

Program

Tuesday, March 10, 2020

11:00am **Trade Show Set Up**

12:00pm **Registration / Trade Show / Refreshments / Lunch on Own**

12:45pm-1:35pm **Introduction and Welcome**

Opening Session

Capturing the Entire Watershed through Storm Water Retrofits*

Joshua White, PG, PE, CFM, CPESC, Geomorphologist/VP of Mitigation Services, Water & Land Solutions (WLS)

Sarah Barbee, Project Manager, Civil & Environmental Consultants Inc. (CEC)

Southern School of Energy & Sustainability (Southern) created an environmental master plan for storm water improvements/retrofits and stream restoration that can be used as a teaching experience. These phased efforts consisted of installing wet detention reuse basins, storm water treatment wetlands, cisterns, and bio retention rain gardens to collect and treat runoff from the school's roofs and parking lots. These BMPs capture, treat, and/or reuse the first 1.0 – 1.5 inch of rainfall for approximately 28.6 acres of impervious areas from the school's 70-acre watershed.

Retrofitting storm water BMPs at Southern provides crucial water quality improvements through infiltration, waste treatment, nutrient cycling, erosion control (sediment and storm water retention). Retrofitting also helps with water quantity benefits by reusing the water from the wet detention basins to irrigate the athletic fields while supplying unique educational opportunities for Durham County schools. This project functions as an outdoor classroom for students, allowing them to further their understanding of water quality, agricultural engineering, landscape architecture, water quality monitoring, and environmental science.

1:35pm-2:25pm **Update on Changes to Ohio's Drainage Laws – H.B. 340***

Doug Reinhart, PE, PS, Auglaize County Engineer

2:25pm-3:00pm **Trade Show Refreshment Break**

3:00pm-3:50pm **Roadside and Ditch Bank Storm Water Management***

Bryan Rose, Vegetation Management Specialist, Arborchem Products

Storm water management is an issue in many environmental projects. Proper drainage is needed for stable and safe roadways, farm fields, and city streets. By maintaining control of vegetation in ditch banks and roadsides you will promote proper storm water drainage. In this presentation you will learn about integrated vegetation management and how to implement a plan in your county. The focus will be on ditch bank maintenance and roadside (guiderail/deflection zone) vegetation control using herbicides. This session will cover the definition of integrated vegetation management and the different tools needed in the field so an applicator can be selective in controlling these targets. Selective treatments promote soil stability while allowing water to drain properly. Additionally, equipment and techniques that have been implemented in Auglaize County, Ohio in order to achieve their vegetation management goals will be explained.

Updated 2-10-2020

**Sessions indicated with an asterisk (*) have been recommended for CPD credit for a maximum of 7.0 CPD hours. Please note that the final determination of what qualifies for CPD credit ultimately lies between the license holder and the State Board of Registration for Professional Engineers & Surveyors.*

Program

3:50pm-4:20pm **Green Infrastructure for Long-Term Provision of Ecosystem Services: Developing a Universal Framework under Different Cultures and Climates***
David Gamstetter, Business Developer, The Davey Tree Expert Company/Davey Resource Group

The Swedish University of Agricultural Sciences (SLU) is conducting research as part of an international pilot project that aims to scope out strategies for reaching the United Nation's Sustainable Development Goals by optimizing long-term ecosystem service (ES) provisioning from urban green infrastructure (UGI). The approach in this pilot project is to examine three different cities on different continents, with different climate, governance, and cultural-contexts.

The three cities chosen for the study are Malmo, Sweden, Cincinnati, Ohio, and Addis Ababa, Ethiopia. Researchers visited each city and held a series of meetings, workshops, and green infrastructure site visits to gather information from professionals and stakeholders. Urban Green Infrastructure has proven to be a potent tool for addressing many of the most pressing urban environmental issues by taking advantage of the ecosystem services provided by nature (MEA, 2005) to deliver specific, measurable human benefits (e.g., Escobedo, 2011). However, the full potential of these nature based solutions to meet the UN's Sustainable Development Goals for urban dwellers has not been realized due to gaps in knowledge, communication, and stakeholder engagement. With this project, we aim to better understand those gaps, and begin filling them.

4:30pm-6:00pm **Trade Show Reception**
Visit our exhibitors and network with your counterparts. Refreshments will be served.

Wednesday, March 11, 2020

7:30am **Continental Breakfast**

8:30am-9:20am **Basic Expectations for a Safe Trench and the Ohio BWC Trench Safety Campaign***
Scott McNulty, Compliance Safety and Health Officer, Public Employment Risk Reduction Program (PERRP)
Mark Reams, Loss Prevention Manager, Ohio BWC

Trench safety continues to be an issue in Ohio, with two fatalities related to trench collapses in 2019. OSHA and PERRP have each made this an emphasis program to eliminate injuries and will stop at active trenches to enforce trench safety requirements.

The Ohio Bureau of Workers' Compensation is committed to working with employers to help solve problems with trench safety. The Ohio BWC launched a campaign in January 2020 to improve trench safety across the state. There are updated training materials, training events, additional safety consulting, and other resources for employers. The Ohio BWC is also

Updated 2-10-2020

**Sessions indicated with an asterisk (*) have been recommended for CPD credit for a maximum of 7.0 CPD hours. Please note that the final determination of what qualifies for CPD credit ultimately lies between the license holder and the State Board of Registration for Professional Engineers & Surveyors.*

Program

providing a safety grant to Ohio employers to assist in the purchase of trench safety equipment such as trench boxes or shoring.

This presentation will review the basic expectations for safe trench work. This includes planning the trench, use of protective systems, soil identification, trench inspections, and other requirements to maintain safety when working in trenches. We will also highlight safety resources available to Ohio employers from the BWC including the trench safety grant.

9:20am-9:50am **Rehabilitation of Corrugated Metal Pipes with Field Paving***

Tami Brehm, PE, District 8 Hydraulic Engineer, ODOT

Field paving of existing conduits is a cost-effective way to add many years of service life to an existing conduit. The presentation will discuss the ODOT Field Paving spreadsheet which determines if reinforcing should be added in order to make the rehab a structural repair. This presentation will include both structural and non-structural field paving examples, which have been operational for over five years.

10:00am-10:30am **Post Development Water Quality – Who are we to Question Nature?***

Brian Bates, PE, Storm Water Project Director, Woolpert

South Carolina's Reedy River has long been an important natural resource, yet a sad history of environmental abuse has rendered the Reedy the most-polluted river in state history. The prevailing concern for the river is nutrient loading, especially due to new development. Greenville County, S.C., recently adopted an anti-degradation policy for development-induced phosphorous loading in the Reedy River watershed. The policy relies on nature being correct in storm water runoff characteristics and permits construction sites to produce no more phosphorous than they would in their predeveloped condition. This approach accounts for specific site characteristics rather than assume one-size-fits-all approaches like: per-acre/per-year standards, surrogate volume treatments, or infiltration requirements.

This presentation will highlight Greenville County's post-construction regulatory program, explain current results and demonstrate the cutting-edge tool that makes this approach not only possible, but practical.

10:30am-11:00am **How to Meet Your Indiana Bat Obligations without Going Batty on Federal Aid Projects***

*Roberta Zwier, PMP, Director of Mitigation Solutions, The Conservation Fund
Karen Hallberg, Phd, Biologist, US Fish and Wildlife Service*

The Range-wide Indiana Bat In-Lieu Fee Program provides transportation project developers with an option to transfer their mitigation obligations to a third party. This presentation will provide an overview of the Ibat ILF and demonstrate how it can aid local sponsors with their Endangered Species Act compliance on Federal-aid projects.

Updated 2-10-2020

**Sessions indicated with an asterisk (*) have been recommended for CPD credit for a maximum of 7.0 CPD hours. Please note that the final determination of what qualifies for CPD credit ultimately lies between the license holder and the State Board of Registration for Professional Engineers & Surveyors.*

Program

11:00am-11:50am **Reducing Erosion in Yellow Creek (Summit County) with Storm Water Management and Stream Restoration***

Bob Hawley, PhD, PE, Sustainable Streams

Based on the results of an extensive assessment and planning effort that identified the root causes of excess stream erosion, the presentation will show how we used programmatic data, GIS analysis, and stakeholder input to identify cost-effective opportunities at the watershed scale in a large suburban watershed (31 mi²). Our multifaceted approach focused on outside-the-box storm water BMPs including 1) regionally-calibrated design targets that discharge storm water below the critical discharge (i.e. "Q_{critical}") for streambed erosion, 2) retrofits of existing detention basins, and 3) bank full wetlands, which can be 10- to 100-times more cost-effective than conventional BMPs. The storm water BMPs were also coupled with in-stream restoration planned along high-priority reaches such as those with at-risk infrastructure and/or public safety risks. The approach underscores the value of tailoring storm water plans to the specific needs of the stream network and community of stakeholders.

11:50am

Closing Remarks / Adjourn

Neil Tunison, PE, PS, Warren County Engineer, Committee Co-Chair

Jim Gills, PE, PS, Lake County Engineer, Committee Co-Chair

Updated 2-10-2020

**Sessions indicated with an asterisk (*) have been recommended for CPD credit for a maximum of 7.0 CPD hours. Please note that the final determination of what qualifies for CPD credit ultimately lies between the license holder and the State Board of Registration for Professional Engineers & Surveyors.*