

US EPA ARCHIVE DOCUMENT

# Quarterly Project Progress Report

**Construction Storm Water Excellence Initiative 2007**

**EPA Grant# EI-96489108-0**

**September 2013**

**U.S. EPA State Innovation Grant Program  
National Center for Environmental Innovation**

**Tennessee Department of Environment and Conservation  
University of Tennessee, Municipal Technical Advisory Service**



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## **Project Description**

### **Construction Stormwater Excellence Initiative**

(Tennessee's State Innovation Grant Project- 2007)

#### **Grantor:**

US EPA State Innovation grant Program, National Center for Environmental Innovation

#### **Grantee:**

Tennessee Department of Environment and Conservation (TDEC)  
University of Tennessee, Municipal Technical Advisory Service (MTAS)

#### **State Project Manager:**

Robert Karesh, Tennessee Department of Environment and Conservation  
Division of Water Resources, Statewide Stormwater Coordinator  
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#### **Total Project Cost:**

The total amount funded was \$200,000. The State of Tennessee has committed a minimum of \$100,000 of in-kind funding for the same period. There are no other federal contributions to this program.

#### **Project Period:**

October 1, 2007 to September 30, 2011 (Original)  
October 1, 2007 to September 30, 2013 (Amended)

**Key Milestones (Including Outputs),  
Reflecting The Projected Timelines For Completion<sup>1</sup>**

<b>Objectives and Outputs</b>	<b>Original Start Date (Amended Start Date)</b>	<b>Original Completion Date (Amended Completion Date)</b>	<b>Complete?</b>	<b>Slippage Explanation/Other Comments</b>
<b>Objective:</b> Stormwater group preliminary organizational meeting (pre-award) <b>Output(s):</b> <i>TDEC/MTAS meetings to determine key MS4's for preliminary solicitation, etc.</i>	September 2007	May 2008	Yes	This objective combined with the 3rd objective while waiting for final signatures.
<b>Objective:</b> Execute contract with the University of Tennessee's Municipal Technical Advisory Service (MTAS) <b>Output(s):</b> <i>Due to MTAS's unique status within the State, their ability to deliver training and technical support statewide to local governments and their history as a TDEC partner in the Stormwater program, MTAS will be the sole contractor for the initiative.</i>	October 2007	Final Signatures May 2008	Yes	Final signatures were received by Contracts Division/TDEC May 2008
<b>Objective:</b> TDEC-MTAS project team meetings <b>Output(s):</b> <i>Continuing identification of MS4's for Stormwater group. Identifying specific contacts from various other stake holder organizations. Scheduling venues for organizational meetings. Developing agenda's, informational literature, etc.</i>	October 2007 (March 2008)	May 2008	Yes	As with Objective #1, TDEC-MTAS continued to work together on project and planning meetings during the delayed pre-award time. The final signatures were received by May 2008.
<b>Objective:</b> Establish stormwater group (Tennessee Stormwater Association) <b>Output(s):</b> <i>Organize initial meeting of the state regional group representative at a state level. Formalize the group. Set up a calendar of regional &amp; state meetings, etc.</i>	December 2007 (March 2008)	June 2008	Yes	Due to delayed signatures for official contract award to MTAS, the development of the statewide Stormwater Association was not begun until March 2008
<b>Objective:</b> Establish stakeholder committee <b>Output(s):</b> <i>Identify, contact, and obtain participation from representatives of the stakeholder groups. Set up and formalize the committee. Set mission, agenda, meeting calendar and milestones.</i>	December 2007 (May 2008)	May 2008	Yes	Due to delayed signatures for official contract award to MTAS, and the delayed establishment of the TNSA, the Stakeholder Committee was not established until May 2008

**Key Milestones (Including Outputs),  
Reflecting The Projected Timelines For Completion<sup>1</sup>**

Objectives and Outputs	Original Start Date (Amended Start Date)	Original Completion Date (Amended Completion Date)	Complete?	Slippage Explanation/Other Comments
<b>Objective:</b> Issue new MS4 General Permit <b>Output(s):</b> <i>With the new minimum requirements for baseline MS4 programs, develop the additional minimum requirements for QLP. This was not part of Grant.</i>	Not part of grant	June 2008 (July 2010) (October 1, 2010)	Yes	TDEC worked with EPA to craft a permit that reflected the EPA's desire to see a "Green" permit with more emphasis on infiltration based permanent BMP's.
<b>Objective:</b> Facilitate meetings to establish criteria <b>Output(s):</b> <i>Set venue, agenda, etc., and facilitate meetings in order to achieve stakeholder input on the criteria for qualifying a local program.</i>	January 2008 (June 2008)	June 2010	Complete	Start date amended due to grant development delays but meetings have been held every quarter since the organizational Kickoff meeting held August 15, 2008. Prep work began in June 2008.
<b>Objective:</b> Develop and promote guidelines and incentives <b>Output(s):</b> <i>With the information from the stakeholder committee meetings, develop guidance material and an incentive program for qualifying local programs.</i>	Began in (September 2008)	June 2010	Complete	Start date amended due to grant development delays but meetings to develop incentives/criteria have been held every quarter since the organizational Kickoff meeting held August 15, 2008
<b>Objective:</b> Develop excellence recognition program <b>Output(s):</b> <i>With the information from additional stakeholder committee meetings, input from additional groups such as the Tennessee Municipal League, etc., develop excellence recognition program</i>	October 2009	September 2010 (February 2011)	Complete	Began initial discussion October 2009, and after amending the project timeline, we will have two more quarterly meetings to discuss & finalize Excellence Recognition. Permit issuance delays changed this to Feb 2011
<b>Objective:</b> MS4's implement new permit <b>Output(s):</b> <i>MS4's revise their programs in accordance with new permit</i>	July 2008 (October 2010)	January 2010 (June 2012)	In process	Issuance of permit delayed 2 years as explained.
<b>Objective:</b> Pilot the qualification of a MS4 <b>Output(s):</b> <i>Work with select MS4(s) volunteer(s) program(s) to work through guidance materials and document achieving the various elements involved in becoming a qualified program. Monitor the designated Qualified Program.</i>	June 2010 (June 2012)	June 2011 (June 2013)	Complete	As of this reporting period, 5 MS4s have been selected and begun the provisional application process. Of those 5, 4 have completed the provisional process and are considered full status QLPs

**Key Milestones (Including Outputs),  
Reflecting The Projected Timelines For Completion<sup>1</sup>**

Objectives and Outputs	Original Start Date (Amended Start Date)	Original Completion Date (Amended Completion Date)	Complete?	Slippage Explanation/Other Comments
<b>Objective:</b> Develop and deliver workshops across the state <b>Output(s):</b> <i>Based on the results of the pilot program, update the guidance materials. With the updated guidance materials and pilot program case history/histories, develop workshops lesson plans. Deliver workshops and guidance materials statewide.</i>	June 2011 (June 2013)	August 2011 (August 2013)	No	The timeline was adjusted by two additional years to provide the MS4s with enough time to adhere to the new MS4 permit requirements; we requested a grant extension of two years. This new timeline projects the QLP Pilot start date for June 2012 and the QLP Program to go live in June 2013.
<b>Objective:</b> Deliver a replicable solution to other states <b>Output(s):</b> <i>With updates to workshop lesson plans and materials based on participant feedback, develop final guidance materials, workshop lesson plans, case histories etc., for delivery to EPA.</i>	September 2011 (September 2013)  *Note: the Gathering of supporting documentation in preparation for this item is ongoing.	September 2011 (September 2013)	No	The timeline was adjusted by two additional years to provide the MS4s with enough time to adhere to the new MS4 permit requirements; we requested a grant extension of two years. This new timeline projects the QLP Pilot start date for June 2012 and the QLP Program to go live in June 2013. Gathering of supporting documentation in preparation for this item is ongoing.

## **Part 1 – Synopsis of Accomplishments during the Reporting Period**

The 22st reporting period (ending September 30, 2013, 3rd quarter (calendar year) 2013), was the fifth after the time allotted under the requested extension for MS4's to work on familiarizing themselves with, and working on, their new Small MS4 Permit.

During this quarter:

- All of the project milestones for the Construction Stormwater Excellence Initiative (Tennessee's State Innovation Grant Project- 2007) have been completed with the exception of:
  - Develop and deliver workshops across the state
  - Deliver a replicable solution to other statesThis will be discussed in (2) Narrative Discussion
- TDEC finalized QLP application form
- TDEC continued coordination with the Pilot programs on their initial operations as full status QLPs
- QLPs continued issuing Notices of Coverage for land disturbances projects ranging in size and end use
- Continued refinement of QLog database based on initial QLP activity reports
- We prepared website and press release content for open enrollment for July 1, 2013
- 2nd survey to be performed was continued in this quarter.

Of the QLP Pilot Program Participants, 4 of the initial 5 successfully completed the provisional period of the QLP application process during the first quarter of 2013:

- |                     |                  |
|---------------------|------------------|
| • Cookeville        | February 1, 2013 |
| • Washington County | February 1, 2013 |
| • Knoxville         | March 1, 2013    |
| • Bristol           | March 15, 2013   |

As the programs completed the provisional period, they were considered full status QLPs and could begin issuing QLP-based construction stormwater permits.

Knox County became the fifth and final of the initial five to complete the provisional period of the QLP application process during the period

As the programs completed the provisional period, they were considered full status QLPs and began issuing QLP-based construction stormwater permits. These QLPs have issued Notices of Coverage for land disturbances projects ranging in size and end use during this period.



TDEC has continued to support the Tennessee Stormwater Association (TNSA) with efforts outside the scope and funding of this grant.

Robert Karesh and Jennifer Watson (TDEC), held meetings with TDEC staff at the various Environmental Field Offices associated with the QLP program, continuing the process begun in the previous quarter.

Meetings were held with Knox County to finalize the provisional period at the Knoxville Environmental Field Office.

The QLP-based construction stormwater permit tracking database was revised during this reporting period.

The second QLP awareness survey among all MS4s was begun in April and continued during this period.

## **Part 2 – Narrative Discussion**

### **2.1 Provisional and Full Status QLPs**

Of the QLP Pilot Program Participants, 4 of the initial 5 successfully completed the provisional period of the QLP application process during the first quarter of 2013:

- |                     |                  |
|---------------------|------------------|
| • Cookeville        | February 1, 2013 |
| • Washington County | February 1, 2013 |
| • Knoxville         | March 1, 2013    |
| • Bristol           | March 15, 2013   |
| • Knox County       | April 1, 2013    |

Knox County became the fifth and final of the initial five to complete the provisional period of the QLP application process during the Second Quarter.

As the programs completed the provisional period, they were considered full status QLPs and have been issuing QLP-based construction stormwater permits.

## **2.2 QLP-based construction stormwater permit tracking database**

In the last quarterly report, we noted that information related to permit coverage's issued by the QLP must be submitted to TDEC utilizing a database developed specifically for the QLP program. The database, named QLog, has been revised during this reporting period to remove a few unnecessary fields. QLPs must submit the data in a specific table structure, but may submit the data in various program formats (excel, access, city-works, etc.). During that quarter we found some formatting conflicts with these file types while adding the data to QLog. Therefore, QLog was also reformatted to better accommodate these various file types. Reformatting and refinement of the QLog system was continued during this quarter.

## **2.3 Second QLP awareness Survey**

The second QLP awareness survey among all MS4s was begun in April. Obtaining response to this second iteration has been much more difficult than to the initial survey.

As of May 16, 2013, we had a 21% response rate following the protocol on additional emails and follow-up phone calls. With the final iteration of the survey coming later this same year, we think that trying to force responses on the medial survey might damage the response rate and/or prejudice the responses on the final survey. We closed the second survey during August with approximately a 25% response rate. We will perform the final survey in the final quarter of this year.

## **2.4 Key Milestones**

Review of the table of key project milestones for the Construction Stormwater Excellence Initiative (Tennessee's State Innovation Grant Project- 2007) will show that all have been completed with the exception of:

- o Develop and deliver workshops across the state
- o Deliver a replicable solution to other states

The milestone with: "Objective: MS4's implement new permit" and "Output(s): MS4's revise their programs in accordance with new permit" won't be completed during this project period. What the milestone was added to the table, in agreement with the EPA, was to make up for time lost to the QLP education outreach by the issuance of the new small MS4 permit being delayed 2 years as TDEC worked with Region 4 to craft a permit including the latest EPA thinking on Green Infrastructure and infiltration, evapotranspiration, and reuse for the majority of rainfall events. This milestone gave the project time to allow for the educational outreach of a new permit without having to conduct the QLP educational outreach concurrently. This was

accomplished, but please understand that no MS4 in Tennessee has 100% completed the implementation of their new NOI.

The materials to deliver the workshops have largely been developed, it remains to schedule and promote the statewide workshops.

The conclusion of the workshops and the final survey will finish the items necessary to deliver a replicable solution to other states.

## **2.5 Tennessee Stormwater Association**

One of the key components to the education and outreach for input for the QLP option was the establishment of the Tennessee Stormwater Association. This was identified in the grant proposal. Support for this outreach and input is a grant activity. The Association has been invaluable in this process and will continue to be.

As provided for in this innovation grant, we have continued to support the TNSA during this reporting period.

TDEC has also continued to support the establishment of the TNSA with efforts outside the scope and funding of this grant.

During this, TDEC assisted further in supporting the credibility and building good will for the QLP initiative by assisting TNSA with a setting up a new round of Green Development Grants to be administered through the Stormwater Association. This period saw the request for grant proposals solicited.

Registration was announced for the Tennessee Stormwater Association Annual Conference. The Tennessee Stormwater Association's Conference Committee works diligently every year to coordinate an annual gathering for TNSA members and water quality professionals to come together to learn about a variety of relevant topics ranging from case studies on new best management practices to information on changes to permitting requirements. This year marks TNSA's first full standalone conference titled "What Are You Wadin' For" The event will be held at Henry Horton State Park in Chapel Hill, TN from November 12th – 14th. This year's conference will include 30+ sessions on topics including regenerative stormwater practices, Qualified Local Program (QLP), An Education Panel, Macroinvertebrate sampling, stream assessment training and so much more!

### **Part 3 – Projection of Activities, Accomplishments, and Major Expenditures for Next Quarterly Report**

During the next quarter we will:

- Finalize and deliver workshop/training materials
- Continue monitoring participants to identify possible program revision
- Continue promotion of the QLP program
- Continue QLP open enrollment
- Prepare for close of the project (finalizing forms, procedures and notifications)
- Conduct final QLP awareness survey among all MS4s
- Continue to evaluate and revise QLog
- Prepare resources necessary to replicable solution to other states

### **Part 4 – Financial Report**

The project budget is on track for the goals and milestones of this project.

UT-MTAS continued to honor its commitment to TDEC, the EPA, and the success of this project by working without a contract or additional compensation until such time as TDEC could issue a contract extension to draw down the remainder of the grant funds. After the remaining funds have been drawn down, MTAS will continue to honor this same commitment.

# APPENDIX “A”

<b>A-1</b>	<b>TDEC MS4 Program Newsletter with QLP references</b>	<b>Page 12</b>
<b>A-2</b>	<b>CGP Fee and QLP procedures for TDEC Staff</b>	<b>Page 20</b>
<b>A-3</b>	<b>Refund Claim Form</b>	<b>Page 21</b>
<b>A-4</b>	<b>QLP Open Enrollment TDEC media release</b>	<b>Page 22</b>



State of Tennessee

Division of Water Resources

## MS4 Program Newsletter

Summer 2013

**TDEC, Division of Water Resources**  
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**NOTE:** The Division of Water Resources has moved to the 11th & 12th Floors of the William R. Snodgrass Tennessee Tower located at 312 Rosa L. Parks Avenue, Nashville, Tennessee 37243.

**Tennessee Stormwater Association (TNSA) Annual  
Conference November 12-14, 2013**

This year marks TNSA's first full standalone conference titled "What Are You Wadin' For". The event will be held at Henry Horton State Park in Chapel Hill, Tennessee from November 12th -14th. This year's conference will include 30+ sessions on topics including regenerative stormwater practices, the Tennessee Qualifying Local Program (QLP), an education panel, macroinvertebrate sampling, stream assessment training and so much more!

Networking activities including a tree planting service project, guided hike, and a social with live music, are just some of the opportunities to meet and learn from other stormwater professionals throughout the state.

**Early Bird Registration:**

May 10, 2013 – September 30, 2013  
Members - \$100/ Non-Members - \$125

[Register online](#) or you may also make checks payable to TNSA and send to:  
11408 Municipal Center Dr, Farragut, TN 37934;  
Attention Jason Scott.

For additional information, contact Leah Crisp at: [leahc@hamiltontn.gov](mailto:leahc@hamiltontn.gov) or 423-209-7851

**Chattanooga Green infrastructure Supplemental Environmental Restoration Project**

Article submitted by Don Green, City of Chattanooga, Tennessee

The City of Chattanooga has developed a multiphase project as part of a Supplemental Environmental Project, SEP, initiated due to legacy permit issues. To satisfy the SEP, the Public Works, Water Quality Program went into contract with consultants in July 2011, identifying three major tasks: develop a Green Infrastructure Strategic Plan, Engineering Site Plans Development, and Education and Public Outreach Activities.

A Retrofit Project for Brainerd Corridor resulted from that plan. The Brainerd Corridor Retrofit Project was developed to provide a model for retrofitting a city district with innovative green infrastructure systems while simultaneously addressing the social, cultural and economic issues: a public/private partnership endeavor to help revitalizing the community.

The City held individual stakeholder meetings in February 2012 with commercial landowners in the area: East Gate Mall, Brainerd Village, Luken Holdings and Chattanooga Metropolitan Airport Authority Airport. The Airport already had plans to raze a series of car lots, on properties they had acquired, that were in their runway protection zone.

*Continued on pg. 7*



[tn.gov/environment](http://tn.gov/environment)





## University of Tennessee SMART Center

Submitted by Daniel Yoder, UT Biosystems Engineering and Soil Science and SMART Center

In collaboration with several state agencies and multiple commercial partners, the University of Tennessee is developing the Stormwater Management Assistance, Research, and Training (SMART) Center.

The SMART Center mission has three parts: 1) to *Research* existing and new science and technology; 2) to *Assist* the entire stormwater community in implementing new technologies and in meeting regulatory challenges; and 3) to *Train* youth, future professionals, and current professionals to provide the best stormwater management throughout Tennessee and the region.

The most critical component of the SMART Center is in place, as evident in the activities of the committed dozen or so researchers, agency staff, and designers and engineers who consider themselves part of the Center.

Planning is also well underway for the construction of a SMART Center campus to support and greatly expand this work. The SMART Center is actively seeking stormwater managers interested in being involved in its activities, and additional financial and in-kind support for the completion of the SMART facility.

<https://az.tennessee.edu/tmsmart/Pages/default.aspx>



## Tennessee Permanent Stormwater Management Manual & Training Course Development

TDEC is currently developing a Permanent Stormwater Management Manual to provide design, installation, and maintenance guidance on runoff reduction/green infrastructure practices. An external stakeholder committee has been selected and includes multiple related stakeholders such as TNSA, ASCE, Road-builders Association, Homebuilders Association, etc., to assist with the drafting of this Manual. The Manual will be released by January 2014. Design, inspection, and maintenance courses are expected to be available by July 2014.

## The 2013 Water Education Summit: Making a Difference in Your Community

**REGISTRATION is now open!**

Registration is now open for our *Water Education Summit* to be held in Chattanooga, Tennessee, Sept 24-26. We are happy to announce the schedule of speakers and complete conference program that includes over 75 presentations of work from 15 states, two field tours, expert panels, and many opportunities to network and share ideas with like-minded water colleagues. Please take a moment and visit the website for more information (<http://www.h2osummit.org/>) and register to attend by Sept. 10th. Reserve a room in the conference block at the Sheraton before Aug 25th.

When: September 24-26, 2013

Where: Sheraton Read House Hotel, 827 Broad Street, Chattanooga TN 37402

## WEF Stormwater Congress Conference



The inaugural WEF Stormwater Congress, taking place in Chicago on October 5-9, 2013, encompasses all pressing aspects of stormwater management in unique sessions, a luncheon, exhibits, a mobile session, a technical tour, and other exciting ways to network with colleagues in the stormwater industry. **Registration Now Open!**

## Tennessee Water Resources Research Center Training Opportunities

1. **TN EPSC Level I Courses (1 day course)** <http://www.tnepsc.org/page.asp?ID=3> The Level I Fundamentals workshop is a 1-day foundation-building course for individuals involved in land-disturbing activities and is intended for contractors, developers, inspection and enforcement personnel from all levels of government, plan preparers, reviewers, designers and engineers.
  - Sept. 11, 2013 Knoxville – Rothchild Conference Center, 8807 Kingston Pike 865-690-0103
  - Sept. 19, 2013 Nashville – One Century Place Conference Ctr., 26 Century Blvd. 615-872-6400
  - Oct. 8, 2013 Chattanooga – Marriott Residence Inn, 2340 Center St. 423-468-7700
  - Oct. 24, 2013 Memphis – Wolfchase Holiday Inn, 2751 New Brunswick Rd.
  - Nov. 6, 2013 Johnson City – Millennium Center, 2001 Millennium Place 423-232-2001
  - Nov. 19, 2013 Nashville – One Century Place Conference Ctr., 26 Century Blvd.
  - Dec. 12, 2013 Knoxville – Rothchild Conference Center, 8807 Kingston Pike
3. **TN EPSC Level II Courses (2 day course)** <http://www.tnepsc.org/page.asp?ID=5> The Level II course, Design Principles for Erosion Prevention and Sediment Control for Construction Sites, is an advanced 2-day workshop designed for engineers and other professionals who have completed the prerequisite Level I course.
  - Oct. 29-30, 2013 Nashville – One Century Place Conference Center, 26 Century Blvd.
  - Nov. 25-26, 2013 Knoxville – Rothchild Conference Center, 8807 Kingston Pike
  - Dec. 4-5, 2013 Memphis – Wolfchase Holiday Inn, 2751 New Brunswick Rd.
  - Dec. 18-19, 2013 Chattanooga – Marriott Residence Inn, 2340 Center St.
4. **TN-EPSC Recertification Course (4 hour course with am session only)** <http://www.tnepsc.org/page.asp?ID=4> A Level I Recertification course is a 1/2-day workshop available to those inspectors and other individuals who need to renew their Level I certifications another three years beyond their currently expiring certification periods.
  - Oct. 1, 2013 Knoxville – Rothchild Conference Center, 8807 Kingston Pike
  - Oct. 2, 2013 Chattanooga – Marriott Residence Inn, 2340 Center St.
  - Oct. 3, 2013 Nashville – One Century Place Conference Ctr., 26 Century Blvd.
  - Oct. 23, 2013 Memphis – Bartlett Performing Arts & Conference Center, 3663 Appling Rd. 901-385-6440
  - Nov. 7, 2013 Johnson City – Millennium Center, 2001 Millennium Place
  - Nov. 12, 2013 Jackson – UT Research & Education Center, 605 Airways Blvd. 731-442-1583
  - Nov. 15, 2013 Murfreesboro – Fleming Center, 2022 Blanton Dr. 615-898-8090
  - Dec. 3, 2013 Memphis – Bartlett Performing Arts & Conference Center 3663 Appling Rd.
  - Dec. 10, 2013 Chattanooga – Marriott Residence Inn, 2340 Center St.
  - Dec. 11, 2013 Nashville – One Century Place Conference Ctr., 26 Century Blvd.
  - Dec. 17, 2013 Knoxville – Rothchild Conference Center, 8807 Kingston Pike

### Webcasts

1. **Free Webcast: August 21, 2013 - 1:00 - 3:00 pm Eastern** [Creative Rate Structure and Affordability Program Options for Utilities](#) 2.0 PDHs offered for this webcast. Topics: Fixed versus Variable Charges; Case Study - Shifting Revenue Recovery; Addressing Pricing Objectives Through Rate Design; Low-Income Affordability Programs



2. **Free Webinar: Erosion Control Systems and Their Role in Green Infrastructure Design** Forester University Tuesday, August 27<sup>th</sup> @ 11am PDT / 2pm EDT 0.1 CEU / 1 PDH Credits

3. **Free Webinar: A New Way of Stormwater Management Applying Asset Management to Stormwater Programs** Tues., September 10<sup>th</sup> @ 2 p.m. EDT / 11 a.m. PDT, 1-1.5hr\* Credits: 1 PDH / 0.1 CEUs Forester University





### Resources: Stormwater & Green Infrastructure Websites/Articles

1. **Cost-Effective Stormwater Management in the James.** Although designed for municipalities located within the James River Watershed Basin, VA., this website provides a report on the cost effectiveness of several stormwater BMPs. That may be useful for any municipality. The James River Association and the Center for Watershed Protection conducted a study that provides local governments with cost-effective solutions for meeting their stormwater pollution obligations under the Chesapeake Bay Cleanup.
2. Article: **County Gets Creative with Complete Streets - Sewer Upgrade Turns in to Much More in Martin County, Fla.** Planners in Martin County, realized that a stormwater and sewer project on a neglected commercial corridor in the Golden Gate neighborhood of Stuart, Fla., was an opportunity not just to provide vital infrastructure, but to spur private investment that would create jobs and help revitalize the neighborhood.
3. Article: **Green Infrastructure Boosts Property Values** New UWM study indicates that stormwater management features have economic benefits. Preliminary results conducted by a UW-Milwaukee researcher show that "green infrastructure" has boosted property values in Milwaukee. According to researcher Kate Madison, a policy analyst for the UW-Milwaukee Center for Economic Development, green features added to developments in the Menomonee Valley, the Pabst Brewery site and the Lincoln Creek area have reaped financial benefits for those properties as well as local taxing authorities.
4. **WELCOME TO THE STORMWATER CHANNEL!** Washington State's Stormwater Center Stormwater Channel includes videos and links to other useful stormwater video resources. Example: **Innovative Stormwater BMP: Oyster Shells** This video was produced in conjunction with the Port of Seattle, a leader in Industrial Stormwater Management. In 2005, staff at the Port of Seattle invented an inexpensive, innovative and effective treatment method to remove copper from their stormwater runoff.
5. Article: **Green Infrastructure Passes KC Test: City Official Says Green Solutions Make Economic Sense** Green infrastructure is helping alleviate combined sewer overflows, as intended, in the neighborhood where heavy rains often sent raw sewage spilling into the waterways of the Middle Blue River Basin. [Associated YouTube Video](#)
6. Website—lots of good resources: The "[Save the Rain](#)" program is a comprehensive stormwater management plan intended to reduce pollution to Onondaga Lake in New York and its tributaries. During wet weather events, stormwater flows into the local sewer system, causing heavy flow periods that can overload the system.
7. Article: **Rainfall interception by 3 types of trees:** A rainfall interception study was conducted in Oakland, California to determine the partitioning of rainfall and the chemical composition of precipitation, throughfall, and stemflow.

### Stormwater Fee/Economics Articles

1. Article: **Using A Quantitative Triple Bottom Line Approach To Make A Strong Business Case** (for a Stormwater Utility) Fully understanding and explaining the financial, social, and environmental benefits of a water project can be keys to gaining approval. By Robert S. Raucher, Ph.D.
2. Article: **CSI Utility:** The nation's first stormwater utility was established in 1974. Since that time, many successful stormwater utilities have been reaping the benefits of dedicated revenue to appropriately manage their stormwater needs. *Some* of these utilities were challenged legally in court but upheld. *All* were challenged in the more exacting court of public acceptance. Full Article at [Stormwater Magazine](#)
3. Publication: **Banking on Green:** A Look at How Green Infrastructure Can Save Municipalities Money and Provide Economic Benefits Community-wide
4. Article: **Thinking About Creating A Regional Utility? Here Are Three Things To Consider** By Jason Mumm and Marilyn Robinson Decentralization may be the wave of the future, but only if the shoe fits.





## NEW! National Stormwater Calculator

EPA's [National Stormwater Calculator](#) is a desktop application that estimates the annual amount of rainwater and frequency of runoff from a specific site anywhere in the United States. Estimates are based on local soil conditions, land cover, and historic rainfall records.

It is designed to be used by anyone interested in reducing runoff from a property, including

- site developers,
- landscape architects,
- urban planners, and
- homeowners

The Calculator accesses several national databases that provide soil, topography, rainfall, and evaporation information for the chosen site. The user supplies information about the site's land cover and selects the types of low impact development (LID) controls they would like to use.

## Resources: Green Infrastructure BMP Maintenance & Monitoring Reports

1. [NYC Green Infrastructure Plan: 2012 Green Infrastructure Pilot Monitoring Report](#) The 2012 report builds upon the 2011 Monitoring Report, providing additional observations, analyses of pilot performance, and comparisons between 2011 and 2012 data for more than 30 source control pilots.

2. [Introducing Field Guide: Maintaining Rain Gardens, Swales and Stormwater Planters](#) The handy guide will help landscape contractors and property owners properly maintain stormwater facilities. Rain gardens, swales, and stormwater planters are important tools in the stormwater management toolkit, soaking up runoff from streets, parking lots, and buildings. Proper maintenance of these facilities is integral to keep them operating effectively. With so many of them now installed across the Portland metro area, a lot has been learned by municipalities and organizations involved with this work.



3. Onondaga County, New York: [Save the Rain Program Green Infrastructure Maintenance Training](#). This 174 pg document is quite lengthy but includes a training powerpoint presentation as well as informational Green Infrastructure Technology Fact Sheets, Green Infrastructure Seasonal Maintenance Schedule, Detailed Green Infrastructure Standard Maintenance Procedures, Green Infrastructure Maintenance Report Log, and Common Plants Used in Rain Gardens/Bioretenention: Plant List and ID Manual.

4. Guide: [After the Storm: How Green Infrastructure Can Effectively Manage Stormwater Runoff from Roads and Highways](#) Stormwater runoff from roads and highways pollutes and erodes our nation's water bodies, imposing health, financial, and environmental costs on local communities. These costs can be avoided or significantly reduced by ensuring that our roadways incorporate runoff controls that retain stormwater onsite. Green infrastructure, in particular, is an especially effective method for retaining stormwater that also generates a wide range of economic and social benefits beyond improved water quality. To ensure that these benefits are enjoyed by communities across the United States, legislative and administrative decision makers at the federal and state levels should provide incentives and requirements for these controls to be implemented at all road and highway facilities. <http://www.nrdc.org/water/files/afterthestorm.pdf>



5. [Rain Gardens for Nashville](#): Rain Gardens are a natural and beautiful way to reduce and clean stormwater. They are shallow, depressed gardens designed to collect rain water and allow it time to filter into the ground. This results in cleaner water, less water entering our storm systems and more water refilling the underground water table that keeps small streams flowing during the dry summer months. Rain Gardens are lovely, lively, colorful, low maintenance habitats for insects and animals. Their native plants provide food to song birds and butterflies. <http://www.raingardensfornashville.com/>



6. [i-Tree Hydro](#) Hydro is a stand alone application designed to simulate the effects of changes in tree and impervious cover characteristics within a defined watershed on stream flow and water quality. It was designed specifically to handle urban vegetation effects so urban natural resource managers and urban planners can quantify the impacts of changes in tree and impervious cover on local hydrology to aid in management and planning decisions. [Webinar presentation](#)



## Public Outreach & Education Resources

1. Burlington's unique combination of art and science is called [Connecting the Drops](#), a public outreach campaign courtesy of the Let it Rain stormwater program.

2. EPA has released [Urban Waters Voices](#), a series of 12 video interviews featuring locally led efforts to restore urban waters in communities across the United States. These videos feature local efforts and strategies to improve urban water quality while advancing local community priorities. This week's video spotlights Bob Zimmerman, Executive Director of the Charles River Watershed Association, describing some of the improvements seen in recent years, as well as challenges still faced by Charles River communities (e.g. legacy contamination). The Massachusetts organization uses science, advocacy, and the law to protect, preserve and enhance the Charles River and its watershed. [Watch the video.](#)



Urban Waters Voices:  
Bob Zimmerman



### 3. [Hosting a Low Impact Development Design Competition](#)

Throughout much of the U.S., there is a lack of familiarity with low impact development (LID) in the engineering and design community. LID design competitions give engineers, developers, landscape architects, and others a chance to gain experience with LID in a low-risk environment. Competitions can also break down perceived barriers to LID — such as performance and cost — and give the development and permitting community a chance to see LID benefits on the ground.



4. [EPA Green Apps](#) EPA hosts a webpage with over 290 apps to help people understand and protect the environment. In addition to finding apps, you can also [tell EPA what apps you'd like someone to make](#) and [suggest an existing app EPA could add to this site](#). You can learn about [EPA's Apps for the Environment Challenge](#), which was conducted in the summer of 2011.



### 5. [Streamer](#)

The Department of the Interior recently released an online tool called [Streamer](#). The interactive map allows you to trace a stream in either direction—upstream to its source or downstream to where it ultimately empties. It also shows statistics for the stream, such as its length, political jurisdictions it passes through (states, counties, and cities), origin elevation, and other information. A more detailed report also shows all the US Geological Survey's stream gages for that stream.

6. [Water Education Portal](#): The mission of Project WET is to reach children, parents, educators, and communities of the world with water education. The curriculum is water focused, and correlated to the Tennessee State Curriculum Standards in Math, Language Arts, Social Studies and Science for grades K through 12.



### 6. [EPA Report Details How Development Can Impact Public Health, Environment](#)

EPA released its most comprehensive review to date on how the built environment — the way we build our cities and towns — directly affects our environment and public health. More information about the report: <http://www.epa.gov/smartgrowth/built.htm>

More information about the Partnership for Sustainable Communities: [www.sustainablecommunities.gov](http://www.sustainablecommunities.gov)

7. Online publication: [Forestinfo.org](#), an online environmental education resource hub, announces the release of a new Eco-Link publication, [Forests & Water Quality: How Forests Improve the Supply and Quality of Our Water](#). To access the full library of more than 35 unique Eco-Link publications, please visit: <http://www.forestinfo.org/eco-links>





## Chattanooga Green infrastructure Supplemental Environmental Restoration Project

(Continued from Page 1)

The City of Chattanooga, in association with the Regional Planning Agency and TDOT, entered into a partnership agreement with the Airport Authority to redevelop this site; employing green infrastructure (mainly infiltration) practices. Native vegetation will stabilize the site and reduce the amount of water necessary to sustain them.

This project will also be a test case for the City's new NPDES water quality requirements that will go into effect December 2014. Stormwater from the adjoining section of Brainerd Road will be directed to the infiltration basins also, reducing flooding problems on the road.

The City initiated a second contract with the consultant team for the design/build of the Airport site, developing the engineering design drawings for the GI structures. The contract also covers education and public outreach: two videos are under construction along with developing the language for brochures and signage. A compost/compost tea workshop was held in April targeting local developers and landscape professionals.

The City has a camera installed to document the project and you can see the how it has advanced so far.

<http://earthcam.net/projects/arcadis/>

The Chattanooga Airport was among the winners of the 2013 Governor's Environmental Stewardship Awards this year, identifying this project as part the reason. <https://news.tn.gov/node/10921>



Don Green, LEED AP, Water Quality Supervisor, Water Quality Program, City of Chattanooga  
Don may be reached at [green\\_d@chattanooga.gov](mailto:green_d@chattanooga.gov) or (423) 643-5875.

## Additional Resources

## Karst Resources

**National Ground Water Association App Helps Homeowners Calculate Water Use** A free National Ground Water Association iPhone and iPad app that allows users to calculate their household water consumption is an excellent tool to help consumers reduce water use and costs.

## Agriculture Water Quality Resources

3. **Leopold Center for Sustainable Agriculture:** Summaries of the results from six recent projects are now available, representing all four research initiatives: Ecology, Marketing and Food Systems, Policy and Cross-Cutting. Four of the six projects focused on water quality and nitrogen management. Investigators of a Cross-Cutting Initiative project monitored water draining from experimental farm fields. They found that cover crops and careful fertilizer application can reduce nitrate loss to waterways.

## Other Resources

## A QUICK GUIDE to Developing Watershed Plans to Restore and Protect Our Waters

The purpose of this Quick Guide, developed in response to feedback on the length and complexity of the original *Handbook for Developing Watershed Plans to Restore and Protect our Waters* (the Handbook), is to provide a streamlined, easy-to-read summary of the information. The guide incorporates key watershed-related topics not included in the original Handbook and highlights new information that can be used for more effective



[When in Doubt Stay Out: Protect your nooch from harmful algal blooms](#) This 15-second video is part of EPA's ongoing education and outreach efforts on nutrient pollution. HABs are associated with nutrient pollution, and an effective way of reaching niche audiences about nutrient pollution because of potential risk HABs present to pets.

WERF BMP SELECT Tool

## WERF Releases Tool To Aid BMP Selection

In late June, the Water Environment Research Foundation (WERF) released BMP SELECT 2.0. This spreadsheet tool helps users conduct planning-level analyses of stormwater best management practices (BMPs). Users can compare life-cycle costs and pollutant-removal efficiencies of various practices under alternative scenarios. Simulate the control of total suspended solids, total nitrogen, total phosphorus, and total zinc in extended detention basins, bioretention areas, wetlands, swales, permeable pavement, and filters. The SELECT tool can be used to determine annual pollutant load reductions and estimate compliance with total maximum daily loads and other requirements. [Download the tool here.](#)

**On Demand Webinar on the tool available:**

**On-Demand Webinar: WERF BMP SELECT Version 2.0 Overview and Discussion** SELECT is a simple planning level tool that enables a stormwater manager to examine the effectiveness of alternative scenarios for controlling stormwater pollution and the whole life cost associated with each scenario. <http://www.werf.org/i/c/Tools/SELECT.aspx>



## Fact Sheet: CGP Fee and QLP Procedures for EFO Administrative Staff

### What is a Qualifying Local Program (QLP)?

Under federal and state codes TDEC can formally recognize an MS4 as a **Qualifying Local Program (QLP)** if that MS4 has demonstrated that its construction stormwater program meets or exceeds the provisions of the Tennessee Construction General Permit (CGP).

The QLP program is expected to:

- Eliminate duplication of the effort between state and local construction stormwater programs,
- Simplify requirements for construction site operators, and
- Promote effective Erosion Prevention and Sediment Control (EPSC) programs resulting in the improved protection our state's waters.

The 5 new QLPs had a 6 month provisional period to implement required minimum program elements, educate stakeholders, and prepare the development community for transition from a dual permit system to a single permit system administered by the QLP. The 5 QLP cities all became active by April 1, 2013, and include:

Bristol  
Cookeville  
Knoxville  
Knox County  
Washington County

**TDEC will no longer be accepting applications for coverage under a CGP for sites located in a QLP.** Any walk-in, mailed, and emailed applications will be returned and any processed checks will be refunded.

The Administrative Staff will work with the QLP Coordinators at the Environmental Field Offices to fill out refund form [FA-0765](#) for checks processed for construction sites located in a QLP. These refund forms and associated paperwork will be delivered to Vidya Bhupathiraju with Fiscal for processing. Refund checks will be mailed out within 30-45 days. Vidya may be reached at: 615-253-6242 or [Vidya.Bhupathiraju@tn.gov](mailto:Vidya.Bhupathiraju@tn.gov)

The QLP Coordinators at each office are:

EFO	QLP Coordinator	EFO	QLP Coordinator
Memphis	Joellyn Brazile	Cookeville	Karina Bynum
Jackson	Ben Matthews	Chattanooga	Jason Dees
Nashville	Ann Morbitt	Knoxville	Michael Atchley
Columbia	Ryan Owens	Johnson City	Brown Patton

Additional information on the QLP may be found: <http://www.tn.gov/environment/wpc/stormh2o/qlp.shtml>



[tn.gov/environment](http://tn.gov/environment)

A-3

Refund Number: \_\_\_\_\_

STATE OF TENNESSEE  
CLAIM FOR REFUND

Department \_\_\_\_\_

Agency \_\_\_\_\_ Allotment Code \_\_\_\_\_

Refund Payable to:

Name \_\_\_\_\_

Address \_\_\_\_\_

Amount to be Refunded: \$ \_\_\_\_\_

Receipt No.: \_\_\_\_\_ Date Received: \_\_\_\_\_

CD Control No.: \_\_\_\_\_ Date Deposited: \_\_\_\_\_

Agency CD No.: \_\_\_\_\_ Account Code  
of CD Deposit: \_\_\_\_\_

Reason for Refund: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I hereby approve the above refund and certify that the payee owes no other monies to this department.

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Written Request for refund should be attached, if applicable.

Refunds of \$1,000 or more must be approved by the Attorney General.

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
Attorney General or Designee

FA-0765

White: Finance and Administration  
Yellow: Attorney General  
Pink: Agency Copy

← Don't sign

← Don't sign





STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

## MEDIA RELEASE

FOR IMMEDIATE RELEASE  
JULY 5, 2013

CONTACT: SHANNON ASHFORD  
(615) 532-8723

### **TDEC Announces Open Enrollment for Qualifying Local Program's Construction Stormwater Permitting**

*Program Designed to Build Permitting Efficiencies, Improve Water Quality*

**NASHVILLE** - The Tennessee Department of Environment and Conservation announced today that the pilot period for the Qualifying Local Program has concluded and the department is now accepting new applications through an open, year-round enrollment. The QLP program is designed to build efficiencies in how construction stormwater permits are issued, while satisfying the permit requirements at both the state and local levels and improving overall water quality.

During last summer's legislative session, Rep. Ryan Williams (R-Cookeville) and Sen. Mike Bell (R-Riceville) sponsored and passed legislation through Public Chapter 1019 in the Tennessee General Assembly, allowing any eligible Municipal Separate Storm Sewer Systems to apply through TDEC to become a Qualifying Local Program. The legislation became effective July 1, 2013, following the conclusion of the pilot period.

"Last October, TDEC leadership joined Rep. Williams and local community officials in Knoxville for a ceremony formally announcing the first five communities to take part in the new stormwater permitting program," said TDEC Commissioner Bob Martineau. "Those five pilot participants were the cities of Bristol, Cookeville and Knoxville, in addition to Knox and Washington counties. We are pleased to be in a position to open up the program to other Tennessee communities."

The Qualifying Local Program's main intent is to eliminate the duplicative efforts of the current permitting process. Some of the most significant benefits of a QLP include:

- A more streamlined and efficient process for managing construction stormwater by eliminating permit and review duplication at the local and state levels;
- Eliminating additional effort at the state level for construction site operators by providing only one set of requirements to follow; and
- A more effective construction stormwater program resulting in greater water quality protection.

In order to achieve QLP status, the MS4 must demonstrate that its construction stormwater program meets or exceeds the provisions of the state's Construction General Permit. After being selected to participate in the QLP program, an MS4 would be able to administer its own stormwater construction permitting program at the local level without duplicating the review and approval process at the state level.

In turn, the site owners or operators of new construction activities within the jurisdiction of the qualifying MS4 will be required to submit paperwork and any fees only at the local level, potentially saving up to \$7,500 in state fees and taking less time by eliminating the additional effort at the state level. Permit coverage through the QLP program will authorize the operator of the construction activity to discharge stormwater associated with construction activity under both the state's Construction General Permit and the QLP's construction stormwater program. Other required permits, such as Aquatic Resource Alteration Permits, will still be handled by TDEC.

(MORE)



"TDEC recognizes there are many local jurisdictions throughout Tennessee that have developed an effective construction stormwater program of their own and have a solid regulatory program in place," said TDEC Deputy Commissioner Dr. Shari Meghreblian. "These cities are already designated as MS4s and are generally comprised of fast-growing urban communities. This program builds much needed efficiencies into the permitting process, improving customer service at the state and local level, while targeting resources where they are needed most."

Critical to the creation of this program was the establishment of a diverse stakeholder committee representing a variety of groups, including MS4s, professional associations, universities and members of government, development and environmental communities. The advisory committee worked to develop the criteria and program incentives designed to encourage MS4s to achieve QLP status.

For more information about TDEC's pilot Qualifying Local Program or to submit an application for participation, please visit <http://www.tn.gov/environment/wpc/stormh2o/qlp.shtml>. Municipalities interested in the QLP program may also contact Robert Karesh at (615) 253-5402 or [Robert.Karesh@tn.gov](mailto:Robert.Karesh@tn.gov); and Jennifer Watson at (615) 532-0359 or [Jennifer.Watson@tn.gov](mailto:Jennifer.Watson@tn.gov).

Additional information about Stormwater Construction General Permit requirements is available at <http://www.tn.gov/environment/permits/conststrm.shtml>.

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# APPENDIX “B”

<b>B-1</b>	<b>TNSA Annual Conference registration announcement</b>	<b>Page 25</b>
<b>B-2</b>	<b>TNSA/TDEC/ TVA Green Development Grant TDEC media release</b>	<b>Page 26</b>



FOR IMMEDIATE RELEASE

May 10, 2013

REGISTRATION IS NOW OPEN for the Tennessee Stormwater Association Annual Conference.

The Tennessee Stormwater Association's Conference Committee works diligently every year to coordinate an annual gathering for TNSA members and water quality professionals to come together to learn about a variety of relevant topics ranging from case studies on new best management practices to information on changes to permitting requirements.

This year marks TNSA's first full standalone conference titled "What Are You Wadin' For" The event will be held at Henry Horton State Park in Chapel Hill, TN from November 12<sup>th</sup> – 14<sup>th</sup>. This year's conference will include 30+ sessions on topics including regenerative stormwater practices, Qualified Local Program (QLP), An Education Panel, Macroinvertebrate sampling, stream assessment training and so much more!

Networking activities including a tree planting service project, guided hike, and a social with live music are just some of the opportunities to meet and learn from other professionals throughout the state.

#### **Early Bird Registration**

May 10, 2013 – September 30, 2013

Members - \$100/ Non-Members - \$125

You may register online at <http://tnstormwater.org/blog/conference/>. You may also make checks payable to TNSA and send to 11408 Municipal Center Dr, Farragut, TN 37934; Attention Jason Scott.

#### **Lodging**

A block of rooms is reserved at the Henry Horton State Park Inn at a rate of \$65+tax/night for TNSA attendees. Reserve your room by calling (931) 364-2222 or (800) 250-8612 and be sure to mention Group Code #2945. Rooms can also be booked online at [www.tnstateparks.com](http://www.tnstateparks.com). Please reserve lodging by September 30, 2013, to ensure availability and rate.

#### **Memberships/Sponsorships/Exhibitors**

Not a member yet? Why not join today and get a discounted conference registration for all of your organization's employees? Several sponsorship opportunities are available for interested organizations. Please visit our website at <http://tnstormwater.org/blog/?p=148> for more information regarding sponsorships and exhibitor booths.

Please contact the TNSA Conference Planning Committee via email at [crystal.piper@franklin.tn.gov](mailto:crystal.piper@franklin.tn.gov) or by phone at 615-550-6670 should you have any questions or require further information.

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*Tennessee Stormwater Association  
605 Airways Boulevard, Suite 109  
Jackson, Tennessee 38301*



# MEDIA RELEASE

STATE OF TENNESSEE

DEPARTMENT OF ENVIRONMENT AND CONSERVATION

FOR IMMEDIATE RELEASE  
JUNE 27, 2013

CONTACT: MEG LOCKHART  
(615) 253-1916

## Agencies Partner to Offer Green Development Grants

*Grant Program Encourages Green Infrastructure and Low-Impact Development Projects*

**NASHVILLE** - The Tennessee Department of Environment and Conservation will once again partner with the Tennessee Stormwater Association (TNSA), the Tennessee Valley Authority and the Tennessee Department of Transportation to offer a grant program designed to help local governments fund green infrastructure and low-impact development projects.

A total of \$200,000 in grant funds will be available for allocation over the next two years. 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.

"We are pleased to be in a position to offer this funding resource, helping local communities improve Tennessee's water quality, while working to meet their stormwater management goals through creative design and green development practices," said Environment and Conservation Deputy Commissioner Dr. Shari Meghreblian.

"Investing in the Green Development Grants program gives the Tennessee Department of Transportation the opportunity to help local governments implement best management practices, while supporting overall improvements to local infrastructure," said Assistant Commissioner Toks Omishakin, chief of TDOT's Environment and Planning Bureau.

This year's grant cycle represents only the third time the Green Development Grants have been offered to local governments. Communities selected during the 2013 grant cycle will join the cities of Athens, Chattanooga, Lakeland, Memphis, Knoxville and Nashville, which have received funding since the grant's inception in 2008 for various projects ranging from pervious concrete parking or walking paths to green infrastructure improvements to community recreational areas.

"This is a great opportunity for Tennessee Stormwater Association members to implement innovative stormwater management techniques that are designed around green technology and that benefit the local communities," said TNSA President Chris Granju.

"Protecting Tennessee's watersheds is a shared responsibility," said Brenda Brickhouse, TVA Vice President of Environmental Permits and Compliance. "Controlling and filtering stormwater prior to it entering Tennessee's waterways is a key component to safeguarding our waterways, while ensuring our communities can rely on good, clean water."

Applications for the 2013 Green Development Grants are due by Aug. 15, 2013, and grant awards will be announced by Sept. 30, 2013. Grant applications will be reviewed and ranked by a team comprised of representatives from each of the partner agencies. The next offering for Green Development Grants will be available in May 2014.

Online application materials and additional information about the Green Development Grants are available on TDEC's website at [www.tn.gov/environment/greendev/](http://www.tn.gov/environment/greendev/) or through the Tennessee Stormwater Association at [www.tnstormwater.org/](http://www.tnstormwater.org/).

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