Ohio Stormwater Conference 2023 Registration Information

May 10-12, 2023

Kalahari Conference Center - Sandusky

ohstormwaterconference.com

HIGHLIGHTS!

- Kayak Tour
- Amazing Keynote Speakers
- Informative Presentations
- Networking
- Incredible Exhibitors and Sponsors

2023OHIO STORMWATER CONFERENCE

KEYNOTES

Dr. John Hartig
Visiting Scholar at the University of Windsor's Great Lakes Institute for Environmental Research, serves on the Board of Directors of the Detroit Riverfront Conservancy, and chairs the Community Foundation for Southeast Michigan's Great Lakes Way Advisory Committee

Betsy Kling
Chief Meteorologist and Anchor at WKYC.

Betsy Kling has won Emmy awards as both Chief Meteorologist and Anchor at WKYC

Contact: Harry Stark
Email : harry@tinkerscreek.org

16th 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 an excellent opportunity 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 harry@tinkerscreek.org.

Tinker's Creek Watershed Partners

Ohio Stormwater Association

In-Person at Kalahari Conference Center

Kalahari Resort and Conference Center is located at 7000 Kalahari Drive, Sandusky, Ohio 44870. Complete directions can be found on the conference website.

Virtual Information

Starting May 15th, all presentations will be available online virtually. You can reister for virtual only or in-person. All in-person attendees will have access to the virtual sessions.

Hotel Information

The Conference Committee has secured group rates for the Kalahari Resort and Conference Center. We are pleased to announce that the Conference has secured a group rate of $139 per night for the conference.

Booking Website:
https://book.passkey.com/e/50154717

Go to the conference website and under hotel/travel is a direct link to the reservation page.

Note: The Resort Fee has been waived and will not be charged on any guest room. The standard wording on their website and confirmation letters though cannot be changed so it will reference the Resort Fee but no fee will be assessed.

Presented By

The Ohio Stormwater Conference is presented annually by Tinker's Creek Watershed Partners and the Ohio Stormwater Association.

Conference Schedule

The Below Schedule is Subject to Change

Wedensday, May 10, 2023

9:00 a.m. - 11:00 a.m.	Kayak Tour
5:00 p.m. - 7:00 p.m.	Opening and Keynote
7:00 p.m. - 8:00 p.m.	Opening Reception - Exhibit Hall

Thursday, May 11, 2023

Exhibit Area open 8:30 a.m.. - 7:30 p.m.

7:00 a.m. - 8:30 a.m.	Registration / Breakfast
8:30 a.m. - 12:00 p.m.	Concurrent Sessions with breaks
12:00 p.m. - 1:30 p.m.	Luncheon
1:30 p.m. - 5:30 p.m.	Concurrent Sessions with breaks
5:30 p.m. - 7:30 p.m.	Reception

Friday, May 12, 2023

Exhibit Area open 8:30 a.m. - 12:00 p.m.

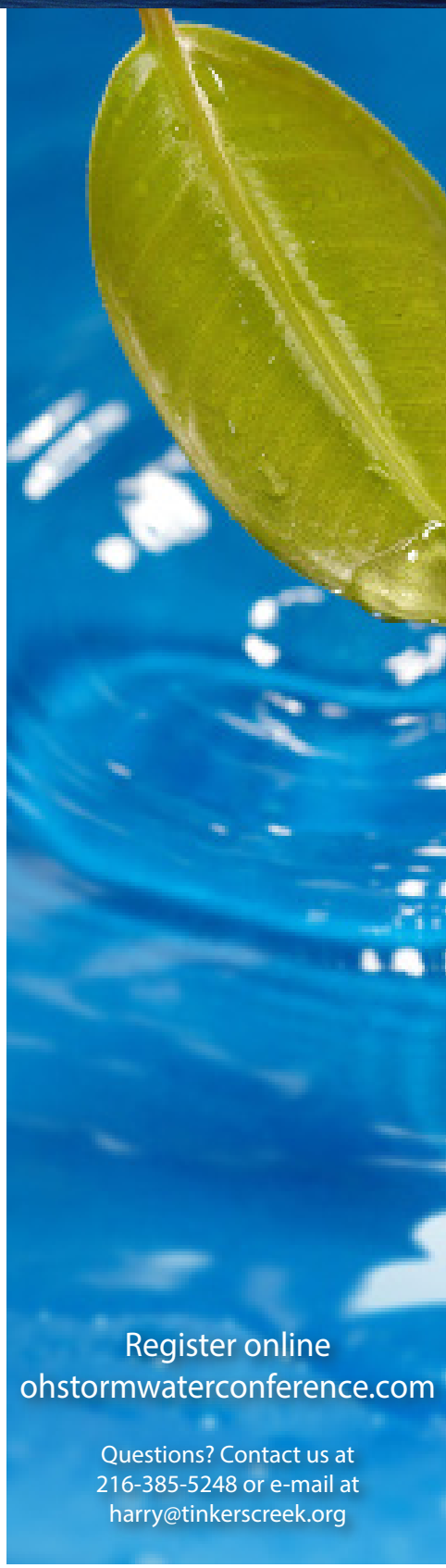
7:30 a.m. - 8:30 a.m.	Registration / Breakfast
8:00 a.m. - 12:30 p.m.	Concurrent Sessions with breaks

Registration Type/Fee

Attendee	Speaker	Student	Scholarship
$225.00 In Person ($275 after 4/15/23)	$100.00	$95.00	$95.00

$150.00 Virtual/Webinar of all presentations starting May 15, 2023
$20.00 Kayak Tour

Registration Includes:
- Unlimited admission to the sessions of your choice on both days
- Access to all recorded presentations after the event.
- Admission to morning breakfasts and all breaks
- Admission to luncheon on Thursday
- Admission to the receptions on Wednesday and Thursday



Register online
ohstormwaterconference.com

Questions? Contact us at
216-385-5248 or e-mail at
harry@tinkerscreek.org

MS4 Bootcamp and Tour

MS4 Boot Camp - more information coming

Whether you have been recently designated a Municipal Storm Sewer System (MS4) community or you have been working with the MS4 program for years, come learn about how other communities meet the requirements of the permit. Join us, virtually, to better understand permit requirements and compliance challenges from other MS4 communities and Ohio EPA stormwater staff. This training will provide all the information and tools your community needs to manage a successful MS4 program compliant with the latest Ohio stormwater general permit. The session will wrap-up with a Q&A session, where you may ask all your program questions and receive program-experienced answers.

Topic: MS4 Bootcamp
Time: May 10, 2023 10:00 am - 3:30 pm
Location: Kalahari, Sandusky

Kayak Tour

Join the Ohio Coastal Training Program for a tour of the barrier beach and the very first Ohio Nature-Based Shoreline Certification Pilot Project before embarking on a paddling tour of the estuary. Staff will discuss some of the different initiatives of the Old Woman Creek National Estuarine Research Reserve, including shoreline stabilization techniques, stormwater management practices, and citizen science monitoring. Canoes/kayaks, paddles, and life preservers provided by OWC NERR. Must be comfortable in a boat and paddling on one's own. Please bring water, sunscreen, and bug spray and dress for the weather.

Price: $20
Time: 9am-11am
Place: Old Woman Creek Reserve Boathouse, 2005 Cleveland Rd E, Huron OH 44839"
Max attendence: 25

Keynote Presentations

Wednesday, May 10, 2023
5:00 - 7:00 pm

Dr. John Hartig
Visiting Scholar - University of Windor's Great Lakes Institute for Environmental Reserach

John Hartig is a Visiting Scholar at the University of Windsor's Great Lakes Institute for Environmental Research, serves on the Board of Directors of the Detroit Riverfront Conservancy, and chairs the Community Foundation for Southeast Michigan's Great Lakes Way Advisory Committee.

For 14 years, he served as Refuge Manager of the Detroit River International Wildlife Refuge. John has received numerous awards for his work, including being recognized as a 2022 Crain's Detroit Business Notable Leader in Sustainability, the 2015 Conservationist of the Year Award from the John Muir Association, and a 2010 Green Leader by the Detroit Free Press. He has authored or co-authored over 140 publications on the environment, including eight books. John's recent book, "Waterfront Porch", won a 2020 Next Generation Indie Book Award in the nature/environment category.

Betsy Kling
Chief Meteorologist & 4-5:30 PM Anchor, WKYC Cleveland

Betsy Kling has won Emmy awards as both Chief Meteorologist and Anchor at WKYC. Born and raised in Northeast Ohio. After graduating from Copley High School she went to Bowling Green State University where she earned her journalism degree with a minor in meteorology. She finished her remaining meteorology coursework through Mississippi State University. Betsy worked in Fort Wayne, Indiana, and Jacksonville, Florida, before coming home in 2003. In 2008 she became Cleveland's first female Chief Meteorologist.

Betsy is part of a small (but growing!) group of women in the country who have earned the prestigious Certified Broadcast Meteorologist (CBM) accreditation from the American Meteorological Society, as well as the Seal of Approval from the National Weather Association (NWA). Betsy was named National Weather Association 2021 Broadcaster of the Year and is the only person to be named Member of the Year twice by the organization.

Program Sessions and Topics

Wednesday May 10, 2023
Opening and Keynotes

Wednesday 5:00 - 7:00 pm

Opening:
Harry Stark, City of Aurora and Tinker's Creek Watershed Partners

Keynote Speakers:

Dr. John Hartig.
Great Lakes Champions is the story of 14 people who love the Great Lakes, have led grassroots efforts to clean up some of their most polluted watersheds, and inspired others to follow. They have had to persevere over decades and not give up in the face of adversity. They are well respected and trusted in their communities and are not in it for acclimation or commendation. They simply and profoundly love the Great Lakes, show reverence for them, and work tirelessly to pass them on as a gift to future generations. Their stories are compelling, provide proof that individuals can indeed change the ecosystems where they live, and will give hope to a new generation of champions.

Betsy Kling
Betsy Kling has won Emmy awards as both Chief Meteorologist and Anchor at WKYC. Born and raised right here in Northeast Ohio, Betsy's hometown, Copley, is in Summit County just to the west of Akron. After graduating from Copley High School she went to Bowling Green State University where she earned her journalism degree and a minor in meteorology. She finished her remaining meteorology coursework through Mississippi State University. Betsy worked in Fort Wayne, Indiana, and Jacksonville, Florida, before coming home in 2003. In 2008 she became Cleveland's first female Chief Meteorologist.

Program Sessions - Starting Thursday

Watershed Planning and Restoration

Thursday 8:30 - 10:00 am

Converting Agriculture Fields to Wetlands in NW Ohio
Kevin Grieser and Suzanne Hoehne, Biohabitats, Inc.
This session showcases six H2Ohio wetland restoration projects in NW Ohio focusing on how cultural resource investigations helped guide the design, putting more dollars into actual restoration, and the different earthworks techniques and habitat features that were installed during construction.

An Urban Watershed Story: From Homestead to Habitat
Erin Mundorf, Biohabitats, Inc.
Elizabeth Hiserk, Cleveland Metroparks
Cleveland Metroparks and their consulting team utilized H2Ohio funding and the CMR process to enhance wetlands and restore a former homestead to a naturalized stream channel. This project tells a watershed story where upstream and downstream projects build on each other to create a naturalized urban stream in dynamic equilibrium.

Thursday 10:30 am - 12:00 pm

Partners in Community
Harry Stark, City of Aurora, Tinker's Creek Watershed Partners
Dr. Erica Matheny, Tinker's Creek Watershed Partners
TCWP received a grant from ServeOhio to develop the Partners in Community Volunteer Platform where individuals and organizations can register and find volunteer opportunities that match their needs and interests.

Innovative Ways to Compete for Unprecedented Funding
Wayne Hofmann and AJ Gutz Wade Trim
Despite unprecedented funding available through the American Rescue Plan Act, Infrastructure Investment and Jobs Act, Inflation Reduction Act, and other programs, the environment remains competitive for municipalities addressing infrastructure issues. This presentation will give an overview of these and other opportunities to position for funding.

Getting Conservation on the Ground - Grants That Encourage Action
Kristin Hall, Cuyahoga SWCD
Cuyahoga SWCD's Conservation Action Grant and Scholarship fund is a small grant program aimed at breaking down barriers residents experience when trying to getting conservation on the ground. The presentation will highlight the rationale for beginning the program and highlight some challenges and successes.

Thursday 1:30 - 3:00 pm

Case Studies on Asset Management Strategies for Stormwater System Planning
John Aldrich, CDM Smith
Many communities face increased challenges in managing their stormwater systems. This presentation will describe a risk-based asset management framework used during system planning to address these challenges and make more equitable, cost-effective decisions. Case studies will be presented illustrating risk-based criteria and cost-effective risk-reduction strategies for retrofit situations.

Aurora Ohio's Stormwater Master Plan and Asset Management Program
Laurel Christian and Kelly Kuhbander, Strand Associates, Inc.
Harry Stark, City of Aurora
The City of Aurora's stormwater master plan identifies needed improvements to address neighborhood flooding, stream bank erosion, and aging infrastructure. Master planning and asset management provide a holistic view of the City's infrastructure needs and the use of data-driven asset risk ranking provides a methodology for determining and prioritizing projects.

The N:P Ratio in Urban Stormwater: Implications for HAB management
Ryan Winston, Ohio State University
The nitrogen to phosphorus ratio is a critical parameter that determines the strength and toxicity of harmful algal blooms. This presentation will focus on the N:P ratio in urban stormwater and whether it can be readily modified using green infrastructure.

Thursday 3:30 - 4:30 pm

After an Extreme Storm: Madison's Approach to Flood Mitigation Planning
Michael Wegner, Brown and Caldwell
In response to flooding in 2018, the City of Madison initiated a comprehensive watershed planning program. This presentation will describe how the program was developed using a case study of the Wingra West watershed, which has been described by city staff as one of the guinea pigs of the program.

Thursday 4:00 - 5:30 pm

Martin's Run Ecological Restoration Project
Kathryn Golden, CPMSM, CFM, City of Lorain
Chip Wendt, PWS, CPESC, CESSWI, Coldwater Consulting
Stormwater management goals can be achieved by constructing ecologically focused stream and wetland restoration projects at considerable cost savings compared to more traditional detention basin projects.

ABCs of Environmental Constructability
Michael Thompson, Meadville Land Service
Often in environmental construction, plans and specifications can unknowingly place a number of constraints on a project that make construction more difficult for the contractor. We will share some ideas that can help save time and consternation for all involved during the construction process.

Friday 8:00 - 9:30 am

How Climate Change is Impacting the Ohio River Basin
Mark D. Kessinger, DLZ National, Inc.
In 2017, the U.S. Army Corps of Engineers, along with other federal and state agencies, completed the first study on how climate change impacts the states that lie within the Ohio River Basin. This presentation will describe potential climate change impacts to Ohio's infrastructure including our stormwater infrastructure.

Optimizing Climate Resiliency and Stormwater Management with Nature-Based Systems
Scott B Dierks, GEI Consultants
Plants exert significant control over the water cycle to provide themselves with the longest continuous supply of water as possible. This presentation will highlight ecohydrology and critical zone research to demonstrate how improved stewardship of native and restored landscapes can improve stormwater management and climate resiliency.

Friday 10:000 - 11:00 am

The Historic Bloody Run Swamp Gets an Overdue Transfusion
Aaron Van Ostran, Stream + Wetlands Foundation
The historic Bloody Run Swamp comes back to life over 100 years after the last portion was drained. Development and implementation of this challenging mitigation site has unearthed a treasure-trove of documented and pre-historic information and will provide ecological, hydraulic, and hydrological information into the future.

Friday 11:15 - 12:15pm

SD1's Comprehensive Bullock Pen Creek Master Plan Achieves Multiple Objectives
Chris Rust, Strand Associates, Inc.
SD1 recently completed the Bullock Pen Creek watershed master plan to holistically evaluate improvement alternatives to alleviate flooding, eliminate sanitary sewer overflows, and reduce stream erosion. The master plan identified 27 projects that can be prioritized and sequenced to achieve the most cost-effective solutions throughout the watershed.

Retrofits: Is existing impervious key to fixing our stormwater problem
Derek M. Berg, Contech Engineered Solutions LLC
This presentation highlights existing impervious surfaces lacking modern stormwater control measures (SCMs) and the opportunity retrofitting them creates for restoring urban impaired watersheds. The presentation defines the scope of the problem, the role of TMDLs in accelerating retrofits, and the need for new policies to maximize progress.

Stormwater Practices, BMPs, Planning and Design

Thursday 8:30 - 10:00 am

Building a Living Capital Improvement Plan for Warren Ohio
Katherine R. Zodrow, ECO
Warren, Ohio—like other legacy cities—is faced with population decline and economic contraction. This creates a problem for stormwater planning, as the City has fewer rate payers and an overabundance of stormwater infrastructure. To meet these unique demands, we have developed a Living CIP that enables fluid evaluation of potential projects.

Turbulence and Velocity Reduction in Stormwater Quality Structures
TJ Mullen Best Management Products, Inc.
Stormwater quality control in a compact structural footprint can be beneficial to drainage design in urbanized areas. This presentation helps designers optimize and model structure design with the addition of water quality hoods and sump plates to reduce turbulence and velocity to meet water quality performance goals.

Mo' Acres, Mo' Problems: Managing Stormwater on Large Solar Sites
Kurt Hansen and Val Locker, Environmental Consulting & Technology, Inc.,
Development of large-scale solar energy facilities is increasing nationwide, presenting new stormwater management challenges. Design and phasing recommendations for greenfield solar sites in the Midwest will be outlined, and we will challenge both industry and regulatory listeners to imagine how large-footprint projects can be inspected to maintain compliance for decades.

Thursday 10:30 am - 12:00 pm

Mitigating for Impacts to Ohio's Ephemeral Streams
Aaron Van Ostran, Stream + Wetlands Foundation
Substitute House Bill 175 (effective July 21, 2022) defines permitting and mitigation calculations for permanent impacts to jurisdictional ephemeral streams in Ohio. Presentation will review the calculations and present options for mitigation through multiple examples.

Rainwater Manual and Construction General Permit Technical Updates
Justin Reinhart, Ohio EPA
This session will present recent technical changes to the Rainwater and Land Development manual, including the new bioretention chapter and the new NPDES construction stormwater general permit. Common technical issues will also be discussed with time to field questions.

Thursday 1:30 - 3:00 pm

Designing Infiltration Basins According to the OEPA Stormwater Permit
Matt Mace, Advanced Drainage Systems
Leroy Wertz, Wertz Geotechnical Engineering
This presentation explains when and how to include an underground infiltration basin into your post-construction stormwater plan.

Climate Change Effects on Rainfall Intensity-Duration-Frequency (IDF) Curves in Town
Samir Mainali, Youngstown State University
For the development of storm drainage facilities, intensity-duration-frequency curves are frequently used. These curves need to be assessed and adjusted for future climatic circumstances. This study compares the findings with the observed data and takes into account all likely emission scenarios from CMIP to produce future IDF Curves.

Thursday 3:30 - 4:30 pm

Pond + Skimmer = 90% TSS
Jamie McCutchen, Rymar Waterworks Innovations
Recent testing has confirmed that new technology combining a stormwater basin, permanent skimmer, and water quality filter is an effective way to meet post-construction water quality requirements by achieving over 90% TSS removal. Join us to learn how this new technology benefits the environment and the development.

Stormwater Management: Post Construction Stormwater BMP's
Doug McCluskey, Everett J Prescott
This course focuses on the importance of promoting the infiltration of stormwater as close to the source as possible to reduce runoff and the harmful contaminants that it carries, while also recharging our depleting aquifers. Methods to infiltrate and capture stormwater will be covered.

Thursday 4:30 - 5:30 pm

Enforcement Escalation: The Requirements Versus The Realities
Brent Eysenbach and Christopher Vasco, Cuyahoga SWCD
Contractual structures often seen on NPDES permitted construction sites lead to complications related to the implementation and maintenance of the stormwater pollution prevention plan. We will examine the factors that complicate effective enforcement escalation and how to overcome the associated awkwardness.

Friday 8:00 - 9:30 am

Why you can't just trust the numbers
Jakob Hamlescher, Cuyahoga SWCD
Learn to look at plans for more than just the numbers. This presentation aims to give stormwater professionals and city officials a new lens through which to view plans and to identify problems with designs that go beyond just the numbers.

The Art of LTOM - Crafting Effective Manuals & Agreements
Carla Regener and Brent Eysenbach, Cuyahoga SWCD
If you want your stormwater control measures to live in perpetuity, then you must have a sound LTMA and LTOM Manual. Let us help you unravel this alphabet soup and give you the components necessary to make it appetizing! No cooking skills needed…just bring your appetite for stormwater.

Friday 10:00 - 11:00 am

Hitting a Grand Slam with Public Education
Matt McFadden and Jay Mosley, Lucas County Engineer's Office
The Lucas County Engineer's Office will present early data on using an efficient and fiscally responsible regional public education and outreach program. From initial conception through the campaign's end, attendees may gather a useful tool in hitting public education out of the park!

Building a Resilient Infrastructure
Donald E. McNutt, PE, American Concrete Pipe Association
This presentation will provide information on how we can protect future generations by designing and replacing our failing underground drainage infrastructure with one that is resilient and sustainable. This session will provide the design community with information that can make that happen.

Friday 11:15 - 12:15pm

Hancock County Flood Risk Reduction Program Update
David Hayson and Derek Dalton, Stantec
Steve Wilson, Maumee Watershed Conservancy District
This presentation will provide background for the HCFRR Program, discuss flood risk reduction measures implemented to date, and provide an update on the design of multiple Hydraulic Improvement projects in Findlay and the Eagle Creek Flood Basin (ECFB).

Legal & OEPA Roundtable

Thursday 8:30 - 10:00 am

Ohio Water Law 101
Louis L. McMahon, McMahon DeGulis LLP
Curious about the underlying legal principles that drive stormwater planning? This presentation will review the basics surrounding the multiple sources and regulators of water law in Ohio. Highlights include common law property and tort doctrines, local authority, state regulation, and federal jurisdiction.

Water Law 102: Basic Legal Issues
Louis L. McMahon, McMahon DeGulis LLP
A high-level overview of the nuts and bolts legal issues often encountered by stormwater utilities. The presentation will touch on specific issues, including ditch law, the examination of the practical implications of Sovereign Immunity, citizen suit protections available under the CWA, and flood insurance/flood mapping issues.

Legal Hot Topics and Headlines in Stormwater Management
Megan E. Goedeker, McMahon DeGulis LLP
Stay informed on the latest stormwater-related litigation and other timely, legal hot topics 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.

Thursday 10:30 - 12:00 pm

Ohio EPA Updates and Roundtable
Jason Fyffe, OEPA
This roundtable session will present updates on the recently renewed Stormwater Construction General Permit, the MS4 auditing process, and other current topics. There will be an opportunity for open questions and discussion with Ohio EPA stormwater program staff.

Environmental Justice
Megan E. Goedeker, McMahon DeGulis LLP
In an ever-evolving regulatory world, environmental justice continues to shape the enforcement landscape. This presentation looks at how the government is utilizing enforcement of current pollution laws to address environmental justice concerns, marking the next stage of USEPA's environmental justice implementation.

Thursday 1:30 - 3:00 pm

Ethical Engineers Throughout History
Tom Pannett, Kegler Brown Hill + Ritter
This presentation on ethics and professionalism will providing continuing education credits for professional engineers and surveyors.

Communicating with the Public on Wet Weather Consent Decrees
Louis L. McMahon, McMahon DeGulis LLP
Successful public engagement during the wet weather consent decree process is critical. This presentation will look at best practices for communicating the complex legal and scientific topics to the public.

Thursday 3:30 - 4:30 pm

Conservancy Districts and Watershed Management
John M. Hoopingarner, McMahon DeGulis LLP
This lessons-learned approach will appeal to water managers and stormwater utilities alike. This presentation will examine the roles of conservancy districts and small watershed protection programs.

Thursday 4:30 - 5:30 pm

NUTRIENTS: Important Issues Coming to a Great Lake Near You
Lee A. Slone, McMahon DeGulis LLP
Nutrients are found in all of Ohio's lakes, rivers, and streams. The regulatory strategy to mitigate this pollution continues to evolve. Learn how this will affect municipal stormwater management strategies.

Transportation

Friday 8:00 - 9:30 am

District DOT Stormwater Retrofits Planning and Design
Larry Trout, Jr, PE, and Andrew Sankowski, PE, Straughan Environmental, Inc.
Describes how Straughan supported District Department of Transportation's (DDOT's) program to retrofit areas in the District within the Transportation Public Right-of-Way (PROW) to improve water quality and to reduce the volume of stormwater runoff to comply with the Municipal Storm Sewer System (MS4) permit issued to DDOT.

ODOT Research - Evaluating the Performance Inlet Protection Devices
Justin Kerns, ms consultants, inc.
Ryan Winston and Alec Grimm, Ohio State University
The Ohio Department of Transportation (ODOT), in collaboration with ms consultants and the Ohio State University, recently completed a research study that evaluated the performance and longevity of storm drain inlet protection devices (IPDs) on highway construction projects to optimize safety, water quality, and ease of installation and maintenance.

Friday 10:00 - 11:00 am

State Department of Trnapsortation - Storm Culvert Inspections
Constantine Kontos and Elizabeth McIlwee, AECOM
Understanding stormwater culvert condition assessment processes can improve State Department of Transportation infrastructure.

MDOT Infrastructure Protection and Rehabilitation Response to High Lake Levels
Craig Hebebrand, Arcadis, U.S., Inc.
This multifaceted planning study addresses risks to MDOT assets associated with high water levels in the Great Lakes, as experienced in 2019 and 2020. The project classifies exposure, vulnerability, and risk for flooding and erosion hazards statewide, focusing on areas hydrologically connected to the Great Lakes.

Friday 11:15 - 12:15 pm

Transportation Roundtable
Mark McCabe, JEO Consulting Group
Transportation RoundTable.

Green Infrastructure

Thursday 8:30 - 10:00 am

Increasing Climate Resiliency with Green Infrastructure and Adaptable Trees
David Gamstetter, Davey Resource Group
This presentation will address how climate change will Impact your Community and what you need to do to be prepared. As our climate changes, weather patterns indicate that our region will be wetter and hotter. Climate resilient trees and green infrastructure can ensure a resilient community.

Urban Tree Stormwater Systems with Suspended Pavement
Albert Key, Deeproot Green infrastructure, LLC
Municipalities implement soil volume mandate strategies to attain their tree canopy goals. The techniques used are an opportunity for hydrologic and pollutant removal of storm water runoff in ultra urban settings. Suspended pavement systems and structural soils will be presented using case studies

Thursday 10:30 - 12:00 pm

Hansen and Ryckman Overflow Abatement and Flood Mitigation Project
Michael Cook and Ian Kuchman, Advanced Drainage Systems, Inc.
Neil O'Conner, City of New Albany
The Hansen Alley and Ryckman Alley Overflow Abatement and Flood Mitigation Project utilized a combination of green infrastructure and gray infrastructure, including constructed wetlands, an underground stormwater infiltration and harvesting system located under a baseball field, while utilizing real-time controls to allow for runoff reduction.

BMP Application Of Various LIDs To Reduce Storm Water Run-off
Rajati Dahal, Youngstown State University
A positive correlation between runoff reduction with the implementation of the rain garden and permeable pavement.

Thursday 1:30 - 3:00 pm

Green Infrastructure Assessments for Coastal Resilience
Greg Hoffmann, Center for Watershed Protection
Lindsey Kerkez, Southeast Michigan Council of Governments
The project team conducted a site retrofit inventory to identify high-priority stormwater retrofits and shoreline restoration opportunities on public lands within Southeast Michigan's coastal zone. The 4-county survey yielded multiple restoration and demonstration project opportunities. Methods for community engagement and participation, project identification, and concept design development will be discussed.

Using High-Flow Biofiltration to Provide Runoff Reduction
Chris Allen and John Pedrick, Contech Engineered Solutions
Field-based performance monitoring of a high flow biofiltration device has demonstrated significant capability for stormwater runoff reduction, providing both water quality and quantity benefits. A review of the device design and gathered field data will help provide an understanding of how to design these products to provide runoff reduction benefits.

Thursday 3:30 - 4:30 pm

Chicago Public Schools Space to Grow Stormwater Program
Thomas Price, Environmental Consulting & Technology, Inc.
Chicago Public Schools, Chicago Department of Water Management, and Metropolitan Water Reclamation District of Greater Chicago have partnered to bring much needed improvements to Chicago's elementary school sites, many within underserved neighborhoods. The projects provide needed landscape and play and learning space to asphalt school yards while also reducing stormwater.

Thursday 4:30 - 5:30 pm

Triple Bottom Line of Green Infrastructure
Jason Bailey, Ferguson Waterworks
The presentation looks at techniques including permeable surfaces, vegetated filters, soil medias, tree cells, and space efficient subsurface storage products. From reducing footprint, to improving aesthetics, these technologies are a vital piece to the larger puzzle. Through their joint implementation, projects can achieve the "triple bottom line".

Friday 8:00 - 9:30 am

Green Infrastructure Improvements at Firestone Park
Robert Thompson, Terra Design Studios
Jim Feath, Herbert, Rowland, and Grubic, Inc.
Firestone Park in Columbiana, Ohio is enjoying a renaissance, thanks to a relationship between local advocates and City officials. Learn how the phased implementation of a master plan was able to make tangible green infrastructure improvements and begin to make the public aware of their importance.

Comprehensive, Synergistic Stormwater Channel Remediation
Kevin Boyce, American Excelsior
Vegetated channels provide a soft solution to the landscape and allow for water infiltration.

Friday 10:00 - 11:00 am

Enhancing Soil Infiltration and Reforestation Success with Suburban Subsoiling
Stu Schwartz, University of Maryland Baltimore County
Josh Phillips, Cleveland Metro Parks
Soil decompaction and amendment restores infiltration services and enhances reforestation success in disturbed urban soils. Motivation, implementation, and a consistent framework to quantify stormwater credits are described for the decommissioning and re-naturalization of the Euclid Middle School in northeast Ohio.

Friday 11:15 - 12:15 pm

Sustainability Goals: Building Soccer Parks One BMP at a Time
Sally Gladwell, The Mannik & Smith Group, Inc.
Joe Fausnaugh, City of Toledo
This presentation will focus on the importance of the green infrastructure as a key component of the expansion and revitalization of Toledo's 33-acre Schneider Park Soccer Complex – the city's home for the world's favorite sport. A fun, interactive "Soccer & Sustainability Jeopardy" game will follow.

Monitoring, Inspection, and Maintenance

Thursday 8:30 - 10:00 am

Biological and Water Quality Monitoring in Ohio's Streams and Rivers
Andrew Phillips, Ohio EPA
Water quality has improved immensely over the past four decades in our state's waterways and Ohio EPA's monitoring program has been documenting these changes all the while. Come join us to hear about the Ohio EPA stream monitoring program and the types of water quality data generated from these surveys.

Enhancing Stormwater Infrastructure with Asset Management in Columbia, S.C.
Hal Clarkson, Woolpert, Inc.
This presentation will focus on the importance of the green infrastructure as a key cLearn from the City of Columbia, SC, how to avoid the financial cliff of stormwater infrastructure failure. Infrastructure management can be complex, but it is not complicated. Learn how to build the critical components of an asset management program and realize a positive return on investment all along the way.

Thursday 10:30 - 12:00 pm

NE Ohio Source Control Pilot - Technical Results and Lessons
Mark Delisio, P.E., CT Consultats, Inc.
Brian Shields, P.E. City of Lakewood
The presentation will review technical results and lessons learned from an inflow and infiltration removal (source control) pilot study conducted in Lakewood, Ohio. The project included both public and private property improvements.

Illicit Discharge Detection through Non-dry Weather Screening Activities
Kate Moran and Jessica Doty, CDM Smith
Based on 10-years of field experience, the Hamilton County Storm Water

District (HCSWD) has modified its IDDE program to include non-traditional surveillance methods. Private infrastructure mapping, facility inspections/ trainings, public reporting, and business inspections have allowed HCSWD to detect and eliminate a higher rate of illicit discharges than through traditional dry-weather

Thursday 1:30 - 3:00 pm

Overcoming Hurdles of Implementing a Successful Post-Construction Management Program
Aaron Homer and Edith Kippenhan, City of Toledo
The use of Conceptual Triage as a method to handle challenges while developing a program will be presented. With requirements increasing regularly on a relatively new practice, ways of eliminating and mitigating gaps in knowledge are essential to success and growth of Post Construction as a Minimum Control Measure Program.

Utilizing NOAA Precipitation Estimates for Project Rainfall Response
Joe Pavlick, CT Consultants
Classifying rainfall quickly can provide engineers and public officials a barometer for the significance in the immediate storm aftermath. Atlas 14 published by the NOAA) is one available classification. This presentation will provide an overview of Atlas 14 methods, incorporation into project monitoring and highlight the future Atlas 15.

Thursday 3:30 - 4:30 pm

Adaptations and Considerations for Construction Site Compliance
Eric Lance, CTL Engineering
Sam Schau, Safety Management Group
During plan development stage of a project, having an understanding of site conditions prior to the site, as well as the logistics of active construction, can help prepare more detailed descriptions and use of sediment and erosion controls for the project and reduce maintenance needs and cost.

Thursday 4:30 - 5:30 pm

Monitoring Sewage Contamination in an Urban Watershed Using qPCR Technology
Eric Soehnlen, NEORSD
Here we present a study on Euclid Creek, to monitor improvements following the implementation of the Euclid Creek Tunnel, a CSO capture structure. Microbial source tracking with qPCR was combined with traditional fecal indicator bacterial monitoring to determine the contributions of human versus animal sources to elevated E. coli concentrations.

Building a Robust Post-Construction Stormwater Program
Drew Gamble and Vanessa Rainwater, Christopher B. Burke Engineering, LLC,
A key area of focus that an MS4 can make strides in improving stormwater quality is by building a robust post-construction stormwater program. This presentation will present procedures to implement a post-construction program that is able to break this task down into manageable steps.

Stormwater Retrofits

Friday 8:00 - 9:30 am

Floodplain Storage Re-Imagined as a Community Asset
Kelly Kuhbander, Strand Associates, Inc.
Jeremy Kalb, City of Findlay
To address severe flooding, the City of Findlay planned a 19-acre floodplain benching project downtown along the bank of the Blanchard River. This project re-imagined how the space could be transformed into a community park, while still serving as flood storage.

Leveraging 2D Modeling in Retrofitting a Flooding Neighborhood
Alex Vieira, Hazen and Sawyer
Eric Onderak, Coldwater Consultants
William Glenn, City of Columbus - Dept. of Utilities
This presentation will detail the historic capacity related flooding in a large, developed urban area and the risked-based strategic decision-making process applied in the development of potential solutions to address the flooding.

Friday 10:00 - 11:00 am

From Funding to Final Construction: A Holistic Infrastructure Planning Approach
David Bridenstine and Ashley Wadsworth, OHM Advisors
The “Midwest Neighborhood” in the City of Garfield Heights has seen 60-80% reduction of stormwater in the sanitary system and improved residents’ quality of life thanks to innovations and unconventional approaches in funding, design, and project management.

Level of Service Policy for Stormwater Capital Improvement Projects
Miles Hebert, PE, CFM, EMH&T
The City of Columbus has developed a Level of Service Policy specific to Stormwater Capital Improvement Projects to address surface flooding. The policy provides objective methods for identifying and prioritizing stormwater problem areas, allowing the City to focus their resources on areas of more significant street and building flooding.

Friday 11:15 - 12:15 pm

Through Collaboration: Creating Water Quality Solutions for Chester Stormwater Authority
Lauren Van Meter, HDR
Robert Backman, Stormwater Investment Group, LLC
The Chester Stormwater Authority wanted water quality investments with lower lifecycle costs, simple maintenance, and easy implementation across the city in order to best utilize funding. This presentation will discuss how the Authority collaborated with a technology vendor to develop an innovative stormwater water quality device to achieve their objectives.

Benefits of Vegetation in Cleveland Metroparks Brookside Reservation Bioretention Cells
Andrew Tirpak and Ryan Winston, Ohio State University
Jennifer Grieser, Cleveland Meroparks
Four bioretention cells with varied planting palettes and loading ratios treating runoff from a parking lot were monitored over 16 months. Leaching of several pollutants was observed during the first two years post-construction. Pollutant load reductions may still be anticipated due to hydrologic mitigations provided by the cells.

Modeling and Research

Thursday 8:30 -10:00 am

Urban Stormwater Runoff Characterization in the Lake Erie Watershed
Jay Dorsey and Ryan Winston, Ohio State University
The Ohio State University Stormwater Management Program (OSU-SWMP) partnered with the Chagrin Watershed Partners, Tetra Tech, and Ohio EPA to monitor sediment, nutrient and chloride pollutant loads in stormwater from three distinct land uses in the Lake Erie Watershed. Results will be presented, including winter monitoring.

Stormwater Asset Management and Master Planning for Jackson, TN
Katie Nolan, Gresham Smith
A city (Jackson, Tennessee) with no formal stormwater asset inventory teamed with Gresham Smith to survey, build a GIS system, perform condition assessment, and develop a hydrologic and hydraulic model of the Cane Creek and Bond Creek basins as a pilot project for future efforts on a city-wide basis.

Comparing a High Flow Media Filter and Bioretention Cell Performance
Kathleen Fast and Ryan Winston, Ohio State University
Performance monitoring of a high flow media filter and a bioretention cell at Holiday Harbor Marina in Huron, OH will be discussed. Results presented will include the performance comparison of these two side-by-side stormwater treatment practices, including peak flow mitigation, volume reduction, and water quality treatment.

Thursday 10:30 - 12:00 pm

Using a HEC-RAS 2D Model to Support Wetland Design
David Anderson, Stantec
Charles Onyak, NEORSD
Designing a wetland to stand the test of time can be challenging. In this presentation we will discuss how a HEC-RAS 2D model is developed and how it can support wetland design.

Modeling Smart Stormwater Controls with EPA SWMM
Dayton Marchese, OptiRTC
Expand your "engineer's toolbox" by simulating real-time control systems for stormwater management in EPA SWMM. Using case studies, this presentation will demonstrate the process of building real-time control configurations and simulations for various objectives, applications and BMP types, and enable you to answer clients' key questions about these systems.

Effects of Chlorides on Macroinvertebrate Communities in Ohio Headwaters
Robert Miltner, Ohio EPA
An examination of Ohio EPA water quality survey data shows that the quality of aquatic macroinvertebrate communities is negatively affected by chloride at concentrations much lower than the current chronic criterion of 230 mg/l. The implications this has for managing chloride pollution is discussed.

Thursday 1:30-3:00 pm

Integrating Climate Change Rainfall Projections into Stormwater Models for Planning
Wilson Shealy and Allison Bowman, 2NDNATURE
The design of stormwater structural control measures (SCMs) is typically based on historic rainfall data. Increased rainfall events from climate change have created substantial uncertainty as to how SCMs will perform in the future. In this presentation, we discuss how forward-thinking modeling is necessary for a sustainable stormwater program.

Developing a Tool for Standardized Hydraulic Risk Calculations
George Remias, NEORSD
Jocelyn Anleitner, Wade Trim
Demonstration of an application-based tool for calculating the flood risk of assets for the Northeast Ohio Sewer District's Regional Stormwater Management Program based on PCSWMM model results. This presentation describes the data needed to perform the calculations, the benefits of an application-based tool, and how the data is utilized.

Thursday 3:30 - 4:00 pm

Understanding Stormwater Control Measure (SCM) Sizing and Resilience
Gregory Williams, StormTrap
This presentation will introduce attendees to a sizing tool representative of the tools available from device manufacturers. It will then describe the models used to develop the tool and how it can be adapted to account for future rainfall. The process presented applies to any sizing method.

Thursday 4:00 - 5:30 pm

Exploring Stormwater Management and Environmental Conservation Programs Utilizing AmeriCorps National Service Members
Northern Ohio Watershed Corps (NOWCorps) AmeriCorps Members
Tinker's Creek Watershed Partners' NOWCorps program utilizes National Service Members to explore pressing stormwater management and environmental concerns. NOWCorps, a program of ServeOhio, Ohio's Commission on Service and Volunteerism, and AmeriCorps, works with government and nonprofit organizations to facilitate outreach, education, capacity building, and environmental stewardship. NOWCorps members will share their service year experience, including projects related to stormwater management and environmental conservation.

2022-23 NOWCorps Members

- Maximilian Bauders – HF&G Arboretum Core & Outer Trails Assistant, Holden Forests & Gardens
- Heather Beukeman – NOWCorps Watershed Steward, Chagrin River Watershed Partners
- Sarah Brunot – NOWCorps Education & Outreach Specialist, Chagrin River Watershed Partners
- Kathryn Burnsworth – NOWCorps Conservation Program & Outreach Assistant, Erie Soil & Water Conservation District
- Cora Crilow – NOWCorps Conservation Program Assistant, Ashland Soil & Water Conservation District
- Melissa Dopirak – HF&G Conservation Specialist, Holden Forests & Gardens
- Blake Erman – Natural Resources Technician, Cleveland Metroparks
- Hannah Goulder – HF&G Core Natural Areas Assistant, Holden Forests & Gardens
- Claire Hardi – NOWCorps Outreach Specialist, Summit Soil & Water Conservation District
- Chynna Ingram – Trails Assistant, Cleveland Metroparks
- Maura Montague – Natural Resources Technician, Cleveland Metroparks
- Isabel Neeley – Field Station Assistant, The University of Akron Field Station
- Julio Olivarez – NEOH CLEB/Restoration Crew Member, The Nature Conservancy
- Julie Olivo – NOWCorps Education/Coordinator, Cuyahoga Soil & Water Conservation District
- Victor Serrano – NOWCorps Outreach Specialist, Lake Soil & Water Conservation District
- Patrick Trauernicht – NOWCorps Community Forestry Specialist, Western Reserve Land Conservancy

Industrial

Friday 8:00 - 9:30 am

Protecting Critical Infrastructure for future generations – Southerly WWTP Columbus
Chad Boyer, ms consultants, inc.
Holly Boyer, City of Columbus
This presentation will discuss the engineering completed to date, including floodplain management, hydrologic and hydraulic modeling, compensatory excavation, culvert improvements, stormwater peak discharge and quality management, as well as other aspects of this expansion into the City's future.

Expanding Flocculant Use: What you Need to Know
Kyla J Wood, Applied Polymer Systems, Inc.
States across the US are rapidly adopting flocculants (PAM) into their guidance documents for E&SC and stormwater management. This presentation will introduce anionic polyacrylamide (PAM), how it works, the fundamental principles for use, and dissect and illuminate guidance that is currently available across the US.

Friday 10:00 - 11:00 am

NPDES Qualifications: Lets Get Certified (or not)!
Julie Morelli, Power Engineers, Inc.
There is a significant difference between qualified and certified professionals. Certification programs are more robust that qualifications, requiring the candidate to meet prerequisites for application, demonstrate knowledge through testing, and take and report continuing education. Let's review how to identify the qualification versus certification criteria in different geographies and permits.

Friday 11:15 - 12:15 pm

Make Data Visualization Work for You to Set Program Priorities
Sarah Maistros, Arcadis
Data visualization of MS4 compliance requirements is very beneficial in risk management, meeting permit requirements, and for planning current and future budget and resource needs. Each organization is collecting mounds of data, why not make it spatial, visual, and useful in planning for today and tomorrow for your program.

A Discussion of Common Questions about Industrial Stormwater Compliance
Nathan Collier, POWER Engineers
This presentation will provide an overview of commonly asked questions related to industrial stormwater compliance and their answers. The question-and-answer format will cover topics widely applicable on a national scale and attendees will leave the presentation with a stronger understanding of industrial stormwater compliance.

Sponsors

Platinum Level
» Advanced Drainage Systems, Inc.
» Butler County Storm Water District
» Environmental Design Group
» GPD Group
» Northeast Ohio Regional Sewer District

Gold Level
» ABT, Inc.
» Atlas Technical
» BMP, Inc.
» CDM Smith
» Civil & Environmental Consultants, Inc.
» Contech
» CT Consultants, Inc.
» Davey Resource Group
» ECT
» Grande Water Management
» Indiana Kentucky Ohio Concrete Pipe Association
» McMahon Degulis LLP
» ODNR
» OHM Advisors
» Stantec Consulting Services, Inc.
» Wade Trim

Silver Level
» Brown and Caldwell
» Burgess & Niple
» EMH&T
» Enviropod
» Gresham Smith
» JEO Consulting Group
» J W Faircloth & Son, Inc
» K.E. McCartney & Associates, Inc.
» Meadville Land Service, Inc.
» ms consultants, inc.
» OEPA
» Storm Water Solutions
» V3 Companies

Bronze Level
» AECOM
» Biohabitats
» Coldwater Consulting LLC
» Coyle SWPPP Professionals
» CTL Engineering
» Deerfield Regional Storm Water District
» DLZ Ohio, Inc.
» EJ
» EnviroScience, Inc.
» Hazen and Sawyer
» HDR
» The Mannik & Smith Group, Inc.
» Michael Baker International
» NDS
» Osborn Engineering
» POWER Engineers
» Raftelis
» Rymar Waterworks Innovations
» StormTrap
» Summit Soil and Water

Exhibitors
» ABT, Inc.
» ACO, Inc.
» Advanced Drainage Systems, Inc.
» American Excelsior Company
» Applied Polymer Systems
» AQUA Doc
» Atlas Technical
» Baughman Tile Company
» Biohabitats
» BMP, Inc.
» Brandstetter Carroll, Inc.
» CDM Smith
» Civil & Environmental Consultants, Inc.
» Contech Engineered Solutions
» Coyle SWPPP Professionals
» CTL Engineering
» Davey Resource Group
» ECT
» EJ
» EMH&T
» Enviropod
» Environmental Design Group
» Enviroscience, Inc.
» Ernst Conservation Seeds
» Eurofins TestAmerica
» Everett J Prescott
» Ferguson Waterworks
» Flexamat
» FODS LLC
» Geoshack
» GEI Consultants
» GPD Group
» Grande Water Management
» GrassWorx InstaTurf
» Indiana Kentucky Ohio Concrete Pipe Association
» J W Faircloth & Son, Inc
» K.E. McCartney & Associates, Inc.
» Maccaferri, Inc.
» Marks Construction
» Meadville Land Service, Inc
» Meredith Brothers, Inc.
» ms consultants, inc.
» MTech
» National Gunite
» NDS, Inc.
» NEORSD
» ODNR
» OHM Advisors
» OSWA
» OTT HydroMet
» Precision Laser & Instrument, Inc.
» Redi Rock Structures of OKI
» Roundstone Native Seed, LLC
» Rymar Waterworks Innovations
» S&ME
» StormTrap
» Storm Water Solutions
» Straughan Environmental, Inc.
» SWPPPTrack
» Sweeping Corp of America
» V3
» Verdantas

Registration Form

First Name: _____ Last Name: _____

Company/Agency/Affiliation: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone (required): _____

E-mail (required): _____

Select Registration Type Below

❑ In-Person ($225) Before April 15, 2023 ($225) After April 15, 2023 ($275)

In-Person registration provides access to all virtual, recorded presentations starting 5/15/23.

❑ Virtual/Webinar ($150): **Virtual are recorded presentations: Available 5/15/23 - 12/31/2023**

❑ Speaker ($100) ❑ Student ($95) ❑ Scholarship ($95)

❑ I am attending The Keynote and Opening, Wednesday, May 10, 2023
(included in registration fee)

❑ I am attending Evening Reception, Wednesday, May 10, 2023
(included in registration fee)

❑ I am attending Evening Reception, Thursday May 11, 2023
(included in registration fee)

❑ Kayak Tour, Wednesday May 10, 2023, $20.00, 9:00 am - 11:00 am

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

Please indicate method of payment:

❑ Check (Please make check payable to Tinker's 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 2023 Ohio Stormwater Conference)

Or, register on-line at www.ohstormwaterconference.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 May 1, 2023, may be subject to a processing fee. After May 5, 2023, registration fees will not be refunded, but may be applied to another individual's registration fees.

Register on-line at WWW.OHSTORMWATERCONFERENCE.COM
OR
Submit this completed form to:
Tinker's Creek Watershed Partners, P.O. Box 444, Twinsburg, Ohio 44087