

Agenda

The Need for Detention Basins in Stormwater Management

Common stormwater management standards and criteria

Stormwater Hydrology

Common hydrologic models

Runoff Estimation

Recurrence intervals

Rational Method

Intensity
Runoff coefficients
Time of concentration

TR-55

Rainfall distribution types
Soil types
Curve numbers
Flow regimes

Modeling Programs

HEC-HMS
Hydrographs

Downstream Analysis

Downstream Hydrologic Analysis
Reasons for downstream problems
The ten percent rule

Detention Basin Design

Storage concepts
Stage-storage-discharge concepts
Storage design procedures
Preliminary detention calculations
Modified rational equation
Outlet calculations
Dry detention design
General design principles
Detention routing

Wet retention pond design

Basin Construction

Erosion and sediment control
Operation and maintenance

Case Studies

Stormwater Management: Detention Basins

Mobile, AL - Wednesday, November 20, 2019



HalfMoon Education Inc.
PO Box 278
Altoona, WI 54720-0278

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Learning Objectives

You'll be able to:

Describe the role of detention basins as part of a stormwater management strategy.

Review stormwater hydrology and calculate stormwater runoff to determine detention/retention needs.

Use dry detention basins and wet retention ponds to manage the flow of stormwater, and to naturally improve stormwater quality.

Consider the goals of erosion and sediment control when designing and constructing detention basins.

Develop operation and maintenance plans for stormwater basins.



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Discuss the need for detention basins in stormwater management

Explore stormwater hydrology

Model stormwater using HEC-HMS and hydrographs

Learn about dry detention basin and wet retention pond design

Examine techniques for erosion and sediment control

Develop plans for operation and maintenance

Continuing Education Credits

Professional Engineers
6.5 PDHs

Architects
6.5 HSW CEHs
6.5 AIA LU|HSW

Landscape Architects
6.5 HSW PDHs
6.5 LA/CES HSW PDHs

Floodplain Managers
6.5 ASFPM CECS

Contractors
Non-Credit Continuing Ed.



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Provider

Faculty



S. Matthew Jones *Professional Civil Engineer, Environmental Engineer with Mobile County*
Mr. Jones graduated from the University of South Alabama with a BS degree in Civil Engineering and Mathematics/ Statistics. His career spans nearly two decades with valuable experience in the public sector, where he gained experience in construction engineering and contract administration and in the private sector, where he gained design experience in water resources engineering and stormwater management. Mr. Jones has also served as City Engineer for the City of Spanish Fort. In his spare time, he enjoys spending time with his wife and three children under the age of five.



Wade Burcham *Professional Engineer, Principal Water Resources Engineer with Geosyntec*
Mr. Burcham graduated from the University of Alabama in Birmingham. His 21 years of experience has been focused on natural stream stabilization, water resources engineering, stormwater management, municipal engineering and contract administration. This experience has facilitated a balanced viewpoint from perspectives obtained as a civil engineer, a municipal consultant and a developer’s representative. He enjoys learning sustainable and innovative design practices and applying those techniques in developing countries through his volunteer work with Engineering Ministries International and other faith-based mission efforts.

Seminar Information

Renaissance Mobile Riverview Plaza Hotel

64 South Water Street
Mobile, AL 36602
(251) 438-4000

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 - 4:30 pm

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.

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 seminar is open to the public and offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects in all states. Educators and courses are not subject to preapproval in Alabama.

This event is approved by the American Institute of Architects Continuing Education System for 6.5 LU|HSW (Sponsor No. J885) and Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Courses approved by the LA/CES qualify for Alabama landscape architects. Only full attendance is reportable to the AIA/CES and 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, Maryland, New Jersey, North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers, architects and landscape architects.

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

This course offers a continuing education opportunity for 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

HEC-RAS Webinar Series

- **Hydraulic Principles and Applications**
Tues., October 29, 2019, 11:00 AM - 1:00 PM CDT
- **Working with the HEC-RAS User Interface**
Tues., October 29, 2019, 1:30 - 3:00 PM CDT
- **Water Surface Profiling**
Thurs., October 31, 2019, 11:00 AM - 1:00 PM CDT
- **Steady Flow Surface Profile Demonstrations**
Thurs., October 31, 2019, 1:30 - 3:30 PM CDT

Tree Preservation

- **Concrete and Pavement Design Principles**
Wed., October 30, 2019, 11:00 AM - 12:00 PM CDT
- **Exterior Concrete Pavement Design**
Wed., October 30, 2019, 12:30 - 3:15 PM CDT
- **Interior Concrete Slabs-on-Ground Design**
Thurs., October 31, 2019, 11:00 AM - 1:00 PM CDT
- **Concrete and Pavement Maintenance and Sustainability**
Thurs., October 31, 2019, 1:30 - 3:00 PM CDT

Distributed Batteries for Solar PV Systems

- **Distributed Batteries for Solar PV Systems, Part I**
Wed., November 6, 2019, 11:00 AM - 2:15 PM CST
- **Distributed Batteries for Solar PV Systems, Part II**
Thurs., November 7, 2019, 11:00 AM - 2:15 PM CST

Complying with ADA Standards for Accessible Design

- **Complying with State & Federal Accessibility Requirements**
Thurs., November 7, 2019, 11:00 AM - 1:30 PM CST
- **Applying the 2010 & A117.1 Accessibility Standards**
Fri., November 8, 2019, 11:00 AM - 1:30 PM CST

For more information 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

Stormwater Management: *Detention Basins*

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How to Register	Registrant Information
Online: www.halfmoonseminars.org	Name: _____ Company/Firm: _____ Address: _____ City:_____ State: ____ Zip_____
Phone: 715-835-5900	Occupation: _____ Email: _____ Phone: _____
Fax: 715-835-6066	Additional Registrants: 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 - **\$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.

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

Credit Card Number: _____

Expiration Date: _____ CVV2 Code: _____

Cardholder Name: _____

Billing Address: _____

City:_____ State:_____ Zip: _____ Signature: _____

Email: _____