



## The 50<sup>th</sup> Annual Drainage Engineers Conference

The 2018 Drainage Engineers Course and Conference at the Holiday Inn Guelph Hotel and Conference Centre.

- Thursday, October 25 – **Drainage Engineers Course**
- Thursday, October 25, 7:30 to 9 p.m. – **Drainage Practitioners Meeting**, including Tribunal Updates.
- Thursday, October 25, starting at 9 p.m. – **Networking Social**
- Friday, October 26, 9 a.m. to 4 p.m. – **Drainage Engineers Conference**

### Drainage Conference Program

**Welcome and Introductions**, Jeff Dickson, P. Eng., Chair, Land Drainage Committee / Project Engineer, R.J. Burnside & Associates Limited

**Ross W. Irwin Scholarship Recipient**, Xander Huggins, B.Eng., Water Resources Engineering

### Past

**Drain Design – Circa 1975**, Andy McBride, P.Eng. (Ret.)

Andy will describe how Drainage Act projects were undertaken when he started his drainage practice in the mid 1970's. Topics include drainage area determination using onsite inspection; aerial photography and topographic mapping; site surveying; project design parameters and methods; preparation of drawings; preparation of reports, including assessments and allowances; construction methods and supervision; and a description of his first appearance in front of the Drainage Tribunal.

**Select Committee on Land Drainage Report**, John Johnston (Ret.)

The Select Committee on Land Drainage was struck in 1972 with a mandate to review the Drainage Act and make recommendations to the legislature on this important piece of provincial legislation. The Committee toured the province holding hearings in most of the counties to hear what type of problems existed with the then current legislation as well as the types of problems landowners were having that were not addressed under the Act. The Committee travelled to Manitoba and other adjacent jurisdictions to see

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what types of legislation were enacted in those jurisdictions that could be useful in addressing the situations in Ontario. The Committee report to the Legislature formed the basis of the current Drainage Act of Ontario.

### **Nothing is more Certain than Change**, Ralph Clayton (Ret.)

A review of agricultural drainage over the past 50 years referencing the presentation delivered at the first conference on November 7, 1969 "Tile Drainage Engineering". This session identified the need for adequate outlets based upon current practice, the use of county soil maps and the Ontario Drainage Guide.

### **Drainage Stats from Time Immemorial**, Alex Barrie, EIT, OMAFRA

Prepare to experience an autonomous sensory meridian response as you listen to the dulcet tones of a man pretending to remember things from before he was born. Watch as he indiscriminately misuses mathematical techniques to create trends that may appear interesting to even the most casual of observers.

### **Present**

#### **What Everyone Ought to Know about Ditch Enclosures**, Steve Brickman, P. Eng., Project Engineer, Dietrich Engineering Ltd

A common belief among the public is that ditch enclosures cause negative hydrologic effects on receiving watercourses. We can all agree that the hydrology changes... but are the changes what the public would expect?

This session will include a detailed hydrologic comparison of a municipal drain in an existing state with an open ditch, and the same municipal drain in a proposed state after enclosure. This exercise will include a comparison of peak flow rates and other hydrologic properties generated by both scenarios, and discussion on why the hydrology changes the way it does.

### **Future**

#### **Indigenous Consultation and the Drainage Act**, Tricia Radburn, M.Sc.(PI), MCIP, RPP, Senior Environmental Planner, Neegan Burnside Ltd.

What is the Duty to Consult and why do drainage engineers need to know about it? This session will provide a brief introduction to consultation, including why, and when, Indigenous communities should be consulted. The session will conclude with a discussion of best practices for carrying out a consultation program and how to build strong relationships with Indigenous communities in your area.

#### **Springmount Drain – A Case Study**, Ian Eriksen, P.Eng., Project Manager, GM BluePlan Engineering

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The Springmount Municipal Drain project commenced in 2012. The project included the lowering and widening of 1.6 km of an existing tributary to the Pottawatomi River, installation of two 3600 x 1800mm Precast Concrete Box Culverts crossing Highway 6 (MTO), as well as two private CSPA culverts. This presentation will focus on the various issues/considerations/roadblocks that were encountered throughout the project.

**Drainage Engineering: Can You Put New Wine in an Old Wine Skin?** Tim Brook, P.Eng., Engineering Program Coordinator (A), OMAFRA

Drainage is essential to agriculture! However, it is a complex task of balancing property owner needs, environmental and societal interests, regulatory compliance and protection of the municipal infrastructure. OMAFRA's Publication 852 – "A Guide for Engineers working under the Drainage Act in Ontario" is designed to help engineers navigate through these challenges and opportunities.

This session will provide an overview of the Guide including the application of the Drainage Act requirements; design components and considerations of the Engineer's report; and regulatory, policy and agency considerations. It will focus on many of the innovative approaches found in the Guide that can be used to balance drainage with other interests of society such as climate change, fish and wildlife habitat, water quality/quantity, wetlands and water retention. "

**Food : Soil : Water – Our Choices Matter**, Don Lobb, P.Ag.(Hon)

No civilization has ever survived the consequences of exploitive agriculture. As soil was degraded, people moved on to "new frontiers". Today, we have a rapidly growing population in a world where most of the highly productive land is already in use – and abused. The "last frontier" is intensive, scientifically sound and responsible soil and water management. Strategic use of organic materials, protection of the soil biological community and precise soil moisture and surface-water management can ensure sustainable, reliable and environmentally friendly food production.

As we look forward, we have tools and technology not available to previous peoples. The "last frontier" is full of opportunities! The status quo is not an option. The fate of future generations depends on our choices.

**Closing Notes**, Jeff Dickson, P. Eng., Chair, Land Drainage Committee / Project Engineer, R.J. Burnside & Associates Limited

## **2018 Drainage Conference Exhibitors**



Aqua Q™ helps build better communities by imagining, engineering and delivering smart drainage solutions for stormwater, wastewater, agriculture and building construction projects across Canada.

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Canada Culvert is a leading manufacturer of CSP and SPCSP in Canada, and trusted partner for transportation, public works, forestry, oil, gas and mining industries.



Pre-cast industry focusing on stormwater management, structural and erosion control projects.



Maccaferri's expertise in the protection and draining of rivers and streams stems from over 140 years of experience in hydraulics.



Nilex provides geosynthetic materials for road building, MSE Solutions for grade changes, erosion and sediment control, water management and containment.



Silk Sock Environmental provides value priced solutions to environmental issues. Our goal is to provide reliable service while building a business relationship that serves your needs.



Sokkia Canada is a manufacturer of a diverse collection of measurement tools for traditional survey including Network RTK and Robotic Total Stations to UAV's and LIDAR Scanners.



Terrafix is a manufacturer and distributor of geosynthetic products and engineered systems. Focusing on subgrade improvements, erosion control, & stormwater.



The PRC focuses on a suite of practices to improve drainage water quality.