

# Agenda

*Presented by Scott Jeffers and Adam Erispaha*

## Urban Hydrology and the Environmental Backdrop

Overview of urban hydrology and environmental concerns  
Separate versus combined sewer systems  
Introduction to green stormwater infrastructure  
Municipal goals and working towards a green future

## Stormwater Modeling Techniques and How They Work Under the Hood

Rational method  
Curve number  
Continuous simulation

## Real Time Decision Support Systems – Optimization for Overflow Reduction

Real time decision support  
Modeling techniques  
Data science and Internet of Things for CSO reduction

## Designing a Separate Sewer – Case Study of a Stormwater Sewer in Philadelphia

Reviewing drainage patterns  
Locating and spacing inlets  
Creating a system layout  
    Choosing pipe materials and diameters  
    Locating manholes  
    Design discharge  
    Gutter design  
    Longitudinal slopes  
Utilities conflicts  
Construction concerns

## City-scale Strategic Stormwater Planning

Sewer system renewal and aging dynamics  
Progressive flood mitigation planning  
Climate change adaptation

## Stormwater Design Case Study

Urban Stormwater Design  
Fairfax, VA - Friday, March 23, 2018

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## Learning Objectives

### ***You'll be able to:***

**Review** municipal stormwater goals and work toward a greener future.

**Review** stormwater modeling techniques.

**Explore** techniques for optimizing overflow reduction.

**Create** separate storm sewer system layouts.

**Adapt** systems due to climate change.

**Evaluate** sewer system renewal and aging dynamics.

**Conduct** progressive flood mitigation planning.



# Urban Stormwater Design

*Fairfax, VA - Friday, March 23, 2018*



**Understand** urban hydrology and the environmental backdrop

**Identify** stormwater modeling techniques and how they work

**Discuss** separate versus combined sewer systems

**Learn** about real time overflow decision support systems

**Explore** city-scale strategic stormwater planning

**Examine** stormwater design case studies

## Continuing Education Credits

### **Professional Engineers**

6.0 Continuing Ed. Hours

### **Certified Planners**

6.0 APA CM Hours

### **Floodplain Managers**

6.0 ASFPM CECs

### **Architects**

6.0 HSW Continuing Ed. Hours

6.0 AIA HSW Learning Units

### **Contractors**

Non-Credit Continuing Ed.



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# Faculty

**Scott Jeffers, PE, PhD**  
Mr. Jeffers is a consulting engineer and recent PhD graduate of the Drexel University Sustainable Water Resource Engineering Lab, studying green infrastructure and urban water resource management. His career spans both the professional consulting world and academia, designing separate stormwater sewers in Philadelphia and partnering with research initiatives at the New York City Department of Environmental Protection and Department of Park and Recreations. Mr. Jeffers is currently a teaching fellow at Drexel. He believes in green solutions to urban environmental issues that promote sustainable planning for the future.

**Adam Erispaha, PE**  
Mr. Erispaha is licensed civil engineer with a passion for building tools, increasing efficiency, and finding innovative solutions to complex problems. He works as a civil engineer and data scientist at the smart sewer technology firm, EmNet, where he develops hydraulic models and software to optimize urban sewer systems. In the past, Mr. Erispaha worked as an on-site consultant to the Philadelphia Water Department’s Planning and Research division where he provided technical and strategic planning support on large scale flood mitigation studies. His professional interests include modeling urban stormwater and flood mitigation systems, strategic infrastructure planning, climate change adaptation, policy development, and software development.

# Seminar Information

**Hilton Garden Inn Fairfax**  
3950 Fair Ridge Drive  
Fairfax, VA 22033  
(703) 385-7774

**Tuition**  
**\$279** for individual registration  
**\$259** for three or more registrations.  
*Each registration includes a complimentary continental breakfast and printed seminar manual.*

**Receive a reduced tuition rate of \$101** by registering to be our on-site coordinator for the day. For availability and job description, please visit [www.halfmoonseminars.org](http://www.halfmoonseminars.org).

**How to Register**  
• Visit us online at [www.halfmoonseminars.org](http://www.halfmoonseminars.org)  
• Mail-in or fax the attached form to 715-835-6066  
• Call customer service at 715-835-5900

**Cancellations:** Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the CD/manual package. You may also send another person to take your place.

Registration  
8:00 - 8:30 am  
Morning Session  
8:30 - 11:45 am  
Lunch (on your own)  
11:45 am - 12:45 pm  
Afternoon Session  
12:45 - 4:00 pm

**Continuing Education Credit Information**  
This seminar is open to the public and offers 6.0 continuing education hours to engineers in Virginia. Educators and courses are not subject to preapproval in Virginia.

The American Planning Association has approved this event for 6.0 certification maintenance hours for planners.

The Association of State Floodplain Managers has approved this course for 6.0 CECs.

This seminar offers 6.0 HSW continuing education hours to architects in all states, except Florida. Educators and courses are not subject to preapproval in Virginia.

The American Institute of Architects has approved this course for 6.0 HSW Learning Units (Sponsor No. J885). Only full attendance can be reported to AIA/CES.

This course offers a non-credit continuing education opportunity to construction contractors. It has not been preapproved in any state with contractor continuing education requirements.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire program. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

# Additional Learning

## February Webinar Series

- Building Operations and Efficiency**
- **Identifying Energy Efficiency Opportunities in Major Renovations**  
Thurs., Feb. 1, 2018, 11:00 AM - 12:30 PM CST
  - **Integration of “Energy Modeling” in the Design of High Performance Buildings**  
Thurs., Feb. 1, 2018, 1:00 - 2:30 PM CST
  - **High Efficiency Building Design Standards**  
Fri., Feb. 2, 2018, 11:00 AM - 12:30 PM CST
  - **Commissioning and Operation of High Performance Buildings**  
Fri., Feb. 2, 2018, 1:00 - 3:00 PM CST

- International Mechanical Code**
- **International Mechanical Code Background and Application**  
Thurs., Feb. 15, 2018, 11:00 AM - 12:30 PM CST
  - **Chapters 2-5: Definitions, Regulations an Ventilation**  
Thurs., Feb. 15, 2018, 1:00 - 3:00 PM CST
  - **Chapters 6-10: Ventilation, Appliances and Equipment**  
Fri., Feb. 16, 2018, 11:00 AM - 1:00 PM CST
  - **Chapters 11-15: Refrigeration, Piping and Appendices**  
Fri., Feb. 16, 2018, 1:30 - 3:00 PM CST

- National Electrical Code: A Solar Photovoltaic System Perspective**
- **National Electrical Code for Building Professionals, Part I**  
Wed., Feb. 21, 2018, 11:00 AM - 2:15 PM CST
  - **National Electrical Code for Building Professionals, Part II**  
Thurs., Feb. 22, 2018, 11:00 AM - 2:15 PM CST

For more information visit:  
[www.halfmoonseminars.org/webinars/](http://www.halfmoonseminars.org/webinars/)

**Can’t Attend? Order the CD/Manual Package:**  
An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

# Registration

**Urban Stormwater Design**  
Fairfax, VA - Friday, March 23, 2018

| How to Register                                                                          |                                                                                                                                                                            | Registrant Information                                                                                                                          |
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| <b>Phone:</b><br>715-835-5900                                                            | <b>Additional Registrants:</b><br>Name: _____<br>Occupation: _____<br>Email: _____<br>Phone: _____<br><br>Name: _____<br>Occupation: _____<br>Email: _____<br>Phone: _____ |                                                                                                                                                 |
| <b>Fax:</b><br>715-835-6066                                                              | Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.        |                                                                                                                                                 |
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( )  I need special accommodations. Please contact me.

**Tuition**  
( ) **I will be attending the live seminar.** Single Registrant - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.  
( ) **I am not attending.** Please send me the CD manual package for **\$289.00**. (S&H included. Please allow five weeks from seminar date for delivery)

**Checks:** Make payable to HalfMoon Education Inc.

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