

Agenda

Presented by Steven Trinkaus, PE

Understanding and Implementing Principles of Low Impact Development (LID)

- Urban environment and water quality
- Conventional development and stormwater management
- Drawbacks of conventional approaches
- Origins of LID
- Principles and benefits of LID

Low-Impact Development Hydrology Considerations

- Water cycle and site hydrology
- Defining hydrologic principles for LID
- Identifying regional hydrologic considerations
- Evaluating hydrologic outcomes
- Hydrologic tools for LID

Low Impact Development Site Planning

- Incorporating LID into common land development projects
- LID site planning tools
- Environmental site design (ESD)

Low Impact Development Structural BMPs

- Choosing and designing best BMPs
- Site investigation
- Bioretention systems
- Dry swales
- Permeable pavements (porous asphalt, porous concrete, interlocking paver systems)
- Infiltration basins, trenches, underground systems
- Rain barrels
- Green roofs

Low Impact Development Economics, Construction, and Maintenance Considerations

- Construction specifications
- Maintenance requirements

Low Impact Development Resources

- Incorporation of LID into land use regulations
- LID model ordinances (state and local)

Low Impact Development

North Little Rock, AR - Friday, February 28, 2020



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Learning Objectives

You'll be able to:

Identify the drawbacks of conventional approaches to stormwater management.

Explain the principles and benefits of low impact development (LID) strategies.

Explain the science of the water cycle and site hydrology, as a foundation to understanding the objectives of low impact development.

Identify the objectives of low impact structural best management practices, such as bioretention systems, dry swales, permeable pavements, infiltration basins, rain barrels and green roofs.

Describe the process of low impact development site planning.

Discuss the economics, construction and maintenance considerations of low impact development projects.



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Low Impact Development

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Understand the principles of low impact development (LID)

Evaluate hydrologic tools used for LID

Explain principles of LID site planning

Understand LID structural best management practices (BMPs), including rain barrels, bioretention systems, green roofs, and permeable pavements.

Analyze the economics and maintenance of LID projects

Continuing Education Credits

Professional Engineers

6.5 PDHs

Architects

6.5 HSW CEHs
6.5 AIA LU|HSW

Landscape Architects

6.5 HSW CEHs
6.5 LA/CES HSW PDHs



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Steven Trinkaus, PE *Principal at Trinkaus Engineering, LLC, in Southbury, CT*

Mr. Trinkaus is an internationally-recognized expert in the field of low impact development, having presented at many ASCE/EWRI international conferences and many other regional conferences and workshops on LID and water quality issues. He has been an invited presenter and consultant in Taiwan, China and South Korea. He has also presented on sustainable stormwater at the University of St. Andrews in Scotland. Mr. Trinkaus has written LID design manuals for the Towns of Tolland, Plainville, Harwinton, East Granby, and Morris, Connecticut. He has designed many types of LID treatment systems for a variety of residential and commercial applications. Mr. Trinkaus is chair of the EWRI LID Guidance Document Task Committee and is the primary author of the Committee’s national guidance document on adopting LID standards. Mr. Trinkaus is a licensed professional engineer in Connecticut and Maryland. He received a bachelor of science degree in Forest Management in 1980 from the University of New Hampshire. He has more than 38 years of experience in the land development field, more than 19 years of experience designing low impact development treatment systems, and six years of experience writing LID regulations and design manuals.

Seminar Information

Courtyard Little Rock North
4339 Warden Road
North Little Rock, AR 72116
(501) 753-2000

Tuition
\$289 for individual registration
\$269 for three or more 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, 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 course is open to the public and offers 6.5 PDHs to professional engineers in all states. Courses are not subject to preapproval in Arkansas.

This course also offers 6.5 HSW continuing education hours to architects in all states and 6.5 HSW CE hours to landscape architects in most states, including Arkansas. Courses approved by the AIA/CES and the LA/CES are considered approved for Arkansas architects and landscape architects.

This seminar is approved by the American Institute of Architects Continuing Education System for 6.5 LU|HSW (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Only full attendance is reportable to the AIA/CES and the LA/CES. Visit www.halfmoonseminars.org for complete AIA/CES information under this course listing.

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

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

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

Pavement Design

- **Principles of Pavement Design**
Wed., Feb. 12, 2020, 11:00 AM - 12:00 PM CST
- **Flexible Pavement Design**
Wed., Feb. 12, 2020, 12:30 - 2:30 PM CST
- **Rigid Pavement Design**
Thurs., Feb. 13, 2020, 11:00 AM - 1:00 PM CST
- **Maintenance, Rehabilitation and Sustainability of Pavements**
Thurs., Feb. 13, 2020, 1:30 - 3:30 PM CST

Ethical Issues for Engineers

- **Resolving Disputes and Handling Ethical Issues in Government Projects**
Fri., Jan. 31, 2020, 12:00 - 1:00 PM CST
- **Complying with Rules of Professional Conduct**
Fri., Feb. 14, 2020, 12:00 - 1:00 PM CST

Foundations in Cold Regions

- **Introduction to Foundations in Cold Regions**
Thurs., Feb. 20, 2020, 11:00 AM - 12:30 PM CST
- **Shallow Foundation Design in Cold Regions**
Thurs., Feb. 20, 2020, 1:00 - 2:30 PM CST
- **Deep Foundation Design in Cold Regions**
Fri., Feb. 21, 2020, 11:00 AM - 12:30 PM CST
- **Foundation Construction in Cold Regions**
Fri., Feb. 21, 2020, 1:00 - 2:00 PM CST

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

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

Low Impact Development
North Little Rock, AR - Friday, February 28, 2020

How to Register		Registrant Information	
Online: www.halfmoonseminars.org		Name: _____	
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		City: _____ State: _____ Zip: _____	
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		Additional Registrants:	
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		Name: _____	
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Complete the entire form. Attach duplicates if necessary.		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**. ☐ USB/Manual Package **\$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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