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# TNSA Times

Tennessee Stormwater Association News & Information

September 15, 2014

## Dalhoff Thomas design|studio Wins the Memphis-Shelby County Low Impact Development Design Competition

Last Thursday night, September 4th, at the Dixon Gallery and Gardens, Memphis-Shelby County Office of Sustainability hosted the final round of competition for the Memphis-Shelby County Low Impact Development (LID) Design Competition.

all teams involved put in countless hours. This competition has the potential to change the way developments are designed in Memphis-Shelby County. *Dean Thomas, principal, said "Dalhoff Thomas Design team is*

*incredibly honored to win the Low Impact Design competition. We want to commend all the amazing entries. This design challenge was a great way to showcase the effectiveness of green infrastructure and we*

*Continued on pg. 4*

The team who took home the trophy and \$15,000 was [Dalhoff Thomas design|studio](#) and [The Corradino Group](#). Second place and \$5,000 was awarded to [Blair Parker Design and Civil Engineering Solutions, LLC](#) and third place with \$1,000 went to Malasri-Gallo-Lawrence.



*1st Place: Dalhoff Thomas design|studio and The Corradino Group.*

The competition was tough and

## Next Week! TNSA Annual Conference September 23-25!

TNSA's Annual Conference is scheduled next week, September 23-25th, at Henry Horton State Park. The Agenda is available [Online](#).

This year's conference is packed with dynamic and compelling presentations including 2 hands-on workshops on the first day—a morning session: Rain Garden Installation presented by [Tennessee Smart Yards](#) and an afternoon session: Intro to Habitat & Visual Stream Assessments. Workshop Agenda [Here](#)

Presentations the following 2 days include sessions on permeable pavers installations and maintenance considerations; Urban Riparian Buffer Program; Runoff Reduction Policies; Comparison of Runoff Reduction Manual Methodologies; Low Impact Design Competitions; Municipal Facility SWPPPs; QLP Discussion; Green Infrastructure Case Studies; MS4 Education Opportunities; Integrated Watershed Planning and much more!

See you there!

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**Our Keynote Speakers will be [Tennessee's Wild Side](#) Hosts [Bill Cody](#) (of [WSM 650](#) fame!) and [Janet Ivey](#)**

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Registration!

## 2nd Annual Urban Runoff 5K & Water Quality Festival

**Saturday, October 25th, 8:30 a.m.**  
**Bicentennial Capitol Mall State Park**

*Building healthier communities through clean water education*

Nashville's Metro Water Services, the Tennessee Department of Environment & Conservation and the Tennessee Stormwater Association have teamed up together to host the 2nd Annual 5K Urban Runoff run in Nashville.

The fun-packed water quality festival will be full of prizes, activities and booths from our

## 2nd Annual Urban Runoff 5K & Water Quality Festival

sponsors and local partners to communicate the importance of improving stormwater quality in achieving healthier streams, rivers and lakes for our good health, wildlife and recreational enjoyment.

The run begins at **8:30 a.m.** at the Bicentennial Mall and weaves its way through downtown past several cool and innovative green stormwater management practices.

Runners/Walkers of all abilities are encouraged to participate. Festivities are for the whole family to enjoy, so feel free to bring children and/or pets.

### Registration Info

Active.com:  
[www.active.com/nashville-tn/running/races/2nd-annual-](http://www.active.com/nashville-tn/running/races/2nd-annual-)

[nashville-urban-runoff-5k-2014](http://nashville-urban-runoff-5k-2014)

\$30 prior to Oct. 22th;  
\$40 on Race Day

All participants will receive a performance T-shirt. Top three finishers in each category will receive a certificate and prize.

Click [Here](#) for more info!



## TDEC Launches Technical assistance Program to Stimulate Energy Efficiency Investments in Local Governments and Public Housing Authorities

TDEC announced the launch of a new program to provide education, outreach and technical assistance to local jurisdictions and public housing authorities to support implementation of energy efficiency and energy management projects.

With a grant from the U.S. Department of Energy, TDEC's Office of Energy Programs and its subrecipient grantee, expert energy efficiency consultancy group Clean Energy Solutions, Inc., will educate local officials on the benefits of energy efficiency and provide technical assistance on

cost-effective energy efficiency measures, such as: building audits and reviews; requests for proposals or requests for qualifications to scope energy efficiency improvement projects; collaborating with energy service companies; benchmarking energy and water usage; measurement and verification of energy savings; and procurement and contracting assistance.

The program will explore major financing options to support energy efficiency improvements, such as energy performance contracting, utility incentives, and utility

bill repayments. Other financing options may be identified during the grant period, which currently runs through early 2016.

**The program is available at no cost to local jurisdictions, including city and county governments, and public housing authorities in the State of Tennessee through January 2016.**

Interested agencies are encouraged to contact Luke Gebhard, Senior Program Manager of TDEC's Office of Energy Programs, at 615-741-2994 or [luke.gebhard@tn.gov](mailto:luke.gebhard@tn.gov)

## WEF Releases Green Infrastructure Implementation Book



In August, the Water Environment Federation announced the release of a special publication related to stormwater. [Green Infrastructure Implementation](#), was developed by Carol Hufnagel of Tetra Tech and Nancy Rottle of the University of Washington, as well as 75 technical experts.

The book provides actionable information promoting the implementation of green infrastructure. Unlike most publications, which focus on technical design of individual green elements, this peer-reviewed book tackles topics related directly to the ability to implement green infrastructure. The collection of programmatic and planning topics is unique in current literature and covers a range of issues from stormwater to public education. *Green Infrastructure Implementation* identifies obstacles and provides guidance for possible approaches to overcoming them at the programmatic level.

It also provides clear and actionable suggestions as to the selection and planning of green infrastructure at different scales and identifies considerations for implementation based on type of practice and specific geographic considerations. Each topic details an assessment of barriers and potential challenges and includes case studies that show how they can be addressed.

## 12th Annual CitiesAlive® Green Roof and Wall Conference Nashville, Tennessee, November 12-15th

Green Roofs for Healthy Cities is also hosting the 12th Annual CitiesAlive® Green Roof and Wall Conference in Nashville, Tennessee **November 12-15** at the Music City Center.

Water is fundamental to life and to green infrastructure. At the 12th CitiesAlive® Green Roof and Wall Conference in Nashville, delegates will explore the many ways in which green roofs and walls can help manage our water resources more wisely. Participants will dig into the science of performance, explore the many inter-relationships between energy and water, and investigate the most forward thinking designs and policies that fuel essential innovation in green building and infrastructure.

Click [here](#) for more information and to register!



## 2014 Green Development Grant Request For Proposals Open!

Applications for the 2014 Green Development Grants are due by **October 15, 2014**. A total of \$103,080 in grant funds will be available for allocation this year. Grants ranging from \$10,000 to \$30,000 will be awarded to local governments 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. The grants require a 20 percent local match.

Online application materials and additional information about the Green Development Grants are available on TDEC's website at <http://www.tn.gov/environment/water/green-development.shtml> or on our website [Here](#).

## 2014 TNSA East Tennessee Development Symposium: *Registration is open!*

Join us at the Knoxville Convention Center **November 4-5**, for the 2014 TNSA East Tennessee Development Symposium as we explore challenges and discover solutions to the ever-changing world of land development and stormwater management in East Tennessee.

We will be bringing you presentations focusing on multiple aspects of the development industry in East Tennessee including: planning, design, construction, financing, BMP maintenance, regulatory compliance and environmental law and policy. In addition, you will hear case studies and success stories.

Registration is now open for the 2014 TNSA East Tennessee Development Symposium (draft agenda will be posted on the website by early September). Visit <http://tnstormwater.org/blog/2014-development-symposium/> to register.

Through this cart you can register one or more participants. In addition, sponsorship and exhibitor space can be purchased through this cart as well providing a one stop registration shop. Please see the sponsor/exhibitor benefits guide on the website for additional details on sponsorship.

If you have any questions regarding the 2014 TNSA East Tennessee Development Symposium, please contact Parci Gibson by phone or email. (865) 215-5861 or [parci.gibson@knoxcounty.org](mailto:parci.gibson@knoxcounty.org)

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Rick Mayo, P.E. *Client Service Manager*

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## *Continued from pg. 1:* Dalhoff Thomas design|studio Wins the Memphis-Shelby County Low Impact Development Design Competition

look forward to the impact these methods will have on planning and stormwater management in Memphis and the Mid-South.”

This competition, with a requirement to feature LID as a way to treat stormwater on site through natural infiltration, drew entries from 28 firms on eleven teams. The project design site was a 12.5 acre senior living community in United Housing Inc.'s Wolf River Bluffs Planned Development in Frayser.

With UHI's previous green development utilizing EcoBUILD energy efficiency technologies in their housing stock and solar panels on their roofs, it was natural for them to want to utilize LID for Phase 2 of their development.

*Tim Bolding, Executive Director of United Housing said, "Green, sustainable development is the goal for Wolf River Bluffs and this project fits in perfectly by creating quality living spaces, managing storm-*

*water in an environmentally sensitive manner, and meeting a real need for older adults in Shelby County."*

Last fall, Memphis-Shelby County Office of Sustainability received a \$21,900 Green Development Grant from Tennessee Department of Environment and Conservation (TDEC) to host a two-day conference and a design competition. Through partnerships, the grant received a 144% match.

Round one judging was conducted by expert professionals in Low Impact Development that are members of the Houston Land/Water Sustainability Forum. The top teams received 80% of their score by these judges and received 20% of their score Thursday night during the final round of judging.

In the final round, a local jury of 17 civic leaders, design professionals, developers, and other decision makers judged the teams on their project and overall presentation. State of TN

TDEC Commissioner Bob Martineau, Shelby County Mayor Mark H. Luttrell, Jr., City Council Chairman Jim Strickland, County Commissioner Mark Billingsley as well as developers Ron Belz and Gary Thompson, and a vast array of civil engineers and landscape architects participated on the "celebrity jury".

The Memphis-Shelby County Office of Sustainability is grateful to all eleven teams for participating in this competition. All project designs were highlighted at the final awards event.

By participating, the teams are all helping to advance the practice of Low Impact Development in the region.

For more information contact:  
Christine Donhardt ASLA  
Memphis-Shelby County Office of Sustainability  
[www.sustainableshelby.com/LID](http://www.sustainableshelby.com/LID)  
901-576-7172



Third Place: Malasri-Gallo-Lawrence



Second Place: Blair Parker Design and Civil Engineering Solutions, LLC

## **Free Report: National Economic and Labor Impacts of the Water Utility Sector**

2014 report by [Water Research Foundation](http://www.waterresearchfoundation.org)

This project contributes to the overall discussion of the value of water by focusing on the economic impacts associated with water, wastewater, and stormwater service operations and capital investments. Funded by the Water Research Foundation and the Water Environment Research Foundation, the study estimates how the planned operating and capital investments of 30 large public water utilities contribute directly and indirectly to the economy and employment markets in their respective regions and to the nation over the next decade. The study produced two reports. The Executive Report (4566a) summarizes the findings and is available in print and PDF. The Technical Report (4566b) provides additional information on the project background, approach, and findings, and is available in PDF. Published in 2014. Download [Here](#).



## APWA's Certified Stormwater Manager Exam

Several people have indicated interest in taking APWA's *Certified Stormwater Manager* exam. Amy Murray with the City of Goodlettsville is coordinating an exam date the week of **December 8-12, 2014**.

In order to take this exam, you must be a current member in good standing with APWA ([www.apwa.net](http://www.apwa.net)).

The *eligibility application* must be post-marked by **October 3, 2014**. The *exam application* must be postmarked by November 7, 2014.

The computerized exam is in Gallatin during the week of December 8-12, 2014.

John Chlarson, UT-MTAS, has graciously agreed to help us study for the exam. The

*study session takes place on Thursday, November 13, 2014, in Goodlettsville*. Should additional time be needed to prepare, it will be finalized at the November 13<sup>th</sup> session.

Study materials will be provided. For more information, contact Amy Murray at [amurray@cityofgoodlettsville.org](mailto:amurray@cityofgoodlettsville.org)

## Free Upcoming Webinars and Webcasts

### Free Webinar - Getting Equitable Development into the Plan

Wednesday, September 17, 2014, 1:00 PM - 2:30 PM EST [REGISTER!](#)

Certification Maintenance (CM) - 1.5 CM Pending

As sustainability initiatives gain traction, it is increasingly apparent that the pathway to a sustainable future will require strategies for 'equitable development'. Equitable development encourages fairness in planning and development practice to ensure everyone has a safe and healthy environment in which to live, work, and play. For this free webinar, planners and community builders will discuss how to align quality of life goals while being socially responsible and supporting community parity. *If you are not a member of a Division or Chapter of the American Planning Association, please type "EPA" in the required registration field titled "Division or Chapter in which you belong"*.

### Free Webinar: MS4 Implementers and the Bay TMDL: Creating or Enhancing Your Local Residential BMP Program

Thursday, September 18, 2014, 12:00 pm EDT - 1:30 pm EDT [REGISTER!](#)

In this particular webcast the goal is to provide localities with the information they would need to successfully implement a residential BMP program. Specifically, we will hear about a local government that has successfully implemented a program and some of the tips and tricks for making it a success, an innovative approach for implementing residential practices from a watershed group that gets a lot of practices in the ground, an update on the tools and resources that exist to help with getting the job done and finally a review of the recently approved [Residential BMP Crediting Policy](#) for meeting the Bay TMDL.

### Free Webinar: Municipal Storm Water: Illicit Discharge Programs, Storm Water System Maintenance and Management, and Recent Regulatory Developments

Thursday, September 25, 2014, 2:00 p.m. - 3:00 p.m. ET [REGISTER!](#)

This webinar will focus on municipal storm water, from program management to permit compliance. Technical considerations will be discussed, including identifying, reducing and eliminating illicit discharges, and developing and conducting effective maintenance programs. In addition, recent regulatory developments involving municipal storm water programs will be covered.

### Upcoming EPA Webinar Series on Sustainable Water and Wastewater Utilities

EPA, working with leading utilities, Associations and States, has developed an important new [document](#) to help utilities develop their own 'roadmap' to sustainability through the implementation of proven and sustainable practices across all facets of utility operations.

Webinar 1: **October 30, 2014 12:30-2:30 PM Eastern** [REGISTER](#)

- Overview of *Moving Toward Sustainability: Sustainable and Effective Practices for Creating Your Water Utility Roadmap*  
Jim Horne, U.S. EPA
- Community Sustainability  
Sue Hann, City Manager - Palm Bay, Florida, Andy Kricun, Camden County Municipal Utility Authority

### Training Opportunity: MS4 Minimum Measure # 6: "Good Housekeeping"

John Chlarson with UT-MTAS recently traveled to Gallatin, TN to train two sessions on Minimum Measure #6 "Good Housekeeping" using ExCal Visual LLP's Training video "[Rain Check - Stormwater Pollution Prevention for MS4s](#)" The 1 1/2 hour training session starts with a pre-test, followed by training lecture and a video, and closed out with a post-test. Zach Wilkinson, Stormwater Project Engineer with the City of Gallatin, said that this was an excellent format to train City public works and maintenance crews on properly stocking materials, vehicle washing, and spotting and managing illicit discharges and spills.

[John Chlarson](#) is a great resource for training on this Minimum Measure, as well as many other municipal requirements and processes. He may be reached at 731-423-3710.



## Job Opportunities

The [City of Goodlettsville](#), Tennessee is seeking an experienced Engineering Professional to serve as Engineer for the City's Public Services Department. The City is seeking a proven, dedicated, responsive, and experienced individual for the position of Engineer. The Engineer reports directly to the Public Services Director and assists with development, review, and oversight of plans, specifications, construction and cost estimates for projects occurring within the City. All interested applicants should submit a resume and cover letter along with five personal and five professional references to: Human Resources Department, 105 South Main Street, Goodlettsville, TN 37072. Email: [dfreeman@cityofgoodlettsville.org](mailto:dfreeman@cityofgoodlettsville.org) **Apply by October 17, 2014.**

[Rutherford County](#), Tennessee, Position Available: County Engineer, Salary: \$65,137- \$76,437 / Year (Commensurate with Experience)

**Application Deadline: September 18, 2014 at 12:00 Noon** <http://www.rutherfordcountyttn.gov/hr/jobs.htm>

Job Summary: The purpose of this classification is to provide consultation to county administrators and commissioners on engineering activities, and to perform managerial and administrative work associated with engineering. Duties and responsibilities include planning and directing departmental activities, including engineering office, Public Works, and the National Pollution Discharge Elimination System (NPDES), as set forth in the Clean Water Act. Position is also responsible for monitoring construction projects, making recommendations, supervising assigned employees, developing and administering budget, maintaining records, and performing other functions as appropriate. Reports to County Mayor.

[State of Tennessee, Department of Environment & Conservation, Division of Water Resources](#)

Environmental Scientist I, **Application Deadline September 23, 2014**, 11:59 PM, Salary: \$28,428/ Year

Under immediate supervision, is responsible for learning professional environmental, natural resources, sustainability, environmental assistance program, radiological health and/or similar science related program work of routine difficulty; and learns to perform related work as required

## EPA Blog: Taking Back the Streets: Restoring a Watershed One Community at a Time

Check out EPA's Environmental Justice In Action latest blog post, [Restoring a Watershed One Community at a Time](#) by Alicia Neal. In this post, Alicia talks about how an EPA Small Grant funded a rain garden which not only helped to offset runoff pollution and mitigate floods in the Lower Ninth Ward of New Orleans, but also brought together community members to reconnect after the damage of Hurricane Katrina.

## Fall Level I, Level II, and Recertification TNEPSC Course Schedule

| TNEPSC <a href="#">Level I</a> Certification Course |              |
|---|--------------|
| Oct. 8, 2014  | Knoxville    |
| Oct. 22, 2014                                       | Jackson      |
| Nov. 6, 2014  | Johnson City |
| Nov. 20, 2014                                       | Nashville    |
| Dec. 16, 2014                                       | Knoxville    |

| TNEPSC <a href="#">Level II</a> Certification Course |             |
|--|-------------|
| Oct. 29-30, 2014                                     | Nashville   |
| Dec. 4 & 5, 2014                                     | Knoxville   |
| Dec. 17 & 18, 2-14                                   | Chattanooga |

| Recertification Course (4 hour course with morning session only)* |           |               |             |
|---|-----------|---------------|-------------|
| Sept. 23, 2014  | Knoxville | Nov. 17, 2014 | Chattanooga |
| Oct. 23, 2014   | Jackson   | Nov. 25, 2014 | Knoxville   |
| Nov. 7, 2014  | Jackson   | Dec. 9, 2014  | Nashville   |
| Nov. 13, 2014   | Memphis   | Dec. 10, 2014 | Chattanooga |

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

## Upcoming Events

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

### SEPTEMBER

September 23-25—[TNSA Annual Conference](#), [Henry Horton State Park](#), 4209 Nashville Highway, Chapel Hill, TN 37034

September 26-27 – [Bartlett Fall Festival](#), Freeman Park (The City of Bartlett will have a stormwater booth with a simple quiz and a prize (you’ve seen our visors, stress balls, lip balm, etc.!) for each correct answer).

September 27-October 1 [WEFTEC: The Water Quality Event](#)

### OCTOBER

October 8-10—[SESWA Annual Regional Conference](#) Charleston, S.C.

October 21—Citizen’s Action Guide to Watershed Assessment and Restoration, Workshop will be held at Wilson Co. Fairgrounds. For More Information Contact [John McFadden](#), Executive Dir. Tennessee Environmental Council

October 25, 8:30 AM [2nd Annual Urban Runoff 5K](#), Bicentennial Capitol Mall State Park



### NOVEMBER

November 4 & 5, [TNSA’s East TN Development Symposium](#) Knoxville, Tennessee

November 12-15. 12th [Annual CitiesAlive Green Roof & Wall Conference](#) Nashville, Tennessee



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## Tennessee Stormwater Association

TNSA Times, Volume 1, Issue 10

### 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.

## Innovative Financing Accelerates Stormwater Management

### WEF Stormwater Report 9/3/14

The negative effects of stormwater — urban flooding, beach closures, nutrient pollution — create a price tag for society. To address these effects, many large cities are requiring stormwater green infrastructure be incorporated as part of construction permits or consent decrees.

More than 15 states have adopted retention-based standards. Yet, traditional urban retrofit methods can be costly. The EPA estimates that tens of billions of dollars are spent yearly on stormwater retrofits. The U.S. also has a \$600 billion (and growing) price tag for water-related infrastructure needs.

Public-private partnerships (P3s) provide a way to accelerate and finance stormwater and green infrastructure investments. P3s can take many forms, including private property incentive programs and stormwater credit trading. "What is powerful about these tools is that you mobilize private capital, ingenuity, and initiative, unleashing creativity throughout the community," said Tracy Mehan, former assistant administrator in EPA's Office of Water and now adjunct professor at George Mason University. "P3s can offer a more flexible and efficient means of achieving regulatory outcomes."

Mehan moderated an Aug. 27 Water Environment Federation (WEF) webcast

on innovative approaches to financing stormwater investments. "The world is awash in private capital," he said. P3s enable communities to leverage a dedicated funding stream to bring in "many multiples" more than a stormwater fee.

Just as importantly, P3s can help finance the ongoing maintenance of green infrastructure projects.

"At best, federal dollars available for addressing water quality can help with 10% to 15% of the problem, so the rest of the money, where does it come from?" asked Deputy Director Dominique Lueckenhoff of the EPA Region 3 Water Protection Division. Lueckenhoff leads the region's community-based P3 initiative and also spoke during the WEF webcast.

Investment banks and financiers see innovative stormwater management as an emerging market. Such stable regulatory drivers as consent decrees and stormwater permits are attractive to private investors because they create surety for funding, Lueckenhoff said.

With so much potential behind the concept of P3s, why are they not more common in the stormwater



sector? Hurdles identified by EPA include the perceived loss of public control. However, a P3 should start "with a partnership in mind," Lueckenhoff said. From there, participants should decide jointly how to achieve the community's goals and "then create the finance structure to make that happen." Another common assumption is that private financing is more expensive. Particularly with long-term models, however, EPA is seeing cases where private financing is less expensive. According to EPA, P3s can reduce costs to government 20% to 50% or more. Additional P3 benefits include decreasing or eliminating the need for bonds, shared risk between public and private partners, and increased accountability.

Click [here](#) to read the rest of this article, including **Philadelphia's Incentive Programs and Washington, D.C. Stormwater Retention Credit Trading.**

Watch a recording of the "[Innovative Approaches to Financing and Funding Stormwater and Green Infrastructure Investments](#)" webcast.