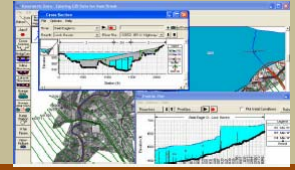


1D/2D HEC-RAS Workshop

November 18 - 20, 2015

U.S. Bureau of Reclamation (2nd Floor)
230 Collins Road
Boise, ID 83702 (12 CECs for CFMs)



Summary

This hands-on 3-day workshop prepares water resources professionals to use HEC-RAS in real world situations. Participants learn how to conduct water surface profiles, bridge/culvert hydraulics, and floodplain studies using the steady flow capabilities of HEC-RAS. The last day will cover two-dimensional (2D) unsteady flow applications using HEC-RAS2D.

Day 1

- Working with HEC-RAS: An Overview
- Basic Input Data Requirements
- Workshop 1: Developing a Hydraulic Model
- Workshop 2: Adding Tributaries and Junctions
- Theoretical Basis of HEC-RAS

Day 2

- Workshop 3: Creating Plans
- Modeling Basic Bridges with HEC-RAS
- Workshop 4: Modeling Bridges
- Modeling Culverts with HEC-RAS
- Modeling Multiple Openings

Day 3

- Unsteady Flow Review
- Introduction to 2D Modeling in HEC-RAS
- Features and Capabilities of RAS Mapper
- Creating 2D Areas
- Workshop 5: Creating a 2D Mesh
- Viewing 2D Model Results
- Workshop 6: Offline 2D Projects

COURSE FEES

\$695-NORFMA Members/\$795-Non-members*

*Become a member for 2015-2016!

Cancellation Policy: \$50 fee until Nov.10, no refunds after this date.

This course is subject to cancellation due to insufficient number of students.

LAPTOPS REQUIRED

INSTRUCTOR: Dr. Raymond Walton, P.E., D.WRE is the Lead Hydraulic Engineer with WEST Consultants in Bellevue, Washington. He has nearly 40 years experience directing water resources projects for a variety of federal, state, local government and private clients. He is a nationally-recognized expert in water resources and computer modeling, including surface water, groundwater, and water quality systems, and has been involved with numerous river and floodplain studies using HEC-RAS. He is a frequent instructor of short courses for ASCE Continuing Education and others in various aspects of numerical modeling using the HEC programs. He received his B.Sc. in Mathematics from University College, London, his M.Sc. in Engineering Hydrology from the University of Newcastle-Upon-Tyne, and his Ph.D. in Hydraulics from the University of Florida.

WHO SHOULD ATTEND? Engineers and scientists in water resources working for local, state and federal agencies and consulting firms, as well as water resources planners.

COURSE BENEFITS AND OUTCOMES: Participants will: learn how to use the HEC-RAS software; receive a comprehensive review of hydraulic principles for rivers, waterway bridges and culverts; understand and apply the principles in HEC-RAS steady flow hydraulic models for analyzing confluences and bridge/culvert structures. Participants will also learn to use HEC-RAS to model 2D unsteady flow hydraulics; understand how to develop a stable 2D flow model; and learn from "real world" projects and applications

REGISTRATION DEADLINE: November 10, 5:00 p.m. Register by e-mailing the information below to hhu@westconsultants.com. **Seating limited to 30 students.**

[Online registration – www.norfma.org](http://www.norfma.org)

For checks, make payable to "NORFMA" and send to: NORFMA C/O Henry Hu, WEST Consultants, 12509 Bel-Red Road, Suite 100, Bellevue, WA, 98005. Visa or Master Card only.

Registrant Information

Name: _____

Company: _____

Address: _____

City,State,Zip: _____

Phone: _____

E-mail: _____

Circle Applicable Course Fee: \$695 / \$795; TOTAL: _____

Card No: _____ Sec. code: _____

Exp. Date: _____ Billing zip code: _____

Cardholder Name: _____ Signature: _____