



Tennessee Stormwater Association

# AGENDA

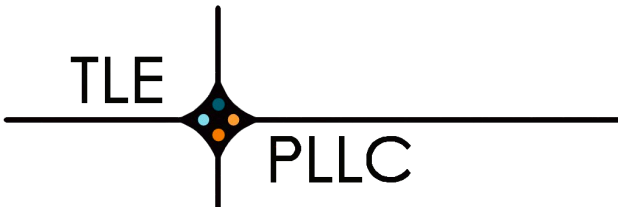
# 2026 ANNUAL CONFERENCE

*Ridges to Rivers*



Gatlinburg  
November 3-5, 2026

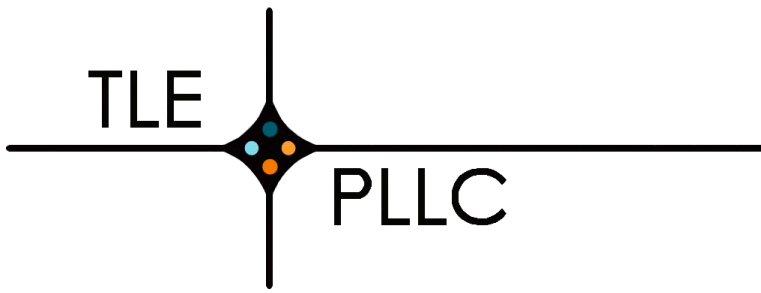
**Presented by:**



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# Tuesday at a Glance

| Start time | End time | Tennessee Ballroom                                                                                                                                             |                                                                                                                                                                |                                                                                                                                                                        |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:30       | 8:45     | Welcome Address - Will Stallard (TNSA President)                                                                                                               |                                                                                                                                                                |                                                                                                                                                                        |
| 8:45       | 9:30     | Flutter & Glow: How more Butterflies, Birds & Fireflies = Stormwater Resilience - Regina Santore (Wild Ones Smoky Mountains Chapter)                           |                                                                                                                                                                |                                                                                                                                                                        |
| 9:30       | 10:15    | Long-term Shifts in Water Quality in the Great Smoky Mountains National Park - John Schwartz (University of Tennessee)                                         |                                                                                                                                                                |                                                                                                                                                                        |
| 10:15      | 10:45    | Break with Exhibitors                                                                                                                                          |                                                                                                                                                                |                                                                                                                                                                        |
| 10:45      | 11:30    | Introduction to FEMA-Floodplain Basic Terminology - Jeremy Holley (Tennessee Emergency Management Agency)                                                      |                                                                                                                                                                |                                                                                                                                                                        |
| 11:30      | 12:00    | Keeping Stormwater Education Fresh & Effective: Practical Approaches for MS4 Permittees* - Mary Halley (WSP)                                                   |                                                                                                                                                                |                                                                                                                                                                        |
| 12:00      | 1:30     | <b>Keynote Luncheon. Speaker: Todd Witcher, Executive Director, Discover Life in America. Title: Water and Wildlife in Great Smoky Mountains National Park</b> |                                                                                                                                                                |                                                                                                                                                                        |
| 1:30       | 2:00     | Break with Exhibitors                                                                                                                                          |                                                                                                                                                                |                                                                                                                                                                        |
|            |          | <b>Gardenview A/B</b><br>Rethinking Flood Risk                                                                                                                 | <b>Gardenview C/D/E</b><br>Project Planning                                                                                                                    | <b>Tennessee Ballroom 4</b><br>Monitoring Matters                                                                                                                      |
| 2:00       | 2:30     | Strategic Stormwater Solutions for Flood Resilience in Athens Tennessee<br>Rebekah Higgins (Gresham Smith)<br>& Ben Burchfield (City of Athens)                | Capital Improvement Planning for Small Municipalities<br>Claudia Bible Tolson (CEC)                                                                            | Finally! Automated, In-situ Bacteria Measurement - Case Studies from MS4s*<br>James Riddle (Woolpert Inc.)                                                             |
| 2:30       | 3:00     | Off the Map, Into Action: Managing Community Risk Beyond FEMA Floodmaps<br>Tom Murray & Lisa Wells (Ardurra)                                                   | From Data to Decisions: Tools for Stormwater Project Prioritization<br>Jordan Hyatt (Barge Design Solutions)                                                   | AIoT Technologies for Flood Monitoring and Retention Pond Management*<br>Roy Chuang, Joseph Fan, Dannis Huang & Anastasia Saint Clair (NEXCOM International Co., Ltd.) |
| 3:00       | 3:30     | Creating a Statewide Gauge Network for Water Levels Across Roadway Crossings<br>Adam Spiller & Crystal Moore (KCI Technologies)                                | Understanding Stormwater Calculators: An Urban Chattanooga Site Case Study<br>Priya Chowdhury & Dr. Jejal Reddy Bathi (University of Tennessee at Chattanooga) | Water Quality Monitoring: A Community Partnership between ETSU and Johnson City*<br>Lena Rodante & Cadence Oliver (East Tennessee State University)                    |
| 3:30       | 4:00     | Break with Exhibitors                                                                                                                                          |                                                                                                                                                                |                                                                                                                                                                        |
|            |          | <b>Gardenview A/B</b><br>Frameworks to Fieldwork                                                                                                               | <b>Gardenview C/D/E</b><br>Watershed Planning                                                                                                                  | <b>Tennessee Ballroom 4</b><br>Next-Generation Asset Management                                                                                                        |
| 4:00       | 4:30     | A Holistic, Adaptive Framework for Integrated Watershed Planning in Knox County<br>David Mason (CDM Smith)                                                     | Streamlining Watershed Plans: Forming Frameworks for Modeling and BMP Selection<br>E. Grace White (Tennessee Technological University)                         | Digital Stormwater Infrastructure Inventory for the City of Kingsport, Tennessee*<br>Evan Needham (Barge Design Solutions)<br>& Will Stallard (City of Kingsport)      |
| 4:30       | 5:00     | Connecting the Dots - Building a Stormwater Asset Inventory<br>Lauren Smith (Kimley-Horn )                                                                     | Targeting Instream Sediment Sources for Watershed Protection<br>Lori Visone (CDM Smith)                                                                        | Strengthening Stormwater Asset Management with Intelligent Data*<br>Karen Ferency (CDM Smith)                                                                          |
| 5:00       | 6:00     | Reception & Networking for TNSA Newcomers                                                                                                                      |                                                                                                                                                                |                                                                                                                                                                        |

# Wednesday at a Glance

| Start time | End time | Tennessee Ballroom                                                                                                                                     |                                                                                                                                                |                                                                                                                  |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 8:00       | 8:30     | Visit with Exhibitors                                                                                                                                  |                                                                                                                                                |                                                                                                                  |
| 8:30       | 9:15     | Urban Waters Report Card: Tool Demonstration for Assessing Stream Quality - John Schwartz (Tennessee Water Resources Research Center)                  |                                                                                                                                                |                                                                                                                  |
| 9:15       | 10:00    | Mud, Sweat, and Streams: Putting Communities to Work in Riparian Restoration* - Andrea Ludwig (University of Tennessee) & Mary Beth Sutton (WaterWays) |                                                                                                                                                |                                                                                                                  |
| 10:00      | 10:30    | Break with Exhibitors                                                                                                                                  |                                                                                                                                                |                                                                                                                  |
|            |          | <b>Gardenview A/B</b><br>Sustaining Success in Program Planning                                                                                        | <b>Gardenview C/D/E</b><br>Evolving Stormwater Solutions                                                                                       | <b>Tennessee Ballroom 4</b><br>Design to Construction                                                            |
| 10:30      | 11:00    | Forward with Funding – How Utility Fees Propel MS4 Planning<br>Aaron Rogge (CDM Smith)                                                                 | Novel Gravel Tree Stormwater System Pilot Project Update<br>Kay Bernard & Bradan Bruce (University of Tennessee)                               | Improving BMP Design: Closing the Gap Between Design Intent & Actual Conditions*<br>Danielle Schwanke (RK&K)     |
| 11:00      | 11:30    | Mature (but Evolving!) Stormwater Utilities<br>Katie Cromwell (Raftelis)                                                                               | High Flow Stormwater Treatment in an Era of Intensifying Storms<br>Dana Stayer (StormTrap)                                                     | Contractors, Municipalities, Engineers, Lend Me Your Ear: About Field Changes*<br>Ryan Forte (City of Gallatin)  |
| 11:30      | 12:00    | Turning Stormwater Vision into Funded, Data-Driven Investment<br>Amy Hathaway & Lisa Wells (Ardurra)                                                   | When Sweeping Isn't Enough: A New Approach to Cleaning Clogged Paver Joints*<br>Van Oldham (EverGreen Infrastructure)                          | Fine-Tuning your PC 1044 for Plans Review Process*<br>Shelia Huffmire (MTAS)                                     |
|            |          | Tennessee Ballroom                                                                                                                                     |                                                                                                                                                |                                                                                                                  |
| 12:00      | 1:00     | Awards Luncheon                                                                                                                                        |                                                                                                                                                |                                                                                                                  |
| 1:00       | 1:30     | Break with Exhibitors                                                                                                                                  |                                                                                                                                                |                                                                                                                  |
|            |          | <b>Gardenview A/B</b><br>Smarter Flows, Cleaner Streams                                                                                                | <b>Gardenview C/D/E</b><br>Roots of Restoration                                                                                                | <b>Tennessee Ballroom 4</b><br>Designing for Approval                                                            |
| 1:30       | 2:00     | A Framework for Evaluating Nutrient Reduction Potential of Tennessee Urban SCMs<br>Tori Denney & Dr. Tania Datta (Tennessee Technological University)  | Compensatory Mitigation for Streams in Urban Watersheds: A Process-Based Study<br>Ceara Parks Oliver & John Schwartz (University of Tennessee) | Guidance for Extended Detention Ponds: Row 3 of the WQTV Table*<br>Christine Guy-Baker & Steven Casey (CEC)      |
| 2:00       | 2:30     | Real Time Stormwater Control and Beaver Dam Effects on Stream Water Quality<br>Theodoros Kyriakopoulos (University of Tennessee)                       | From Plans to Plants: Lessons Learned Developing a Plant & Tree Guidance Manual*<br>Parci Gibson (WSP)                                         | From Watershed Theory to Submittal: Improving Hydrology for Municipal Review*<br>Jacob Mabrey & Ben Butler (CEC) |
| 2:30       | 3:30     | Travel to Ober                                                                                                                                         |                                                                                                                                                |                                                                                                                  |
| 3:30       | 4:30     | TNSA Membership Meeting (Ober Gatlinburg)                                                                                                              |                                                                                                                                                |                                                                                                                  |
| 4:30       | 6:00     | Break at Ober                                                                                                                                          |                                                                                                                                                |                                                                                                                  |
| 6:00       | 9:00     | Networking Event & Dinner for TNSA Members and Conference Attendees at Ober                                                                            |                                                                                                                                                |                                                                                                                  |

# Thursday at a Glance

| Start time | End time | Tennessee Ballroom                                                                                                               |  |  |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------|--|--|
| 8:30       | 9:00     | A Picture is Worth a Thousand Hydrographs - Matt Schlicker (Kimley-Horn)                                                         |  |  |
| 9:00       | 9:30     | From a Stormwater Campus to a Classroom: Engaging 1,400 Middle School Engineers* - Gretchen Judkins (Metro Water Services)       |  |  |
| 9:30       | 10:00    | Tennessee Mitigation Assessment Tool: Overview with Stormwater Focus - John Schwartz (Tennessee Water Resources Research Center) |  |  |
| 10:00      | 10:15    | Coffee Break                                                                                                                     |  |  |
| 10:15      | 11:00    | Continuation of Nashville's SCM Inspection and Compliance Program* - Matthew Lockhart (Metro Water Services)                     |  |  |
| 11:00      | 11:45    | TDEC Updates                                                                                                                     |  |  |
| 11:45      | 12:00    | Closing Address - Christine Guy-Baker (TNSA President 2027)                                                                      |  |  |

\* NPDES MS4 PERMIT COMPLIANCE TOPIC

# Tuesday, November 3, 2026

**8:00 AM – 4:30 PM REGISTRATION AND EXHIBIT HALL OPEN**

**8:00 – 8:30 AM Networking & Visit with Exhibitors**

## Tennessee Ballroom

**8:30 – 8:45 AM Welcome Address** Will Stallard, TNSA President

**8:45 – 9:30 AM Flutter & Glow: How more Butterflies, Birds & Fireflies = Stormwater Resilience**

**Regina Santore, Wild Ones Smoky Mountains Chapter**

Attendees will leave this session with deeper understanding of native and non-native plant ecology, and their effects on stormwater management capacity, as well as the ability to quickly and persuasively communicate these concepts to others.

**9:30 – 10:15 AM Long-term Shifts in Water Quality in the Great Smoky Mountains National Park**

**John Schwartz, University of Tennessee Water Resources Research Center**

Water quality (WQ) in the Great Smoky Mountain National Park has been studied since 1991 from the impacts of acid deposition. There have been significant changes in deposition since 2008 however stream WQ improvements vary due to complex biogeochemical processes. These processes and WQ trends are presented.

**10:15 AM – 10:45 AM Network with our Exhibitors!**

**10:45 – 11:30 AM Introduction to FEMA-Floodplain Basic Terminology**

**Jeremy Holley, Tennessee Emergency Management Agency**

Stormwater professionals will gain a practical understanding of common FEMA/NFIP terms and how they connect to drainage, mapping, development, and local coordination as stormwater and floodplain management continue to overlap.

**11:30 AM – 12:00 PM Keeping Stormwater Education Fresh & Effective: Practical Approaches for MS4 Permittees \***

**Mary Halley, WSP**

This presentation focuses on how MS4 permittees can build on their existing PIE Plans by evaluating and identifying opportunities to refresh and strengthen messaging and will demonstrate how targeted, branded messaging can be delivered in a way that is engaging, practical, and easy to implement.

**12:00 – 1:30 PM Lunch & Keynote Speaker: Todd Witcher, Discover Life in America**  
**Water and Wildlife in the Great Smoky Mountains National Park**



**1:30 PM – 2:00 PM Network with our Exhibitors!**

## Gardenview A/B: Rethinking Flood Risk

**2:00 PM – 2:30 PM Strategic Stormwater Solutions for Flood Resilience in Athens Tennessee**

**Rebekah Higgins, Gresham Smith & Ben Burchfield, City of Athens**

This presentation will overview the ARPA funded Stormwater Masterplan completed for the City of Athens, TN. It will discuss the modeling methodology used to establish existing conditions and the strategic solutions developed to help solve repetitive flooding issues the city struggles with.

**2:30 PM – 3:00 PM Off the Map, Into Action: Managing Community Risk Beyond FEMA Floodmaps**

**Tom Murray & Lisa Wells, Ardurra**

Attendees will gain practical insights into how local governments can go beyond traditional FEMA-based floodplain management and develop community-level programs that identify hidden flood risks, reduce future damages, improve resilience, and support informed decision-making across entire watersheds.

**3:00 PM – 3:30 PM Creating a Statewide Gauge Network for Water Levels Across Roadway Crossings**

**Adam Spiller & Crystal Moore, KCI Technologies**

Public safety is the main priority. Stream gauges allow communities to be proactive rather than reactive during major flooding events. Gauges can serve a variety of purposes, from supporting resilient future development to providing real-time warnings during active flooding.

## Gardenview C/D/E: Project Planning

**2:00 PM – 2:30 PM Capital Improvement Planning for Small Municipalities**

**Claudia Bible Tolson, CEC**

Developing a useful CIP can be difficult for small municipalities with limited resources. How do you prioritize and plan for projects with the resources you have, while also considering where you want to go? This presentation discusses ways to create a meaningful CIP that works for smaller programs.

**2:30 PM – 3:00 PM From Data to Decisions: Tools for Stormwater Project Prioritization**

**Jordan Hyatt, Barge Design Solutions**

Learn practical methods for watershed and project prioritization, data management, and stakeholder communication that can help stormwater utilities of any size make more informed infrastructure planning decisions.

**3:00 PM – 3:30 PM Understanding Stormwater Calculators: An Urban Chattanooga Site Case Study**

**Priya Chowdhury & Dr. Jejal Reddy Bathi, University of Tennessee at Chattanooga**

As urbanization reshapes natural hydrology, selecting the right stormwater tool becomes critical. This study shows that combining hydrologic performance and cost-based assessments provide the most reliable foundation for sustainable, resilient, and regulatory-compliant LID planning.

**\* NPDES MS4 PERMIT COMPLIANCE TOPIC**

## Tennessee Ballroom 4: Monitoring Matters

**2:00 PM – 2:30 PM Finally! Automated, In-situ Bacteria Measurement - Case Studies from MS4s \***

**James Riddle, Woolpert Inc.**

The challenges of sampling/analysis of bacteria are well known, but there is hope. Woolpert has been using new bacteria analyzers capable of quantifying reliable bacteria concentrations without a lab. This innovative approach has allowed MS4s to expedite results and enhance their programs.

**2:30 PM – 3:00 PM AIoT Technologies for Flood Monitoring and Retention Pond Management \***

**Roy Chuang, Joseph Fan, Dannis Huang & Anastasia Saint Clair, NEXCOM International Co., Ltd.**

AIoT based emerging technology for near real-time water/sediment level, water health monitoring by using EC profiling for in real time flood monitoring/early warning and other applications.

**3:00 PM – 3:30 PM Water Quality Monitoring: A Community Partnership between ETSU and Johnson City \***

**Lena Rodante & Cadence Oliver, East Tennessee State University**

ETSU Hydrology students partnered with Johnson City to perform water quality monitoring on local streams and found two did not meet standards.

**3:30 PM – 4:00 PM Network with our Exhibitors!**

## Gardenview A/B: Frameworks to Fieldwork

**4:00 PM – 4:30 PM A Holistic, Adaptive Framework for Integrated Watershed Planning in Knox County**

**David Mason, CDM Smith**

A strong watershed plan aligns goals, public input, and sustainable tools to deliver multi-benefit projects that communities support and funders are more likely to advance.

**4:30 PM – 5:00 PM Connecting the Dots - Building a Stormwater Asset Inventory**

**Lauren Smith, Kimley-Horn** Practical strategies for improving stormwater asset data in a data-limited environment. This presentation highlights lessons learned identifying data gaps, verifying infrastructure connectivity, and maximizing the value of field collection efforts.

## Gardenview C/D/E: Watershed Planning

**4:00 PM – 4:30 PM Streamlining Watershed Plans: Forming Frameworks for Modeling and BMP Selection**

**E. Grace White, Tennessee Technological University**

This presentation will discuss a developing framework for watershed management planning through the integration of modeling, best management practice selection and case studies.

**4:30 PM – 5:00 PM Targeting Instream Sediment Sources for Watershed Protection**

**Lori Visone, CDM Smith**

Sedimentation reduces reservoir storage and raises treatment costs. This study uses LiDAR-based elevation-change analysis and field checks to identify eroding streambanks and translate the findings into practical watershed management guidance.

## Tennessee Ballroom 4: Next-Generation Asset Management

**4:00 PM – 4:30 PM Digital Stormwater Infrastructure Inventory for the City of Kingsport, Tennessee \***

**Evan Needham, Barge Design Solutions & Will Stallard, City of Kingsport**

Kingsport's phased stormwater inventory shows how local/grant funding, survey-grade GPS, mobile condition assessments, and 360° imagery can create reliable asset data to support MS4 compliance, maintenance prioritization, and long-term capital planning.

**4:30 PM – 5:00 PM Strengthening Stormwater Asset Management with Intelligent Data \***

**Karen Ferency, CDM Smith** Understand tools and technologies available to support inventory development and asset management of stormwater systems.

**\* NPDES MS4 PERMIT COMPLIANCE TOPIC**

**5:00 – 6:00 PM NEWCOMERS RECEPTION IN HOTEL LOBBY**

**DINNER ON YOUR OWN**



# Wednesday, November 4, 2026

7:00 AM – 8:00 AM Breakfast in Tennessee Ballroom

8:00 AM – 2:30 PM Registration (Exhibit Hall 8:00AM - 2:30 PM)

\* NPDES MS4 PERMIT COMPLIANCE TOPIC

8:00 AM – 8:30 AM Network with Exhibitors

## Tennessee Ballroom

8:30 AM – 9:15 AM Urban Waters Report Card: Tool Demonstration for Assessing Stream Quality

John Schwartz, University of Tennessee Water Resources Research Center

The Tennessee Urban Waters Report Card (UWRC) provides municipal separate storm sewer systems (MS4s) communities with an assessment tool to grade stream that receive discharges from runoff and stormwater program community engagement. The UWRC is demonstrated from its on-line web page.

9:15 AM – 10:00 AM Mud, Sweat, and Streams: Putting Communities to Work in Riparian Restoration\*

Andrea Ludwig, University of Tennessee & Mary Beth Sutton, WaterWays

Riparian systems across Tennessee are facing multifaceted challenges. We will share how partnerships between the university, nonprofits, and local governments create opportunities for on-the-ground conservation and experiential education and training in riparian restoration.

10:00 AM – 10:30 AM Network with our Exhibitors!

## Gardenview A/B: Sustaining Success in Program Planning

10:30 AM – 11:00 AM Forward with Funding – How Utility Fees Propel MS4 Planning

Aaron Rogge, CDM Smith

This presentation will detail Mt. Juliet's path to utility fee implementation, the production of a stormwater master plan, project identification and prioritization, and phasing for project design and construction.

11:00 AM – 11:30 AM Mature (but Evolving!) Stormwater Utilities

Katie Cromwell, Raffelis

Real case studies will be used to trace how stormwater utilities evolve over decades: from refining rate structures and improving data management to advancing financing strategies and tackling equity. Attendees learn the key drivers for program updates and leave with ideas for what to tackle next.

11:30 AM – 12:00 PM Turning Stormwater Vision into Funded, Data-Driven Investment

Amy Hathaway & Lisa Wells, Ardurra

Bridging the gap between vision and funding, integrated stormwater planning empowers communities to turn unfunded mandates and unmet infrastructure needs into prioritized, data-driven investments that deliver measurable resilience and long-term value.

## Gardenview C/D/E: Evolving Stormwater Solutions

10:30 AM – 11:00 AM Novel Gravel Tree Stormwater System Pilot Project Update

Kay Bernard & Bradan Bruce, University of Tennessee

Early results demonstrate that GTSSs are an effective stormwater management approach which provide primarily hydrologic and water quality benefits. Pending data, this presentation will discuss the runoff reduction and pollutant removal capabilities of the pilot monitoring site.

11:00 AM – 11:30 AM High Flow Stormwater Treatment in an Era of Intensifying Storms

Dana Stayer, StormTrap

Increasing storm intensity across the U.S. is driving higher runoff volumes and peak flows, placing new demands on stormwater control measures. Review changes and benefits to performance/verification programs and how high flow stormwater treatment solutions fit.

11:30 AM – 12:00 PM When Sweeping Isn't Enough: A New Approach to Cleaning Clogged Paver Joints\*

Van Oldham, EverGreen Infrastructure

Participants will learn how sediment clogging reduces infiltration in permeable paver systems and why traditional sweeping may fall short. The presentation reviews University of Toronto research and field applications using compressed air to restore infiltration and extend pavement performance.

## Tennessee Ballroom 4: Design to Construction

10:30 AM – 11:00 AM Improving BMP Design: Closing the Gap Between Design Intent & Actual Conditions\*

Danielle Schwanke, RK&K

Ever seen a BMP and wondered, "what is going on here?" The reality of post-construction BMPs may be vastly different from their intended design, often resulting in underperformance, maintenance challenges, and even complete failure. Close the gap between BMP design intent and actual conditions.

11:00 AM – 11:30 AM Contractors, Municipalities, Engineers, Lend Me Your Ear: About Field Changes\*

Ryan Forte, City of Gallatin

Creating a system to manage field changes during construction is helpful for a municipality to stay organized. The coordination required between multiple parties can be a challenge, but there are ways to bring all parties together for the benefit of the community.

11:30 AM – 12:00 PM Fine Tuning your PC1044 for Plans Review Process

Shelia Huffmire, MTAS

This presentation will discuss the requirements of HB 2552 / Public Chapter 1044 and its mandate for a coordinated and timely development review process. The Center for Local Planning, MTAS, and CTAS have developed guidance documents, webinars, and Q&A resources to assist communities in understanding and implementing the new legislation.

12:00 PM – 1:00 PM EXCEPTIONAL QUALITY AWARDS LUNCHEON IN THE TENNESSEE BALLROOM



# Wednesday, November 4, 2026

1:00 PM – 1:30 PM Network with our Exhibitors!

## Gardenview A/B: Smarter Flows, Cleaner Streams

**1:30 PM – 2:00 PM A Framework for Evaluating Nutrient Reduction Potential of Tennessee Urban SCMs**

**Tori Denney & Dr. Tania Datta, Tennessee Technological University**

Development of a GIS-based framework for evaluating nutrient reduction potential of urban stormwater control measures across Tennessee through statewide SCM inventories, ArcGIS and Python automation, literature-based pollutant reduction estimates, and field validation.

**2:00 PM – 2:30 PM Real Time Stormwater Control and Beaver Dam Effects on Stream Water Quality**

**Theodoros Kyriakopoulos, University of Tennessee**

Real Time Control of stormwater detention ponds caused a significant increase to fluorescent dissolved organic matter in the stream. Beaver dams caused a significant change in water temperature and leaf litter decomposition rates.

## Gardenview C/D/E: Roots of Restoration

**1:30 PM – 2:00 PM Compensatory Mitigation for Streams in Urban Watersheds: A Process-Based Study**

**Ceara Parks Oliver & John Schwartz, University of Tennessee**

This presentation applies a process-based compensatory mitigation framework in the Turkey Creek watershed, integrating stormwater management and stream restoration practices adapted to the functional and spatial realities of urban streams.

**2:00 PM – 2:30 PM From Plans to Plants: Lessons Learned Developing a Plant & Tree Guidance Manual\***

**Parci Gibson, WSP**

Practical lessons from developing a Plant and Tree Guidance Manual, including how to turn stormwater and landscaping requirements into usable design guidance, create site-specific plant palettes, and support long-term performance of vegetated stormwater practices.

## Tennessee Ballroom 4: Designing for Approval

**1:30 PM – 2:00 PM Guidance for Extended Detention Ponds: Row 3 of the WQTV Table\***

**Christine Guy-Baker & Steven Casey, CEC**

This presentation reviews extended detention pond design standards under TDEC MS4/WQTV requirements, focusing on achieving 80% TSS removal. It includes comparisons across Tennessee and other states, research insights, design methods, and a practical example with standard drawings.

**2:00 PM – 2:30 PM From Watershed Theory to Submittal: Improving Hydrology for Municipal Review\***

**Jacob Mabrey & Ben Butler, CEC**

This presentation reviews key hydrologic principles, common submittal challenges, and municipal expectations. It highlights best practices for clear, consistent analyses by linking calculations, mapping, and documentation to support effective design and review.

**\* NPDES MS4 PERMIT COMPLIANCE TOPIC**

Dismiss to Travel to the TNSA Membership Meeting (Directions available at registration)

**3:30PM-4:30 PM TNSA Membership Meeting: Ober Gatlinburg**

**4:30 PM – 6:00 PM FREE TIME AT OBER**

**6:00 PM-9:00 PM RECEPTION DINNER AT OBER**



# Thursday, November 5, 2026

7:00 – 8:00 AM: Breakfast in Ballroom

8:00 – 10:00 AM: Registration

## Tennessee Ballroom

### 8:30 AM– 9:00 AM A Picture is Worth a Thousand Hydrographs

**Matt Schlicker, Kimley-Horn**

Visual communication helps stormwater professionals translate technical data into clear, decision-ready graphics. This session shows how imagery, maps, renderings, dashboards, and ArcGIS tools can explain flood risk, project benefits, MS4 needs, and funding priorities.

### 9:00 AM – 9:30 AM From a Stormwater Campus to a Classroom: Engaging 1,400 Middle School Engineers\*

**Gretchen Judkins, Metro Water Services**

We did it, and everyone survived! We hosted campus tours for 1400 students to learn about stormwater features. Acting as engineers and using their new knowledge, students created runoff solutions to answer our design challenge. These field trips launched our campus as a hands-on learning center.

### 9:30 AM – 10:00 AM Tennessee Mitigation Assessment Tool: Overview with Stormwater Focus

**John Schwartz, University of Tennessee Water Resources Research Center**

An overview of the new Tennessee Mitigation Assessment Tool (TMAT) will be presented with emphasis on metrics related to stormwater management.

## 10:00 AM – 10:15 AM Coffee Break

### 10:15 AM – 11:00 AM Continuation of Nashville's SCM Inspection and Compliance Program\*

**Matthew Lockhart, Metro Water Services**

With the upcoming reissued MS4 Permit for Metro Nashville, we expect increase inspections and maintenance compliance requirements for stormwater control measures. We have implemented several updates to our program to increase efficiency with inspection, reporting, and maintenance compliance.

### 11:00 AM – 11:45 AM TDEC Updates

Answers to your questions dropped off in the TDEC comment box during conference and additional TDEC Updates.

**11:45 AM CLOSING ADDRESS: Christine Guy-Baker, 2027 TNSA President**

**STAY AROUND FOR DOOR PRIZES**

Scan Code for Speaker Bios



**THANK YOU  
FOR  
ATTENDING!**

Scan code for the Conference Survey  
Fill out before the end of conference for a  
chance to win a \$50 Gift Card.  
Winner announced at Closing Session



## A Special Thanks to the Conference Planning Committee:

Conference Chair: Amy Hathaway

Catering – Chris Masin

Social – Barret Fisher

IT/Computer/AV set up – Tim Gangaware

Abstracts and Agenda – Shelia Huffmire, Amy Hathaway & Karen Ferency

Tour/Hike Josh Rogers and John Schwartz

Tracy Jones, Michael Underwood, Tom Lawrence & John Chlarson



Room  
Reservations  
Open in  
January

**SAVE THE DATE:**  
**OCTOBER 19-21, 2027**  
**2027 ANNUAL CONFERENCE**  
**THE CHATTANOOGAN**  
**CHATTANOOGA, TN**

Call for  
Abstracts  
Open late  
February

## Notes:

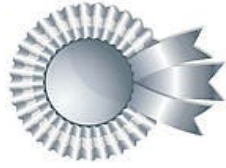
This image shows a single sheet of white paper with horizontal blue lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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has received \_\_ PDH credits for attending:

# THE TENNESSEE STORMWATER ASSOCIATION'S ANNUAL CONFERENCE



November 3-5, 2026

*Charlene DeSha*

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Charlene DeSha, TNSA Executive Director

*Presented by:*

**Tennessee Stormwater Association (TNSA)**  
Park Vista, Gatlinburg, TN

| ✓ | Time          | Credit | Presentation Name                                                                | Presenter                       |
|---|---------------|--------|----------------------------------------------------------------------------------|---------------------------------|
|   |               |        | Tuesday, November 3rd.                                                           |                                 |
|   | 8:45 - 9:30   | 0.75   | Flutter & Glow: How more Butterflies, Birds & Fireflies = Stormwater Resilience  | Santore                         |
|   | 9:30 - 10:15  | 0.75   | Long-term Shifts in Water Quality in the Great Smoky Mountains National Park     | Schwartz                        |
|   | 10:45 - 11:30 | 0.75   | Introduction to FEMA-Floodplain Basic Terminology                                | Holley                          |
|   | 11:30 - 12:00 | 0.5    | Keeping Stormwater Education Fresh: A Practical Approach for MS4 Permittees*     | Halley                          |
|   | 12:00 - 1:30  | 0.5    | Water and Wildlife in Great Smoky Mountains National Park                        | Witcher                         |
|   | 2:00 - 2:30   | 0.5    | Strategic Stormwater Solutions for Flood Resilience in Athens Tennessee          | Higgins, Burchfield             |
|   | 2:00 - 2:30   | 0.5    | Capital Improvement Planning for Small Municipalities                            | Tolson                          |
|   | 2:00 - 2:30   | 0.5    | Finally! Automated, In-situ Bacteria Measurement - Case Studies from MS4s        | Riddle                          |
|   | 2:30 - 3:00   | 0.5    | Off the Map, Into Action: Managing Community Risk Beyond FEMA Floodmaps          | Murray, Wells                   |
|   | 2:30 - 3:00   | 0.5    | From Data to Decisions: Tools for Stormwater Project Prioritization              | Hyatt                           |
|   | 2:30 - 3:00   | 0.5    | AIoT Technologies for Flood Monitoring and Retention Pond Management             | Chuang, Fan, Huang, Saint Clair |
|   | 3:00 - 3:30   | 0.5    | Creating a Statewide Gauge Network for Water Levels Across Roadway Crossings     | Spiller, Moore                  |
|   | 3:00 - 3:30   | 0.5    | Understanding Stormwater Calculators: An Urban Chattanooga Site Case Study       | Chowdhury, Bathi                |
|   | 3:00 - 3:30   | 0.5    | Water Quality Monitoring: A Community Partnership between ETSU and Johnson City  | Rodante, Oliver                 |
|   | 4:00 - 4:30   | 0.5    | A Holistic, Adaptive Framework for Integrated Watershed Planning in Knox County  | Mason                           |
|   | 4:00 - 4:30   | 0.5    | Streamlining Watershed Plans: Forming Frameworks for Modeling and BMP Selection  | White                           |
|   | 4:00 - 4:30   | 0.5    | Digital Stormwater Infrastructure Inventory for the City of Kingsport, Tennessee | Elam, Stallard                  |
|   | 4:30 - 5:00   | 0.5    | Connecting the Dots - Building a Stormwater Asset Inventory                      | Smith                           |
|   | 4:30 - 5:00   | 0.5    | Targeting Instream Sediment Sources for Watershed Protection                     | Visone                          |
|   | 4:30 - 5:00   | 0.5    | Strengthening Stormwater Asset Management with Intelligent Data                  | Ferency                         |
|   |               |        | Wednesday, November 4th.                                                         |                                 |
|   | 8:30 - 9:15   | 0.75   | Urban Waters Report Card: Tool Demonstration for Assessing Stream Quality        | Schwartz                        |
|   | 9:15 - 10:00  | 0.75   | Mud, Sweat, and Streams: Putting Communities to Work in Riparian Restoration     | Ludwig                          |
|   | 10:30 - 11:00 | 0.5    | Forward with Funding – How Utility Fees Propel MS4 Planning                      | Rogge                           |
|   | 10:30 - 11:00 | 0.5    | Novel Gravel Tree Stormwater System Pilot Project Update                         | Bernard, Bruce                  |
|   | 10:30 - 11:00 | 0.5    | Improving BMP Design: Closing the Gap Between Design Intent & Actual Conditions  | Schwanke                        |
|   | 11:00 - 11:30 | 0.5    | Mature (but Evolving!) Stormwater Utilities                                      | Cromwell                        |
|   | 11:00 - 11:30 | 0.5    | High Flow Stormwater Treatment in an Era of Intensifying Storms                  | Stayer                          |
|   | 11:00 - 11:30 | 0.5    | Contractors, Municipalities, Engineers, Lend Me Your Ear: About Field Changes    | Forte                           |
|   | 11:30 - 12:00 | 0.5    | Turning Stormwater Vision into Funded, Data-Driven Investment                    | Hathaway, Wells                 |
|   | 11:30 - 12:00 | 0.5    | When Sweeping Isn't Enough: A New Approach to Cleaning Clogged Paver Joints      | Oldham                          |
|   | 11:30 - 12:00 | 0.5    | Fine Tuning your PC1044 for Plans Review Process                                 | Huffmire                        |
|   | 1:30 - 2:00   | 0.5    | A Framework for Evaluating Nutrient Reduction Potential of Tennessee Urban SCMs  | Denny, Datta                    |
|   | 1:30 - 2:00   | 0.5    | Compensatory Mitigation for Streams in Urban Watersheds: A Process Based Study   | Oliver, Schwartz                |
|   | 1:30 - 2:00   | 0.5    | Guidance for Extended Detention Ponds: Row 3 of the WQTV Table                   | Guy-Baker, Casey                |
|   | 2:00 - 2:30   | 0.5    | Real Time Stormwater Control and Beaver Dam Effects on Stream Water Quality      | Kyrakopoulos                    |
|   | 2:00 - 2:30   | 0.5    | From Plans to Plants: Lessons Learned Developing a Plant & Tree Guidance Manual  | Gibson                          |
|   | 2:00 - 2:30   | 0.5    | From Watershed Theory to Submittal: Improving Hydrology for Municipal Review     | Mabrey, Butler                  |
|   | 3:30 - 4:30   | 1      | TNSA Membership Meeting                                                          | TNSA                            |
|   |               |        | Thursday, November 5th.                                                          |                                 |
|   | 8:30 - 9:00   | 0.5    | A Picture is Worth a Thousand Hydrographs                                        | Schlicker                       |
|   | 9:00 - 9:30   | 0.5    | From a Stormwater Campus to a Classroom: Engaging 1,400 Middle School Engineers  | Judkins                         |
|   | 9:30 - 10:00  | 0.5    | Tennessee Mitigation Assessment Tool: Overview with Stormwater Focus             | Schwartz                        |
|   | 10:15 - 11:00 | 0.75   | Continuation of Nashville's SCM Inspection and Compliance Program                | Lockhart                        |
|   | 11:00 - 11:45 | 0.75   | TDEC Updates                                                                     | TDEC                            |

# EXHIBITORS

