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TNSA Times

Tennessee Stormwater Association News & Information

February 2015

Town of Farragut's Outdoor Classroom

Farragut's Outdoor Classroom and Water Quality Demonstration site was originally conceived in the Fall of 2010 after Stormwater Coordinator and TNSA Vice President, Jason Scott, attended a celebration at Halls Outdoor Classroom in North Knoxville.

Struck by the level of community involvement and opportunities for service learning, an idea was born. As luck would have it, the Town would have a piece of property adjoining Farragut High School, and a survey conducted by Alyssa Watson and Amy Scheuer as part of FHS's Science Academy would lay the foundation for moving forward with the project.



Boy Scout Spencer Flint, working on his Eagle Scout Project

In 2014, the project was finally completed, and in the fall of 2014 the Town held its first ever 'Green Earth, Blue Skies' festival celebrating public lands day and introducing the outdoor classroom space to the public. Since its completion, the Outdoor Classroom has been the site of several Eagle Scout projects, thanks to Boy Scout Troop 444, as well as projects lead by Farragut High School staff, and a new partnership with Pellissippi State Community College to install a rain garden on the site.

In addition, the Outdoor Classroom serves as a water quality demonstration space illustrating the use of permeable pavers, permeable concrete, rainwater harvesting, and rain gardens to the general public.

These demonstrations are particularly important because it represent the tools available to the development community to meet their 1" runoff reduction requirements as it pertains to the 2010 NPDES Phase II Municipal Stormwater Permit. These demonstrations, combined with workshops

and public meetings, are laying the foundation for implementation of these dynamic new regulations.

For more information, contact [Jason Scott](#), Town of Farragut Stormwater Coordinator.



TNSA Board Member Jake Greear and his children working with AmeriCorps Member, Hanna Jackson



Teacher Lauren George Smith with one of her classes from Farragut High School at the OC's permeable paver parking lot.

TDEC's New Permanent Stormwater Management & Design Guidance Manual Available

The Tennessee Division of Water Resources is pleased to announce the availability of the Tennessee Permanent Stormwater Management and Design Guidance Manual, First Edition.

The manual includes site design standards for stormwater runoff reduction management and is intended to be a resource to local permanent stormwater management programs.

The manual can be downloaded from our Permanent Stormwater Management Training website located [Here](#).

Also available on the website are the Tennessee Runoff Reduction Assessment Tool (TNRRAT), TNRRAT tutorial videos, information on upcoming training courses, and other related stormwater resources.

The website is best viewed using Google Chrome, Firefox or Internet Explorer 11 browsers.

If you have any questions or comments, please email using the Permanent Stormwater Management Training website contact tab or by calling the Tennessee Stormwater hotline at [865-946-3009](tel:865-946-3009)



Executive Coordinator
Jennifer Watson
jennifer@tnstormwater.org

TNSA Committees

Regulations & Policy
Chair: [Mary Halley](#)

Education Training
& Professional Development
Chair: [Parci Gibson](#)

Manufacturer BMP
Evaluation
Chair: [Chris Granju](#)

Conference Planning
Chair: [Crystal Piper](#)

We welcome TNSA Members to participate on any of these committees! Please contact the committee chair for additional information.

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Update! Rescheduled for March 14th! Looking to Plant 50,000 Tree Plantings in 1-Hour Across Tennessee!

Due to inclement weather we are rescheduling the tree planting event for March 14th!

Tennessee Environmental Council, TDA-Division of Forestry, TNSA, Cumberland River Compact and TDEC are partnering with MS4s, State and Local Parks, to join together to plant 50,000 trees in one

hour across every county in Tennessee!

There will be several tree species available bundled in bags of 100 seedlings. The event will take place on Saturday, **March 14, from 10-11 AM CT/ 11-12 PM ET**. Trees will be available for pick up on Thursday and Friday, March 12 & 13 at each of the 7 TDEC Field Offices

(except Chattanooga) (Click [here](#) for locations).

The Chattanooga pick-up location will be the River City Center (850 Market Street, 2nd Floor Miller Plaza).

If you are interested in participating, please contact Jennifer Watson [Here](#), or please visit the TEC website [Here](#) for additional information.

Call for Abstracts! EPA Region 4 and IECA's Southeast Chapter 2nd Annual MS4 Conference



The EPA Region 4 and the Southeast Chapter of the International Erosion Control Association (IECA) are hosting the second annual Municipal Wet Weather

Stormwater Conference in **Atlanta, GA on June 15-16, 2015**. Presentations will inform and educate MS4 operators, consultants, contractors and others

practicing in the discipline of stormwater management, stormwater quality and erosion and sediment control. Submit an abstract to present in Atlanta! Find out more [Here](#).

Scientific Report Shows Strong Connection between Wetlands, Streams, Rivers and Estuaries

January 15, 2015, By Lek Kadeli

You may have noticed along a favorite hiking trail that some streams only appear after rainfall, or maybe you've seen wetlands far from the nearest river. You probably didn't think about the importance of those smaller water bodies. But a new scientific report we're releasing today shows that small streams and wetlands play an important role in the health of larger downstream waterways like rivers and lakes.

Our researchers conducted an extensive, thorough review of more than 1,200 peer-reviewed, published scientific studies to learn how small streams and wetlands connect to larger, downstream water bodies. The results of their work are being released today. The report, [Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence](#), is a state-of-the-science report that presents findings on the connectivity of streams and wetlands to larger water bodies.

So, what did the researchers find?

1. The scientific literature clearly demonstrates that streams, regardless of their size or frequency of flow, are connected to downstream waters in ways that strongly influence their function.
2. The literature also shows that wetlands and open waters in riparian areas (transition areas or zones between terrestrial and aquatic ecosystems) and floodplains are integrated with streams and rivers, and help protect downstream waters from pollution.
3. There is ample evidence illustrating that many wetlands and open waters located outside of riparian areas and floodplains provide functions that could benefit rivers, lakes, and other downstream waters, even where they lack surface water connections. Some potential benefits of these wetlands, in fact, are due to their isolation, rather than their connectivity.
4. Connectivity between waters occurs in gradients determined by the physical, chemical and biological environment.
5. The incremental contributions of individual streams and wetlands

are cumulative across entire watersheds.

Before finalizing these conclusions, our researchers subjected early drafts of the report to rigorous scientific review. Reviewers came from academia, consultation groups, and other federal agencies, including the U.S. Geological Survey, U.S. Department of Agriculture, the Department of the Interior, and the U.S. Army Corps of Engineers. Our Science Advisory Board reviewed the September 2013 draft of the report and comments were received from members of the public on that draft.

Based on both the extensive, state-of-the-science report and the rigorous peer review process it received, this report makes it clear: What happens in these streams and wetlands has a significant impact on downstream water bodies, including our nation's largest waterways.

About the Author: Lek Kadeli is the Acting Assistant Administrator in EPA's Office of Research and Development. Click [Here](#) for Blog

TNSA Announces \$103,080 in Green Development Grants

Five innovative green infrastructure and low-impact development projects chosen

The Tennessee Stormwater Association, in partnership with the Tennessee Department of Environment and Conservation, the Tennessee Valley Authority and the Tennessee Department of Transportation, awarded \$103,080 to five local governments to fund green infrastructure and low-impact development projects beginning March 2015.

The Green Development Grant Program provides funding through a competitive process for projects such as rain gardens, green roofs, pervious concrete applications, trees and tree boxes, in addition to outreach and education efforts designed to promote green development in Tennessee communities.

“By applying creative design and green technology, these five local governments can improve water quality for Tennesseans, while working to achieve their stormwater management goals,” said Dr. Shari Meghreblian, deputy commissioner for the Tennessee Department of Environment and Conservation. “TDOT, TVA and the Tennessee Stormwater Association are committed to protecting the state’s water resources and TDEC joins these agencies in their efforts to support infrastructure improvements and to share best management practices at the local level.”

The Green Development Grant recipients announced are:

◆ **Memphis and Shelby County Office of Sustainability: (\$20,000)** The Shelby County Engineering program in partnership with Memphis and Shelby County Office of Sustainability with support from Tennessee Chapter of the American Society of Landscape Architects propose to install multiple green infra-

structure demonstration rain gardens at the Peggy W. Edmiston Administration Building (one of the largest Shelby County Government offices) and to offer multiple educational sessions to homeowners. As a part of this demonstration project, the Office of Sustainability will conduct a series of workshops across Shelby County to educate residents and homeowners about practices that can be undertaken at home to save water and treat stormwater.

◆ **Johnson City: (\$25,000)** The Johnson City Public Library, in conjunction with East Tennessee State University, the City of Johnson City, LDA Engineering and Siteworks Studios, will be addressing stormwater runoff at the Public Library by installing an infiltration bed to capture the first inch of runoff from the library roof, provide storage capability for flood mitigation, provide natural habitat for pollinators and provide aesthetic value to the library lawn. The library and ETSU will host community and school education events, workshops, and guided tours on green infrastructure.

◆ **City of Ducktown: (\$25,000)** The City of Ducktown along with the Southeast Tennessee Development District will install green infrastructure in the form of tree wells, pervious pavers and bioretention cells to improve Spruce Street’s stormwater drainage while also addressing water quality with the added benefit of making the street more attractive and accessible to pedestrians.

◆ **City of Lewisburg: (\$23,080)** The City of Lewisburg will use these funds as part of a comprehensive plan to improve the popular Rock Creek Park which host numerous festivals and events throughout the year. The City plans to remove 4,500 square feet of asphalt to create public green space. The existing parking lot will be replaced with pervious pavers to address stormwater runoff by providing a

more natural infiltration of stormwater into the ground.

◆ **City of Chattanooga: (\$10,000)**

The City of Chattanooga will develop and implement a Low Impact Development model competition for students. The competition will recognize outstanding achievement in developing green infrastructure models and understanding of water quality, as it relates to these practices. The competition will recognize individuals, schools and teachers involved as well as cash prizes that will go towards further education concerning water quality and LID.

This grant cycle represents the fourth time the Green Development Grants have been offered to local governments. The grant awards announced today join efforts in the cities of Athens, Chattanooga, Lakeland, Memphis, Knoxville, Nashville, Farragut, Morristown, and the University of Tennessee which were part of the 2008, 2012, and 2013 funding initiatives, with projects ranging from pervious concrete parking installation to a Low Impact Development Design Competition.

“Protecting Tennessee’s watersheds is part of TVA’s mission of service,” said Rebecca Tolene, TVA Vice President, Natural Resources. “Working with our partners on projects like this one is critical to safeguarding our waterways, while ensuring our communities can rely on good, clean water.”

To learn more about the Green Development Grants, please visit TDEC’s website at <http://www.tn.gov/environment/water/green-development.shtml> or the Tennessee Stormwater Association’s website at www.tnstormwater.org/.

2015 Value of Water Summit

March 12-13, 2015 - Knicely Conference Center • Bowling Green, KY

Please join KY-TN WEA and KY/TN Section AWWA at the 2015 Value of Water Summit. Water is essential to life, yet greatly undervalued in the United States where 300 million Americans pay as little as a penny a gallon for clean, safe water. Let’s change the conversation by promoting the value of water and the critical need for infrastructure investment. Keynote Speakers George Hawkins, CEO and General Manager of DC Water, and Melanie Goetz, author of “Communicating Water’s Value”, will kick off our Summit on Thursday, March 12th. <http://www.kytnwea.org/>



SESWA Seminar

MS4 Permits: Getting Maximum Effectiveness out of "Minimum" Measures



DoubleTree Atlanta Buckhead / Atlanta, Georgia / April 17, 2015

The Seminar will present a comprehensive review of new developments in storm-

water practices and permit policies throughout the Southeast. Attendees will hear from both EPA Region 4 and state regulatory agencies on emerging regulatory policies and permitting programs in stormwater management.

Leading experts from local governments and the consulting community will review new strategies and best practices

for permit compliance, public education programs, implementing TMDLs, and LID and BMP selection and maintenance. Presentations will be tailored for both small and large cities/counties, including Phase 1 and 2 MS4 permit holders.

REGISTER NOW!

Some Maryland Industries Find Fee For Stormwater Better Than Alternatives

BNA Report, By *Steven D. Cook*

While Maryland Gov.-elect Larry Hogan (R), during his campaign, called for repealing the state law requiring Baltimore and 10 counties to impose stormwater fees on residential and business properties, at least two affected industries prefer the fee to possible alternatives, representatives of those industries said.

Kathleen Maloney, lobbyist for the Maryland Building Industry Association, told Bloom-

berg BNA Jan. 12 that some Maryland jurisdictions have put forward the rationale that the fee covers only part of the cost of complying with stormwater requirements, and it should be covered with general funds.

The problem, though, she said, is that if localities are unable to fund stormwater requirements, "the EPA can require contingencies." Maloney said the home builders are concerned they would be unable to move forward with construction as a

result.

Tom Ballentine, vice president for policy and government relations at the Maryland Chapter of NAIOP, an association of commercial real estate developers, agreed.

"We're not enthusiastic about paying the fee," he told Bloomberg BNA, but that "progress toward permit compliance is important for future growth. The consequences of failure fall disproportionately hard on future growth."

Take a Virtual Field Trip Through DC Water's Stormwater Infrastructure

January 22, 2015, Jennifer Fulcher, [WEF High-lights](#)

Go online to get an up close and personal view of a giant tunnel and expansive green roof. These two components of DC Water's (Washington, D.C.) [Clean Rivers Project](#) were the subject of a Nov. 19 virtual field trip. EarthEcho (Washington, D.C.) conducted "[Virtual Field Trip: Managing Stormwater with DC Water.](#)"

Two project engineers showcase the tunnel created by the Lady Bird Tunnel Boring Machine and green infrastructure that will capture stormwater during heavy rainfall and help reduce combined sewer overflows in Washington, D.C. From the bottom of a 43-m (140-ft) hole at the [Blue Plains Advanced Wastewater Treatment Plant](#), engineer James Wonneberg discuss-

es the construction of the new stormwater tunnel system. And on top of the enclosed [Fort Reno Reservoir](#), engineer Bethany Bezak describes the reservoir's green roof and discusses how green infrastructure helps capture rainfall and reduce stormwater.

View the entire virtual field trip at <http://earthecho.org/news/HOA-111914>

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- >> Stormwater Pollution Prevention Plans



Jake Greear, PE // 2240 Sutherland Avenue, Suite 2 // Knoxville, TN 37919 // 865.540.0801

Nomination Call for 2015 Governor’s Environmental Stewardship Awards

Each year, the Governor’s Environmental Stewardship Awards honor outstanding accomplishments in the protection and enhancement of Tennessee’s natural resources. Nominating an individual, group or organization for their achievements is a meaningful way to promote conservation and recognize effective environmental leadership in Tennessee.

Nominations are currently being accepted for the 2015 Governor’s Environmental Stewardship Awards, and I am asking you to draw on your knowledge and experience to help us identify those organizations and individuals improving the quality of Tennessee’s land, air and water.

The Governor’s Environmental Stewardship Awards cover 10 categories: Building Green; Clean Air; Energy and Renewable Resources; Environmental Education and Outreach; Environmental Education and Outreach (school category); Land Use; Materials Management; Natural Heritage; Sustainable Performance and Lifetime Achievement.

Any individual, business, organization, educational institution or agency is eligible, provided they are located in Tennessee and projects were completed during the 2014 calendar year. All nominees must have a minimum of three consecutive years in overall environmental compliance

with the Department of Environment and Conservation. Self-nominations are encouraged.

A panel of judges representing agricultural, conservation, forestry, environmental and academic professionals will select award recipients based on criteria including on-the-ground achievement, innovation and public education. The deadline for nominations is March 31, 2015. Award recipients will be announced in May 2015.

For more information and to apply, click [Here](#) or contact [Kathy Glapa](#).

EPA releases 2 documents on Paying and Planning for Green Infrastructure

[Getting to Green: Paying for Green Infrastructure, Finance Options and Resources for Local Decision-Makers](#) summarizes various funding sources that can be used to support stormwater management programs or finance individual projects. Each type of funding source is illustrated by several municipal programs and contains a list of additional resources. A comparative matrix is included which describes the advantages and disadvantages of the various funding sources.

[Coastal Stormwater Management through Green Infrastructure: A Handbook for Municipalities](#) is designed to assist coastal municipalities within the Massachusetts Bay and Cape Cod Bay areas to incorporate green infrastructure into their stormwater management planning. The Handbook can also be applied more broadly by municipal infrastructure and resource managers located in other States. The document presents the following process for green infrastructure planning: 1) watershed assessment, 2) site identification and prioritization, 3) site planning, 4) selecting appropriate green infrastructure practices, 5) developing conceptual plans, and 6) effective plan review.

Spring 2015: Level I, & Level II TNEPSC Course and TN-HDT Course Schedule

TNEPSC Level I Certification Course	
March 19, 2015	Knoxville
March 25, 2015	Memphis
April 21, 2015	Chattanooga
May 7, 2015	Nashville
TBD	Knoxville

TNEPSC Level II Certification Course	
April 8 & 9, 2015	Nashville
May 20 & 21, 2015	Memphis
TBD	Knoxville

TN Hydrologic Determination Training (TN-HDT)	
March 11-13, 2015	Oak Ridge
August 10-12, 2015	Montgomery Bell State Park

Please contact [Tim Gangaware](#) with questions or visit the website: <http://tnstormwatertraining.org/> or <http://tnhdt.org/>.

Creating and Maintaining a Home Rain Garden

FREE Train-the-Trainer Workshop

Thursday, March 12, 2015

9:00 am—3:00 pm

Lunch will be provided by the Collierville Environmental Commission

Collierville Town Hall
500 Poplar View Parkway
Collierville, TN 38017

A train-the-trainer workshop for MSAs interested in conducting home rain garden workshops. The workshop will include a comprehensive overview and hands-on training for creating and maintaining a home rain garden including rain garden design, installation and maintenance.



Advanced registration is required

RSVP to Emily Harrell
eharrell@ci.collierville.tn.us or (901) 457-2346



Sponsored by: TN Dept. of Agriculture, Nonpoint Source Program
Town of Collierville, Collierville Environmental Commission

Obama Administration Announces Water Finance Center, New Municipal Bond

On Jan. 16, the Obama Administration launched the new Water Infrastructure and Resiliency Finance Center at the U.S. Environmental Protection Agency and announced a new municipal bond to encourage public private partnerships. The announcement took place at the Anacostia River Tunnel Project Site in Washington, D.C., where DC Water is working to reduce the 2 to 3 billion gallons of combined sewer overflows (CSOs) that reach the Anacostia River annually. The goal of the water finance center will be to help local and state governments access federal loan and grant programs to get more water and wastewater projects off the ground, including those focused on CSOs and wet weather. The Administration also looks to level the playing field for municipalities seeking public-private partnerships by proposing the creation of an innovative new kind of municipal bond,

Qualified Public Infrastructure Bonds (QPIB). In the stormwater sector, public-private partnerships have come to the forefront as an innovative financing option. In December, for instance, Prince George's County, Md., [approved](#) a first-of-its-kind, community-based, public-private partnership with Corvias Solutions. Under a 30-year partnership, Corvias will manage the design, construction, and long-term maintenance of stormwater management systems for up to 1620 impervious hectares (4000 ac). Public-private partnerships that combine public ownership with private sector management and operations expertise cannot currently take advantage of the benefits of municipal bonds. QPIBs, however, will extend the benefits of municipal bonds to public-private partnerships, including partnerships involving long-term leasing and management contracts, which will lower

the cost of borrowing and attracting new capital. [Read more.](#) Overall, green bonds like this are expected to play a larger role in helping cities and municipalities fund projects that create environmental improvements and increase climate change resiliency, according to the Climate Bonds Initiative. The green bond market has historically been dominated by development banks, but municipality participation is increasing. For instance, [DC Water issued](#) \$350 million in taxable, green century bonds in July 2014, a first for the municipal sector. Project costs will be repaid over 100 years, and proceeds from the century bonds will finance a portion of the DC Clean Rivers Project. [Click Here](#) for



Evaluation of the Role of Public Outreach and Stakeholder Engagement in Stormwater Funding Decisions in New England: Lessons from Communities

This [evaluation report](#) describes lessons about the role and design of public outreach and stakeholder engagement strategies related to community stormwater funding decisions. The evaluation is based on the experiences of eleven small and medium-sized communities, primarily—

but not exclusively—in New England. The evaluation has two complementary goals: first, to evaluate whether and how public outreach and stakeholder engagement efforts (including the use of consensus-building protocols) influenced the

adoption of stormwater funding mechanisms; and second, to draw on the communities' experiences to identify lessons for other MS4 communities considering stormwater program funding solutions.

Making Decisions in Complex Landscapes: Headwater Stream Management across Multiple Agencies

Northeast Climate Science Center Publishes Paper on "Making Decisions in Complex Landscapes: Headwater Stream Management across Multiple Agencies"

Headwater stream ecosystems are especially vulnerable to changing climate and land use, but their conservation is challenged by the need to address the threats at a landscape scale, often through coordi-

ination with multiple management agencies and landowners. Agencies, however, often make decisions independently and this fragmentation of management resources and responsibilities across the landscape may impede the efficiency and effectiveness of conservation actions.

This project sought to provide an example of cooperative landscape decision-making

by addressing the conservation of headwater stream ecosystems facing climate change at the watershed scale. The goal is to provide a decision-making framework and analysis that addresses large-scale conservation threats across multiple stakeholders, as a demonstration of cooperative landscape conservation for aquatic ecosystems. For more information and to download the report, [Click Here.](#)

Executive Order Establishes New Federal Flood Risk Management Standards for Federal Projects

The [Executive Order](#) signed on January 30, 2015, directs federal agencies to adopt new flood elevation standards for the siting, design, and construction of federal projects.

These standards will protect federal assets and improve the Nation's resili-

ence to current and future flood risk. They are expected to lead to financial saving over the long term by reducing federal disaster assistance spending following extreme weather events.

The Executive Order gives agencies options for establishing the flood elevation

and hazard area used in siting, design, and construction, allowing flexibility, while adhering to best practices.

It advocates using a climate-informed science approach and the implementation of natural systems, ecosystem processes, and nature-based approaches to aid decision making.

Boston Groups Plan to Sue EPA for Failing To Require Stormwater Permits

Feb. 10, BNA Report, By Susan Bruninga
Two environmental advocacy groups announced their intention Feb. 10 to sue the EPA for allegedly failing to require numerous dischargers along the Charles River in Massachusetts to obtain stormwater permits for their nutrient-laden runoff.

The Conservation Law Foundation and the Charles River Watershed Association said in their notice of intent to sue that nutrients, including phosphorus, in the stormwater from a number of "commercial, industrial, institutional, and high density residential" entities are polluting the Lower Charles River. "High levels of phosphorus in the Charles River result in excessive algae and aquatic plant growth and low and/or highly variable dissolved oxygen levels," the notice said, indicating that a TMDL had been approved by the EPA mandating reduc-

tions in nutrient loadings. "The Administrator has recognized that the primary cause of the Charles River's collective phosphorus impairment is stormwater runoff from rainfall or snowmelt events, and current controls for stormwater pollution are inadequate to protect the river from its harmful effects."

The EPA issued a preliminary determination in 2008 finding that unpermitted stormwater discharges from properties with two or more acres of impervious cover must be controlled and be covered by National Pollutant Discharge Elimination System permits.

The groups submitted comments on the findings and petitioned the agency in 2009 to go a step further and require permits for dischargers of one acre or more of impervious area in the entire Charles River Watershed. Granting that petition would extend the draft stormwater permit issued in April

2010 by the agency's Region 1 Office in Boston to properties with one acre or more of impervious surface in the entire Charles River watershed, the notice said.

Agency Accused of Several Violations The notice of intent said the agency hasn't acted on the draft permit, the preliminary determination, or the group's petition to extend the permit to properties of one acre or more. The groups will file their suit after 60 days, or April 13, seeking a court order to force the agency's hand. "CRWA analysis has shown that pavement and parking lots are the number one source of phosphorus pollution in the Charles River," Robert Zimmerman, executive director of the watershed group, said in a news release. "If we're ever going to restore the river, water runoff from these large paved areas must be addressed."

Presidential Innovation Award for Environmental Educators

The application period for the 2014-2015 Presidential Innovation Award for Environmental Educators is now open. Apply through March 13, 2015.

The Presidential Innovation Award for Environmental Educators recognizes outstanding kindergarten through grade 12

teachers who employ innovative approaches to environmental education and use the environment as a context for learning for their students.

Up to two teachers from each of EPA's 10 regions, from different states, will be selected to receive this award. The White

House Council on Environmental Quality, in partnership with the U.S. Environmental Protection Agency (EPA) administers this award to honor, support and encourage educators who incorporate environmental education in their classrooms & teaching methods. More details [Here](#).



Oldcastle Stormwater Solutions

BELGARD
commercial

Nashville, TN Seminar

4 PDH Credits/Units Available

February 25, 2015
8:00 AM - 12:30 PM

Location:
Cumberland River Compact
2 Victory Avenue, #300
Nashville, TN 37213
www.cumberlandrivercompact.org

Sponsor: **Oldcastle Architectural**

Stormwater Management Challenges and Innovative Solutions for TENNESSEE

- 8:00 - 8:30 AM** Inlet Filtration
- 8:30 - 8:50 AM** Media Filtration
- 8:50 - 9:30 AM** Biofiltration/BioRetention
- 9:30 - 10:15 AM** Hydrodynamic Separation
- 10:15 - 11:00 AM** Detention/Infiltration
- 11:00 - 11:20 AM** Permeable Solutions
- 11:20 AM - 12:30 PM** Harvesting/Reuse

Registration - Coffee & Assortment of Snacks

Welcome, Safety, Introductions, & KrisStar/Oldcastle Stormwater Solutions Overview
Host Speakers: Laddie Fromelius, Director of Business Development for Oldcastle Stormwater Solutions; Jeff McKinley, General Manager for Oldcastle Precast, Bluegrass Region; Mekayle Houghton, Executive Director for Cumberland River Compact

Improving Nashville's Outdated Stormwater System Through the Creation of the Clean Water Infrastructure Program
KEYNOTE SPEAKER: Nashville Mayor Karl Dean

Oldcastle Stormwater Treatment Solutions
Speaker: Laddie Fromelius, Oldcastle Stormwater Solutions

- Dual Vortex Hydrodynamic Separator
- Perk Filter™ Media Filtration
- BioMod™ Modular BioRetention System

Solutions to Stormwater Infiltration, Detention, Retention & Harvesting
Speaker: Mark Bauer, Oldcastle Stormwater Solutions

- StormCapture® Precast Modular Systems
- PermeCapture™ Precast Modular Systems
- Wahaso Water Harvesting Solutions

Break and Lunch is Served

Sustainable Site Pavement Systems
Speaker: Darryl Sapp, Belgard APG
Permeable Paver Systems; LID; Land Planning; Proper Specifications and Strategies

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RSVP By Feb. 20th - Click Here to Register [Click Here to RSVP](#)

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Upcoming Events

Please email [Jennifer Watson](mailto:jennifer.watson@tensawater.com) with your upcoming events:

February

- 2/20/15—Free tree giveaway of native species noon-5PM Goodlettsville Kroger 123 North Creek Blvd, Goodlettsville
- 2/21/15 - [Greenline Garden Workshops](#) 9-10am, \$5. Join Shelby Farms & Master Gardeners each month to learn more about gardening.

March

- 3/3/15—1:00 PM **West Tennessee Regional TNSA meeting**— Shelby County Roads & Bridge Conference Room, 6449 Haley Road, Memphis, TN 38134 Contact [Chris Masin](#)
- 3/4/15 – Sumner/Wilson/Montgomery Co Managers Meeting. Contact [Amy Murray](#)
- 3/6/15—**East TN TNSA Regional Meeting** 8:30AM in Oak Ridge: 100 Woodbury Lane, Oak Ridge, TN 37830
- 3/7/15 – Stream clean-up, tree planting, tree giveaway, community shredding event – Goodlettsville, Northcreek Park 9AM. Free. All materials provided. Wear protective clothing.
- 3/12 & 3/13—2015 **Value of Water Summit** KY/TN WEA Bowling Green, KY
- 3/14/15 – 50K Tree Planting across the state <http://tectn.org/50ktreeday/>
- 3/16-3/18—[Tennessee Environmental Conference](#), Kingsport
- 3/27/15 – Karst Considerations Workshop, Wilson Co. Fairgrounds Conference Room
(Details forthcoming)



April

- 4/1—4/3—**TN AWRA Conference** 2015 Tennessee Water Resources Symposium Montgomery Bell State Park, Burns, TN
- 4/10/15 – Karst Considerations Workshop, Volkswagen Conference Room, Chattanooga, (Details forthcoming)
- 4/15/15 – **TNSA/APWA Middle TN quarterly meeting**, Tuff Equipment, LaVergne, 11AM-1PM. Free. Lunch is provided. RSVP to Sherry (615) 851-3460.

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Purpose

The mission of the Tennessee Stormwater Association (TNSA) is to assist local government entities in their efforts to comply with State and Federal clean water laws and Stormwater Regulations promulgated by the Environmental Protection Agency and the Tennessee Department of Environment and Conservation; and through such assistance, to protect and improve the quality of the waters of Tennessee. This mission will be accomplished through TNSA members' exchange of information and knowledge regarding the design, construction, maintenance, administration and operation of stormwater facilities. The TNSA will promote the dissemination of information in stormwater control measures and the adoption of improved practices in stormwater administration.

Members

TNSA membership is composed of designated Municipal Separate Storm Sewer Systems (MS4s) including local governments (city and county), universities, military installations, and other entities such as TN Department of Transportation (TDOT). Associate members include environmental advocacy groups, non-profits, Tennessee State, sub-state or federal government entities consultants. Private sector membership is available to for-profit engineering, scientific and management firms or other organizations with an interest in stormwater.

The Role of Public-Private Partnerships in Meeting a Community's Water and Wastewater Needs

Communities challenged with aging water and wastewater infrastructure, increasingly complex regulatory requirements, and budgetary constraints are seeking alternative solutions through proven Public-Private Partnerships (P3s).

The Horinko Group, on behalf of the National Association of



Water Companies, completed a white paper entitled *The Role of Public-Private Partnerships in Meeting a Community's Water and Wastewater Needs — A Primer for Public Officials*.

This primer was designed to help public officials better understand their unique water and wastewater needs, and how vari-

ous types of P3s can meet a municipality's infrastructure requirements.

Relevant examples of successful P3 case studies are

included throughout the primer to reveal how communities are taking advantage of these collaborative arrangements. Additionally, a slide deck and two-page summary are available that distill the more comprehensive white paper.

To download the white paper, visit: http://www.thehorinkogroup.org/wp-content/uploads/2015/02/The_Role_of_P3s_Jan-2015_web.pdf

To download the suite of resources, visit: <http://www.thehorinkogroup.org/reports/>

Getting to Green: Paying for Green Infrastructure
Financing Options and Resources for Local Decision-Makers

"[Getting to Green: Paying for Green Infrastructure, Financing Options and Resources for Local Decision-Makers](#)" summarizes various funding sources that can be used to support stormwater management programs or finance individual projects.

Each type of funding source is illustrated by several municipal programs and contains a list of additional resources. A comparative matrix is included which describes the advantages and disadvantages of the various funding sources.

**Getting to Green:
Paying for Green Infrastructure**
 Financing Options and Resources for Local Decision-Makers

EPA United States Environmental Protection Agency EPA 842-R-14-005 December 2014



Office of Wetlands, Oceans and Watersheds
 National Estuary Program