

Agenda

Presented by Brandon Kulhanek, CPESC

Understanding Stormwater Permit Requirements and Procedures

Background, development, and requirements of national and state regulations
Waters of the United States update
Activities exempt from construction general stormwater permit requirements
Complying with NPDES and Michigan Department of Environmental Quality regulations

- Notice of Intent requirements
- Special conditions for sensitive waters
- Review and permitting process

Land/water interface MDEQ/USACE joint permitting

Understanding and Applying the Science of Stormwater

Legal aspects of drainage
Stormwater management planning
Classifying storm events Stormwater sizing criteria
Rainfall and runoff estimation methods
Understanding and classifying soils Infiltration estimation methods

Hydrologic and Hydraulic Analysis using SWMM

Introduction to EPA Storm Water Management Model (EPA SWMM)
Real time flow and rainfall monitoring for model input and model calibration techniques

Open Channel and Culvert Hydraulics

Open channel fluid dynamics Understanding Manning's equation
Understanding culvert nomographs Culvert design process

Developing Stormwater Pollution Prevention Plans (SWPPP)

Including required elements
Choosing best management practices (BMPs)
Planning for required inspection, maintenance and recordkeeping
Implementing SWPPPs

Choosing Appropriate Stormwater Green Infrastructure

Reducing impervious cover Porous pavement
Riparian buffers and filter strips Detention basin
Vegetated swales Disconnected runoff
Infiltration practices Rain gardens
Green roofs Stormwater planters
Rain barrels/cisterns Preservation of natural features

Stormwater Management Measures

Design and selection of appropriate detention basin
Detention basin particle settling velocity

Stormwater Management 2018
East Lansing, MI - Friday, April 27, 2018

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Learning Objectives

You'll be able to:

Classify storm events and identify their consequences.

Determine when a stormwater permit is necessary and comply with stormwater permit requirements.

Assess building sites and describe the elements to be included in stormwater pollution prevention plans (SWPPPs).

Obtain plan certifications and implement SWPPPs.

Choose appropriate stormwater best management practices (BMPs) and develop plans for inspection, monitoring, maintenance and recordkeeping.



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Review the background and development of national and state stormwater rules and permit requirements

Understand and apply the science of stormwater

Discuss design and selection of detention basins

Learn about the EPA Stormwater Management Model for hydrologic and hydraulic analysis

Review stormwater best management practices, including porous pavement and vegetated swales

Continuing Education Credits

Professional Engineers
7.0 Continuing Ed. Hours

Floodplain Managers
7.0 ASFPM CECs

Landscape Architects & Architects
7.0 HSW Continuing Ed. Hours
7.0 LA CES HSW PDHs
7.0 AIA HSW Learning Units



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Faculty

Brandon Kulhanek, CPESC *Ramboll*

Mr. Kulhanek is a leading practitioner in streambank stabilization, environmental regulatory matters, and water resource management. He has a B.S. Degree in Civil Engineering from Michigan State University. He has served as lead engineer on various water resource projects in the Midwest. He currently is the lead engineer for a large environmental remediation and streambank stabilization project in Michigan. Mr. Kulhanek has over 10 years of experience in computer modeling software including HEC-RAS, HEC-HMS, EPA SWMM, and DRAINMOD. He specializes in green infrastructure design, wetland design, and stream restoration design. His approach is focused on bioengineering, creating aesthetically pleasing natural designs integrated with conventional engineering methods. Mr. Kulhanek has extensive SESC and MDEQ/USACE permitting experience and NPDES Phase I & II stormwater permit compliance. Mr. Kulhanek is a member of the American Society of Civil Engineers. He has earned the designation of certified professional in erosion and sediment control from EnviroCert International, and is both a construction and an industrial certified stormwater operator in Michigan.

Here’s what past attendees had to say about the program and presenter Brandon Kulhanek:

“Lots of material which Brandon covered thoroughly and quickly.” – *Transportation Engineer*

“Great information on permits and plans.” – *Civil Engineer*

Seminar Information

Marriott at University Place
300 Michigan Agricultural College Ave.
East Lansing, MI 48823
(517) 337-4440

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 - 5:00 pm

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.

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 CD/manual package. You may also send another person to take your place.

Continuing Education Credit Information

This seminar is open to the public and offers 7.0 continuing education hours to professional engineers, 7.0 CECs to certified floodplain managers, and 7.0 HSW continuing education hours to landscape architects and architects in most states, including Michigan architects and engineers. Educators and courses are not subject to pre-approval in Michigan.

This course has been approved by the American Institute of Architects for 7.0 HSW Learning Units (Provider No. J885) and the Landscape Architecture Continuing Education System for 7.0 HSW PDHs. Only full attendance can be reported to LA/CES and AIA/CES.

Architects, engineers, and landscape architects seeking continuing credit in other states 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 activity for 7.0 CECs.

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

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

Additional Learning

Webinar Series

Solar Photovoltaic Project Design and Development

- **Solar Photovoltaic Project Design and Development, Part I**
Wed., Mar. 7, 2018, 11:00 AM - 2:15 PM CST
- **Solar Photovoltaic Project Design and Development, Part II**
Thurs., Mar. 8, 2018, 11:00 AM - 2:15 PM CST

Deep Excavations

- **Introduction to Deep Excavations**
Thurs., Mar. 15, 2018, 11:00 AM - 1:00 PM CDT
- **Soil Mechanics, Cantilever Walls and Anchored Sheet Pile Walls**
Thurs., Mar. 15, 2018, 1:30 - 3:00 PM CDT
- **Braced Excavation Design**
Fri., Mar. 16, 2018, 11:00 AM - 12:30 PM CDT
- **ASD and LRFD Design**
Fri., Mar. 16, 2018, 1:00 - 2:30 PM CDT

HEC-RAS

- **Hydraulic Principles and Applications**
Thurs., Mar. 22, 2018, 11:00 AM - 1:00 PM CDT
- **Working with the HEC-RAS User Interface**
Thurs., Mar. 22, 2018, 1:30 - 3:00 PM CDT
- **Water Surface Profiling**
Fri., Mar. 23, 2018, 11:00 AM - 1:00 PM CDT
- **Steady Flow Surface Profile Demonstrations**
Fri., Mar. 23, 2018, 1:30 - 3:30 PM CDT

Commercial Energy Conservation Code

- **Commercial Energy Conservation Code and COMcheck Introduction**
Weds., Mar. 28, 2018, 11:00 AM - 1:00 PM CDT
- **Building Envelope Energy Efficiency**
Weds., Mar. 28, 2018, 1:30 - 3:30 PM CDT
- **Heating, Ventilation and Air Conditioning Systems**
Thurs., Mar. 29, 2018, 11:00 AM - 1:00 PM CDT
- **Service Water Heating, Power and Lighting**
Thurs., Mar. 29, 2018, 1:30 - 3:00 PM CDT

For more information visit:
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

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

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.

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

Credit Card Number: _____
Expiration Date: _____ CVV2 Code: _____
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Billing Address: _____
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