

Agenda

Presented by Andrew C. Yung and Andres A. Salazar

Introduction, History, and Development of US Army Corps HEC-HMS Software

Brief history
Applications of HEC-HMS
Computational categories

Basic Hydrologic Concepts

The hydrologic cycle and HEC-HMS
User interface
Input, output, and HEC-DSS

Loss Rates

Loss computation assumptions and methods
Accounting for urbanization
Selecting a loss method and estimating parameters

Unit Hydrographs and Rainfall/Runoff Transformation

Assumptions of the unit hydrograph
Derivation and application of the unit hydrograph
Selecting a unit hydrograph method and estimating parameters

Precipitation

Storm distributions
Hypothetical vs. historical storms
Sources of precipitation data

Stream Routing

Purpose, importance, and effects of streamflow routing
Streamflow routing methods
Streamflow diversions and returns

Reservoirs

Purpose, importance, and effects of reservoir routing
Types of reservoirs and detention
Reservoir routing input and output

Calibration and Optimization

Observed data input
Parameters to be calibrated/optimized
Calibration/optimization setup

Using HEC-HMS in Design

Design example walkthrough

Introduction to HEC-HMS Modeling
Houston, TX - Wednesday, May 16, 2018

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Learning Objectives

You'll be able to:

Explore the hydrologic cycle and learn how HEC-HMS models the hydrologic processes of watersheds.

Understand precipitation loss computations and methods.

Analyze precipitation in hypothetical vs. historic storms.

Examine unit hydrographs and rainfall/runoff transformation.

Discuss the purpose, importance, and effects of stream flow routing and reservoir routing.

Conduct a design example walkthrough using HEC-HMS.



Introduction to HEC-HMS Modeling

Houston, TX - Wednesday, May 16, 2018



Understand the history and development of HEC-HMS software

Identify basic hydrologic concepts

Examine precipitation loss rates

Discuss unit hydrographs and rainfall/runoff transformation

Explore stream routing and reservoirs

Learn about calibration and optimization

Continuing Education Credits

Professional Engineers

6.0 PDHs

Professional Geoscientists

6.0 CE Hours

Floodplain Managers

6.0 ASFPM CECs



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Faculty

Andrew C. Yung, P.E., CFM
Chief Hydrologist for Walter P Moore

Mr. Yung serves as chief hydrologist for Walter P Moore. Mr. Yung has more than 27 years of experience as an engineer, planner, and hydrologist. He has managed a wide range of engineering projects involving hydrology, hydraulics, master drainage studies, channel modification and hydraulic structure designs, watershed impact analyses, detention facility designs, and dam safety analyses. Mr. Yung has also served as the team leader for independent technical review (ITR) for several federal projects currently under way in Houston. He is very familiar with HEC-HMS/ HEC-1, HEC-RAS/HEC-2, HEC-DSS, and HEC-SSP and provides technical support and training to users of these programs. Mr. Yung joined Walter P Moore in 1996.

Seminar Information

Marriott West Loop - By the Galleria
1750 West Loop South
Houston, TX 77027
(713) 960-0111

Tuition

\$279 for individual registration
\$259 for three or more registrations.

Each registration includes a complimentary continental breakfast and printed seminar manual.

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 CD/manual package. You may also send another person to take your place.

Andres A. Salazar, Ph.D., P.E.
Director of Water Resources Engineering for Walter P Moore

Dr. Salazar serves as the director of water resources engineering for Walter P Moore. He is a water resources engineer with more than 17 years of experience in steady and unsteady modeling, river basin and reservoir operations, and water resources planning. Dr. Salazar is an expert with planning and feasibility studies for drainage and water supply projects. He has extensive experience with complex drainage projects across the State of Texas and is proficient in the use of EPA-SWMM, HEC-RAS, HEC-HMS, STORM NET, InfoWorks, and RiverWare computer models. Dr. Salazar has special expertise in hydrologic and hydraulic systems that are key to creating an effective sustainable site drainage design. Dr. Salazar provides expertise and direction for site drainage, water recycling, and site water amenities. He joined Walter P Moore in 2009.

Continuing Education Credit Information

This seminar is open to the public. It offers 6.0 PDHs to professional engineers and 6.0 continuing education hours to geoscientists in Texas. Educators and courses are not subject to preapproval in Texas.

Professional engineers seeking continuing education credit in other states will be able to claim the hours earned at this seminar. HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana, Louisiana, Maryland, New Jersey (Approval No. 24GP00000700), New York (NYSED Sponsor No. 35), North Carolina, and North Dakota.

The Association of State Floodplain Managers has approved this event for 6.0 CECs. ASFPM approval qualifies this program for Texas floodplain managers.

This course offers a non-credit continuing education opportunity to 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

AutoCAD 2018 Beginners 2-D Course

- **Create a Drawing**
Thurs., April 5, 2018, 11:00 AM - 12:30 PM CDT
- **Edit a Drawing**
Thurs., April 5, 2018, 1:00 - 2:30 PM CDT
- **View and Display a Drawing**
Fri., April 6, 2018, 11:00 AM - 12:30 PM CDT
- **Print, Plot or Print File**
Fri., April 6, 2018, 1:00 PM - 2:30 PM CDT

Special Inspections

- **Overview of Special Inspections**
Wed., April 11, 2018, 11:00 AM - 12:30 PM CDT
- **Steel, Wood and Cold-Formed Steel**
Wed., April 11, 2018, 1:00 - 2:30 PM CDT
- **Concrete, Masonry and Soils**
Thurs., April 12, 2018, 11:00 AM - 1:00 PM CDT
- **Fire-Resistant Materials and Material Standards**
Thurs., April 12, 2018, 1:30 PM - 2:30 PM CDT

Land Description Workshop

- **Land Description Basics**
Fri., Apr. 20, 2018, 9:00 - 10:30 AM CDT
- **Interpreting Land Descriptions**
Fri., Apr. 20, 2018, 11:00 AM - 12:30 PM CDT
- **Writing Land Descriptions**
Fri., Apr. 20, 2018, 1:00 - 2:30 PM CDT

Boundaries and Easements

- **Locating Land Boundaries on Paper (And on the Ground)**
Weds., Apr. 25, 2018, 9:00 - 10:30 AM CDT
- **Physical Evidence and Boundaries**
Thurs., Apr. 26, 2018, 1:00 - 2:30 PM CDT
- **Easements: Understanding Possessive Rights in Lands of Others**
Thurs., Apr. 26, 2018, 11:00 AM - 12:30 PM CDT
- **Disputes: Boundaries, Shared Spaces, and Split Estates**
Thurs., Apr. 26, 2018, 1:00 - 2:30 PM CDT

For more information visit:
www.halfmoonseminars.org/webinars/

Can't Attend? Order the CD/Manual Package:

An audio recording of this seminar is available for \$289 (including shipping). Allow five weeks from the seminar date for delivery. Please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

Introduction to HEC-HMS Modeling

Houston, TX - Wednesday, May 16, 2018

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Complete the entire form. Attach duplicates if necessary.		

()  I need special accommodations. Please contact me.

Tuition

() **I will be attending the live seminar.** Single Registrant - **\$279.00**. Three or more registrants from the same company registering at the same time - **\$259.00** each.

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