

Agenda

Understanding Stormwater Permit Requirements and Procedures *P. Sauer*

- Background and development of national and state regulations and permit requirements
- Activities exempt from construction general stormwater permit requirements
- Complying with NPDES and Iowa Department of Natural Resources regulations
 - Notice of intent requirements
 - What the permit covers and does not cover
 - Application process
 - General requirements and standard conditions
 - Implementing, monitoring and assessing SWPPPs

Understanding and Applying the Science of Stormwater *P. Sauer/R. Keehn*

- Hydrology, soil science and drainage
- Identifying consequences of storm events
- Stormwater modeling
- Runoff reduction, routing and storage
- Infiltration and percolation

Choosing Appropriate Stormwater Best Management Practices (BMPs) *R. Keehn*

- Stormwater management planning
 - Sizing criteria
- Green infrastructure practices
 - Preservation of natural features and conservation design
 - Reducing impervious cover
- Green management techniques
 - Conservation of natural areas
 - Riparian buffers and filter strips
 - Vegetated swales
 - Stream daylighting
 - Green roofs
 - Rain barrels/cisterns
 - Proprietary practices
 - Disconnected runoff
 - Rain gardens
 - Stormwater planters
 - Porous pavement

Tying it all Together: *P. Sauer/R. Keehn*

Planning, Modeling, Design and Maintenance

- Case study
 - Planning
 - Modeling
 - Design

Can't Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

Audio recordings of this seminar are available for purchase starting at \$269. See registration panel 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.

Stormwater Management 2020 Johnston, IA - Wednesday, January 29, 2020

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Learning Objectives

Learners will be able to:

- Discuss** the background and development of federal and state stormwater regulations and permit requirements.
- Identify** activities that are exempt from construction general stormwater permit requirements.
- Comply** with stormwater permit requirements, and review the application process.
- Describe** green infrastructure practices to manage stormwater, including the preservation of natural features, conservation design, and reduction of impervious surfaces.
- Choose** sustainable stormwater best management practices, including vegetated swales, stream daylighting, rain gardens, green roofs, stormwater planters and porous pavements.



Stormwater Management 2020

Johnston, IA - Wednesday, January 29, 2020



Understand the background and development of national and state stormwater regulations and permit requirements

Identify the consequences of storm events

Learn about green stormwater management practices including vegetated swales, rain gardens, and filter strips

Review case studies on BMP design, stormwater modeling, and BMP maintenance

Continuing Education Credits

Professional Engineers

6.0 PDHs

Floodplain Managers

6.0 ASFPM CECS

Architects

6.0 HSW Continuing Ed Hours
6.0 AIA LU|HSW

Contractors

Non-Credit Continuing Ed.

Landscape Architects

6.0 HSW Continuing Ed Hours
6.0 LA/CES HSW PDHs



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Faculty

Pat Sauer *CPSS, CPESC*

Ms. Sauer is a professional soil scientist and the executive director for the Iowa Stormwater Education Partnership (ISWEP). She oversees ISWEP, an organization that supports Iowa MS-4 cities that are permitted by the IDNR by providing educational resources, training and technical support. She also develops and conducts educational training and certification programs throughout Iowa on construction site runoff control, green infrastructure and stormwater design, streambank restoration and stormwater pollution prevention. Ms. Sauer is on the Technical Committee for the IDNR Iowa Stormwater Management Manual and is involved with planning the annual Iowa Water Conference.

Rocky J. Keehn *PE, D.WRE, CFM, ENV SP, LEED AP*

Mr. Keehn has over 30 years of experience in the field of stormwater planning and design. Projects have included detention ponding for rate control; retention ponds for water quality improvements; wetland construction; underground and above ground BMPs including rain gardens, first flush diversion structures, and special outlet structures; and retrofit of existing sites for stormwater improvements. He holds the certification of diplomate water resource engineer (D.WRE) from the American Academy of Water Resource Engineers, and is a registered engineer in the states of South Dakota, Nebraska, Minnesota, and Wisconsin. Mr. Keehn is a registered hydrologist in Wisconsin, a certified floodplain manager (CFM), LEED accredited professional and Nebraska Department of Transportation (NDOT) erosion and sediment control certified inspector.

Seminar Information

**Hilton Garden Inn
Des Moines/Urbandale**
8600 Northpark Drive
Johnston, IA 50131
(515) 270-8890

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

Tuition

\$289 for individual registration
\$269 for three or more registrants from the same company at the same time.

Included with your registration: 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.

How to Register

- Visit us online at 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 self-study package. You may also send another person to take your place.

Continuing Education Credit Information

This seminar is open to the public and offers 6.0 PDHs to professional engineers and 6.0 HSW continuing education hours to architects and landscape architects in most states, including Iowa. Educators and courses are not subject to preapproval in Iowa.

This seminar is approved by the American Institute of Architects Continuing Education System for 6.0 LU|HSW (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.0 HSW PDHs. Only full attendance is reportable to the AIA/CES and LA/CES. Visit www.halfmoonseminars.org for complete AIA/CES seminar information under this course listing.

Architects, engineers, and landscape architects seeking continuing education credit out Iowa will be able to apply the hours earned at this seminar, in most cases. Refer to specific state rules to determine eligibility.

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

This seminar offers a non-credit continuing education opportunity to construction contractors. It has not been approved by any state contractor licensing entity.

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

Webinar Series

Commercial Solar Peaker Batteries

- **Part I**
Wed., Feb. 5, 2020, 11:00 AM - 2:15 PM CST
- **Part II**
Thurs., Feb. 6, 2020, 11:00 AM - 2:15 PM CST

Pumping and Piping Systems

- **Introduction to Pumps:
Operation, Principles and Calculations**
Thurs., Feb. 6, 2020, 11:00 AM - 1:00 PM CST
- **Pumping and Piping Design
Standards and Codes**
Thurs., Feb. 6, 2020, 1:30 - 2:30 PM CST
- **Piping System Components,
Materials and Calculations**
Fri., Feb. 7, 2020, 11:00 AM - 1:00 PM CST
- **Handling Pump and Piping System Problems**
Fri., Feb. 7, 2020 , 1:30 - 2:30 PM CST

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

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Registration

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How to Register	Registrant Information Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip: _____ Occupation: _____ Email: _____ Phone: _____ Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____ 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. ()  I need special accommodations. Please contact me.
Online: www.halfmoonseminars.org	
Phone: 715-835-5900	
Fax: 715-835-6066	Code:
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278 Complete the entire form. Attach duplicates if necessary.	

Tuition

() **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.

() **I am not attending.** Please send me the self-study package:

☐ Downloadable MP3 Audio/PDF Manual for **\$269.00**.
☐ CD/Manual Package for **\$289.00**. ☐ USB/Manual Package **\$289.00**.
(S&H included. Please allow five weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.

Credit Card: *Mastercard, Visa, American Express, or Discover*

Credit Card Number: _____

Expiration Date: _____ CVV2 Code: _____

Cardholder Name: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

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Email: _____