

Agenda

Fundamental Concepts of Hydrology and Hydraulics

- The water cycle
- Defining the water budget
- Design storms vs historic rain events
- Natural vs urban landscapes
- Natural channels and engineered drainage systems
- Hydraulic control structures
- Challenges and trends in municipal stormwater management

Basic Stormwater Calculations: Case Study Demonstration

- Conceptual design - designing a bioretention basin for a small site
- Total volume - how much water do we have to manage? Using curve number
- Storage volume - how big does our basin need to be?
- Peak flow rate - what is the maximum flow rate of water we will expect our system to manage? Using the rational method
- Pipe sizing - what size will our hydraulic components need to be to manage the peak flow? Using Manning's Equation.
- Putting it together - taking the engineering parameters into physical site design
- Software options to streamline the approach

Introduction to Hydrologic/Hydraulic Modeling

- Hydrologic/hydraulic modeling demonstration
- TR-20 vs SWMM demonstration
- Implementation of GIS
- Evaluating design storms vs continuous rainfall patterns
- Key elements in reporting and forming a design

Design and Municipal Considerations

- Stormwater management plan permitting
- Pros and cons of various systems
- Low impact development/green stormwater infrastructure
- Design elements and choosing the right system

Advanced Modeling Techniques

- 1D vs 2D modeling
- City-wide master planning with hydrologic/hydraulic modeling
- Telling a story with modeling
- Where information can be obtained

Can't Attend? Order the Webinar as an On-Demand Package!

Recordings of this webinar are available for purchase. See course listing online for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Hydrology and Hydraulics for Municipal Stormwater Engineering

Live, Interactive Webinar - Thursday, May 9, 2024

NON-PROFIT
U.S. POSTAGE PAID
EAU CLAIRE, WI
PERMIT NO. 2016

HalfMoon Education Inc.
PO Box 278
Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Identify fundamental concepts of hydrology and hydraulics.

Discuss challenges and trends in municipal stormwater engineering.

Participate in a case study where you'll develop basic stormwater calculations.

Explore software options for hydrologic and hydraulic modeling.

Discuss low impact development and green stormwater infrastructure.

Consider advanced modeling techniques and opportunities for city-wide master planning.



HalfMoon Education Live Webinars

Hydrology and Hydraulics for Municipal Stormwater Engineering

Live, Interactive Webinar - Thursday, May 9, 2024



Explore fundamental concepts of hydrology and hydraulics

Use a case study to develop stormwater calculations

Get an introduction to hydrologic and hydraulic modeling

Discuss stormwater system design considerations

Examine permitting processes and opportunities for city-wide stormwater master planning

Continuing Education Credits

Professional Engineers

6.0 PDHs

Architects

6.0 HSW CE Hours

6.0 AIA LU | HSW

Landscape Architects

6.0 HSW CE Hours

6.0 LA CES HSW PDHs



HalfMoon Education Inc.
WWW.HALFMOONSEMINARS.ORG

Webinar Information

Online - Thursday, May 9, 2024

Log into Webinar 8:30 - 9:00 am CDT	Break 12:20 - 1:20 pm CDT
Morning Session 9:00 am - 12:20 pm CDT	Afternoon Session 1:20 - 4:30 pm CDT

Tuition
\$319 for individual registration.
\$289 for two or more registrants from the same company at the same time.

Included with your registration: PDF seminar manual.

How to Register

- Visit us online at www.halfmoonseminars.org
- Call customer service at 715-835-5900

Webinars are presented via GoToWebinar. Instructions and login information will be provided in an email sent close to the date of the webinar. For more information, please visit our FAQ section of our website, or visit www.gotowebinar.com.

Cancellations: Cancel at least 48 hours before the start of the webinar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another webinar or the on-demand package. You may also authorize another person to take your place.

Learn More and Register:
www.halfmoonseminars.org
Customer Service (715) 835-5900 Ext. 1

or scan here



Can't Attend? Order the Webinar as an On-Demand Package!
Recordings of this webinar are available for purchase. See details online for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Faculty

Scott Jeffers, PhD, PE *Water Resource Engineer*
Dr. Scott Jeffers's career focuses on urban water resources and green infrastructure collaborating with major municipalities internationally to address modern challenges in water, wastewater, and stormwater systems. Dr. Jeffers brings over 12 years' experience in the water resource industry specializing in site and regional hydraulic/hydrologic modeling, permitting, capital improvement master planning, optimization/prioritization for asset management, IoT deployment, and a background in novel digital water techniques. Dr. Jeffers is a leading expert in EPA SWMM modeling and teaches hydrology and urban ecohydraulics at Drexel University. Recreationally, he is a musician and rock climber.

Credit Information

This webinar is open to the public and is designed to qualify for 6.0 PDHs for professional engineers, 6.0 HSW continuing education hours for licensed architects, and 6.0 HSW continuing education hours for landscape architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider License No: CEA362), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130). HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.0 HSW LUs (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The Landscape Architecture Continuing Education System has approved this course for 6.0 HSW PDHs. Only full participation is reportable to the LA CES.

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

On-Demand Credits
The preceding credit information only applies to the live presentation. This course in an on-demand format is not pre-approved by any licensing boards and may not qualify for the same credits; please consult your licensing board(s) to ensure that a structured, asynchronous learning format is appropriate. The following pre-approvals may be available for the on-demand format upon request:
6.0 HSW LUs (AIA), 6.0 HSW PDHs (LA CES)

Additional Learning

Erosion and Sediment Control
- Thursday, April 11, 2024 | 9:00 am - 1:15 pm CDT
- Friday, April 12, 2024 | 9:00 am - 1:15 pm CDT

Wetland Mitigation Law and Procedure
- Thursday, April 11, 2024 | 8:30 am - 4:00 pm CDT

USDA National Organic Program: Rules and Compliance
- Monday, April 15, 2024 | 9:00 am - 4:00 pm CDT

Aerial Mapping for Land Surveyors and Civil Engineers
- Tuesday, April 16, 2024 | 9:00 am - 4:30 pm CDT

Lateral Earth Pressure for Seismic Design
- Tuesday, April 16, 2024 | 11:00 am - 1:10 pm CDT

Pruniversity: The Short Course on Pruning and Training Trees
- Tuesday, April 16, 2024 | 9:00 am - 4:30 pm CDT

The Tree Course for the Southeastern United States
- Wednesday, April 17, 2024 | 8:00 am - 3:30 pm CDT

Basics of Riparian Surveying
- Thursday, April 18, 2024 | 12:00 - 4:00 pm CDT

Best Practices in Plumbing Design and Construction: For Residential and Small Commercial Buildings
- Thursday, April 18, 2024 | 8:30 am - 3:30 pm CDT

Handling Ethical Issues in Professional Engineering Practice
- Friday, April 19, 2024 | 1:00 - 2:00 pm CDT

Permeable Pavements: Applications, Design and Installation
- Friday, April 19, 2024 | 9:00 am - 4:00 pm CDT

Saltwater Intrusion into Freshwater Resources
- Friday, April 19, 2024 | 9:00 am - 12:15 pm CDT

Deep Dive into Water Quality Tests
- Monday, April 22, 2024 | 8:30 - 10:30 am CDT

The National Environmental Policy Act (NEPA) Review Process
- Monday, April 22, 2024 | 9:00 am - 4:00 pm CDT

Controlling Shoreline Erosion and Creating Living Shorelines on Lakes and Rivers
- Thursday, April 25, 2024 | 8:30 am - 3:30 pm CDT

Land Descriptions
- Thursday, April 25, 2024 | 9:00 am - 12:00 pm CDT

Pavement Design, Construction and Maintenance
- Thursday, April 25, 2024 | 8:30 am - 4:00 pm CDT

For more information and other online learning opportunities visit:
www.halfmoonseminars.org