

*“Spotlight” Webinar Series*



## **Public Education and Outreach Programs**

May 15, 2019 | 11:00 a.m. – 12:00 noon (Eastern)

[www.SESWA.org](http://www.SESWA.org)

# Today's Presenters



**Crystal Bishop**  
Stormwater Manager  
Hamilton County, TN  
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**Jennifer Watson**  
Stormwater Coordinator  
City of Gallatin, TN  
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# Project



- ▶ Education and Outreach  
A Multi-MS4 Approach

Crystal Bishop  
Stormwater Manager  
Hamilton County Water Quality



— WHAT IS  
**Project  
WET ?**

- ▶ Water Education for Teachers
- ▶ Educator Workshops
- ▶ Lessons for K - 12 Students

"It renewed my excitement for teaching science!"

## Our Approach



First week of June



Out of the classroom



Provide lesson plans



Benefits of

# Partnership

By establishing a multi agency partnership, we are able to accomplish goals that would be otherwise unattainable for a single water quality program.



**Cost**

Split evenly between three MS4's we are able to provide educators with an overall better experience.



**Knowledgeable Staff Members**

Allows WQ staff to answer questions and build working relationships with their local educators.



**Larger Audience**

We are able to reach a larger audience to spread our message.

Benefits of  
Partnership

# Cost

- ▶ Split cost between MS4s
- ▶ Creates additional funding for teacher incentives
- ▶ Also provides additional funding for travel-related activities

"First time snorkeling and I loved it!"



One Third  
Facility  
Cost

One Third  
Facilitator  
Cost



One third  
Field Trip  
Cost

B e n e f i t s o f  
P a r n e r s h i p

## Knowledgeable Staff

- ▶ Answer watershed-specific questions
- ▶ Creates working relationships between MS4 and educators
- ▶ Provide materials teachers can check out

"I really got materials I could use in the classroom."



Provide more support for teachers.



Introduce educators to local water quality staff.

## Larger Audience

- ▶ One teacher can share lessons with hundreds of students
- ▶ Multiple municipalities = wider reach

"I also teach a math and science methods course at a university and I plan to share these activities with my college students."



"It was nice to get together with other educators and learn. I loved the hands on activities and the snorkeling."



We have educators from all over the Southeast.



# Activities

**Project WET**

8:00 Arrive at Ocoee Whitewater Center  
Parking-Attendee to give out Parking Passes and Instructions

8:05 Welcome and Introductions  
Leah Crisp, Hamilton County Water Quality Program

8:10 Project WET Activities and Workshop  
George Bartnik

11:30 Distribution of Education Materials & Certificates

11:45 Lunch and Presentation  
Lunch Provided by Cleveland Stormwater Program  
Presentation: Matt Snyder, City of Chattanooga

12:15 Pack/Change clothes (if desired) to depart for snorkeling activity

12:30 Depart for snorkeling activity. Park personal vehicles at Hwy 411 & Hwy 64 and board outfitters bus bound for the Conasauga River

1:30 Arrive at Conasauga River

4:00 Begin loading bus to return personal vehicles

Activities Featured in today's Workshop

- Blue Planet
- Incredible Journey
- Blue River
- Macroinvertebrate Mayhem
- Sparking Water
- Aqua Notes

Please take time to visit [www.discoverwater.org](http://www.discoverwater.org) for interactive games and lessons on water, brought to you by Project WET.

Correlations to Tennessee K-8 Curriculum Standards for Project WET can be found at: <http://weintennessee.org/resources/about.aspx?>

**A BIG THANK YOU TO:**

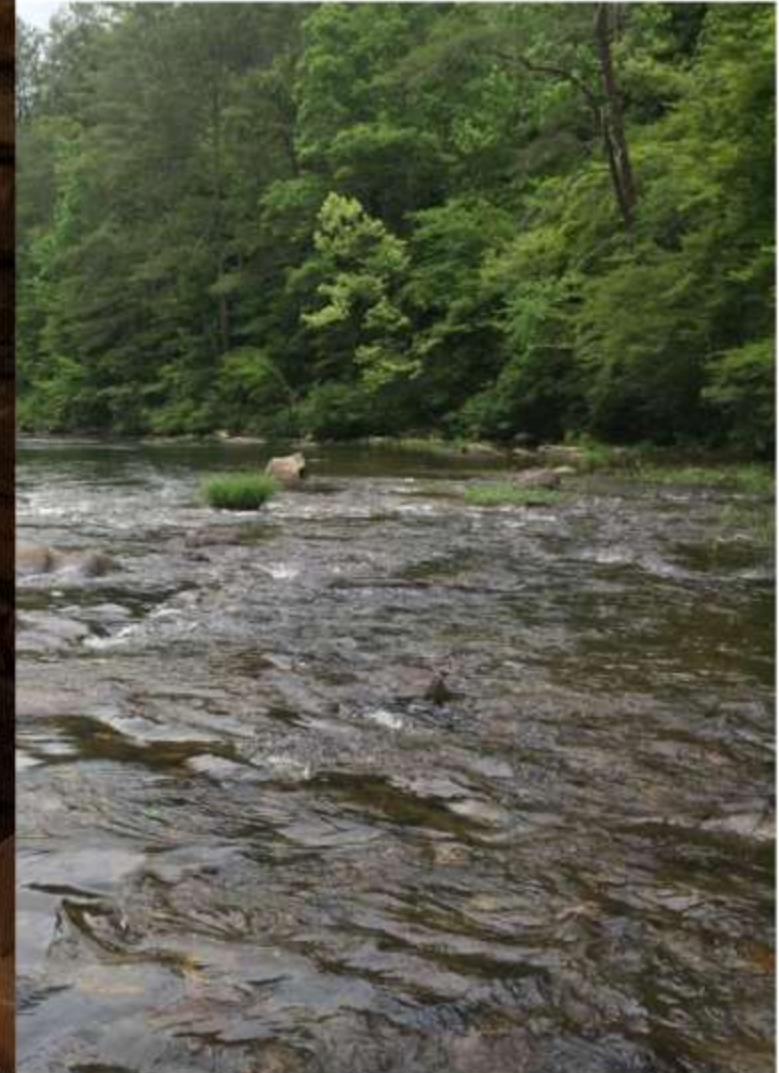
James Whitener and the staff of the Ocoee Whitewater Center, Cherokee National Forest

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**City of Cleveland TENNESSEE**

**Hamilton County Water Quality Program**

**County College**



# Activities



## Blue Planet

- ▶ Demonstrate how much of the earth is covered in water
- ▶ Estimate percentage of Earth's surface covered by water/land
- ▶ Simple probability sample to determine answer



# Activities —

## Incredible Journey

- ▶ Each student acts as a "water molecule"
- ▶ Stations represent various stages of the water cycle
- ▶ Students create a bracelet to show their journey



# Activities —

## Blue River

- ▶ Describe major components of a watershed
- ▶ Demonstrate movement of water through a river
- ▶ Create hydrograph based on simulation



# Activities

- ▶ Simulate the effects of environmental stressors on macroinvertebrates
- ▶ Demonstrates importance of biodiversity to aquatic ecosystems

## Macroinvertebrate Mayhem



# Activities —



## Sparkling Water

- ▶ Attempt to clean a sample of "wastewater"
- ▶ Understand process to keep our water clean
- ▶ Compare to natural water cycle



# — Conasauga River Snorkel Hole



# — Conasauga River Stream Crawl





How do we to get educators  
to want to sign up for the  
workshop?



I n c e n t i v e s

# — Feed Them

By sharing the cost, we are able to provide everyone with breakfast and lunch. Also snacks and water on the snorkeling field trip.

## Lunch

The DAM Deli  
Where the Locals Eat.



## Breakfast

Delicious Chicken  
Biscuits and Coffee



I n c e n t i v e s

# — Entertain Them

Fun activities

Free Snorkeling

Stream Sampling macros

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"Just wish I had known about this earlier in my teaching career. I hope to be informed about future workshops."



## Conasauga River

One of the most biologically-diverse rivers in North America.

## I n c e n t i v e s

# — Support Them

Each MS4 is set up and run differently. Some have the budget to do one thing where the others may not, but all three come together to help with individual incentives.

Hamilton county offers a stipend to qualifying teachers to help them with environmental education supplies.

City of Cleveland does the same thing with gift cards.

Bradley County supplies welcome bags with environmental education supplies.



## Gifts and Door Prizes

- Welcome Goody Bags
- T-shirts
- Door Prizes
- \$25 Gift Card for Participation
- Stipend to cover cost of education materials
- Professional Development Credits Hours
- Free Project WET workbook filled with classroom activities for all age groups.

## Hamilton County and City of Cleveland

Water Quality Programs make these resources available to teachers to checkout in order to simplify the use of lessons in the classroom.



"This was an excellent class. I am excited to have such a wealth of materials to share with my students and team."

**72%**  
of teachers  
say they would  
check out a lesson  
resource kit if  
made available.





**"It gave me insight into new ways to present some of the material we already base our educational programming on."**

**93%**  
of teachers say they can use Project WET activities in their classroom.





**400 +**  
**Workshop**  
**attendees**  
**in the past**  
**10 years!**

**90%**  
of teachers  
say they are  
extremely likely  
to recommend  
project WET to  
a colleague

**3**  
Participating  
MS4's

**30**  
Educators per  
Workshop

# Urban Runoff 5K & Water Quality Festival

## A Partnership for Public Education



SESWA Webinar

May 15, 2019

*Jennifer Watson*

*City of Gallatin & TNSA*





# Urban Runoff 5K & WQ Festival Partnership

An example of a successful and unique and fun Public Education collaborative effort in Nashville!



# Urban Runoff 5K & WQ Festival Partnership

Formed in 2012



Forestry



# Urban Runoff 5K & WQ Festival Partnership

- 2019 is our 7<sup>th</sup> Year
- We've hosted 6 successful events with a turnout of over 1,500 people
- TDA-Forestry has handed out tree seedlings as awards every year
- This will be the 5<sup>th</sup> year we have offered Water Quality Grants to local Not-For-Profit groups
- We've raised \$ for TNSA: stormwater education programming in Tennessee



# Urban Runoff 5K & WQ Festival Partnership

- The race attracts a broad spectrum of local and out of town participants. A chance to reach a new and unique audience
- It serves as one of Nashville's 6 large public education events to be held each year, as required by the Phase I MS4 Permit, and fulfills many Phase II MS4 annual public education goals
- It is the perfect forum for state/local regulatory agencies to work together on an outreach project
- Also a great way to work together with Private and Not-For-Profit Groups
- And it's really fun!



# Urban Runoff 5K & WQ Festival Partnership

## MS4 Race Contributors and Exhibitors:

MTSU/City of Murfreesboro

TDOT

Sumner County

City of Goodlettsville

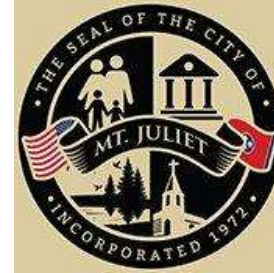
City of Portland

City of Mt. Juliet

City of Lebanon

City of Franklin

Williamson County



# Urban Runoff 5K & WQ Festival Partnership

## Not-For-Profit Race Contributors and Exhibitors:

Cheekwood Botanical Garden

Cumberland River Compact

Nashville Zoo

Richland Creek Watershed Alliance

State Agencies: TWRA, USACOE

Tennessee Concrete Association

Tennessee Environmental Council

Urban Green Lab

Water City USA



# Urban Runoff 5K & WQ Festival Partnership

Private Consultants/

Companies Race Contributors & Exhibitors

Barge Cauthen & Associates

Belgard Hardscapes

CDM Smith

Civil Environmental Consultants

Gobbell Hays Architects

Gresham Smith Partners

Hazen & Sawyer

Mid-Tennessee Erosion Control

Rock City Construction

Wood Engineering



Thank you to our Sponsors

Presenting Sponsors:



Performance Sponsor:



Green Sponsors:



Splash Sponsors:



Race Partners:



# Urban Runoff 5K & WQ Festival Partnership

## Race Teams

Many of these groups also sign up Teams to compete against each other!





# Urban Runoff 5K & WQ Festival Partnership

## Mascot Fun!



# Urban Runoff 5K & WQ Festival Partnership

**Tenny C. Bear**



**Mascot Fun!**

**Ramble**



Some of the Mascots wanted to show off their skills to win the Mascot Race!

# Urban Runoff 5K & WQ Festival Partnership

## Photobooth Fun!



NASHVILLE URBAN RUNOFF 5K 8.26.2017



NASHVILLE URBAN RUNOFF 5K 8.26.2017



# Urban Runoff 5K & WQ Festival Partnership

## So, how did this outreach event idea develop?

While at TDEC, I first heard the idea from a new Urban Runoff 5K run in Maine that began that year - 2012

- TDEC was working closely with the TDA-Division of Forestry at this time and asked if they would be interested in participating
- Asked Metro Nashville MS4 if they would be interested in partnering, and
- Asked TNSA if they would be interested in partnering and serving as the Fiscal Agent

**All three said YES!**



# Urban Runoff 5K & WQ Festival Partnership

## The History Behind this Event

Ok... so now that we have the partners for this new outreach event, what exactly will be our main objective and our message?

Stormwater and Green Infrastructure, of course!



# Urban Runoff 5K & WQ Festival Partnership

## The History Behind this Event

*To put this into context and perspective...*

Newly Re-Issued Phase II MS4 Permit in 2011 and Phase I Nashville in 2012

- EPA was promoting **Green Infrastructure** as an innovative method for managing Post Construction Stormwater Runoff
- TDEC held multiple stakeholder meetings with MS4s and TNSA on new permit requirements over the last couple of years
- TDEC and EPA listened to MS4 input and incorporated changes into the permits



# Urban Runoff 5K & WQ Festival Partnership

## The History Behind this Event

Nashville is a Phase I MS4

- Multiple City and Private Green Infrastructure BMPs had been recently installed through a voluntary incentive program initiated before making Green Infrastructure a requirement

The Urban Runoff would be a fantastic and timely way of educating our Stormwater Professionals and the Public on these new Green Infrastructure Practices!



# Urban Runoff 5K & WQ Festival Partnership

## Objective

Engage the general public and Stormwater Professionals in a **fun atmosphere** that promotes the importance of eliminating stormwater pollution and the idea for implementing innovative “*green*” stormwater management practices in urban settings.

*(An unique event to attract a different kind of audience)*





# Urban Runoff 5K & WQ Festival Partnership

## Ok... Now What's Our Next Step?

Ok – So we have the Partners, the Objective, and the Commitment to work together on this Public Outreach project...  
Now what?

Mayor's Office had an Event Specialist!

He gave us a list of items to consider...



# Urban Runoff 5K & WQ Festival Partnership

Ok... Now What's Our Next Step?  
How do you even set up a 5K?

- Date and Location?
- Route?
- Permits & Fees
- Restrooms and Hydration?
- Funding?
- Prizes?
- Water Quality Festival?
- Race Registration site
- Advertising
- Timing system
- Race course certification
- Police and road barricades
- First Aid
- Develop Sponsor and Exhibitor Pledge Packet
- Social Media Kit
- T-Shirts and Logo Design



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Date depends on multiple factors:

- Availability for Metro Nashville
- Police & road closure considerations
- Check race calendars for other races
- Check calendars for other popular events
- General weather conditions/time of year

First two years, we held the Race and Festival in October



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Tennessee State Parks are the Conservation arm of TDEC

- State Parks were instrumental in providing assistance to us.
- Our first two years we ran the race in October from Bicentennial State Park into downtown Nashville,
- In 2014, we moved the date to August and moved the Race and Festival to Nashville's Centennial City Park for one year,
- In 2015, we then moved it to another larger City Park and Greenway (Shelby Park)



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

First Two Events Held at Bicentennial Mall State Park  
As a late October Event



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Why did we move? Metro Police and Road Closures are expensive!

- Hourly Charge for Police Security
- Road Closures
  - Barricades can be costly
  - Annoys local residents
- Additional administration
  - Parade Permits
  - Approvals



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

The benefits to the downtown Nashville race route was the Green Infrastructure BMPs – the race route was designed to run through the heart of downtown Nashville!



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Green Features along Route

Deaderick Street: Tennessee's First Green Street





# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Green Features along Route

Nashville's Public Square Green Roof

Award winning 2.5 acre green roof and water harvesting cisterns



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Ma

son

& 2014



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Turns out October was too cold *and* those dates interfered with College Football!!!!

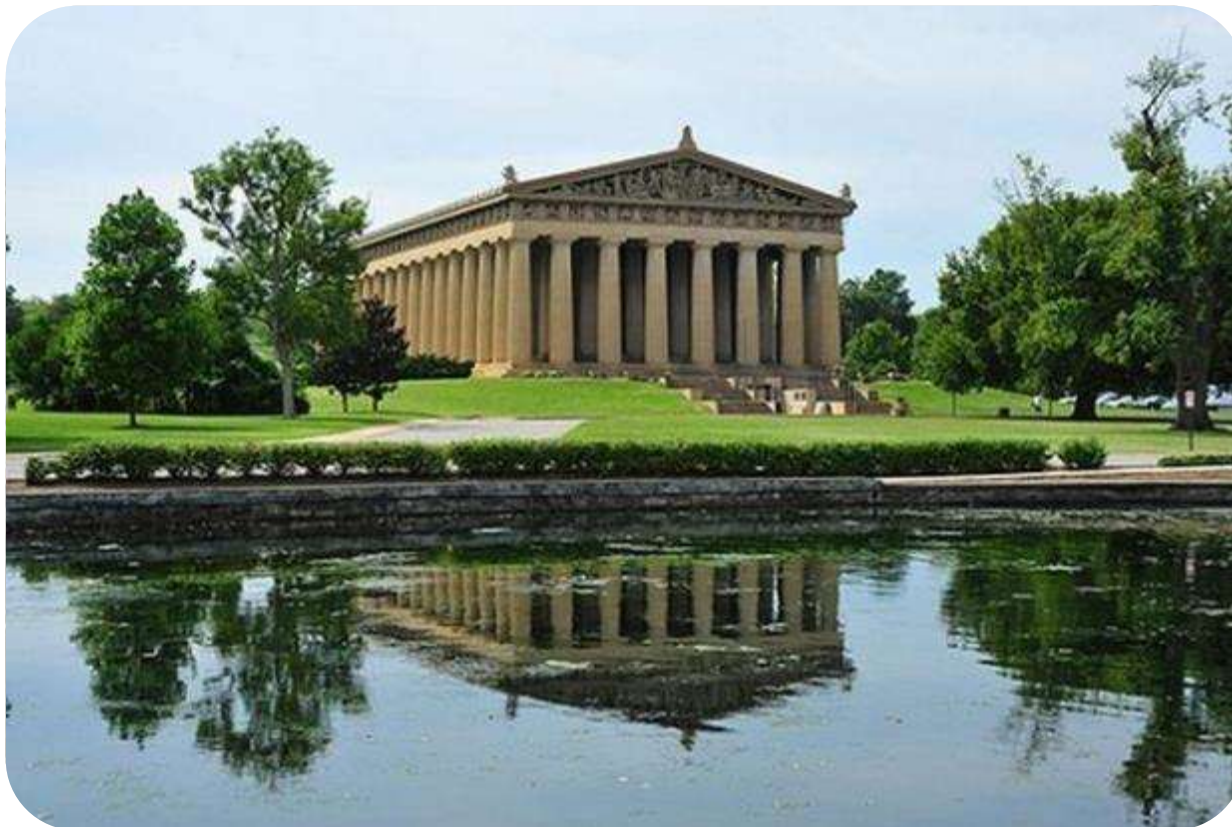
So we changed our Race & Festival date to August



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

In 2015, moved to Centennial Park



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

In 2015, the route was designed to have fewer road closures, while still positioned within an urban area with on the ground “Green Features”



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Green Features along the route

**Lake Wataugu  
Floating Biomats**



**Parthenon Parking Lot  
Bioretention Basin**



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Green Features along the route

**Private Development**  
**Pervious Pavers**



**28<sup>th</sup> Connector**  
**Green Street**



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations





# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Since 2016, Race and WQ Festival have been contained within a City Park



# Urban Runoff 5K & WQ Festival Partnership

## Date, Location and Route Considerations

Although there is a Green Roof on the Nature Center, there aren't as many urban Green Infrastructure Practices at Shelby Park so we increased our signage along the route.

### How you can help prevent polluted runoff...

Wash your car in your lawn!

Washing your car in the street takes all the pollutants and soaps straight to the storm drain. Park it in your yard and allow the ground to filter all the pollutants out of the water!



### How you can help prevent polluted runoff...

¼ of a teaspoon of car oil can spread out to cover 2,000 square feet of water. Treat car leaks as emergencies and get them fixed immediately.



# Urban Runoff 5K & WQ Festival Partnership

## Positive Lessons

Free trees (TDA-Forestry)-given to winners of each age category received very positive feedback!



# Urban Runoff 5K & WQ Festival Partnership

## Positive Results

- In 2015, introduced a new contest to promote on the ground implementation of green water quality improvements within Davidson County.
- Contestants (NGOs) were asked to submit applications to perform a project that would result in direct/indirect improvements to stormwater runoff.
- The Award is \$1,000



# Urban Runoff 5K & WQ Festival Partnership

## Lessons Learned

Over the 6 years, there have been some valuable lessons learned:

Route itself is very important:

- If you choose to host an event in the City on Public Roads: More road closures = higher costs
- Needs blessing of City officials/Police Department.
- Route to feature Stormwater Management devices or have signage
- Route should be measured and certified as a 5K distance and race should be chip-timed (*many runners are serious*).
- Timing Company is important (*runners want to know their times are verified and correct and they don't want to wait too long for the results*)



# Urban Runoff 5K & WQ Festival Partnership

## Lessons Learned

- Race date is equally important
  - Engage with City officials to make sure proposed date doesn't conflict with other dates
  - Check all the online race calendars to make sure no other races are already planned.
  - Plan for Race-Day (same-day) registrants
- Race Budget
  - Identify in-kind costs that can be covered from the partners.
  - Reserve some seed money each year for the following year's race.



# Urban Runoff 5K & WQ Festival Partnership

## Lessons Learned

### Start Early:

- Start talking to Sponsors early (Sponsorships are critical to cover overhead costs)
- Pick a date early and get it posted to the online race calendars so no one else tries to schedule a race on your day.
- Advertise early and often: *email blasts, social media, websites, flyers at other races*
- Start talking with City officials early to get all the required approvals:
  - Parade Permit
  - Street Closure Permits, etc.
  - Park Police
  - Park Date Reservation (Park Board Approval)



# Urban Runoff 5K & WQ Festival Partnership

## Lessons Learned

- Race day Coordination
  - Don't leave any loose ends (i.e. barricades, signage, volunteers – make sure they are all in the correct locations)
  - Have plenty of volunteers and plan on something to go wrong with packet pick-up or registration.
    - Separate table for problem registrations
    - Separate table for same-day registrations





# Urban Runoff 5K & WQ Festival Partnership

Questions?





Please contact me with any questions!

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