

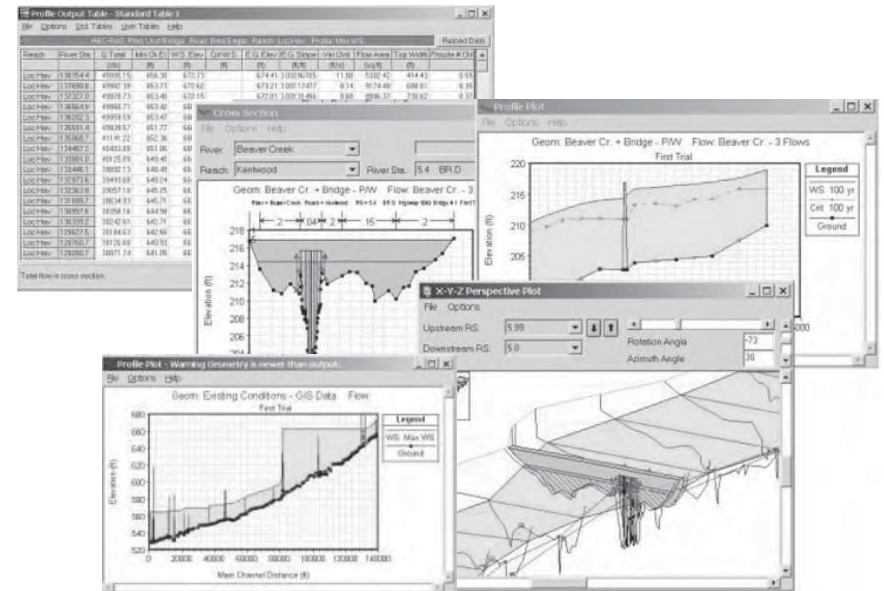
HEC-RAS 4.1.1

River Analysis System

A four-day, computer-intensive, hands-on workshop designed to get beginning to intermediate users using HEC-RAS software.

July 14 - July 17, 2008
Lansing, MI

Local Technical Assistance Program
309 Dillman Hall
Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931-1295



Sponsored by
Michigan's
Local Technical
Assistance Program



HEC-RAS 4.1.1 Workshop

July 14 - July 17, 2008

**Lansing Community College, West Campus -
M-TEC Center, Lansing, MI**

Comprehensive hands-on approach provides beginning to intermediate users the skills and information needed to apply and utilize the many new features in HEC-RAS 4.0. Participants will have an opportunity to prepare and analyze output during the workshop.

Concepts Covered:

- Open channel flow
- Basic input requirements
- Application of bridge & culvert routines
- Data requirements
- Output analysis
- Floodway determination

Course Materials:

- Instruction binder
- CD-ROM containing HEC-RAS software
- User Manual
- Applications and Hydraulic Reference Guides
- HEC-RAS technical support

Instructor:

Dennis Johnson, Ph.D., Assistant Professor in Environmental Sciences & Studies in Information Technology and a nationally recognized expert in hydrology applications.

Registration Fee:

Public Agencies - \$ 900.00 Private Agencies - \$ 1,100.00
Registration fee is due July 7, 2008.
Room locations and maps will be sent with confirmed registration.

To Register:

Call Michigan LTAP at 906-487-2102
Cancellations must be received prior to July 7, 2008 for full refund. Substitutions will be accepted.

Agenda

Workshop hours

9:00 - 5:00 Monday, 8:00 - 5:00 Tuesday, Wednesday, and Thursday

Monday, July 14

Registration (8:00 - 8:45 am)

Modeling River Hydraulics with HEC-RAS (9:00 am)

Water Surface Profile Calculations

Resistance to Flow

Geometric Data Requirements for Water Surface Profile Calculations

Steady Flow Data Requirements

Steps in Developing Hydraulic Models

Introduction to Calculation of Water Surface Profiles

Tuesday, July 15

HEC-RAS Bridge Analysis

Hydraulics of Bridge Waterways

Selecting a Bridge Modeling Approach

Bridge Computation

Culvert Hydraulics

Wednesday, July 16

HEC-RAS Culvert and Multiple Opening Analysis

Applications of Culvert Hydraulics

Culvert Analysis

Multiple Bridge and Culvert Openings & Analysis

Thursday, July 17

Optional Capabilities & Floodway Determination

Mixed Flow Regime Calculations

Importing HEC-2 Data

Floodway Determination

Troubleshooting with HEC-RAS

Lunch and refreshments are included each day. Please let us know of any special dietary needs.

Space is limited so register early to reserve your seat.