to know what it is all about? Then this class is for you! This half-day course walks you through the basics of erosion and sediment control, outlining some of the main products and best management practices, including their advantages and disadvantages.

Upon completing this course, you will understand the factors affecting erosion and sedimentation on construction sites in urban environments. You will have an overview of how to inspect your construction site, and learn how and when to report a release. You will be on your way to implementing and inspecting effective practices to reduce erosion and control sedimentation.

Includes light refreshments and a certificate of attendance.

[CLICK HERE TO REGISTER NOW](#)

REGISTER NOW AT <https://dftsummit2018.eventbrite.ca>

Direct inquiries to Leta@alidp.org



YOUR INSTRUCTOR

Robert Wills has more than 30 years of construction and landscape construction experience, with the last 26 at The City of Calgary. He started as an Arborist in Urban Forestry. From there he went on to be a natural areas foreman, development inspector, subdivision inspector in Urban Development, and an ESC inspector in Water Resources. Currently he is a Capital Project Coordinator for Planning & Development Services (Parks). His education includes a 2-year Broadcasting diploma out of Spokane, WA, and a Journeyman Landscape Gardener diploma from Olds College. He is also an accredited CISEC (Certified Inspector of Sediment and Erosion Control) as well as a CISEC instructor. He currently sits on the Board of Directors for IECA (International Erosion Control Association) Canada.

The Alberta Low Impact Development Partnership is pleased to present:

SWM-INT1: Introduction to Stormwater Management

Date: Wednesday, March 14, 2018



Time: 8:30 am - noon
Fee: \$150 plus GST
Level: Beginner/Refresher
Venue: Carriage House Inn,
9030 Macleod Trail S
CALGARY

Audience: Municipal staff, elected officials, planners, architects, landscape architects, engineers, contractors, builders and developers, community group leaders, and stewards.

So you're not a stormwater engineer, but for a large assortment of possible reasons, you have an interest in stormwater management. Let us help you put the pieces of the puzzle together.

What are we trying to accomplish with stormwater management, anyways? There are many balls to juggle: maximizing public safety and minimizing infrastructure and property damage, minimizing traffic impacts, protecting our watershed and drinking water supplies, maximizing resiliency in the face of climate change, maximizing liveability and minimizing life-cycle expenditures. In the process of exploring how stormwater management addresses these many considerations, the advancement and evolution of the discipline over the last couple of decades will become apparent. This will help you understand why it is necessary to differentiate between what is needed in new, greenfield development versus older, existing communities. We'll look at components and variations and talk a bit about regulatory requirements, and cover the roles and responsibilities of all parties within our communities that impact or are impacted by stormwater management. Finally, the concept of low impact development will be introduced.

Includes light refreshments and a certificate of attendance. Register for both the morning and afternoon courses and lunch will be included.

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YOUR INSTRUCTOR

Bert van Duin has more than 30 years of experience in the analysis, planning, design and management of urban drainage, stormwater management and watershed management projects in Alberta, British Columbia, Saskatchewan and Ontario. As Drainage Technical Lead at the City of Calgary, he is a resource to all of Water Resources for the practical implementation of sustainable drainage practices. Prior to joining the City in 2009, he provided stormwater and watershed management services in the Calgary area to the land development industry, municipal government, and provincial government. He serves as Adjunct Assistant Professor in the Schulich School of Engineering's Department of Civil Engineering at the University of Calgary, and in 2009 he was invited to join the Urban Water Resources Research Council of the Environmental Water Research Institute. Recently, he has been appointed Chair of the Canadian Standards Association Technical Committee of the Green Infrastructure for Stormwater Management initiative, responsible for the development of national standards for Low Impact Development infrastructure. He is one of the founding members of the Alberta Low Impact Development Partnership.



The Alberta Low Impact Development Partnership is pleased to present:

SWM-INT2: Introduction to Low Impact Development

Date: Wednesday, March 14, 2018



Time: 1:00 to 4:30 p.m.
Fee: \$150 plus GST
Level: Beginner/Refresher
Venue: Carriage House Inn,
9030 Macleod Trail S
CALGARY

Audience: Municipal staff, elected officials, planners, architects, landscape architects, engineers, contractors, builders and developers, community group leaders, and stewards.

So you did the Introduction to Stormwater Management course in the morning, or you already know the basics of conventional stormwater management. You want to know more about how

we can design and manage and fund more resilience into the system. With our ever-increasing urban footprint and densifying older neighbourhoods, how can we guarantee a sustainable urban drainage system, in environmental, social and economic terms? Low impact development is a catch-all term including policy and planning aspects as well as green infrastructure and water quality measures that are the next logical step in the evolution of stormwater management. From green roofs to reuse, permeable pavement to tree canopy, pollution prevention and bioretention, the toolbox is big and diverse. As the morning course will illuminate, ponds and pipes can do a lot but they aren't a panacea. Attend this course to understand how low impact development techniques can use nature and technology to complement existing stormwater management techniques for a sustainable, liveable future.

Includes light refreshments and a certificate of attendance. Register for both the morning and afternoon courses and lunch will be included.

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The Carriage House Inn

We are centrally located at 9030 Macleod Trail South, in a popular South Calgary Restaurant and Entertainment district. Located within walking or close driving distance are:

- 2 major shopping centers - Southcentre Mall & Chinook Centre Mall
- Popular local dining: Ranchman's Cookhouse, Redwater Rustic Grille, McDonalds, Swiss Chalet, Wendy's, Starbucks Coffee, King's Head Pub, Kinjo Sushi and many others.
- Light Rapid Transit station – direct line to Calgary Stampede Exhibition & Downtown
- Heritage Park Historical Village and Spruce Meadows Equestrian Centre



We are pleased to offer the following amenities & services:

- **Year-round outdoor heated Pool & Hot Tub**
- Complimentary guest parking
- State of the art Fitness Centre & Sauna
- Room Service
- Pet "Luv-Inn" Program – we are a "Pet Friendly" Hotel!
- Over 16,000 sq ft of highly flexible meeting & events space
- In-house Audio Visual company and technician
- 24-hour Business Centre
- ATM Machines on-site
- Electronic locks on guestrooms for added security



Guestrooms

Standard



- Two Double or Two Queen Beds
- Updated Bathrooms with Shower or Tub

Premium Queen or King



- One or Two Queen Beds or one King Bed
- Upgraded Bathroom with Deep Soaker Tub
- Higher Floors with Mountain or City Views
- Seating Area in one Queen or one King

Executive King



- Located on the Executive Floor
- Enhanced Mountain or City views
- Seating Area
- Upgraded Bathroom with Deep Soaker Tub

Executive Suites



- Located on the 2nd and Executive Floors
- Separate Bedroom with King Size Bed
- Dining & Living Areas
- Chromotherapy Jacuzzi Tub
- Working desk with Multi Line Conference Phone

ALL ROOMS COME WITH MINI FRIDGE, KEURIG COFFEE MAKER WITH COMPLIMENTARY STARBUCKS COFFEE, BATHROBES, HAIR DRYER, IRON AND IRONING BOARD

ROOM TYPE	YOUR GROUP RATES
Standard	\$129.00
Premium Queen	\$139.00
Premium King	\$149.00
Executive King	\$159.00
Suite	\$269.00

Applicable taxes and fees are not included.

The above rates are net, quoted in Canadian dollars and are based on single or double occupancy. \$15.00 extra person charge applies. Children 17 and under stay for free in their parents' room. Hot Buffet Breakfast will be included for up to 2 guests per room. Available in THÉ Restaurant ~ Dine-in only, gratuity not included.