Course Number

FHWA-NHI-135095B

WCT

Course Title

Model Terrain Development with Various Data Sources WCT

This course, NHI-135095B SRH-2D Model Terrain Development with Various Data Sources, is a follow-on Web-conference Training (WCT) to NHI-135095 Two-Dimensional Hydraulic Modeling of Rivers at Highway Encroachments, a 3-day Instructor-led Training (ILT). This course provides participants instruction to learn how to process and effectively use LiDAR and other elevation format types in defining geometry for 2D hydraulic models. Participants will learn how to identify potential data issues. Participants will also learn various methods for modifying the geometry for the simulation and will be able to use the software to import data from other data sources and export data to be used in formats compatible with other standard programs.

This course presents material in a series of three Web-conference training sessions, supplemented by two hands-on exercises. The sessions are as follows: Session 1: Introduction, Course Overview, Working with LiDAR and Other Elevation Data, and Importing/Exporting in Alternate Data Formats; Session 2: Feature Stamping and Polygon Editing; and Session 3: Summary and Exercise Review.

As part of the course materials, a set of independent study exercise data files and demonstration files will be provided. The data files for the independent study sessions are distributed at the end of the corresponding lesson. The demonstration data files are used at designated demonstration times.

Offerings of this course are intended to be delivered within a given work week, with Session 1 typically delivered on a Monday, Session 2 on a Wednesday, and Session 3 on a Friday. Alternate timing for the sessions can be scheduled at the request of the host, but the course is not intended to be conducted over a long period of time.

Outcomes

Upon completion of the course, participants will be able to:

- Import and process LiDAR data for use in an SRH-2D simulation
- List several import and export data format types and describe how to interact with each
- Identify other types of elevation data input/output data types supported by SRH-2D
- Modify elevation datasets using the feature stamping tools in SMS and list other methods for modifying elevation geometry
- Practice using SMS to import and export data and modify elevation geometry

Target Audience

The target audience for this course is FHWA and State Department of Transportation hydraulics personnel and other Federal, State, local or consulting engineers who have responsibility for, or desire to work with, the hydraulic analysis and design of highway river crossings. Course participants should have knowledge of the fundamentals of open channel flow hydraulics. It is suggested (but not required) that course participants take NHI-135091 Basic Hydraulic Principles Review (WBT).

Training Level: Intermediate

Fee: 2021: $150 Per Person; 2022: N/A

Length: 9 HOURS (CEU: .9 UNITS)

Class Size: MINIMUM: 15; MAXIMUM: 25

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