

Agenda

Presented by Ms. Mary Paist-Goldman

Applications for Hydrologic Analysis

- | | |
|-----------------------|------------------------|
| Watershed studies | Stormwater management |
| Regional flood models | Stream flow assessment |

Hydrologic Principles

- | | |
|------------------|-----------------------------------|
| Hydrologic cycle | Watershed delineation methodology |
| Hydrographs | Rational method |
| SCS methods | |

History and Development of US Army Corps HEC-HMS Software

HEC-HMS Application User Interface

- Program file and project management
- Data entry and editing

Building a Small-Scale Watershed Model

- | | |
|-----------------------|-------------|
| Data required | Model setup |
| Analysis requirements | |

Model Output and Troubleshooting

- | | |
|------------------------|----------------------|
| Results and reporting | Mapping capabilities |
| Results interpretation | Calibration |
| Troubleshooting tips | |

Demonstration of Small Watershed Model

- Live demonstration of a small-scale HMS model

Building a Large-Scale Watershed Model

- | | |
|---------------|-----------------------|
| Data required | GIS data usage |
| Model setup | Analysis requirements |
| Modeling tips | |

Demonstration of Larger Watershed Model

- Live demonstration of a larger scale HMS model

Other Applications in HEC-HMS

- | | |
|---------------------|-------------------|
| Dam breach analysis | Irrigation design |
| Stormwater routings | Flood analysis |

Introduction to HEC-HMS Modeling
Allentown, PA - Thursday, January 23, 2020

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Learning Objectives

You'll be able to:

Identify applications for hydrologic analysis, including watershed studies, stormwater management and regional flood modeling.

Use hydrologic principles, including the hydrologic cycle, watershed delineation methodology, and hydrographs.

Get tips on building a small-scale watershed model using HEC-HMS software.

Get tips on building large-scale watershed models, and view a large watershed model demonstration.

Learn about other applications for HEC-HMS models, including dam breach analysis, irrigation design, stormwater routings and flood analysis.



Introduction to HEC-HMS Modeling

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Use hydrologic models for regional flood modeling and stormwater management

Understand hydrologic principles, including the hydrologic cycle and watershed delineation methodology

Explore the HEC-HMS application user interface for file and project management

Learn about small-scale and large-scale watershed modeling

Explore the use of HEC-HMS for dam breach analysis, irrigation design and flood analysis

Continuing Education Credits

Professional Engineers
7.0 PDHs

Professional Geologists
7.0 PDHs

Landscape Architects
7.0 HSW Clock Hours
7.0 LA/CES HSW PDHs

Certified Floodplain Managers
7.0 CECs



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Ms. Mary Paist-Goldman *Principal and Owner of Rippled Waters Engineering, LLC based in New Jersey*
Ms. Paist-Goldman has more than 20 years of experience in water resource engineering with a particular focus in hydrologic and hydraulic modeling. She is the principal and owner of Rippled Waters Engineering, LLC based in New Jersey. Her firm specializes in water resources engineering services for a variety of projects. Prior to starting Rippled Waters in 2018, she served for many years as principal engineer and director of Engineering Services at a Mid-Atlantic natural resources firm.

She is an experienced modeler and has worked extensively on design and analysis using a variety of hydrologic and hydraulic programs including HEC-HMS, HEC-RAS, HydroCAD and XP-SWMM. Applications for her hydraulic modeling expertise include wetland restoration and mitigation; stream restoration; bridge repair and replacement; and dam repair, replacement and removal. Specifically related to riverine systems, Ms. Paist-Goldman has extensive expertise with stream restoration, natural channel design and stabilization. Throughout her career, she has designed dozens of projects with low impact development techniques, green infrastructure and with a focus on water quality – particularly in regard to TMDL compliance. She has designed rain gardens, cistern systems for water re-use in the form of landscape irrigation, bioretention islands, manufactured LID devices, infiltration basins and constructed wetlands. In addition, Ms. Paist-Goldman has developed projects with goals of zero discharge upon completion, groundwater recharge to address aquifer deficits, and stormwater retrofits to reduce water quality impacts on environmentally sensitive streams, lakes and reservoirs. With regard to dams, she has worked on hazard classification analyses, dam breach analyses and dam removal design for anadromous migratory fish passage to name a few. For dam safety compliance, she has also prepared inundation mapping, emergency action plans, operation and maintenance manuals and dam inspection reports for low to high hazard dams.

Seminar Information

Hilton Garden Inn Airport
1787-B Airport Road
Allentown, PA 18109
(610) 443-1400

Tuition
\$289 for individual registration
\$269 for three or more registrants from the same company at the same time.

Registration
8:00 - 8:30 am
Morning Session
8:30 am - 12:15 pm
Lunch (on your own)
12:15 - 1:15 pm
Afternoon Session
1:15 - 5:00 pm

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 provides 7.0 PDHs to professional engineers and geologists in most states, including Pennsylvania. The Pennsylvania State Board of Professional Engineers, Land Surveyors, and Geologists does not pre-approve continuing education actives.

This course offers 7.0 HSW clock hours to Pennsylvania landscape architects. It is approved by the Landscape Architecture Continuing Education System for 7.0 HSW PDHs.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and landscape architects.

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

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.

Here’s what past attendees had to say about the program and presenter Ms. Mary Paist-Goldman

“Mary is very knowledgeable! Great presenter with great pace and flow.” – Civil Engineer

“Ms. Paist-Goldman has clearly mastered this topic – I will call her if I have a project!” – Engineer

“Very detailed and well-articulated. Mary is a born teacher”. – Mechanical Engineer

Additional Learning

Webinar Series

Floodplain Mapping and Regulation

- **Floods, Floodplains and Introduction to Floodplain Management**
Wed., Dec. 4, 2019, 11:00 AM - 12:30 PM CST
- **Flood Maps and Flood Zones**
Wed., Dec. 4, 2019, 1:00 - 2:30 PM CST
- **Elevations in the National Flood Insurance Program (NFIP) and Floodplain Regulation**
Thurs., Dec. 5, 2019, 11:00 AM - 12:30 PM CST
- **Practical Floodplain Management**
Thurs., Dec. 5, 2019, 1:00 - 2:30 PM CST

Retaining Walls and Slope Stabilization

- **Retaining Wall Basics**
Tues., Dec. 10, 2019, 11:00 AM - 12:00 PM CST
- **Geosynthetics and Retaining Walls**
Tues., Dec. 10, 2019, 12:30 - 3:00 PM CST
- **Slope Stability and Geosynthetics**
Wed., Dec. 11, 2019, 11:00 AM - 12:30 PM CST
- **Slope and Retaining Wall Failures, Fixes and Prevention**
Wed., Dec. 11, 2019 , 1:00 - 3:00 PM CST

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

Registration

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How to Register	
Online: www.halfmoonseminars.org	
Phone: 715-835-5900	
Fax: 715-835-6066	Code:
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Complete the entire form. Attach duplicates if necessary.	
Registrant Information Name: _____ Company/Firm: _____ Address: _____ City: _____ State: _____ Zip: _____ Occupation: _____ Email: _____ Phone: _____ Additional Registrants: Name: _____ Occupation: _____ Email: _____ Phone: _____ Name: _____ Occupation: _____ Email: _____ Phone: _____ 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.
Checks: Make payable to HalfMoon Education Inc.
Credit Card: <i>Mastercard, Visa, American Express, or Discover</i>
Credit Card Number: _____
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