



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

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TO: All Design, Operations, and District Personnel, and Consultants

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SUBJECT: HEC-RAS 5 and IDNR Construction in a Floodway Permit
Application Guidance

EFFECTIVE: Immediately

In 2016, the Hydrologic Engineering Center of the U.S. Army Corps of Engineers released Version 5 of HEC-RAS, the hydraulic modeling software used by both IDNR and INDOT for modeling bridges and floodplains. The major advance with Version 5 is the addition of 2-D modeling capability, along with other detailed enhancements. Staff at both IDNR and INDOT have performed testing of the 1-D, steady state module of the program, and have deemed it acceptable for use. Therefore, both IDNR and INDOT will accept HEC-RAS 5 for modeling submittals.

- The initial releases of HEC-RAS 5 had issues that have been resolved with later releases. Please be sure to use version 5.0.3, or later.
- The 1-D unsteady and 2-D modules are NOT generally approved for modeling submittals. If there is a modeling situation that requires 1-D unsteady or 2-D modeling, consultation with the appropriate agency should occur well in advance of a submittal.
- More information about HEC-RAS 5 can be found on the HEC website at <http://www.hec.usace.army.mil/software/hec-ras/>

Construction in a floodway permit application guidance:

- The No Change in Effective Cross Sectional Flow Area worksheet and Change in Effective Cross Sectional Flow Area worksheet are not to be used for bridge projects.
- The Bridge Replacement in Kind Non-Modeling worksheet should be considered for bridge rehabilitation, bridge replacement and bridge widening projects as appropriate under [2.5.4](#) in the [IDNR General Guidelines for the Hydrologic-Hydraulic Assessment](#). The worksheet, companion worksheets and instructional videos can be found by clicking on “Technical Requirement: Minimum Application Submittal for Construction in a Floodway” at the following website: <http://www.in.gov/dnr/water/2455.htm>
- IDNR is currently developing a new worksheet which will group all bridge/culvert non-modeling work together. It will be termed the Bridge Non-Modeling Worksheet and will replace the Bridge Replacement in Kind Non-Modeling worksheet.

If you have any questions or comments, please contact me at (317)233-2096 or by email at mbailey1@indot.in.gov

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