

## Credit Information

### **Vegetated Green Roof Technology: Design and Construction**

This webinar offers 6.0 PDHs to professional engineers and 6.0 HSW continuing education hours to architects in all states. It offers 6.0 HSW continuing education hours to landscape architects in all states, except Florida, New Jersey, and North Carolina.

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, architects, and landscape architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2), §69.6(i)(2), and §79-1.5(i)(2)). Courses approved by the AIA/CES qualify for Florida and New Jersey architects. Other states do not preapprove continuing education providers or courses.

This course has been approved by the American Institute of Architects Continuing Education System for 6.0 LU | HSW (Sponsor No. J885) and the Landscape Architect Continuing Education System for 6.0 HSW PDHs. Only full participation is reportable to the AIA/CES and LA CES.

The International Code Council has approved this course for .6 CEUs in the specialty area of Energy (Preferred Provider No. 1232).

Completion certificates will be awarded to participants who complete this event, respond to prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

### **Stormwater Best Management Practices**

This webinar offers 7.0 PDHs to professional engineers and 7.0 HSW continuing education hours to architects licensed in all states. It offers 7.0 HSW continuing education hours to landscape architects in all states, except Florida, New Jersey, and North Carolina.

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The American Institute of Architects Continuing Education System has approved this course for 7.0 LU | HSW (Sponsor No. J885) and the Landscape Architect Continuing Education System for 7.0 HSW PDHs. Only full participation is reportable to the AIA/CES and LA CES.

The International Code Council has approved this event for .7 CEUs in the specialty area of Sitework (Preferred Provider No. 1232).

The Association of State Floodplain Managers has approved this event for 7.0 CECs for certified floodplain managers.

Completion certificates will be awarded to participants who complete this event, respond to all prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

#### **Can't Attend? Order the Webinar as a Self-Study Package!**

Recordings of each webinar are available for purchase. See course listing online 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. Self-study packages do not qualify for AIA or LA CES credit.

## Live, Interactive Webinars

- Vegetated Green Roof Technology: Design and Construction
- Stormwater Best Management Practices

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## Live, Interactive Webinars

### **Vegetated Green Roof Technology: Design and Construction**

- Wednesday, June 30, 2021 | 8:30 am - 4:00 pm CDT

### **Stormwater Best Management Practices**

- Thursday, July 1, 2021 | 8:30 am - 5:00 pm CDT

**To register, view detailed presenter biographies,  
and see other learning opportunities, please visit:**

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## HalfMoon Education Online Learning Live, Interactive Webinars



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LA CES: 6.0 HSW PDHs    International Code Council: .6 CEUs (Energy)

### **Stormwater Best Management Practices**

Thursday, July 1, 2021 | 8:30 am - 5:00 pm CDT

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LA CES: 7.0 HSW PDHs    Floodplain Managers: 7.0 ASFPM CECs  
International Code Council: .7 CEUs (Sitework)

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# Vegetated Green Roof Technology: Design and Construction

Wednesday, June 30, 2021 | 8:30 am - 4:00 pm CDT (incl. a 60-min break)

**Tuition:** \$289 per registrant, \$199 per registrant for three or more

**Credits:** Professional Engineers: 6.0 PDHs Architects: 6.0 HSW CE Hours  
AIA: 6.0 LU | HSW Landscape Architects: 6.0 HSW CE Hours  
LA CES: 6.0 HSW PDHs International Code Council: .6 CEUs (Energy)

## Agenda

### Early Adopters and Realized Benefits

A brief history  
Benefits and advantages in today's urban built environment

### Vegetated Green Roof Technology: Types and Purpose

Building-integrated stormwater management  
Energy-wise roofing system Rooftop farm  
Therapeutic green-view Urban garden space

### Components and Layout Configurations

Common components to all systems  
Common layout configurations  
Understanding type-specific layouts and components

### Design and Site Issues

Building structural issues affecting design and performance  
Site considerations for all vegetated green roof types  
Issues surrounding a vegetated green roof retrofit  
Understanding the implications of design decisions for a 'Living' system

### Design for Specific Outcomes

Maintenance efficiency and safety  
Plant and soil media design considerations for stormwater management  
Effective energy efficient component configurations  
Food production soil media blends  
Therapeutic green-view plant palettes  
Design considerations for interactive rooftop gardens

### Construction and Logistics

Material storage and loading challenges  
Understanding the implications of construction scheduling and delays  
Specifications regarding installer experience/certifications  
Logistical decisions impacting project success  
Planting techniques vital to successful plant establishment  
Soil media compaction aversion methods

### Expectations of a Successful Project

Examples of thriving vegetated green roof projects  
Methods to monitor performance  
Expected ROI timeline

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International Code Council: .7 CEUs (Sitework)

## Agenda

### Selecting Stormwater Best Management Practices

Site topography, hydrology, and soils System sizing and design  
System performance Selection criteria

### Reducing Site Disturbance and Increasing Natural Landscaping

Benefits of natural landscaping Choosing native species for plantings  
Cost considerations and maintenance

### Permeable Pavers

Site criteria and product selection Preparation and installation  
Cost considerations and maintenance

### Vegetated Roofs

Benefits and life cycle cost Extensive roofs  
Intensive roofs Maintenance

### Rain Barrels, Cisterns and Rain Gardens

Stormwater collection Water storage  
Reuse Garden sizing and design  
Cost considerations

### Filter Strips and Drainage Swales

Benefits and design considerations Choosing appropriate vegetation  
Cost considerations and maintenance

### Detention Basins and Ponds

Benefits and site selection Sizing and design  
Choosing native vegetation Maintenance considerations

### Stormwater Best Management Case Studies

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# Faculty

## Vegetated Green Roof Technology: Design and Construction

**Mary Ann Uhlmann** *Urban Horticulture Consulting, LLC*

Ms. Uhlmann is an environmental horticulturist, accredited green roof professional, certified permaculture practitioner and certified sustainable landscape professional. Her firm, Urban Horticulture Consulting, provides green infrastructure planning, training and asset management. Over the past 19 years, she has been a passionate advocate for green infrastructure education and policy-making. Based in Marietta, Georgia, her projects include green roof design, assessments and remediation, maintenance protocol development, FLL compliance testing and the development of public outreach programs. Recent speaking engagements include The Little Rock Sustainability Conference, P80 Global Summit and The Green Infrastructure Foundation Seattle Design Charette.

## Stormwater Best Management Practices

**Brad Flack, CPESC, CESSWI, QCIS** *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 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.

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