

Day One - Track One -

Wednesday, March 21st, 2018

9:00 a.m. – 9:30 a.m.

Addressing Stormwater in Ontario using Green Infrastructure: the New Ministry of the Environment and Climate Change Low Impact Development Stormwater Management Manual

Presenters: Chris Denich, Aquafor Beech Ltd. and John Antosek, Ontario Ministry of the Environment and Climate Change (MOECC)

Biography



Chris Denich, M.Sc., P.Eng. is the Director of the Water Resource Engineering and Green Infrastructure division of Aquafor Beech Ltd. where he participates in a variety of municipal, private and public sector projects focusing on stormwater management using innovative approaches such as Low Impact Development (LID) and Green Infrastructure (GI), for both retrofit and new developments, and is responsible for the planning, project management, staff assignments, agency contact and public consultation of such project. Chris is responsible for the planning, design and construction of more than 50 LID and GI installations and projects across Canada, including several award winners, and has authored numerous SWM and LID standards and guidance documents. He is considered an expert in LID, GI and sustainable SWM by numerous municipalities and organizations including Toronto Water, Canadian and Mortgage and Housing Corporation (CMHC), Canadian Standards Association (CSA), Toronto and Region Conservation (TRCA), Credit Valley Conservation (CVC), Lake Simcoe Conservation Authority (LSRCA), the Alberta Low Impact Development Partnership (ALIDP), Sustainable Building Canada (SBC), American Society of Civil Engineers (ASCE), Interlocking Concrete Paving Institute (ICPI) and others.

TRIECA CONFERENCE



John Antosek, P.Eng, is the Pollution Control Engineering Advisor, Water Standards Section, Standards Development Branch, Ontario Ministry of the Environment and Climate Change (MOECC). John has worked for the MOECC for 30 years in a variety of positions involving stormwater management, control of combined sewer overflows, and water and wastewater treatment. John currently works with the Water Standards Section of the Technical Assessment and Standards Development Branch in the position of Pollution Control Engineering Advisor. His duties include the provision of engineering/technical expertise and support on water pollution control for municipal point and non-point sources with emphasis on stormwater runoff quality control. John also provides engineering and scientific expertise in the development of pollution control guidelines and policies and provides engineering advice and support to other branches of the Ministry and external clients, including consulting engineers, municipalities and Conservation Authorities.

Abstract

During the past three decades, there has been an evolution in stormwater management (SWM). Planners, engineers and landscape architects now must address a broad suite of technical issues including maintenance of the hydrologic cycle and natural water balance, enhancement of aquatic and terrestrial habitats, and stream morphology. Current SWM approaches reflect the change in the way in which the public and policy makers regard the natural environment. This change, embodied within the principles of Green Infrastructure (GI) and Low Impact Development (LID), has led to considerable alterations in the planning, design and construction of Ontario communities and the infrastructure necessary to sustain them. In keeping with these principles many communities and approval agencies are moving towards an ecosystem-based approach to SWM. This approach has largely replaced the now outdated land use and infrastructure planning driven solely by rapid conveyance and public safety objectives. In 2017 the Ontario Ministry of the Environment and Climate Change (MOECC) will release the LID Stormwater Management Guidance Manual. A companion document to the 2003 MOE Stormwater Manual, the new manual will prescribe specific runoff volume control targets for New Development; Redevelopment, Reurbanization and Intensification; Linear Development; and Stormwater Retrofits in the Province of Ontario. These targets are to be met using a Mandatory Control Hierarchy which will require the application of GI and LID techniques.

Learning Objectives

1. Educate the audience on the new stormwater volume control requirements for Ontario;
2. Outline the Mandatory Control Hierarchy which preferentially requires the use of GI and LID, and direct the audience to existing available resources from TRCA/CVC and others; and
3. Describe the criteria and processes for groundwater protection and the assessment process for which to reflect future climate scenarios and assess climate change risks and vulnerabilities.