2016 OHIO STORMWATER CONFERENCE

Dedicated to the advancement of stormwater and natural resources management

www.ohstormwaterconference.com

REGISTRATION INFORMATION
2016 OHIO STORMWATER CONFERENCE

Sharonville Convention Center | Sharonville | May 4-6, 2016

9th annual *Ohio Stormwater Conference*

Conference Overview

Recognizing that watershed and stormwater management involves people of varying disciplines and degrees of experience, our conference engages speakers experienced in many aspects of stormwater or water resource management. Speakers will address: examples of planning and design; new standards being developed; incorporating environmental goals into traditional stormwater areas; practice effectiveness; program administration and management; communications; as well as meeting regulatory requirements. Beyond learning from listening and dialogue with speakers, the conference provides the best circumstance to meet, network and collaborate with peers.

Who Should Attend?

Planned by a committee of professionals who deal with stormwater issues on a daily basis, the conference is appropriate for public and private engineers, planners, policy makers, scientists, managers, and elected officials throughout Ohio and the region. Those interested in innovative solutions to common issues relating to stormwater management should attend.

Continuing Education

A Certificate of Attendance will be provided to all individuals who attend the conference. This certificate, along with a copy of the agenda, will assist individuals needing to document professional development hours for their technical profession. We are also seeking to get approved hours from a variety of professions. Please contact Harry Stark with any questions at 216-385-5248 or hstark@ohstormwaterconference.com.

Sharonville Convention Center

Sharonville Convention Center is located at 11355 Chester Road, Sharonville, OH 45246. Complete directions can be found on the conference website.

Hotel Information

The Conference Committee has secured group rates for the following and more information can be found online:

Drury Inn & Suites Cincy North
2265 East Sharon Road, Sharonville
Room Rate: $124 Single King/2 Queens- $134.00 Double King/2 Queens
Group Code: 2245448
Phone Number: 800.325.0720
Cut Off: Wednesday, April 6, 2016

Fairfield Inn and Suites Cincinnati North
11440 Chester Road, Sharonville
Room Rate: $129.00 Double Double/King/ or King Suite
Group Code: TCW
Phone Number: 513.842.9112 hotel reservations or central reservations 888.236.2427
Cut Off Date: Wednesday, April 6, 2016

Hilton Garden Inn Cincinnati/Sharonville
11149 Dowlin Drive, Sharonville
Room Rate: $139.00 Single/Double
Group Code: OSW
Phone Number: 513.772.2837
Cut Off: March 29, 2016

LivINN Hotel
11385 Chester Road, Sharonville
Room Rate: $84.00 Premium Room/$94.00 Studio Room
Group Code: Ask for Ohio Stormwater Conference
Phone Number : 513.772.7877
Cut Off: Tuesday, April 1, 2016

Presented By

The Ohio Stormwater Conference is presented annually by the Tinkers Creek Watershed Partners and the Ohio Stormwater Association.

Tinker's Creek WATERSHED PARTNERS
Rediscover • Respect • Revitalize

OHIO STORMWATER ASSOCIATION

Conference Schedule

Wednesday, May 4, 2016

8:00 a.m. - 4:00 p.m.	Envirocert Review Class's
1:00 p.m. - 5:00 p.m.	Greenest Zoo in America- Sustainable Practices at the Cincinnati Zoo
1:00 p.m. - 5:00 p.m.	BMP's at the SD1 Public Service Park in Fort Wright, Kentucky

*For more information on tours, see page 5.

Thursday, May 5, 2016

Exhibit Area Open 9:00 a.m. - 12:00 p.m. and 1:00 p.m. - 7:30 p.m.

7:30 a.m. - 8:30 a.m.	Registration / Breakfast
8:30 a.m. - 10:00 a.m.	Opening Session / Keynote Speaker
9:00 a.m. - 2:00 p.m.	CESSWI, CPESC, CPSWQ AND CMS4S Exams
10:00 a.m. - 10:30 a.m.	Morning Refreshment Break / Exhibits
10:30 a.m. - 12:00 p.m.	Concurrent Sessions
12:00 p.m. - 1:30 p.m.	Luncheon
1:30 p.m. - 3:00 p.m.	Concurrent Sessions
3:00 p.m. - 3:30 p.m.	Afternoon Refreshment Break / Exhibits
3:30 p.m. - 5:00 p.m.	Concurrent Sessions
5:00 p.m. - 7:00 p.m.	Opening Reception

Friday, May 6, 2016

Exhibit Area Open 9:00 a.m. - 1:00 p.m.

7:30 a.m. - 8:30 a.m.	Registration / Breakfast
8:30 a.m. - 10:00 a.m.	Concurrent Sessions
10:00 a.m. -10:30 a.m.	Morning Refreshment Break / Exhibits
10:30 a.m. - 12:00 p.m.	Concurrent Sessions
12:00 p.m. - 1:00 p.m.	Luncheon
1:00 p.m. - 2:00 p.m.	Concurrent Sessions
2:10 p.m. - 310 p.m.	Concurrent Sessions

NOTE: Session Tracks/Presentations/Speakers may change slightly between now and the conference.

Registration Type/Fee

Attendee	Speaker	Student	Scholarship
$195.00 (postmarked by April 15, 2016)	$100.00	$95.00	$95.00
$245.00 (postmarked after April 15, 2016)			

Registration Includes:

- Unlimited admission to the sessions of your choice on both days
- Admission to morning breakfasts on both days and all breaks
- Admission to luncheons on Thursday, May 5 and Friday, May 6, 2016
- Admission to the Reception on Thursday, May 5, 2016

Register online
ohstormwaterconference.com

Questions? Contact us at
216-385-5248 or e-mail at
hstark@ohstormwaterconference.com

Certification Class/Exams

ENVIROCERT International, Inc.

49 State Street, Marion, NC 28752
3500 Camino Ave. Ste. 210, Oxnard CA 93030
Phone: (828) 655-1600 | Fax: (828) 655-1622
www.EnviroCertIntl.org

REGISTRATION FORM

SHARONVILLE, OH

MAY 4-5, 2016

EVENT INFORMATION

- **Start Time**: 8:00 AM (Check-in 30 minutes prior to Start Time)
- **Cutoff Date**: 4/25/2016 Registration must be received by the Cutoff Date. (No refunds for cancellations after Cutoff Date).
- **Minimum Registrants:** 6 (by Cutoff Date).

REGISTRATION INFORMATION

Review Course:

05/4/2016:
❑ CPESC ($350.00)

05/4/2016:
❑ CESSWI ($300.00)

05/4/2016:
❑ CPSWQ ($350.00)

Exams: EXAM DATE SUBJECT TO CHANGE

05/5/2016:
❑ CPESC ❑ CESSWI ❑ CPSWQ ❑CPMSM

❑ Proctor Fee ($100.00)
❑ Exam Fee ($50.00)

Registrant must have application approval letter in order to sit for exam (Application Fee Separate). Study Guide included in application fee; all others order separately from EnviroCert. $75 + S&H
Questions call (828) 655-1600 or email courses@envirocertintl.org

Wednesday, May 4 - Tours

TOUR - The Greenest Zoo in America- Sustainable Practices at the Cincinnati Zoo

Date: May 4, 2016 Time: 1-5 PM Cost: $25 Max number: 30
Buses leave from: Sharonville Convention Center, 11355 Chester Road, Cincinnati OH
Tour destination: Cincinnati Zoo, 3400 Vine Street, Cincinnati OH
Tour leader: Fia Cifuentes, Cincinnati Zoo Sustainability Coordinator

Take a trip through the Cincinnati Zoo with Fia Cifuentes, the zoo's Sustainability Coordinator, and find out why the Cincinnati Zoo is the Greenest Zoo in the country! Proclaimed the "Greenest Zoo in America" in 2010, the Zoo has continued to lead the way in sustainability and green initiatives by greening its daily operations and reducing its impact on the environment. Through green building, solid waste management, renewable energy, water conservation, storm water management, energy efficiency and community outreach, the Zoo has strengthened its sustainability program to have a positive impact on the planet. Since the launch of its water-saving initiative in 2006, the Cincinnati Zoo & Botanical Garden has saved one BILLION gallons of water, enough to provide water (indoor and outdoor use) for 10,000 households for a year.

Tour 1 Approximate Schedule

1 PM- bus leaves Sharonville Convention Center

1:15: Bus arrives at Cincinnati Zoo

1:15-3:15 tour

3:15-4:15 enjoy the zoo

4:15-4:30 get back to bus stop

4:45 bus arrives at Sharonville Convention Center

TOUR - Best Management Practices at the SD1 Public Service Park in Fort Wright, Kentucky

Date: May 4, 2016 Time: 1-5 PM Cost: $25 Max number: 25
Buses leave from: Sharonville Convention Center, 11355 Chester Road, Cincinnati OH
Destination: Public Service Park, 1045 Eaton Drive, Ft. Wright, KY 41017
Tour leader: Kelly Kuhbander, Strand Associates

Visit Public Service Park, an outdoor environmental center that has incorporated many types of best management practices for over a decade! This park is dedicated to those who enhance Northern Kentucky's quality of life through public service. Featuring environmental best management practices (BMPs) and cutting edge public educational programming, PSP is a national model for environmental outreach.

Whether you are curious about our vegetated roof, looking to take a quiet walk, or searching for a wetland adventure, PSP provides an empowering and interactive learning experience you won't soon forget! Along your journey, you'll learn why it is important to reduce the amount of pollution entering our streams and rivers through storm water runoff. This one-of-a-kind, innovative facility features the following educational tools and BMPs: V**egetated roof; Wetland classroom; Storm water garden; Retention and detention basins; Vegetated bioswales; Native meadow; Watershed plaza; Oil/water separator; Porous pavements; Cistern; Urban forest; Environmental art sculptures; Native American creek walk and more!**

Thursday, May 5, 2016

REGISTRATION / BREAKFAST

WELCOME - 8:30 a.m.

KEYNOTE SPEAKER - 9:00 a.m.

Mark Fisher - Senior Director of Facilities and Planning, Cincinnati Zoo

A product of the University of Cincinnati's Civil and Environmental Engineering program, Mark spent the first eleven years of his professional career working as a project manager for Turner Construction, a commercial construction company. Many of those years were spent at the Cincinnati Zoo, overseeing the construction of several major exhibits. In 2006, he came on board at the Zoo as the Senior Director of Facilities and Planning. In addition to the standard duties of a facilities manager, Mark is also the driving force behind the Zoo's sustainability movement. By implementing the most aggressive green building program in the nation, along with producing dramatic reductions in natural resource consumption, he has taken the Zoo from an organization that barely had a recycling program, to becoming the greenest Zoo in America. In 2014 Mark was promoted to Vice President of Facilities, Planning and Sustainability.

BREAK / VISIT EXHIBITORS - 10:00 to 10:30 a.m.

SESSIONS / TRACKS - 10:30 to 12:00 p.m.

T1A: Monitoring, Modeling and Research

Monitoring Methods for Stormwater Best Management Practices and Green Infrastructure – Demonstrating Performance and Resource Needs (60 min.)

Nitin Katiyar, PE, HDR, Water Resources Specialist

Evaluations of effectiveness are increasingly becoming more important as results are communicated to officials, regulators, ratepayers and others. This presentation will provide a detailed overview of different monitoring approaches, their benefits and other considerations such as schedule and necessary resources that should be clearly described in monitoring protocols. A step-by-step monitoring program will be presented along with lessons learned in order to assist participants to craft monitoring programs for their unique stormwater management projects.

How to overcome the challenges of water quality data collection (SSO 700 IWAP) (30 min.)

Kathleen Bollmer, CH2M, Project Manager

MSDGC is pursuing the development of an Integrated Watershed Action Plan (IWAP), which requires a detailed Water Quality Data Collection program. This presentation will focus on the challenges faced by the team, and how these challenges were overcome to accomplish a successful water quality sampling program. Key challenges included forecasting the timing/magnitude of rainfall and the logistical effort required to mobilize resources. Despite these challenges, the collected datasets are sufficient to calibrate watershed and surface water quality models.

T1B: Stormwater & MS4 Program Management

Who's on First? Stormwater Management in an Urban Watershed I (60 min.)

Matt Latham, ASLA, Mill Creek Watershed Council of Communities, Project Manager

Brian Wamsley and Robert J. Hawley, PhD, Hamilton County Planning and Development

This session, the first of two parts, presents a comprehensive inventory of stormwater management in the Mill Creek Watershed, showing how the region's stormwater is currently being managed, and by whom. This will also a basis for evaluating alternative management practices at a watershed-scale. This will be useful for formulating an integrated approach to stormwater management and fees.

Who's on First? Stormwater Management in an Urban Watershed II (30 min.)

Matt Latham, ASLA, Mill Creek Watershed Council of Communities, Project Manager

Brian Wamsley and Robert J. Hawley, PhD, Hamilton County Planning and Development, Senior Planner; Sustainable Streams, Principal Scientist

This session, the second of two parts, will showcase successful examples of watershed-based stormwater management in other urban areas as a basis for evaluating the applicability of similar approaches in Southwest Ohio.

T1C: Stormwater Practice, Planning and Design

Reflections on the Last Decade of Post-Construction Stormwater Management in Ohio (60 min.)

Jay Dorsey, ODNR-Division of Soil and Water Resources

John Mathews, ODNR-Division of Soil and Water Resources

Ohio is in its third permit cycle for the NPDES construction stormwater permit and the Phase II MS4 permit. Though the last full update to the Rainwater and Land Development occurred in 2006, updates have occurred with an emphasis on green infrastructure practices. We've all been working our way along the implementation learning curve for managing post-construction stormwater - the WQv; designing, approving, and maintaining stormwater infrastructure; and the Darby permits watershed groundwater recharge requirements. This presentation reflects on the progress made, the advances worth celebrating, and a few of the things left to figure out.

University of Kentucky/FEMA Flood Mitigation Project (30 min.)

Joshua Karrick, PLA, ASLA, AICP, Bell Engineering - Landscape Architect and Planner

Bob Pickerill, PE, Bell Engineering - Associate and Regional Office Manager

The University of Kentucky received a Hazard Mitigation Grant from FEMA to develop a regional stormwater detention system to counteract downstream flooding. The project incorporates several surface and underground detention basins, stream-restoration, and bio-swales concepts into a linear stormwater park that provides storage in the upper reaches of the watershed.

T1D: Watershed Planning

Watershed-scale Stormwater Management (Part 2-Implementation): Go Big or Go Home (60 min.)

Bob Hawley, Ph.D., P.E., Sustainable Streams, Principal

Chris Rust, P.E., Strand Associates, Project Manager

In two suburban watersheds (33 & 58 mi2) with stormwater-impaired/303(d) listed streams, BMPs were planned and optimized at the watershed scale to address the root cause of the impairments using primarily outside-the-box BMPs such as detention basin retrofits and bankfull wetlands (~10-100 times more cost effective than conventional BMPs).

Stream Restoration as Green Infrastructure: Integration With Watershed Stewardship (30 min.)

William K. Barry, S&ME, Inc., Technical Principal

Patrick McMahon, Senior Engineer

Stream restoration has grown to a routinely performed service, often with the goal of improving water quality. This presentation will survey recent research from the US and Europe regarding stream restoration's effectiveness as a water quality improvement tool and examine the use of stream restoration to achieve watershed management goals.

T1E: Legal

Potential Impacts of Recent MS4 Enforcement Cases (60 min.)

Skipp Kropp, Steptoe & Johnson PLLC

Kathy Milenkovski, Steptoe & Johnson PLLC

Learn about EPA National Enforcement Initiative on Raw Sewage and Contaminated Stormwater. EPA is taking action to reduce contaminated storm water discharges from MS4 systems. Several MS4 communities have been heavily penalized. Learn about recent enforcement actions and discuss possible operational and legal impacts on MS4 permit holders and operators.

Legal Roundtable (30 min.)

Louis L. McMahon, McMahon DeGulis LLP

Andrea M. Salimbene, McMahon DeGulis LLP

The goal of this presentation is to enable community leaders, engineers and stormwater professionals to share experiences dealing with the interplay between complex stormwater planning and associated legal issues. By becoming aware of these issues and each other's experiences, attendees can make more informed choices that will benefit their communities.

T1F: CSO/Green Infrastructure

Hamilton County's Integrated Watershed Action Plan Approach (60 min.)

Dave Meyer, Director of Utility Oversight, Hamilton County, Ohio

Brandon C. Vatter, Hatch Mott MacDonald, Associate

A panel discussion with Ohio EPA, Hamilton County and the Metropolitan Sewer District of Greater Cincinnati (MSDGC) to share Hamilton County's Integrated Watershed Action Plan (IWAP) approach for MSDGC Consent Decree compliance. Ohio EPA will be part of the panel and offer their regulatory perspective on Integrated Planning (IP) in Ohio. The Pittsburgh Water & Sewer Authority, Columbus Ohio, and Northern Kentucky SD1 have also been invited to share their integrated planning efforts and be part of the panel discussion.

A Green Infrastructure Performance Appraisal for the Cincinnati Zoo (30 min.)

Nancy Ellwood, CDM Smith, Project Manager

Mark Fisher, Cincinnati Zoo and Botanical Garden, Vice President – Facilities, Planning and Sustainability

Listen to a frank appraisal of the success of green infrastructure (GI) for stormwater control on a grand scale in an urban zoo. Learn what has worked and what has not based on years of observation of the performance of GI for stormwater control at the Cincinnati Zoo and Botanical Garden.

LUNCH - 12:00 to 1:30 p.m.

Speaker: Kyle Dreyfuss-Wells, Northeast Ohio Regional Sewer

SESSIONS / TRACKS - 1:30 to 3:00 p.m.

T2A: Monitoring, Modeling and Research

Infrastructure Design: Modeling Green to Size Your Grey (30 min.)

David King, Barge, Waggoner, Sumner and Cannon

Integrated hydrologic and hydraulic stormwater modeling allows designers to optimize the sizing of infrastructure improvements. Instead of the oversimplified traditional design of single facilities, the more advanced stormwater modeling techniques can size infrastructure for an entire watershed, consider multiple conveyance routes, and estimate the effects of multiple, sequential stormwater control facilities, including green infrastructure. This presentation will offer best practices for modeling green infrastructure facilities on a watershed scale, while providing various project examples.

Planning for Adaptation and Resiliency to Climate Change in Stormwater Infrastructure (60 min.)

Devon E. Seal, P.E., ENV SP, Gresham, Smith and Partners, Senior Engineer

Liz Miller, EI, Gresham, Smith and Partners, Engineer Intern

Interested in planning for adaptation and resiliency to climate change, but not sure where to start? This presentation includes approaches for assessing stormwater assets that are sensitive to change and identify the potential impacts to assets and strategies for adaptation and resiliency.

T2B: Stormwater & MS4 Program Management

Observational Analysis of Maintenance Needs of LID Stormwater Control Measures (30 min.)

Kristen Buccier, Chagrin River Watershed Partners, Inc., Project Manager

Chagrin River Watershed Partners, Inc. (CRWP) inspected more than 50 LID stormwater control measures (SCMs) installed on public properties within the Chagrin River watershed. CRWP compiled data on the observed maintenance needs of the SCMs and found that most required maintenance, with many having conditions that may impede system function.

Plan Review - The Critical Element to Your Stormwater Program (60 min.)

John Mathews, ODNR-Division of Soil and Water Resources

Thorough plan review is critical to successful and timely implementation of stormwater, sediment and erosion control practices. And poor plan review is responsible for difficulties during construction and later. This session will discuss how to strengthen the plan review process in order to improve construction compliance and longterm maintenance. It will discuss critical aspects of review, useful tools for reviewers and aspects typically neglected in plan review and their implications.

T2C: Stormwater Practice, Planning and Design

Using Trees as an Ultra Urban Stormwater BMP (30 min.)

Al Key, Account Manager, DeepRoot Green Infrastructure, LLC

This session will review basic applications, notable projects and storm water mitigation potential for urban trees and suspended pavement systems. The primary installation discussed will be multiyear redevelopment of the Ohio State Fair Grounds in Columbus. At the Ohio state Fairgrounds, ODOT and ODNR have committed to large volumes of loamy soils beneath pavement to benefit trees and stormwater. The mitigation value of the site will be evaluated and modeled on research data from North Carolina State University.

Using Urban Trees for Stormwater Management: The State of the Science (60 min.)

Peter MacDonagh, Kestrel Design Group, Inc., Director of Design + Science

Come hear the latest new developments in using urban trees for sustainable stormwater management, including new research results, policy, and case studies.

T2D: Watershed Planning

Improved Phosphorus Retention of a Tree Box Filter System (30 min.)

Peter T. Weiss, Valparaiso University, Professor of Civil Engineering

Results indicate that the enhanced media has increased contaminant retention in the tree box filter system.

Removing phosphorus from drainage with phosphorus removal structures and Phrog (30 min.)
Chad Penn, Associate Professor of Agricultural, Soil, and Environmental Chemistry; Oklahoma State University
Chad Penn, Oklahoma State University; Kevin King, USDA-ARS Soil Drainage Research Unit; Stuart Wilson, TLDR consulting; Lauren Lindemann and Carrie Vollmer-Sanders, The Nature Conservancy

The phosphorus (P) removal structure was developed to intercept dissolved P from drainage water using various P sorption materials (PSMs). Phrog (phosphorus removal online guidance) software is used to design structures to achieve desired load removal using any viable PSM. Several P removal structures constructed in Ohio will be presented.

T2E: Legal

Hot Topics in Water Law (30 min.)
Erin M. McDevitt-Frantz, McMahon DeGulis LLP, Associate
Sarah J. Gable, McMahon DeGulis LLP

This presentation will address current hot topics in Water Law and the practical implications for all who have a direct stake in stormwater management, non-point source pollution or the modeling of urban water systems.

Ohio Water Law 101 (60 min.)
Louis L. McMahon, McMahon DeGulis LLP

Participants will gain an understanding of the multiple sources and regulators of water law in Ohio, including the common law property and tort doctrines, local authority, state regulation and federal jurisdiction.

T2F: CSO/Green Infrastructure

Detroit Green Infrastructure: Implementing More Green for Less Green (30 min.)
Carol Hufnagel, Tetra Tech; Program Manager

Detroit's green infrastructure program uses a multi-pronged approach to reduce the cost of green infrastructure implementation. The primary concept relates to leveraging other funding to control costs for the ratepayers in the City. This presentation presents these approaches.

Shades of green: Brownfields, green infrastructure and urban stormwater solutions (60 min.)
Ms. Robin Halperin, Northeast Ohio Regional Sewer District, Manager of Regulatory Compliance
Mr. Dan Brown, Partners Environmental Consulting, Inc., President

To reduce combined sewer overflows, Green Infrastructure (GI) has been promoted as a sustainable solution to stormwater management. Where space is limited, Brownfields present an opportunity in terms of available land, but pose a hurdle to implementing GI. Participants will learn about the conflict between GI and suitable Brownfield locations.

BREAK / VISIT EXHIBITORS - 3:00 to 3:30 p.m.

SESSIONS / TRACKS - 3:30 to 5:00 p.m.

T3A: Monitoring, Modeling and Research

Maintenance of Permeable Pavements: Field Tests (30 min.)
Ryan Winston, Ohio State University, Research Assistant Professor

This presentation will focus on effective maintenance techniques for permeable pavements. Both small-scale (hand vacuuming, pressure washing) and large-scale maintenance (street sweeping, milling) practices will be discussed.

Seasonal Variability in Stormwater Quality Treatment by Permeable Pavements (30 min.)
Ryan Winston, Ohio State University, Research Assistant Professor

Two permeable pavements were studied for water quality performance. Sediment and metals retention was related to the elapsed time since winter, implying deicing salt caused deflocculation and resuspension of subgrade soil material. These permeable pavements performed similarly to others by the fall, suggesting effects lasted 3-6 months after winter.

Simplified Tools for Planning Stormwater Controls Using Complex Model Output (30 min.)
Scott Bell, President, Limnotech
Julie Padilla, Project Engineer, LimnoTech

Managers and stakeholders are faced with a difficult task when selecting and siting non-point source controls to achieve the most effective pollutant reduction. Computer models can be helpful in this task, but many are complicated and most require some expertise to use. Non-modelers must rely on consultants or others with specialized training to simulate alternatives and scenarios, which can be an expensive, time-consuming process. This paper will present two examples of tools that were developed to allow non-modelers to conduct scenario planning and alternatives analysis, using the output from complex watershed models, without having to use the models themselves. These do not replace complex watershed models, but do maximize their power by allowing more stakeholders to use their output.

T3B: Stormwater & MS4 Program Management

Updating Mason's Stormwater Management Program to Incorporate TMDL Requirements (30 min.)
Kathy Dorman, P.E., Assistant Public Utilities Director and Stormwater Coordinator for the City of Mason
Kelly Kuhbander, P.E., LEED AP, Project Manager, Strand Associates

This presentation will focus on the City of Mason's program update including the latest TMDL requirements. Specifically, how the City of Mason dissected the OEPA TMDL documents to determine which elements are applicable to the City's MS4 program. Additionally, this presentation will provide an update on other key Mason stormwater initiatives.

Comprehensive Plan Approach for Meeting Stormwater TMDL Waste Load Allocations (30 min.)
Kelly Mattfield, Brown and Caldwell Managing Engineer
Caroline Burger, Brown and Caldwell Senior Engineer

Numeric, stormwater Waste Load Allocations require objective tools to predict stormwater pollution loads and load reductions from a variety of management practices. This presentation will explain the approach currently underway in Wisconsin for MS4s to meet their TMDL load reduction requirements.

Utilizing Volunteer Monitoring to Meet Local Stormwater Program Objectives (30 min.)
Chris French, Water Environment Federation - Director of Stormwater Programs; Co Chair - VA Water Monitoring Council

This presentation will offer a background on volunteer water monitoring and case studies from Virginia where localities have partnered with volunteer groups to assist with local water quality monitoring efforts, with a growing focus on stormwater management and TMDL issues. The discussion will provide an overview of how partnerships with volunteer monitors can provide a low cost and effective water quality monitoring program designed to meet local regulatory requirements; achieve compliance with the MS4 Minimum Control Measures requirements (Illicit Discharge Detection and Elimination (IDDE), Public Education & Participation, and Pollution Prevention/Good Housekeeping); and measure TMDL compliance progress.

T3C: Stormwater Practice, Planning and Design

A Public/Private partnership transforms a regional detention basin (30 min.)
Tom Evans, ASLA, LEED AP, URS Corp., Landscape Architecture Practice Leader

To accommodate the campus expansion of a major employer, the City of Akron developed a public/private partnership to define a $ 2M+ project which illustrates a prototype solution for retrofitting a regional detention

basin to support economic development, reduce flooding, improve water quality, and create an open space amenity.

Retrofitting for Water Quality and Water Volume (30 min.)
Kurt Keljo, Watershed Coordinator, Franklin Soil and Water Conservation District
Joel Thrash, Operations Manager, Engineering and Environmental Services Division, Cardno

A stormwater treatment wetland was installed in a Columbus park in what had been a dry detention basin. The new wetland increases water quality treatment and reduces the volume of stormwater leaving the site. Wetland design, data on stormwater volume reduction, and challenges facing stormwater retrofits will be discussed.

Implementation of Innovative Stormwater Practices in Cleveland's Public Square Redevelopment (30 min.)
Joseph K. Ferenczy, P.E., Osborn Engineering/Associate Director of Civil Engineering
David R. Ritter, CPESC, CESSWI, NEORSD/Stormwater Technical Specialist

The Redevelopment of Cleveland's Public Square included multiple innovative stormwater control measures. In conjunction with NEORSD, the project achieved a highly sustainable and effective implementation of stormwater controls in an ultra-urban setting including a dual functioning rainwater harvesting system and infiltration chamber permitting year round functionality.

T3D: Watershed Planning
Digital Detection for MS4 Program Efficiency: Leveraging Dollars and Data (30 min.)
Meghan Dunn, AECOM / GIS Specialist (Water Resources)
Wesley Sydnor, Louisville MSD / MS4 Program Manager

Non-point source pollution contributes significant pollutant loadings to receiving waters. In an effort to locate illicit connections more efficiently, the Metropolitan Sewer District utilized non-traditional approaches of Aerial Infrared Photography and digital data evaluation to better-prioritize field investigation. Data imagery gathered included: Infrared and thermal imagery covering Jefferson County, Kentucky.

Prioritization of Residential Demolition Sites for Decentralized Stormwater Management (30 min.)
Cyndee Gruden, Associate Professor, Department of Civil Engineering, University of Toledo

Many communities are seeking opportunities to stem urban decay by transforming vacant properties into community assets. Green stormwater infrastructure presents an increasingly attractive, affordable, and effective stormwater management option. Site placement of green stormwater infrastructure requires prioritization of potential sites. Hydrologic modeling (SWMM) and GIS analysis of commonly available parcel data (soil and imperviousness) were used in combination to prepare a ranked list of sites suitable for green stormwater infrastructure.

Integrated living infrastructure in campus planning (30 min.)
Jennifer Dowdell, Landscape Ecological Planner & Designer, Biohabitats Inc.
Suzanne Hoehne, Biohabitats, Inc. Ecological Engineer

A living infrastructure planning approach combines stormwater management and ecological enhancement, in an effort to build a site's capacity for regeneration in response to development pressures. This presentation highlights two campus planning efforts in Ohio where ecological corridors and hydrological connections informed master planning through green infrastructure.

T3E: Legal
Variations in stormwater utility form across the United States (30 min.)
Brian Alexander Chalfant, PhD candidate + Adjunct Faculty + Research

Drawing on in-depth case studies of stormwater utility forms in the Cincinnati, Cleveland, and Pittsburgh metropolitan regions, this presentation explores the political, social, geographic, physiographic, demographic, and other factors that hinder or facilitate formation of multi-municipal stormwater utilities.

Leveraging Stormwater Costs in EPA Affordability Analysis (30 min.)
Louis L. McMahon, McMahon DeGulis LLP, Partner

Conducting a thorough Affordability Analysis lays the groundwork for determining how much Clean Water Act work a community can afford to conduct and over what timeframe. Fully factoring in the current cost of stormwater, and evaluating how those costs may escalate in the future, can result in a more complete and accurate measure of the affordability of these programs in your community.

Using Regional Districts for Stormwater Management: The Supreme Court Speaks (30 min.)
Eric Luckage, Attorney, Albers and Albers
TBD, Northeast Ohio Regional Sewer District

The recent Ohio Supreme Court decision of Northeast Ohio Regional Sewer District v. Bath, confirmed that the ORC authorizes regional districts formed under Chapter 6119 for stormwater purposes to manage stormwater and to collect a fee. We will review the decision and discuss districts as an option for your community.

T3F: CSO
Dye Testing Leads to GI Solution for Akron CSO Program (30 min.)
R. Tony Burgoyne, PE, GPD Group, Principal Water Resources Practice
Ivan Valentic, GPD Group, Project Manager Water Resources Practice

Dye trace testing efforts led to implementation of distributive and centralized GI to eliminate combined sewer overflows to the Cuyahoga River. Hear testing and design details, an overview of the City's Long Term Control Plan and problem solving techniques used to modify a City consent decree project through integrated planning. Results promise lower O&M costs, decreased impacts to home owners and increased receiving stream benefits.

Blueprint Columbus: A Toolkit for Community Engagement to Support Integrated Planning (30 min.)
Kristen Atha, Brown and Caldwell, Vice President
Blueprint Columbus: A Toolkit for Community Engagement to Support Integrated Planning

The outreach and engagement plan for Blueprint Columbus was developed with five specific goals: collaborate with internal stakeholders to meet project objectives; perform market research, stakeholder identification, and engagement planning; engage the community to assess acceptability of the Blueprint approach and build consensus; brand stormwater initiatives; and develop sustainable public involvement.

Conveyance of the 100-Year Storm through a Dense Urban Corridor (30 min.)
Mike Ellerbrock, P.E., LEED AP, Project Manager, Strand Associates

The Lick Run Valley Conveyance System is the $100 Million capstone project of stormwater separation activities in the Lick Run Watershed to reduce CSOs and revitalize a blighted urban area. This presentation highlights the technical details and challenges associated with designing a 100-year stormwater conveyance system in a dense urbanized area.

RECEPTION - 5:00 to 7:00 p.m.
A casual networking opportunity and time to gather while enjoying appetizers and drinks.

Friday, May 6, 2016

REGISTRATION / BREAKFAST - 7:30 to 8:30 a.m.

SESSIONS / TRACKS - 8:30 to 10:00 a.m.

F1A: Monitoring, Modeling and Research

Flow-Management Strategies to Enhance Impaired Waterbodies in Ohio (30 min.)
John Aldrich, CDM Smith

This presentation examines why our waterbodies remain degraded, and offers flow management strategies for improving them. Continuous hydrologic simulation provides a common method for establishing watershed-scale management strategies and developing design criteria for green infrastructure, stream stabilization, sewer overflow management, and flood control.

Using Continuous Simulation to Quantify Impacts and Reward Green Infrastructure (30 min.)
Bryan Rogne, P.E., AECOM, North American Stormwater Technical Practice Leader
Mike Gregory, P.E., Computational Hydraulics International (CHI), Engineer

This paper summarizes the regulatory context that requires continuous simulation in stormwater design and presents a methodology for determining flow duration exceedances and the level of flow duration control. The methodology is demonstrated for case studies that illustrate how property owners can be rewarded for their green infrastructure facilities.

Performance of bioretention systems designed for stormwater treatment (30 min.)
Paliza Shrestha, University of Vermont

Present water quality results from monitoring eight bioretention cells at the University of Vermont Bioretention Laboratory. Results include data from cells receiving different soil, vegetation, and hydrologic treatments during May to November 2015. Inflow and outflow pollutant loads and event mean concentrations (EMCs) will be presented.

F1B: Stormwater & MS4 Program Management

Stormwater Assets: Out of Sight, But Not Out of Mind (30 min.)
Melanie Knecht, P.E., Gresham, Smith and Partners - Senior Environmental Engineer
Tom Dietrich, P.E., Gresham, Smith and Partners - Environmental Engineer

Stormwater asset management can be especially challenging due to many potential factors affecting decision-making, including future development, regulatory compliance, hydraulic issues, climate change, and safety. This presentation will review a case study where asset management was integrated into a comprehensive stormwater master plan to support targeted asset decision-making and prioritization.

Applying Asset Management to a Regional Stormwater Management Program (30 min.)
George Remias, NEORSD, Manager of Stormwater Inspection and Maintenance

This presentation covers how the Northeast Ohio Regional Sewer District applies asset management principles to their regional stormwater management program. Examples will be provided that cover essential functions including: asset identification, inspection and maintenance prioritization, capital project nomination, stormwater master planning, and community reporting.

Public Outreach for Successful Utility Referendum Campaign (30 min.)
Jim Bachhuber, Brown and Caldwell Managing Engineer

Using multiple methods, and targeting audiences with direct messages can influence the outcome of a referendum. Key "take-aways" are: keep the message simple, engage people one-on-one, and find community leaders to publically support the message.

F1C: Stormwater Practice, Planning and Design

Green Infrastructure Design & Implementation in Racine Wisconsin (30 min.)
Jaren Hiller, AECOM

The presentation will cover the City of Racine's experience planning, designing, and implementing green infrastructure BMPs. Specific topics to be presented include environmental challenges with existing soils, modeling BMPs in WinSLAMM, an overview of the design process, and challenges encountered in implementing these BMPs adjacent to a great lake.

Fourth Ward Park: Modeling Green Infrastructure Partnerships, Co-Benefits and Envision® Verification (30 min.)
Robert Bryant, PLA, AICP, LEED AP, ENV SP, HDR, Section Manager,
Julie Stein, LEED AP BD+C, ENV SP, HDR, Northeast Stormwater Lead

Once described as "a barren expanse of cracked concrete, weeds and towering trees surviving against a background of neglect," a five-acre parcel within the Atlanta's Historic Fourth Ward has been transformed. The project grew out of a need to address combined sewer overflows (CSOs). The industrial lowland area has been transformed into a park surrounding a functional stormwater retention pond. The pond serves as the centerpiece of the park, surrounded by walking trails, urban plazas, and native plantings.

F1D: Watershed Planning

Implementing Stream Restoration Projects on Private Residential Properties
Kristen Buccier, Chagrin River Watershed Partners, Inc., Project Manager
Judith Mitchell, Davey Resource Group, Senior Project Manager

Streambank erosion contributes large amounts of sediment to the Chagrin River. A grant was obtained to provide funds to stabilize streambanks and vegetate riparian areas on private properties. Sites were selected based on size, feasibility, and cost. Restoration practices included instream features, grading, and vegetation. Sediment reduction exceeded 3,900 tons.

Highland Park Golf Course Stream Restoration – Stormwater Benefits from Restoration (30 min.)
Paul Kovalcik, NEORSD, Stormwater Projects Specialist
Ivan Valentic, ASLA, GPD Group, Project Manager/Landscape Architect

The goal of this presentation is to provide an overview of raising stream invert and floodplain excavation as components of natural channel design. The presenters will also examine the practicality of stream and floodplain restoration as a quantifiable stormwater practice.

Alternative Delivery for Stream and Wetland Mitigation (30 min.)
Kevin Williams, HDR, Ecological Restoration Practice Lead
Ron Geiger, HDR, Southeast Stormwater Lead

Hear about trends seen across the country regarding alternative delivery of natural resource recovery, mitigation, and banking strategies that are becoming more prevalent within public projects, and the lessons learned from completed implementation of projects.

F1E: Transportation

Transportation Stormwater Management in a Design Build World (30 min.)
Kathryn Gruver, HDR Engineering Inc, Hydrology and Hydraulic Engineer

The Project Scope rules design build projects. Multiple groups use the scope: owner, contractor, reviewer, and designer. All of these groups have diverging goals, most of those goals are not a well thought out stormwater management plan. A well written scope provides a clear understanding of all the items needed for the proper design, installation, and eventual maintenance of the stormwater components.

ODOT L&D Post Construction BMP Updates (30 min.)
Jon Prier, P.E., Department of Natural Resources, Natural Resources Engineer

The design guidance for many post construction BMPs has been

updated in ODOT's L&D Volume 2. Additional design guidance has also been developed by ODOT to support design of BMPS. This presentation will identify recent updates to each BMP listed in the L&D and discuss impacts on design.

How to Maximize Stormwater Asset Management for DOTs (30 min.)
Mark Dennis, Arcadis, Project Manager
Mark VanAuken & Jeffrey E. Syar, P.E., Arcadis, Stormwater Practice Leader

DOTs are required by MAP-21 to gather information on their stormwater assets. Use of mobile devices and an automated risk-based asset management approach tied to GIS is a cost-effective method to gather stormwater asset information, prioritize maintenance and capital improvements, and meet regulatory requirements for their stormwater system.

F1F: Industrial

Stormwater Best Management Practices for Marinas (30 min.)
Sarah Orlando, Ohio Sea Grant, Clean Marinas Program Manager
Heather Sheets and Jenny Roar, ODNR-Division of Watercraft

Case study of an Ohio marina was developed to highlight successful Ohio Clean Marinas Program stormwater best management practices. Guidance will be provided on retrofitting existing marinas to comply with the NPDES General Permit for Industrial Activity at Marinas requirements or to improve water quality.

Satisfying the Industrial MS4 Permit (30 min.)
Amanda Baker, P.E., LEED AP ID+C, McCormick Taylor, Water Resources Engineer

Many county maintenance facilities are classified under industrial activity category eight which requires an industrial permit. This presentation will elaborate on the requirements associated with industrial permits and showcase four county owned sites which will provide a framework to discuss strategies to satisfy permit requirements and discuss lessons learned.

STORMWATER ACTIVITIES IN OHIO | Shale Oil and Gas Requirements (30 min.)
Adam Weinandy, CPESC, CESSWI, Hull & Associates | Engineer

ODNR's Horizontal Well Site Construction Rule includes requirements for a sediment and erosion control plan, a stormwater hydraulic report and more. Though oil and gas activities from National Pollutant Discharge Elimination System (NPDES) permits, installation of best management practices (BMPs) is required. An overview will be presented, along with control measures and BMPs implemented to meet requirements.

SESSIONS / TRACKS - 10:30 to 12:00 p.m.

F2A: Monitoring, Modeling and Research

AquaSafe: An all-inclusive App for Akron's Storm and Source Water Monitoring (30 min.)
Jessica Glowczewski, City of Akron, Watershed Superintendent
Kenneth Crisp, City of Akron, Civil Engineer

The City of Akron has spent the last year developing the aQuaSafe application, which has entirely replaced all other forms of data collection and management for the Watershed Division. This application allows the assignment and field collection of data for water quality sampling (stream and reservoir sampling), land use pollution monitoring and incident reporting as well as providing emergency notifications and support for both field and supervising personnel.

Advancements in Monitoring and Real-Time Control Technology Result in Improved Stormwater Management (30 min.)
Jamie Lefkowitz, P.E., OptiRTC, Inc. Senior Engineer
Elizabeth Toot-Levy, Geosyntec Consultants Project Scientist

This presentation will discuss real-time monitoring and forecast-based stormwater control technology. Modeling to support its effectiveness, case studies, and local examples will be included to show how data-driven stormwater management improves planning, design, and implementation.

Technology for Stormwater Utility Management (30 min.)
Derek Mair, EMH&T, Director of Geospatial Solutions

There is great potential to improve and streamline stormwater utility business operations through the use of technology. The processes related to managing a stormwater utility can be complex and are ripe for automation. This includes items such as determining the basis of billing, approval and tracking of credits, rate structure, verification and update of billing due to development, and overall or individual reporting. EMH&T has developed and applied an application that brings together all these details and more and integrates them seamlessly - including the billing system which is often managed by a third party.

F2B: Stormwater & MS4 Program Management

Ohio EPA Online Permit Submittal (30 min.)
Harry Kallipolitis and Jason Fyffe, Ohio EPA Division of Surface Water

Ohio NPDES general permits can now be submitted, signed and paid online. Hear how to obtain the necessary e-business account and pin and all the steps required in submitting your Ohio NPDES notices of intent using the internet.

MS4 and CGP UPDATE (30 min.) - repeated twice
Harry Kallipolitis and Ohio EPA's regional stormwater coordinators

Hear the most recent updates and planned direction of the Ohio Construction General Permit and the Municipal Separate Storm Sewer Systems (MS4s) Permit. You'll have an opportunity to ask questions and have them answered by the staff responsible for assisting permit holders and monitoring compliance.

F2C: Stormwater Practice, Planning and Design

Post Oak of Gahanna Bioretention Cell Design and Construction Review (30 min.)
Casey C. Elliott, PE, PS, Conservation Technologies, Inc.

Post Oak of Gahanna is a small infill subdivision in Gahanna, Ohio. Construction of the subdivision was completed in September of 2015. House construction continues. We used Bioretention Cells, along with sheet flow from streets into grass filter strips, and storm sewer outlets into grass swales and filter areas, as an alternative to conventional detention basin design with forebays and micropools. The construction sediment basins and the bioretention cells were closely coordinated to minimize excavation and erosion.

Creating Safer Green Infrastructure Designs (30 min.)
Kurt Kinney, Arcadis, Water Resource Specialist
Mark Auken, Senior Water Resources Engineer, Natl Expert Leadership

Improperly designed and maintained green infrastructure can lead to tripping hazards, poor aesthetics, traffic safety, and health issues. Learn about design issues inherent with green infrastructure safety and concepts that should be considered to improve the long-term performance of green infrastructure designs.

Closed Bottom Pervious Pavers - East Bank at the Flats (30 min.)
Ken Bukowski, GPD Group, Project Manager

East Bank at the Flats Pervious Paver Closed Bottom BMP Systems are successfully implemented. Extreme site challenges and constraints have been effectively worked through and surpassed. This ultra-urban redevelopment has tapped into this BMP's benefits to create one of the most desirable Downtown Cleveland, Ohio live, work, enjoy life experiences.

F2D: Watershed Planning

How Many Credits Would Your Stream Mitigation Project Generate? (30 min.)
Joshua White, Civil & Environmental Consultants, Inc. (CEC)

Stream mitigation has become a routine unavoidable requirement from Federal and State permitting agencies for impacts to our water resources. This has placed intense focus on stream restoration practices as the most common practice for mitigation. As it is written, the Federal regulations have left it up to each region or district to establish stream mitigation requirements. These regulations have created a wide range of assessments and procedures for mitigating the impacts.

Water Quality Enhancement through Development - The Benefit of Riparian Buffers (30 min.)
Cynthia Paschke, Cynthia Paschke, MEd, PWS Princ. Env. Scientist and
James Jones, PE, CPESC CPSWQ BL Companies

During the expansion plans for Christ Community Chapel in Aurora, Ohio Plans required mitigation of a section of a perennial headwater stream that was proposed to be enclosed. The project required Section 404 permitting with the USACE for which BL Companies performed multiple site visits, coordinated with the Corps, City, and others to develop the mitigation concept. Hear how the project shows collaboration with the agencies to accomplish the landowner needs, enhance water quality, and satisfy the requirements of the Clean Water Act.

Managing Stormwater at a U.S. EPA Superfund Site in Cleveland, Ohio
Michael J. Cook, PE, StormTech -- Engineered Products Manager
Michael Blair, CPG, Tetra Tech -- Project Manager / Geologists

Hear about the challenges faced as designers wrestled with achieving clean water quality standards and other stormwater objectives on a large multi-acre contaminated Cleveland public park in an area adjacent to a school and urban neighborhoods and while under a strict emergency-response timeline. This session will discuss the design phase, modifications made during construction, regulatory requirements with the City of Cleveland and Northeast Ohio Regional Sewer District (NEORSD), and stormwater public safety measures taken. This unique was managed by U.S. EPA Region 5 and a team of professionals from Tetra Tech, Inc., Environmental Quality Management, Inc., and Weston Solutions, Inc.

F2E: Transportation

If You Can Fit a Ditch, You Can Fit Bioretention (30 min.)
Jon Prier, P.E., Ohio Department of Natural Resources, Natural Resources Engineer

For many roadway projects, linear bioretention may provide water quality and quantity treatment while only requiring the footprint of a normal grass ditch. This post construction BMP can help transportation projects avoid purchasing additional right-of-way for basin systems by taking advantage of its narrow footprint.

BMP stormwater management tool for locals (30 min.)
Mark McCabe, Gresham Smith and Partners

Learn more about ODOTs post-construction BMP screening tool for locals. This tool was developed to assist local planners, public works and roadway engineers to identify and select roadway BMPs for local projects.

Road Less Traveled Implementing Nontraditional BMPs for Transportation Projects (30 min.)
Kevin Hutchens, PE, Burgess & Niple, Inc.; Lead Drainage Transportation Engineer

This presentation will examine nontraditional stormwater BMP approaches for transportation projects. Citing two Ohio case studies, attendees will learn about the pros and cons of integrating nontraditional approaches (bioretention and extended retention), relative cost compared to traditional BMP methods, and how to apply them to all levels of municipal projects.

F2F: Commercial

ODOT Rehabilitates Large Arched Culverts with Trenchless Solution (30 min.)
Bradley M. Boyer, Watermark Engineered Product Sales, President

In 2013, the Ohio Department of Transportation (ODOT) approved a pilot project for the rehabilitation of large, twin arch culverts that were rusting and leaking. ODOT identified CentriPipe as a structural rehabilitation solution. This presentation will review the evaluation, selection and installation process as well as a post-installation inspection.

Filtration Fundamentals: The basics and why filtration matters today (30 min.)
Derek Berg, Regulatory Manager, Contech Engineered Solutions

Learning Objectives: Understand how filters function and what impact their ability to clean water; Understand key variables like media gradation, hydraulic loading rate, reactive properties and how they interact to influence performance and longevity; Ensuring filters are designed with sufficient longevity; Applying fundamentals to new forms of stormwater filtration. This presentation takes a close look at key variables like media gradation, hydraulic loading rate, longevity, reactive capacity and discusses how they influence filter performance.

Lessons Learned Retrofitting Urban Streets to Green Streets using Stormwater Planters (30 min.)
William Harris, Modular Wetlands Systems; National Sales Manager

This presentation provides civil engineers, planners, landscape architects, designers, and project developers / advocates with various alternative space-saving solutions to applying smaller, more compact "Green Street" flow-through planter boxes and Tree Box Filters where and when available space is limited in a public roadway or street. Specific project examples using space saving stormwater planter box systems will be provided along with detailed information on the proper design, components, installation and costs for applying stormwater planter box systems.

LUNCH - 12:00 to 1:00 p.m.

SESSIONS / TRACKS - 1:00 to 2:00 p.m.

F3A: Monitoring, Modeling and Research

Crediting Volume Reducing Practices (60 min.)
Jay Dorsey, ODNR-Division of Soil and Water Resources

As developments incorporate greater aspects of green infrastructure, the result will be an overall decrease in stormwater runoff and associated impacts. Incentives are often provided by permit programs and communities in the form of reduced fees or reduced detention requirements. So how much credit should be given to each practice? This session discusses resources being developed for Ohio's Rainwater and Land Development manual along with updates that will be a sound basis for volume reductions associated with practices designed according to the standards.

F3B: Stormwater & MS4 Program Management

Stormwater Control Measures, A Guide for Private Owners and Operators (60 min.)
J. Meiring Borcherds, Cuyahoga County Board of Health

Please join us in learning how to use the NEW "Stormwater Control Measure Operations and Maintenance Manual". This Manual was developed by the Northeast Ohio Stormwater Training Council. The manual will guide the user through routine and non-routine maintenance for each SCM and simplify inspections with state approved maintenance inspection checklists.

F3C: Stormwater Practice, Planning and Design

Restoration and Transformation of Toledo's Cullen Park (60 min.)
Sally Gladwell, The Mannik & Smith Group, Inc. / Principal & Vice President
Steven Day, City of Toledo, Division of Engineering Services

Uniquely located at the confluence of the Maumee River and the western basin of Lake Erie, Cullen Park sits within the 100-year floodplain of the Maumee River watershed and offers the only public access to Lake Erie within the City of Toledo. The park has historically been a very popular passive recreation site and, with help from the Great Lakes Restoration Initiative in the form a $300,000 grant, was transformed into a spectacular demonstration of sustainable stormwater management with a walking trail and diverse habitat.

F3D: Watershed Planning

Current Tools for Stormwater Quality (60 min.)

Scott Taylor, P.E., Michael Baker International, Senior Vice President

This session presents the national research and the tools as a comprehensive approach to some of the most difficult issues facing the stormwater practitioner, in a combined format. These research projects are related by topic as well as by the development of interactive tools.

F3E: Transportation

Maryland Transportation Authority NDPES Compliance in the Chesapeake Bay Watershed (60 min.)

Ali Abbasi, PRIME AE Group, Inc. - VP of Water Services

Aaron Burkhardt, PRIME AE Group, Inc. - Project Manager

The Maryland Transportation Authority (MDTA) is implementing a stormwater management program to address their MS4 NDPES permit and the Chesapeake Bay TMDL. Over 5 years, MDTA has invested $8 million on planning, design and construction. This presentation will address aspects of MDTA's program including regulatory, financial, management and technological requirements.

F3F: Commercial

Utilizing Autodesk's Hydraulics & Hydrology Tools (60 min.)

Dino Lustri, P.E., P.S., Department of Port Control, Design Supervisor

The need to accomplish water resources tasks, meet minimum standards and have verifiable data is becoming even more important as the higher frequency storms appear to be escalating. This class will provide professionals in responsible charge, designers and modelers the comfort of knowing what equations are being used for the various tasks they delegate or perform themselves. There will also be some tips and tricks demonstrating tools you may already have at your fingertips.

SESSIONS / TRACKS - 2:10 to 3:10 p.m.

F4A: Monitoring, Modeling and Research

The Stormwater Institute & Rainfall to Results: the State of Stormwater Report (30 min.)

Chris French, Water Environment Federation - Director of Stormwater Programs

This presentation is designed to introduce the recently created Stormwater Institute, a center for excellence and innovation focused on developing best-in-class solutions to stormwater runoff and wet weather issues. Highlights of the Institute's first product, the 2015 "Rainfall to Results: the Future of Stormwater" report, will be discussed as well as other efforts tied to the Institute.

Stormwater Program Audits – a burden or an opportunity? (30 min.)

Todd G. Williams, M.Sc., Michael Baker International

This presentation highlights lessons learned from audits conducted by State and Federal regulators and looks at how you can take advantage of an audit to improve your stormwater program. A proactive approach to taking advantage of lessons learned by other audits can be very helpful to an MS4 program manager.

F4B: Stormwater & MS4 Program Management

Blueprint Columbus Workforce Development Program: Working Together, Working in Neighborhoods (30 min.)

John Hazlett, Team Leader-Integrated Planning

Keena Smith and Cindy Jacobsen, City of Columbus-Assistant Director Workforce and Economic Development and Regional Client Manager-T&M Associates

As part of the Blueprint Columbus initiative to address a consent decree with the Ohio EPA, the City of Columbus has created a green infrastructure maintenance workforce development program in partnership with Columbus State Community College and several local non-profits. This program has the potential to address poverty and unemployment within the community while promoting the development of small, minority and female-owned businesses through the creation of green-collar jobs.

Tackling Maintenance to Create Jobs and Protect Water Resources (30 min.)

Jennifer Eismeier, Mill Creek Watershed Council of Communities, Executive Director

Maintenance is a consistent barrier to implementation of green infrastructure and stream restoration projects. The Mill Creek Watershed Maintenance Fund removes maintenance from the equation, fundamentally shifting the calculus on returns on investment in project implementation. It also creates stable high-quality jobs and builds a skilled labor force.

F4C: Stormwater Practice, Planning and Design

Use of Super-Sized Green Infrastructure to Mitigate Urban Flooding (30 min.)

Mark VanAuken, PE, CMS4S, ENV SP, Arcadis, Stormwater Practice Leader

The Metropolitan Water Reclamation District of Greater Chicago is evaluating whether green infrastructure can be used to mitigate flooding from wet weather events as large as the 100-year design storm. This presentation describes the activities involved in developing a stormwater master plan featuring super-sized green infrastructure to mitigate flooding, identifies how these improvements tie to opportunities for collaboration and economic redevelopment, and explains how communities can incorporate these stormwater controls on other municipal projects.

An Outdoor Educational Stormwater Classroom in the Banklick Watershed (30 min.)

Kelly Kuhbander, P.E., LEED, AP, Project Manager, Strand Associates

Executing the vision developed in a sustainable stormwater campus master plan, an elementary school courtyard was transformed from an underutilized grassy lawn into an interactive outdoor educational facility featuring stormwater Best Management Practices (BMPs).

F4D: Watershed Planning

Ecological Design of Demolition Sites to Manage CSOs in Detroit (30 min.)

Dan Christian, Senior Project Manager

The stormwater management improvements can lead to improved water quality, and can enhance neighborhood stabilization, community engagement and public health. This project is part of Detroit's Green Infrastructure CSO program. Four bioretention systems were designed and constructed on residential blocks to effectively manage runoff from a 2-year 24-hour storm.

Watershed-scale Stormwater Management (Part 1-Planning): Impairments, Causes, and Cost-effective Solutions (30 min.)

Mark Jacobs, Boone County Conservation District in Northern Kentucky

Katie MacMannis, P.E., Design Engineer at Sustainable Streams

Two approved Watershed Plans provide contrasting case studies that illustrate the importance of comprehensive monitoring programs to identify the root cause of stream impairment. The results of these monitoring data informed the development of cost-effective stormwater management approaches for improving stream conditions.

F4E:

A River Runs Through It: Redeveloping the waterfront from an ecological perspective

Suzanne Hoehne, Biohabitats, Inc. Ecological Engineer

Sherese Fortriede, AICP, City of Fort Wayne Community Development

A riverfront conceptual plan in Fort Wayne, Indiana revealed that the ecological aspects of the riverfronts were underutilized. As a result, three ecologically focused projects have been undertaken. This presentation discusses evaluating ecological function during the planning process, potential for future projects, and the importance of ecology in our communities.

TOWN RUN STREAM RESTORATION | Naturalized System in a Downtown (30 min.)

Conner Smith, Hull & Associates | Engineer

Hugh Crowell, Hull & Associates, Inc, Senior Project Manager

Presentation outlining the creative engineering and ecological strategies, Hull and the City of Marysville used to restore a stretch of the Town Run to a more natural condition, improving natural aquatic and riparian habitats, and creating an aesthetically pleasing asset to Uptown.

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❑ Full Registration
Postmarked before April 15, 2016 ($195)
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❑ Speaker ($100)

❑ Student ($95)

❑ Scholarship ($95)
(See Below)

❑ I am attending Evening Reception, May 5, 2016
(included in registration fee)

Additional Registration Options (see page 5) - **Wednesday May 4, 2016**

❑ The Greenest Zoo in America- Sustainable Practices at the Cincinnati Zoo - $25 per person

❑ Best Management Practices at the SD1 Public Service Park in Fort Wright, Kentucky- $25 per person

Vegetarian options at meals will be available. If **Vegan** option is needed, please check box. ❑

NOTE: Session Tracks/Presentations/Speakers may change slightly between now and the conference.

Please indicate method of payment:

❑ Check (Please make check payable to **Tinkers Creek Watershed Partners**). Any processing fees will be billed to the registrant.

❑ Purchase Order Number: _____
(PO number must be enclosed with this form. Fee is to be paid in full prior to the 2016 Ohio Stormwater Conference)

Or, register on-line at www.ohiostormcon.com under the conference section of our web site.
If you are paying by check or purchase order, please mail the registration form with your payment.

Cancellation Policy: Cancellations before April 22, 2016, may be subject to a processing fee. After April 22, 2016, registration fees will not be refunded, but may be applied to another individual's registration fees.

Scholarship Information

On behalf of the generosity of the Ohio Department of Natural Resource's Ohio Coastal Training Program, we are pleased to offer a limited number of scholarships to assist with conference fees. Applicants will be considered in the order received. Lake Erie Basin Watershed government employees are eligible to apply for the Ohio Coastal Training Program scholarship in the amount of $95.

To apply for this scholarship, please contact Harry Stark at hstark@ohiostormcon.com or 216-385-5248.

Register on-line at WWW.OHSTORMWATERCONFERENCE.COM or submit this completed form to:
Tinkers Creek Watershed Partners, P.O. Box 444, Twinsburg, Ohio 44087

Stormwater Awards

Ohio Stormwater Association Awards will be presented at this year's Ohio Stormwater Conference. The purpose of these awards is to recognize outstanding individuals, programs and projects in the profession of stormwater management, and the benefits they provide to the environment and local citizens.

To nominate someone for an award, please go to the Ohio Stormwater Conference website at www.ohiostormcon.com. The award nominations are due no later than April 1, 2016.

Visit the Conference website to register online and for updated information on the conference.
www.ohstormwaterconference.com

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