

Agenda

Presented by Chris Maxwell-Gaines, P.E.

Understanding the Historical Context of Stormwater Management

Background and development of national and state regulations and permit requirements
Development of stormwater management paradigms in the United States

Understanding and Applying the Science of Stormwater

Hydrology, soil science, and drainage
Identifying consequences of storm events
Classifying storm events
Stormwater modeling

Understanding Stormwater Permit Requirements and Procedures and Developing Stormwater Pollution Prevention Plans (SWPPP)

Overview of stormwater permit requirements in Texas
Activities exempt from construction general stormwater permit requirements
Complying with Texas Commission on Environmental Quality (TCEQ) procedures
Implementing, monitoring and assessing SWPPPs, including required elements:

- Assessing building sites
- Choosing best management practices (BMPs)
- Planning for required inspection, maintenance and recordkeeping
- Obtaining plan certification
- Implementing SWPPPs

Passive Green Infrastructure Stormwater Best Management Practices (BMPs)

Stormwater management planning
Sizing criteria
Green infrastructure practices

- Preservation of natural features and conservation design
- Reducing impervious cover

Conservation of natural areas	Riparian buffers and filter strips
Vegetated bioswales	Disconnected runoff
Stream daylighting	Rain gardens
Porous pavement	Proprietary practices

Active Green Infrastructure Stormwater Best Management Practices (BMPs)

Stormwater management planning	Green roofs
Sizing criteria	Stormwater planters
Commercial vs. residential developments	Rainwater harvesting systems

Green Infrastructure Case Studies

Stormwater Management 2018
Houston, TX - Wednesday, January 31, 2018



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Learning Objectives

You'll be able to:

Describe the development of national and state stormwater regulations and permit requirements.

Comply with the Texas Commission on Environmental Quality procedures.

Determine the elements to be included in stormwater pollution prevention plans.

Utilize green infrastructure practices and green management techniques, including vegetated swales, rain gardens, cisterns and porous pavement.

Implement stormwater inspection, maintenance and recordkeeping policies.



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Identify activities exempt from construction general stormwater permit requirements

Classify storm events and identify their consequences

Explore hydrology, soil science and drainage issues

Examine the required elements and best management practices for stormwater pollution prevention plans

Learn about green management techniques including vegetated swales, rain gardens, and porous pavement

Continuing Education Credits

Professional Engineers
6.5 PDHs

Architects
6.5 HSW CEPHs/CE Hours
6.5 AIA HSW Learning Units

Landscape Architects
6.5 HSW CEPHs/Contact Hours
6.5 LA CES HSW PDHs

Floodplain Managers
6.5 ASFPM CECs

Contractors
Non-Credit Continuing Ed.



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Faculty

Chris Maxwell-Gaines, P.E. received a B.S. degree in Civil Engineering specializing in water resources from Texas A&M University in College Station.

After college, Mr. Maxwell-Gaines and his wife joined the U.S. Peace Corps and accepted volunteer positions in Suriname, South America. They were assigned to the remote village of Godolo which is located in the Amazon rainforest, deep in the interior of Suriname. They helped the village implement a water well project, provided after-school tutoring, and business training for the villagers. They spent 27 months serving in the Peace Corps.

After returning to Austin, Mr. Maxwell-Gaines worked at a civil engineering firm that provided a breadth of project experience ranging from TMDL computer modeling projects for impaired streams in Texas, to subdivision design, and water and wastewater treatment plant design. He became a licensed engineer in 2007.

In 2004, he started Innovative Water Solutions LLC. IWS is a design/build water conservation company that focuses on the nexus of stormwater management and water conservation. The company designs and installs rainwater/stormwater collection systems, stormwater management systems including green infrastructure, and graywater reuse systems, as well as efficient irrigation systems and water conservative landscaping for residential and commercial projects. To date, Innovative Water Solutions has installed over 6,500,000 gallons of rainwater storage capacity across the state of Texas.

Mr. Maxwell-Gaines has designed rainwater harvesting systems for numerous municipalities and institutions including Texas A&M University; the University of Texas at Austin; the City of Austin; Austin, Hayes Consolidated, and Wimberley Independent School Districts (Texas); Atmos Energy; Denton County (Texas); the City of New Braunfels, San Jacinto River Authority; Sea World; the Texas Department of Transportation; and Texas Parks and Wildlife.

Here’s what past attendees have to say about the program and speaker Chris Maxwell-Gaines:

“Very informative.” – *Civil Engineer*

“Enjoyed presentation by Chris. Good speaker.” – *Civil Engineer*

“Good presentation, well organized. (Mr. Maxwell-Gaines was) personable and engaging.” – *Architect/Planner*

“Good seminar. Would recommend.” – *Architect*

Seminar Information

Marriott West Loop - By the Galleria

1750 West Loop South
Houston, TX 77027
(713) 960-0111

Tuition

\$279 for individual registration
\$259 for three or more registrations.

Each registration includes a 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 CD/manual package. You may also send another person to take your place.

Continuing Education Credit Information

This seminar is open to the public. It offers 6.5 PDHs to professional engineers and 6.5 HSW CEPHs/continuing education hours to architects and landscape architects in most states, including Texas. Educators and courses are not subject to preapproval in Texas.

This seminar is approved by the American Institute of Architects for 6.5 HSW Learning Units (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Only full attendance can be reported to the AIA.

Engineers, architects, and landscape architects seeking continuing education 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 event for 6.5 CECs. ASFPM approval qualifies this program for Texas floodplain managers.

This course 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 event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Additional Learning

Webinar Series

Construction Cost Estimating

- **Introduction to Cost Estimating**
Thurs., Dec. 7, 2017, 11:00 AM - 12:30 PM CST
- **Cost Components - A Closer Look at the Estimates**
Thurs., Dec. 7, 2017, 1:00 - 3:00 PM CST
- **Cost Estimate Organization**
Fri., Dec. 8, 2017, 11:00 AM - 1:00 PM CST
- **Cost Estimating Topics**
Fri., Dec. 8, 2017, 1:30 AM - 3:00 PM CST

Retaining Walls and Slope Stabilization

- **Retaining Wall Basics**
Thurs., Dec. 14, 2017, 11:00 AM - 12:00 PM CST
- **Geosynthetics and Retaining Walls**
Thurs., Dec. 14, 2017, 12:30 - 2:30 PM CST
- **Slope Stability and Geosynthetics**
Fri., Dec. 15, 2017, 11:00 AM - 12:30 PM CST
- **Slope and Retaining Wall Failures, Fixes and Prevention**
Fri., Dec. 15, 2017, 1:00 - 2:30 PM CST

International Energy Conservation Code

- **International Energy Conservation Code, Part I**
Thurs., Dec. 21, 2017, 8:00 - 11:00 AM CST
- **International Energy Conservation Code, Part II**
Thurs., Dec. 21, 2017, 12:00 - 3:00 PM CST

Seismic Design and Construction

- **Seismology and Building Codes**
Wed., Dec. 27, 2017, 11:00 AM - 3:30 PM CST
- **Seismic Design of Building Structures**
Thurs., Dec. 28, 2017, 11:00 AM - 3:30 PM CST

The Distributed Battery Webinar Series

- **The Distributed Battery Webinar, Part I**
Thurs., Dec. 28, 2017, 11:00 AM - 2:15 PM CST
- **The Distributed Battery Webinar, Part II**
Fri., Dec. 29, 2017, 11:00 AM - 2:15 PM CST

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: _____
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Phone: 715-835-5900		Additional Registrants:
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		Email: _____
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Fax: 715-835-6066		Name: _____
		Occupation: _____
		Email: _____
		Phone: _____
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		
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: _____

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Cardholder Name: _____

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