



## The 51<sup>st</sup> Annual Drainage Engineers Conference

The 2019 Drainage Engineers Course and Conference at the Holiday Inn Guelph Hotel and Conference Centre.

- **Thursday, October 24**
  - 12:30 to 4:30 p.m. **Drainage Engineers Course**
  - 5:30 p.m. **Networking Social and Exhibitors** – An informal evening to dine, socialize and visit the exhibitors. (Drainage Reception \$39 plus tax.)
  - 7:00 to 9 p.m. – **Drainage Practitioners Meeting**, including Tribunal Updates
  - **Networking Social** continues
- **Friday, October 25**
  - 9 a.m. to 4 p.m. – **Drainage Engineers Conference**

### Drainage Conference Program

#### Ross W. Irwin Scholarship Recipient

Mistaya Langridge, Water Resources Engineering Student, University of Guelph

University of Guelph water resources engineering student Mistaya Langridge was the recipient of the 2018 Professor Ross W. Irwin Scholarship. This scholarship was provided in memory of Prof. Irwin by the Land Improvement Contractors of Ontario for students actively involved in water conservation issues and demonstrating academic excellence. Ms. Langridge will briefly explain her studies and future plans.

#### “Something Drainage Related”: Informative and Humorous

Alex Barrie, OMAFRA

Probabilistic similitude to natural phenomenon of mathematical models for movement of di-hydrogen monoxide in gravitational fields can be expressed in much fewer words than this presentation will suggest. Similarly, stress-strain relationships for zero compressive strength members in static and dynamic force applications can be used to guide principles of effective engineering design. This presentation will aim to obfuscate these and other principles in a way that is guaranteed\* to be humorous.

\* This is not a guarantee.

## **Costs against Parties under the Drainage Act**

Mr. Harold McNeely, Vice-Chair, Agriculture, Food and Rural Affairs Appeal Tribunal

Mr. McNeely will provide an overview of the Agriculture, Food and Rural Affairs Appeal Tribunal's power to award costs under the Drainage Act and under the Tribunal's own Rules of Procedure, followed by a review of recent Tribunal decisions where costs were ordered against a party.

## **Installing Pipe with a Dual Wall Shoe**

Erick Nooyen, Trever Dunn and Caden Gillier, Gillier Drainage Contractors

Gillier Drainage uses two custom-made dual wall shoe to install 10 to 24" pipe. With the one shoe being able to install 10" – 18" pipe, as well as a second shoe which can install pipe 21" – 24". A hydraulic ramming press inside of the shoe ensures firm pipe connections.

## **Thames River PRC Projects**

Charles Lalonde, Thames River Phosphorus Reduction Collaborative

Under the Thames River PRC various projects were initiated along the Thames River watershed. The projects address agricultural runoff through surface and field tiles. Accordingly, seven different technologies were deployed to intercept both particulate and dissolved phosphorus leaving agricultural lands. As research has shown that late fall, winter and early spring periods are associated with the majority of phosphorus losses from agriculture, the projects were developed to operate through the difficult winter period. The presentation will outline technology approaches to absorb and remove low levels of phosphorus based on a variety of sorbent materials and complete edge of municipal drain treatment systems. Challenges encountered will be discussed based on relevancy to the drainage sector including future opportunities.

## **Managing for Invasive Species**

Dayna Laxton, Invasive Species Specialist, The Regional Municipality of York

Invasive species are a growing environmental and economic threat to Ontario. In fact, Ontario has more non-native invasive species than any other province or territory in Canada (over 660 species) and municipalities continue to face significant pressures and costs in managing their impacts and spread. In Ontario, invasive species are defined as harmful alien species whose introduction or spread threatens the environment, the economy, or society, including human health. When it comes to infrastructure, both grey and green, invasive species have the potential to impact the lifespan and overall function, and can even threaten the health and safety of maintenance staff. Invasive species and their potential introduction and spread should be considered in all parts of a construction project; from consideration in planning and environmental assessments, to the incorporation of mitigation measures in design and construction, to post-construction monitoring and control, and considerations for long-term maintenance. This

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presentation will cover some of the priority invasive species impacting municipalities in Ontario and offer mitigation and control measures for construction and maintenance works.

### **McNain Municipal Drain – A Tale of Two Drains**

Jeremy Taylor, P.Eng., R.J. Burnside & Associates Limited

While some drains share a common interest in serving the majority of landowners within the watershed, this drain was divided into two distinct groups of landowners. The diversity of the landowners and their respective land use created a challenge to prepare a report to balance their different needs and interests.

The McNain Municipal Drain is located in the northeast corner of the Township of Ashfield-Colborne-Wawanosh with a watershed of approximately 400 ha. The open drain outlets into a gully that eventually reaches Lake Huron. The project required an improvement to the existing drop structure as well as deepening of the main drain and the replacement of many crossings throughout its length. The presentation will summarize the history of the drain, the challenges preparing the report, the referral of the report back to the engineer, the Tribunal Hearing and the eventual construction.

### **Schiller Drain – A Case Study**

Antonio (Tony) Peralta, P.Eng., N. J. Peralta Engineering Ltd.

A case study that demonstrates the challenges that a Drainage Practitioner endures when dealing with a peculiar drainage situation, mixed with onerous landowners.

The Schiller Drain is an existing Municipal Drain located within a semi-urban area of the Town of Kingsville (County of Essex). The downstream residential area of the watershed had experienced an on-going history of flooding. With efforts to provide a feasible drainage solution, the project is best described as a “rollercoaster”... without the fun!

### **2019 Drainage Conference Exhibitors**



We develop state-of-the-art products to solve storm water management challenges while setting industry-wide standards for quality, durability and performance.



Atlantic Industries Limited (AIL) offers a broad range of efficient solutions for the transportation, public works, railway, urban, mining and energy, forestry, northern, and development sectors.



Armtec is the leader in the supply of drainage products including CSP, HDPE, Stormwater management / treatment, and other related materials.



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.



An environmental consulting firm that is highly experienced with the legislation, permitting and requirements for addressing Species at Risk in drains.



As a manufacturer and supplier of innovative erosion and sediment control products, we pride ourselves in visionary problem-solving and superior customer service.



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



Implementation of phosphorus reduction projects in the Thames River watershed.