

Agenda

Presented by Jim Albertz

Principles of Urban Hydrology

- Stormwater flow and frequency
- Watershed definition
- Using the rational method
- Stormwater modeling
- Collection network design
- Urban storage options: detention and retention

Separate Versus Combined Storm Sewer Systems

- Examples of cities and age, planning and results
- Consent decrees in place
- Remediation and compliance
- Tunnels for storage
- Green versus gray solutions

Introduction to Green Stormwater Infrastructure (GSI)

- Potential benefits of GSI
- GSI technologies:
 - Permeable pavement types
 - Bioinfiltration swales
 - Raingardens
 - Stormwater harvesting
 - Graywater reuse
 - Stormwater treatment
 - NPDES compliance
 - Stormwater Pollution Prevention Plans

Establishing Municipal Goals and Working Towards a Green Future

- Effluent quality
- Flow control
- Reimbursement programs
- Cost benefit analysis
- Examples

Exploring Urban Hydrology and Environment
Ann Arbor, MI - Tuesday, March 19, 2019

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PO BOX 278
Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Learn about principles of urban hydrology, including the impact of stormwater and options for urban stormwater management.

Evaluate the benefits and drawbacks of separate versus combined storm sewer systems.

Understand requirements for National Pollutant Discharge Elimination System (NPDES) compliance.

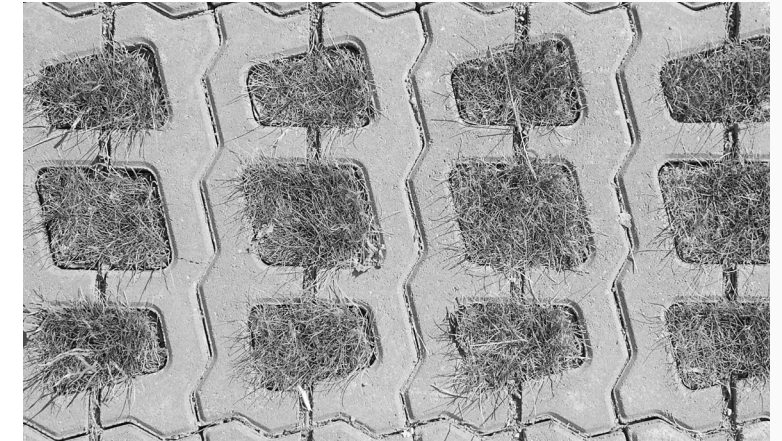
Review green stormwater technologies like permeable pavement types, raingardens, graywater reuse and more.

Discuss municipal stormwater goals and explore costs and benefits.



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Understand the principles of urban hydrology

Identify separate versus combined storm sewer systems

Discuss examples of cities and age, planning and results in separate and combined systems

Explore green stormwater infrastructure

Get tips establishing municipal goals while working towards a green future

Continuing Education Credits

Professional Engineers
6.5 PDHS

Floodplain Managers
6.5 ASFPM CECS

Landscape Architects & Architects

6.5 HSW Continuing Ed. Hours
6.5 LA CES HSW PDHS
6.5 AIA HSW Learning Units



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Faculty

Jim Albertz *President at Albertz Engineering*

Mr. Albertz is a professional engineer with 25 years of experience in feasibility studies, design, construction, operation and improvement of municipal and industrial water and wastewater treatment and soil and groundwater remediation. He has designed and installed treatment systems that use gravity separation, filtration, pH neutralization, adsorption, oxidation, and biological processes. Mr. Albertz has designed landfill gas, leachate collection, and stormwater management systems. Using creative problem solving, Mr. Albertz has designed process control systems, and has developed robotic manufacturing systems and integrated machine guarding. A member of the Construction Specifications Institute, Mr. Albertz has prepared specifications for multimillion-dollar construction projects including treatment, remediation, and vehicle maintenance facilities.

Additional Learning

Webinar Series

Off-Grid Master Class

- **Off-Grid Master Class, Part I**
Wed., Feb. 6, 2019, 11:00 AM -2:15 PM CST
- **Off-Grid Master Class, Part II**
Thurs., Feb. 7, 2019, 11:00 AM -2:15 PM CST

Complying with ADA Standards for Accessible Design

- **Complying with Federal and State Accessibility Requirements**
Thurs., Feb. 7, 2019, 11:00 AM -1:30 PM CST
- **Meeting Requirements in IBC and ADA Standards**
Fri., Feb. 8, 2019, 11:00 AM -1:30 PM CST

Special Inspections

- **Introduction to Chapter 17: Special Inspections**
Wed., Feb. 13, 2019, 11:00 AM -12:30 PM CST
- **Soils and Foundations**
Wed., Feb. 13, 2019, 1:00 -2:30 PM CST
- **Reinforced Concrete and Structural Steel**
Thurs., Feb. 14, 2019, 11:00 AM -12:30 PM CST
- **ACT Ceiling Grid, Epoxy Anchors, and Fire Penetrations**
Thurs., Feb. 14, 2019, 1:00 -2:30 PM CST

Foundations in Cold Regions

- **Introduction to Cold Regions Foundations**
Thurs., Feb. 21, 2019, 11:00 AM -12:30 PM CST
- **Shallow Foundation Design in Cold Regions**
Thurs., Feb. 21, 2019, 1:00 -2:30 PM CST
- **Deep Foundation Design in Cold Regions**
Fri., Feb. 22, 2019, 11:00 AM -12:30 PM CST
- **Foundation Construction in Cold Regions**
Fri., Feb. 22, 2019, 1:00 -2:00 PM CST

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

Seminar Information

Courtyard by Marriott Ann Arbor

3205 Boardwalk Drive
Ann Arbor, MI 48108
(734) 995-5900

Registration
8:00 - 8:30 am
Morning Session
8:30 am - 12:00 pm

Lunch (On your own)
12:00 - 1:00 pm
Afternoon Session
1:00 - 4:30 pm

Tuition

\$289 for individual registration
\$269 for three or more simultaneous registrations.
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 (CDT), 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 6.5 PDHs to professional engineers, 6.5 CECs to certified floodplain managers, and 6.5 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.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota. HalfMoon Education an approved Florida architect continuing education provider and is deemed an approved continuing education sponsor for New York architects and landscape architects.

This course has been approved by the American Institute of Architects for 6.5 HSW Learning Units (Provider No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Only full attendance can be reported to LA/CES and AIA/CES.

The Association of State Floodplain Managers has approved this activity for 6.5 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.

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.

Registration

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How to Register	
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.	
Registrant Information	
Name: _____	
Company/Firm: _____	
Address: _____	
City: _____ State: _____ Zip: _____	
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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.	

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**.

(Please allow four weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.

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

Credit Card Number: _____

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