

Agenda

Understanding Infiltration

C. Haskell/J. Dennis

- Stormwater behavior before regulatory requirements
- Maine stormwater management requirements
- Benefits of infiltrating stormwater
 - Reduced stormwater volume and peak flow
 - Improved stormwater quality
- DEP views on infiltration – benefits and concerns
 - Chloride baseflow contamination

Soil and Water Science

J. Szillery

- Types of soils
- Soil characteristics
- Impact of water on soils
- Movement of water through soils

Infiltrating Stormwater

J. Kuchinski

- Defining infiltration
- Measuring infiltration
- Creating and using infiltration surfaces
- Selecting soils, plants and other materials

Innovative Subsurface Infiltration Storage Solutions

R. Woodman

- Evolution of subsurface storage systems
- Modular box high void subsurface storage solutions
- Selecting appropriate geotextiles and subgrade prep

Innovative Pretreatment Solutions for Protection and Sustainability of Infiltration Systems Part 1

R. Woodman

- Mechanical screening and filters
- Permeable surfaces (formal and informal)

Innovative Pretreatment Solutions for Protection and Sustainability of Infiltration Systems Part 2

S. Gorneau

- High performance modular biofiltration systems/Green infrastructure

Energy Passive Groundwater Recharge

S. Gorneau

Stormwater Infiltration Case Studies

S. Gorneau

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

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Effective Stormwater Infiltration

South Portland, ME - Wednesday, August 28, 2019

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Learning Objectives

You'll be able to:

Review Maine stormwater management requirements.

Understand the impact of water on soils and the movement of water through soils.

Discuss how to create and use infiltration surfaces.

Consider innovative subsurface infiltration storage solutions.

Review pretreatment processes including mechanical screening and biofiltration systems.



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Effective Stormwater Infiltration

South Portland, ME - Wednesday, August 28, 2019



Understand stormwater infiltration

Examine soil and water science

Learn how to define and measure infiltration

Identify innovative subsurface infiltration storage solutions

Explore energy passive groundwater recharge

Discuss stormwater infiltration case studies

Continuing Education Credits

Professional Engineers

6.5 PDHs

Architects & Landscape Architects

6.5 HSW Continuing Ed. Hours*

6.5 AIA LU|HSW

6.5 LA CES HSW PDHs

Floodplain Managers

6.5 ASFPM CECS

Contractors

Voluntary Continuing Ed.

*Not mandatory in Maine



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Faculty

Chip Haskell, PE *Project Manager at CES, Inc.*

Mr. Haskell received his B.S. degree in Civil Engineering from the University of Maine in 2008. Since then, he has worked as an engineer on a variety of projects including road and site design and layout, stormwater treatment designs, storm drain and sanitary sewer systems, permitting, and pre-and post-hydrology studies. In 2013 Mr. Haskell became a licensed professional engineer in the State of Maine. His stormwater treatment projects have included design and permitting for underdrained soil filters, wetponds, gravel wetlands, bio-retention cells, rain gardens, porous pavement and concrete and infiltration basins, as well as proprietary systems. As a consulting engineer his goal is to provide sensible solutions that balance the requirements of the regulatory authorities, with the needs of the client considering suitability on the site, budget, and long term maintenance obligations.

Jeff Dennis *Biologist Maine DEP's Division of Environmental Assessment*

Mr. Dennis is a biologist in the Maine DEP's Division of Environmental Assessment where he heads the Division's Watershed Management Unit. He has worked since the early 1970s on lake and stream assessment, restoration and protection. Over most of that period, he has been a strong proponent of stormwater BMPs that rely, either intentionally or incidentally, on infiltration. In the past two decades much of his time has been spent on the restoration of healthy biological communities in impaired urban streams, with a recent focus on avoidance of toxic chloride contamination in stream base flow.

Johanna Szillery *Senior Project Scientist at CES, Inc.*

Ms. Szillery has 20 years of experience in the natural resource and regulatory permitting field, which includes positions in academic research, Federal government, and as an environmental consultant. She is a wetland scientist and a Maine certified soil scientist (ME CSS 494). Ms. Szillery has a master's degree in Plant, Soil, and Environmental Science from the University of Maine, and completed research on the watershed-scale of climate change and acid rain on biogeochemistry in eastern Maine. As a consulting soil scientist, she has performed soil surveys throughout Maine, from general planning level soil surveys for USDA county soil surveys to high-intensity soil surveys specific to proposed development. Ms. Szillery has completed soil suitability assessments for a variety of uses, including spray irrigation, composting, and land application of wastes. She is a member of the State of Maine Board of Certification for Soil Scientists and Geologists. Ms. Szillery also serves as a wetland and natural resource scientist, completing project strategy and planning at the inception of a project, agency consultation and negotiation, natural resource delineation, and site permitting.

John Kuchinski, PE *Senior Project Engineer at CES, Inc.*

Mr. Kuchinski has a bachelor of science degree In Civil Engineering from the University of Massachusetts, Dartmouth, and is licensed in Maine, New Hampshire and Massachusetts as a

professional engineer. He has over 30 years' experience in the design of large-scale commercial, industrial, and residential land development projects. Mr. Kuchinski's experience includes the layout of roads, parking lots, site circulation and pedestrian ways in an integrated design. He has worked with site design and the permitting for site development on projects including grading, stormwater drainage, spill control, utilities, and erosion control.

Rob Woodman *Senior Stormwater Engineer, ACF*

Mr. Woodman serves ACF as senior stormwater engineer. His skill set bolsters ACF's engineering technical support service allowing ACF to better serve their clients and customers with value added, project specific and engineering technical support. Mr. Woodman earned a BS degree in Civil Engineering in 2004 from the University of Wollongong in Wollongong, Australia. His schooling provided the necessary knowledge for Mr. Woodman to launch his career into site civil design and the ever-trending green infrastructure industry. He spent the first 10 years as a design and project engineer for a private engineering consulting firm, gaining experience and expanding his knowledge of the industry on a wide variety of civil and stormwater engineering design projects for private and public sector clients throughout New England. He is a registered professional engineer in Maine and Pennsylvania, a certified professional in erosion and sedimentation control, a Maine DEP certified stormwater inspector, master gardener and entrepreneur.

Scott Gorneau

National Manager of Stormwater Solutions, ACF - Convergent Water Technologies Alliance

As national manager of stormwater solutions for the ACF-CWT Alliance, Mr. Gorneau is responsible for offering innovative green infrastructure/low impact stormwater solutions that enable new applications and raise the bar on performance, cost effectiveness and verification. Mr. Gorneau previously served as regional vice president for FABCO Industries where he was responsible for engineering design, specification and installation of manufactured stormwater management systems. He earned a BS degree in Biological Systems Engineering and an MS degree in Agricultural and Biological Systems Engineering from the University of Nebraska-Lincoln which provided the necessary knowledge for him to launch his career into the technical sales and specified engineered products industry. He spent the subsequent time since graduation gaining experience and expanding his knowledge of the industry on a wide variety of civil and environmental engineering design projects for private and public sector clients. Mr. Gorneau is a registered professional engineer in Maine and New Hampshire, and he is a Maine certified stormwater inspector. He has been a member of the American Society of Civil Engineers (ASCE) since 1999, serving as section president in 2014.

Seminar Information

Doubletree by Hilton 363 Maine Mall Road South Portland, ME 04106 (207) 775-6161	Registration 8:00 - 8:30 am Morning Session 8:30 am - 12:15 pm Lunch (On your own) 12:15 - 1:15 pm Afternoon Session 1:15 - 4:30 pm
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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.*

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 6.5 PDHs to professional engineers in most states and 6.5 HSW continuing education hours to architects and landscape architects in most states. Educators and courses are not subject to preapproval for Maine engineers. Continuing education is not mandatory for Maine architects and landscape architects.

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

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

This seminar also offers a non-credit continuing education opportunity to contractors, but 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 event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Additional Learning

Webinar Series

Stormwater Infiltration

- **Infiltration and Soil: Water Science**
Thurs., August 8, 2019, 11:00 AM - 12:30 PM CDT
- **Infiltrating Stormwater and Maximizing Infiltration**
Thurs., August 8, 2019, 1:00 - 2:30 PM CDT
- **Improving Infiltration with Low Impact Development Techniques**
Fri., August 9, 2019, 11:00 AM - 12:30 PM CDT

For more information visit:
www.halfmoonseminars.org/webinars/

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Registration

Effective Stormwater Infiltration

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		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.
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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**.
- (S&H included. Please allow five weeks from seminar date for delivery)

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