

Agenda

Chad Ballard, PE, CFM

Session 1 – Intro into HEC-RAS

Hydraulic principles
Applications of HEC-RAS
1d vs 2d vs 3d

Session 2 – RAS Mapper

Georeferencing and projections
Mapper tools and workflow
Terrain and land cover setup
Session 2 (workshop)

Session 3 – 2D Modeling

2D modeling theory
Geometry setup
Boundary conditions
Session 3 (workshop)

Session 4 – Advanced 2D Modeling

2D modeling theory
Model troubleshooting
Rain on grid
Session 4 (workshop)

Session 5 – 2D Hydraulic Connections

Hydraulics structures
Internal boundary conditions
Session 5 (workshop)

Session 6 – 1D/2D Modeling with HEC-RAS

Lateral 1D/2D connection
Inline 1D/2D connections
Session 6 (workshop)

You are encouraged to bring a laptop with you to the seminar. The instructor will demonstrate the software on his computer, and attendees will be able to try working along on their computers. You will receive an email two weeks before the seminar that will contain more information on the hands-on portion of the program.

HEC-RAS 2D Modeling

Corpus Christi, TX- Wednesday, May 6, 2020

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



Learning Objectives

You'll be able to:

Explore hydraulic principles.

Learn about applications for HEC-RAS software.

Examine RAS mapper tools and terrain and land cover setup.

Discuss 2D modeling theory, geometry setup and model troubleshooting.

Study hydraulics structures and internal boundary conditions.

Explore 1D and 2D modeling with HEC-RAS, and have the option of participating in hands-on workshop sessions.



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Examine RAS mapper tools and terrain and land cover setup

Study 2D modeling theory, geometry setup and model troubleshooting

Discuss hydraulics structures and internal boundary conditions

Explore 1D and 2D modeling with HEC-RAS

Continuing Education Credits

Professional Engineers
7.0 PDHs

Floodplain Managers
7.0 ASFPM CECs

Professional Geoscientists
7.0 CE Hours

Hydrologists
7.0 PDHs



HalfMoon Education Inc.
WWW.HALFMOONSEMINARS.ORG

Faculty

Chad Ballard, PE, CFM *Stormwater and Flood Team Leader at Plummer in Dallas, TX*
Mr. Ballard is a licensed civil engineer holding a bachelor’s and master’s degrees in Civil and Environmental Engineering from Brigham Young University. He was first introduced to numerical modeling methods as an undergrad and continued with his graduate work in 2D surface water and sediment transport modeling.

Since then Mr. Ballard has obtained experience using a variety of hydrologic and hydrodynamic modeling solvers and platforms on a variety of different engineering applications (HEC-HMS, HEC-RAS, XP-SWMM, TUFLOW, SRH-2D, SMS). In addition to a broad range of engineering skills, he has helped hundreds of engineering firms apply numerical models to their projects all around the world. In the past Mr. Ballard has taught undergraduate and graduate level courses in hydraulics and hydrology, and he is currently teaching professional continuing education courses for the new 2D tools in the HEC-RAS software.

Mr. Ballard is active in professional organizations including the Texas Floodplain Managers Association (TFMA) and ASCE Texas Section where he serves as the current Honors Committee chairman. He is also a committee member of the EWRI National Computational Hydraulics Technical Committee.

Mr. Ballard is the Stormwater and Flood Team leader for Plummer and started the High Water Mark, a website for resources, information and current events specific to water resource engineers. He currently lives in the Dallas area with his wife and five daughters.

Here’s what past attendees had to say about the program and about presenter Chad Ballard:

- “Very informative session.” – *Civil Engineer*
“Awesome presentation. Well prepared.” – *Civil Engineer*
“Clear, concise.” – *Civil/Environmental Engineer*

Seminar Information

Hyatt Place Corpus Christi
6773 South Padre Island Drive
Corpus Christi, TX 78412
(361) 985-8888

Tuition
\$299 for individual registration
\$279 for three or more simultaneous registrations.

Included with your registration:
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. You may also send another person to take your place.

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

Additional Learning

- Webinar Series**
- International Residential Code**
• **Development and Enforcement of International Residential Code**
Thurs., March 12, 2020, 11:00 AM - 12:00 PM CDT
• **IRC Building Planning and Shell Construction, Part I**
Thurs., March 12, 2020, 1:00 - 2:30 PM CDT
• **IRC Building Planning and Shell Construction, Part II**
Fri., March 13, 2020, 11:00 AM - 12:30 PM CDT
• **IRC Energy Efficiency and Building Systems**
Fri., March 13, 2020, 1:00 - 3:00 PM CDT

- Erosion and Sediment Control**
• **Erosion and Sediment Control Requirements and Practices**
Thurs., March 12, 2020, 12:30 - 2:00 PM CDT
• **Selection of Erosion Control Practices and Best Practices**
Thurs., March 19, 2020, 12:30 - 2:00 PM CDT
• **Small Channels, Control Measure Estimating and Pollution Prevention Plans**
Thurs., March 26, 2020, 12:30 - 2:00 PM CDT
• **Stormwater Management Inspection, Maintenance and Case Studies**
Thurs., April 2, 2020, 12:30 - 2:00 PM CDT

Continuing Education Credit Information
This seminar is open to the public. It offers 7.0 PDHs to professional engineers in all states and 7.0 continuing education hour to Texas geoscientists. Educators and courses are not subject to preapproval in Texas.

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 a New York-approved continuing education provider for professional engineers.

The Association of State Floodplain Managers has approved this event for 7.0 CECs. ASFPM approval qualifies this program for Texas floodplain managers.

This course offers 7.0 PDHs to professional hydrologists. Courses are not subject to preapproval.

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.

- Construction Cost Estimating**
• **Introduction to Cost Estimating**
Thurs., March 19, 2020, 11:00 AM - 12:30 PM CDT
• **Assessing the Impact of Sea Level Rise, Changing Temperature and Changing Weather Patterns**
Thurs., March 19, 2020, 1:00 - 3:00 PM CDT
• **Cost Estimate Organization and Examples**
Fri., March 20, 2020, 11:00 AM - 1:00 PM CDT
• **Adapting Sites, Outdoor Spaces, New Construction and Existing Buildings to Withstand Extreme Weather Events**
Fri., March 20, 2020, 1:30 - 3:00 PM CDT

- Introduction to HEC-HMS**
• **Introduction to Cost Estimating**
Thurs., March 26, 2020, 11:00 AM - 12:30 PM CDT
• **HEC-HMS Application User Interface**
Thurs., March 26, 2020, 1:00 - 3:00 PM CDT
• **Model Output and Troubleshooting**
Fri., March 27, 2020, 11:00 AM - 12:30 PM CDT
• **Large Watershed Model and Other Applications**
Fri., March 27, 2020, 1:00 - 3:00 PM CDT

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:
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278	
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 - \$299.00 . Three or more registrants from the same company registering at the same time - \$279.00 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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