CASFM Continuing Education

HEC-RAS BASIC 1D MODELING COURSE

November 29 - December 1, 2022
8am-5pm

Course Description

WEST Consultants' hands-on seminar and computer workshop provides practical training in basic steady flow modeling. Participants gain intensive experience constructing HEC-RAS models, including developing bridge geometry and performing floodplain analyses. Lectures also discuss modeling culverts, modeling techniques, and FEMA floodway encroachment analysis. Workshops focus on giving students experience developing a hydraulic model, modeling bridges and culverts, modeling inline and lateral structures, floodway encroachments, and using the built-in feature RASMapper to spatially analyze results.

Attendees should bring their own laptop with latest version of HEC-RAS

Learning Outcomes:

1. Obtain a working understanding of the theory behind HEC-RAS 1D.
2. Develop a 1D hydraulic model and run a steady flow analysis.
3. Model bridges, culverts, and inline and lateral structures.
4. Analyze FEMA floodway encroachments.
5. Understand how to use RASmapper to visualize results.

Cost:

Early Registration (by November 14th): $825
Late Registration (after November 14th): $925

Date:

November 29 - December 1, 2022 8AM-5PM
Lunch will be provided

Location:

Dewberry

990 S Broadway #400, Denver, CO 80209

Register:

Register for the event here

Questions?

Contact Katie Kerstiens at MHFD
303-653-3220 | kkerstiens@mhfd.org

We will be offering a certificate that will provide 7 CECs per day for this course
(Registrants are responsible for submitting CECs to ASFPM)

WEST CONSULTANTS
WATER | ENVIRONMENTAL | SEDIMENTATION | TECHNOLOGY

Basic HEC-RAS Modeling
3-Day Course Outline

Presented by:

WEST Consultants, Inc.

www.westconsultants.com

Day 1

Event	Time
Administrative and Introductions	**8:00 AM - 8:30 AM**
Working with HEC-RAS: An Overview	**8:30 AM - 9:30 AM**
Break	**9:30 AM - 9:45 AM**
Basic Input Data Requirements	**9:45 AM - 11:30 AM**
Lunch	**11:30 AM - 12:30 PM**
Workshop No. 1: Developing a Hydraulic Model	**12:30 PM - 1:30 PM**
Review Workshop No. 1	**1:30 PM - 1:45 PM**
Break	**1:45 PM - 2:00 PM**
Workshop No. 2: Adding Tributaries and Junctions	**2:00 PM - 2:45 PM**
Review Workshop No. 2	**2:45 PM - 3:15 PM**
Theoretical Basis of HEC-RAS	**3:15 PM - 5:00 PM**

Basic HEC-RAS Modeling
3-Day Course Outline

Presented by:

WEST Consultants, Inc.

www.westconsultants.com

Day 2

Event	Time
Workshop No. 3: Creating Plans	**8:00 AM - 9:00 AM**
Review Workshop No. 3	**9:00 AM - 9:30 AM**
Break	**9:30 AM - 9:45 AM**
Cross-Sections and Ineffective Areas for Modeling Structures	**9:45 AM - 10:45 AM**
Modeling Basic Bridges	**10:45 AM - 12:00 PM**
Lunch	**12:00 PM - 1:00 PM**
Workshop No. 4: Modeling Bridges	**1:00 PM - 2:30 PM**
Review Workshop No. 4	**2:30 PM - 3:00 PM**
Break	**3:00 PM - 3:15 PM**
Modeling Culverts and Multiple Openings	**3:15 PM - 4:00 PM**
Workshop No. 5: Modeling Multiple Openings	**4:00 PM - 5:00 PM**

Basic HEC-RAS Modeling
3-Day Course Outline

Presented by:

WEST CONSULTANTS
WATER | ENVIRONMENTAL | SEDIMENTATION | TECHNOLOGY

WEST Consultants, Inc.
www.westconsultants.com

Day 3

Event	Time
Review Workshop No. 5	**8:00 AM - 8:30 AM**
Modeling Inline and Lateral Structures	**8:30 AM - 9:15 AM**
Break	**9:15 AM - 9:30 AM**
Optional Capabilities and Modeling Techniques	**9:30 AM - 10:30 AM**
Floodway Determination	**10:30 AM - 11:30 AM**
Lunch	**11:30 AM - 12:30 PM**
Workshop No. 6: Floodway Encroachment	**12:30 PM - 2:00 PM**
Review of Workshop: Floodway Encroachment	**2:00 PM - 2:30 PM**
Break	**2:30 PM - 2:45 PM**
RAS Mapper Lecture/Walkthrough	**2:45 PM - 3:45 PM**
Workshop No. 7: Output Analysis	**3:45 PM - 4:30 PM**
Review of Workshop: Output Analysis	**4:30 PM - 5:00 PM**