



The 49th Annual Drainage Engineers Conference

The 2017 Drainage Engineers Course and Conference at the Holiday Inn Guelph Hotel and Conference Centre.

- Thursday, October 26, 2017 – Drainage Engineers Course
- Thursday, October 26, 2017, 7:00 to 9:00 pm – Drainage Practitioners Meeting, including Tribunal Updates
- Friday, October 27, 2017 – Drainage Engineers Conference,

Drainage Conference Program

Welcome and Introductions, Jeff Dickson, R.J. Burnside Ltd., Chair, OSPE Land Drainage Committee

Ross Scholarship Recipient Presentation, Lucas Parsons

Lucas will speak about his experience as a Water Resources Engineering graduate from the University of Guelph, past work experience and current interests in the water resources field that made him eligible to receive the Ross W. Irwin Scholarship.

Enforcement under the Drainage Act, Tim Brook, Water Management Engineering Specialist, Ontario Ministry of Agriculture, Food and Rural Affairs

Enforcement under the Drainage Act is an important topic for municipalities, drainage superintendents and engineers. Having the right enforcement procedures and tools in place to deal with obstructions, damage, connections, and disconnection to a drainage works is fundamental to protecting the overall system. This is particularly true as the drainage community incorporates more environmental features (e.g., riparian buffers, wetlands, etc.) into communal drains.

This presentation will review Sections 80, 82 and 65(5) of the Drainage Act and provide some thoughts and suggestions on how they can be used by municipalities and drainage superintendents to protect the drainage works. It will also provide some thoughts on how the drainage engineers can assist with the enforcement of the Act through the Engineers Report.

Barefoot Box Culvert™ “Thinking Inside the Box”, Christopher Pfohl, Aquatics
2017 Drainage Engineers Conference – LandDrainageEngineers.com

Group Team Lead, R. J. Burnside and Associates Ltd.

Over the past two years RJ Burnside and Associates Limited has designed and built a unique pre-cast option for culverts that can improve existing conditions for aquatic life. Based on the need to replace an existing degraded cast in place culvert, Burnside was required to identify a suitable design option that addressed the safety and environmental concerns at the site and fit within a Township's budgetary constraints. Due to the sensitivity of the site (headwater system that supports Brook Trout), it was important to replicate the form and function of the watercourse as well as existing conditions. Burnside proposed a precast concrete option called the Barefoot Box Culvert™ to the client, DFO and NVCA for approval. The Barefoot Box Culvert™ incorporated unique design characteristics such as preformed holes in the base slab to allow groundwater discharge and embedment to accommodate a meandering low flow channel within natural substrate. Burnside's Barefoot Box Culvert™ is the first approved for construction in Ontario.

Managing Municipal Drains in an Encroaching Urban Environments, Dave Ryan, Professional Geoscientist, City of Ottawa

Urban expansion into previously undeveloped lands, or former agricultural lands, presents unique challenges with respect to legal and sufficient outlet for stormwater management systems, particularly when an existing municipal drain is involved, or a petition for a new drainage works is submitted to the municipality, under Section 4 of the Drainage Act. This session will highlight some of these issues.

New Horizons in Urban Stormwater Management: Using the Drainage Act to Promote Low Impact Development, Bill Trenough, Sr. Specialist, Integrated Water Management, Credit Valley Conservation

Despite proven performance, low impact development (LID) has not enjoyed wide scale uptake at the municipal or watershed level. This is true even in instances where stormwater utility and credit programs exist. The reason: the long or non-existent payback periods which fail to properly incentivize businesses to undertake retrofit projects. What are needed are tools which allow private property owners to pool their stormwater resources and realize economies of scale through the creation of communally-owned infrastructure. The processes and mechanisms contained within the Drainage Act are well-suited to meet such needs, and warrant examination through the lens of a 21st-century stormwater manager.

Trenchless Culvert Installation Works, Art Groenveld, Senior Engineer, Drainage Design, Ministry of Transportation

This presentation will highlight trenchless installation options for the repair and replacement of existing culverts (i.e., spray-on liners, pipe insertion (sliplining), pipe bursting) and the placement of new culverts (pipe ramming, tunneling). A brief overview of each type of trenchless option will be discussed noting site suitability conditions, size

2017 Drainage Engineers Conference – LandDrainageEngineers.com

constraints and design factors to consider.

Design guides have been developed for some of the options discussed and will be presented as well. Links for audience access will be provided to complete the presentation.

Rural Stormwater Management Demonstration Projects, Sarah Fleischauer, Project Lead and Geoff King, Stewardship Services Coordinator, Maitland Valley Conservation Authority

Rural stormwater management is becoming increasingly important as our landscape and climate are changing. MVCA is focused on using a systems approach to tackle stormwater management in rural settings. The goal is to research and demonstrate how to best create a watershed that is resilient to the effects of climate change. The MVCA has two main projects that it is using to demonstrate the effectiveness of a variety of BMPs in different agricultural settings. This presentation will look at the Scott Municipal Drain and Garvey-Glenn Watershed Projects, how BMPs are being implemented and monitoring that is being completed to understand the effectiveness of the projects.

Case Study – David Adams Municipal Drain, Lorne Franklin, Certified Engineering Technologist, Robinson Consultants Inc.

Finding and implementing solutions for the removal of a long-disputed man-made pond. This case study reviews the challenges of removing a man-made dam with impacts on non-consenting landowners who disputed the installation over 20 years and sought relief through the Drainage Act, and the environmental impacts of removing natural features that developed over that time.

2017 Drainage Conference Exhibitors – to do



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



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.



Devron Sales Ltd. presents SHORESOX , the most innovative bioengineered “living system” developed to immediately halt soils erosion and stabilize shorelines.



IECS has provided solutions for SWM, erosion control issues and pre-cast structures since 1984. Cable Concrete® is backed by extensive engineering and testing.



Maccaferri is a leading provider of Geosynthetic Materials, Steel Products, and Gabions around the world. Engineering a Better Solution!



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



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.



Sulzer Pumps manufactures a complete range of pumps, mixers, aeration systems and control panels.



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