

# Agenda

Presented by Brad Flack, CPESC, CESSWI, QSM, QCIS, QPSWPPP

**Stormwater Management System Objectives and Design Considerations**

- Regulations addressing stormwater quality and management
  - Clean Water Act
  - Complying with state laws and regulations
- Site assessment
- Preparing stormwater pollution prevention plans
  - Stormwater goals
  - Design considerations

**Stormwater Conveyance and Detention**

- Impact area
- Watershed, terrain and soil considerations
- Stormwater quality
- Community and environmental factors

**Choosing Storage System Types: Detention Basins**

- Stormwater routing, sizing, design criteria
- Water quality, public safety
- Inlets, outlets, forebays, spillways

**Choosing Storage System Types: Retention Basins**

- Stormwater routing, sizing, design criteria
- Water quality, public safety
- Inlets, forebays, spillways

**Choosing Storage System Types: Infiltration Basins**

- Stormwater routing, sizing, design criteria
- Enabling and promoting infiltration

**Choosing an Underground Storage System**

- Retention systems
  - Stormwater routing, sizing, design criteria
- Detention/infiltration systems
  - Stormwater routing, infiltration, sizing, design criteria

**Sustainable Best Practices in Stormwater Detention/Retention**

- Naturalizing detention/retention basins
- Small detention areas vs. large detention area
- Rain gardens
- Water reuse options
- Recharging groundwater table
- Retrofitting existing systems and basins

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## Stormwater Basins and Underground Systems

Live, Interactive Webinar - Friday, August 11, 2023

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## Learning Objectives

**You'll be able to:**

**Explore** regulations addressing stormwater quality and management.

**Discuss** stormwater conveyance and detention.

**Choose** storage system types: detention basins, retention basins and infiltration basins.

**Consider** stormwater routing, basin sizing and quality.

**Implement** sustainable best practices in stormwater retention/detention.



### HalfMoon Education Live Webinars

# Stormwater Basins and Underground Systems

Live, Interactive Webinar

Friday, August 11, 2023 - 8:30 am - 4:00 pm CDT



**Review** stormwater management system objectives and design considerations

**Understand** stormwater basin and underground system design

**Discuss** basin types

**Discuss** retention, detention and infiltration systems

**Explore** sustainable best practices in stormwater detention and retention

### Continuing Education Credits

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6.5 PDHs

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6.5 AIA LU | HSW

**Landscape Architects**

6.5 HSW CE Hours  
6.5 LA CES HSW PDHs

**International Code Council**

.65 CEUs (Sitework)

**Floodplain Managers**

6.5 ASFPM CECs



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# Faculty

**Brad Flack, CPESC, CESSWI, QSM, QCIS, QPSWPPP**

*President & CEO of Integrity Stormwater*

Mr. Flack has earned his designation, among select thousands in the world, as a certified professional in erosion and sediment control (CPESC) as well as his designation as a certified erosion, sediment and stormwater inspector (CESSWI) and a course instructor, lending his experience and training to his customers for all of their stormwater needs. Furthermore, he is among the select few who are qualified compliance inspectors of stormwater (QCIS). He has served as the president and as the administrative vice president of the South Central Chapter of the International Erosion Control Association (IECA). Mr. Flack was the Region 6 president for EnviroCert International and has served as the Region 7 representative for CPESC, Inc. He was technical vice-chair for the CPESC Council, and he is on the Education Committee: Stormwater Management Track for the International Erosion Control Association

Region 1 which encompasses North America, South America and Europe, where he has served as chair. Mr. Flack was awarded Young Professional of the Year for 2014 by the IECA Region 1 and is also an IECA Mentor. He also served as a member of the Policies and Procedures Committee and the Certified Professional in Industrial Stormwater Management Committee for EnviroCert International. He is an EnviroMentor for the Texas Commission on Environmental Quality (TCEQ) as well as a member of the TCEQ Houston Area Small Business Advisory Council. Mr. Flack has been involved with stormwater management since 2004, when he learned about permitting, turf establishment, erosion control and detention pond maintenance. He has since continued to learn and develop his stormwater knowledge and skills and is now a speaker at many conferences sharing his expertise across the US and internationally. He is married to his high school sweetheart and they have three boys. He works both locally and internationally on humanitarian projects and in missionary service.

# Webinar Information

Log into Webinar 8:00 - 8:30 am CDT	Break 11:45 am - 12:15 pm CDT
Morning Session 8:30 - 11:45 am CDT	Afternoon Session 12:15 - 4:00 pm CDT

## Tuition

**\$319** for individual registration  
**\$289** for two or more registrants from the same company at the same time.

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# Credit Information

This webinar is open to the public and is designed to qualify for 6.5 PDHs for professional engineers, 6.5 HSW continuing education hours for licensed architects, and 6.5 HSW continuing education hours for landscape architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130). HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.5 HSW LUs (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The Landscape Architecture Continuing Education System has approved this course for 6.5 HSW PDHs. Only full participation is reportable to the LA CES.

The International Code Council has approved this event for .65 CEUs in the specialty area of Building (Preferred Provider No. 1232).

This webinar has been approved by the Association of State Floodplain Managers for 6.5 CECs for floodplain managers.

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

## On-Demand Credits

The preceding credit information only applies to the live presentation. This course in an on-demand format may not be eligible for the same credits as the live presentation; please consult your licensing board(s) to ensure that a structured, asynchronous learning format is appropriate. The following pre-approvals may be available for the on-demand format upon request:

6.5 HSW LUs (AIA) | 6.5 HSW PDHs (LA CES) | 6.5 ASFPM CECs

# Additional Learning

## Design and Construction on Expansive Soils

- Friday, July 7, 2023 | 9:00 am - 4:00 pm CDT

## Wetland Restoration

- Friday, July 7, 2023 | 8:30 am - 4:00 pm CDT

## PFAS and Other Persistent Organic Pollutants

- Monday, July 10, 2023 | 8:30 am - 3:20 pm CDT

## Protecting Trees During Development and Construction

- Wednesday, July 12, 2023 | 9:00 am - 12:15 pm CDT

## Walls, Water, and What To Do When They Interact

- Wednesday, July 12, 2023 | 10:00 am - 2:30 pm CDT

## Bioretention System Design

- Wednesday, July 12, 2023 | 1:00 - 3:00 pm CDT

## Soil Investigation and Classification

- Thursday, July 13, 2023 | 2:00 - 4:00 pm CDT

## Hot-Mix Asphalt Pavement Design, Maintenance and Rehabilitation

- Monday, July 17, 2023 | 1:00 pm - 5:00 pm CDT  
- Tuesday, July 18, 2023 | 1:00 pm - 3:30 pm CDT

## Design-Build Contracting: Focusing on AIA Contract Documents

- Thursday, July 20, 2023 | 9:00 am - 4:30 pm CDT

## Design, Ecology and Maintenance of Ponds

- Thursday, July 20, 2023 | 8:30 am - 3:30 pm CDT

## Avoiding, Identifying and Resolving Ethical Issues in Land and Water Transactions

- Friday, July 21, 2023 | 2:00 - 3:00 CDT

## 2023 National Electrical Code Update

- Tuesday, July 25, 2023 | 8:00 am - 5:00 pm CDT

## Soil-Structure Interaction (SSI)

- Tuesday, July 25, 2023 | 9:00 am - 4:00 pm CDT

## International Residential Code 2021

- Wednesday, July 26, 2023 | 8:30 am - 4:30 pm CDT

## PFAS Remediation in City Water Supplies

- Wednesday, August 2, 2023 | 1:00 - 4:00 pm CDT

## How to Estimate Construction Costs for Commercial Buildings

- Thursday, August 3, 2023 | 10:30 am - 12:30 pm CDT

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