## Agenda

### Presented by Ginny Snead, P.E.

### **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

# **Best Management** Virginia Stormwater Ľ. Practices

-ive, Interactive Webinar - Fri., December 11,

2020

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



### You'll be able to:

*Select* stormwater best management practices for construction projects in Virginia.

**Consider** Virginia topography, hydrology and soils.

**Describe** the benefits of reducing site disturbance during construction, as well as the benefits of natural landscaping.

**Explore** applications for rain barrels, cisterns, rain gardens, filter strips and drainage swales.

*Review* criteria for sizing and designing detention basins and ponds.

Discuss stormwater best management practice case studies in Virginia.



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## **Stormwater Best Management Practices in Virginia**

Live, Interactive Webinar - Friday, December 11, 2020



Select stormwater management practi construction projec **Consider** topograph and soils

Reduce site disturb natural landscaping

**Continuing Education Credits Professional Engin** 7.0 PDHs

Architects 7.0 HSW CE Hours

AIA 7.0 LU|HSW



best ices for Virginia cts	<i>Explore</i> applications for vegetated roofs, permeable pavers, and drainage swales
hy, hydrology	<i>Explore</i> rain barrels, cisterns and rain gardens
bance and use g	<i>Discuss</i> sizing and design criteria for detention basins and ponds

Landscape Architects 7.0 HSW CE Hours

LA CES 7.0 HSW PDHs

**Floodplain Managers** 7.0 ASFPM CECs



## Faculty

Ginny Snead, P.E. Associate at A. Morton Thomas and Associates, Inc. (AMT), Williamsburg, VA Ms. Snead is a water resources engineer with more than 25 years of consulting and state government experience, specializing in water planning, engineering and policy in Virginia and in the Chesapeake Bay watershed. Her municipal experience includes stormwater master planning, BMP and retrofit design, inspection oversight, plan review and programmatic planning and reporting services. Her prior experience includes directing the Office of Stormwater at the Virginia DEQ and managing the Office of Regulatory Programs at the Virginia DCR which governed both the NPDES (MS4, Construction General Permit) for stormwater and the TMDL implementation plan programs, and which included the Virginia Erosion and Sediment Control Program, the Virginia Stormwater Management Program (and Virginia Stormwater BMP Clearinghouse), the Chesapeake Bay Preservation Act Program and Nutrient Management. Ms. Snead led the state team negotiating Virginia's 2013 MS4 NPDES permits with U.S. EPA Region III which still serve as the basis for MS4 permits in the Commonwealth. She has served as the project manager and technical lead on projects including stream restoration, outfall stabilization and BMP retrofits as well as on MS4 compliance projects. She currently serves as a member of the Chesapeake Bay Urban Stormwater Workgroup, closely following and commenting on the changes in stormwater BMP crediting in the Bay. She also serves on the committee developing protocols for manufactured treatment devices, to encourage innovation in MS4 TMDL compliance options. Ms. Snead is the current board chair for the Alliance for the Chesapeake Bay, a non-profit focused on improving the health of the Bay, and she serves as a member of the Commonwealth of Virginia Chesapeake Bay Stakeholder Advisory Panel.

## Webinar Information

Log into Webinar 8:00 - 8:30 am EST Break 12:30 - 1:30 pm EST

Afternoon Session

1:30 - 5:00 pm EST

Morning Session 8:30 am - 12:30 pm EST

### Tuition

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## **Additional Learning**

### GNSS Surveying: Principles and Practices Stormwater Basins

- Wed., December 2, 2020 | 9:30 am - 5:00 pm CST

### **Boundaries and Easements**

### **Pruniversity:** Plant Health Through Pruning

- Thurs., December 3, 2020 | 9:00 am - 5:00 pm CST

### 2018 International Existing Building Code:

Work Area Compliance Method - Fri., December 4, 2020 | 10:00 am - 2:30 pm CST

### **Structural Forensic Engineering**

- Fri., December 4, 2020 | 7:30 am - 3:30 pm CST

### AIA Contract Document Workshop

- Mon., December 7, 2020 | 9:00 am - 5:00 pm CST

### **IBC International Building Code 2021**

- Mon., December 7, 2020 | 8:30 am - 4:20 pm CST

### and Underground Systems

- Tues., December 8, 2020 | 9:00 am - 4:30 pm CST

### - Wed., December 2, 2020 | 11:00 am - 2:30 pm CST Soil Mechanics and Slope Stabilization, - Thurs., December 3, 2020 | 11:00 am - 2:30 pm CST Failures and Repairs

- Tues., December 8, 2020 | 10:00 am 1:45 pm CST
- Wed., December 9, 2020 | 10:00 am 2:15 pm CST

### SketchUp for Building Professionals

- Tues., December 8, 2020 | 11:00 am - 2:45 pm CST - Wed., December 9, 2020 | 11:00 am - 2:45 pm CST

### **Construction Cost Estimating**

- Wed., December 9, 2020 | 8:30 am - 3:50 pm CST

Technical Writing Workshop for Engineers - Wed., December 9, 2020 | 8:30 am - 5:00 pm CST

### **Drones in Construction**

- Fri., December 11, 2020 | 10:00 am - 4:50 pm CST

For more information and other online learning opportunities visit: www.halfmoonseminars.org

### **Continuing Education Credit Information**

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

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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 prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

## Registration

### Stormwater Best Management Practices in Virginia

Live, Interactive Webinar - Friday, December 11, 2020

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