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**NATURAL RESOURCES COMMISSION****Information Bulletin #37 (Third Amendment)**

**SUBJECT:** Submission and Review of Hydraulic Modeling for Permit Applications under the Flood Control Act

**1. Background**

The Flood Control Act ([IC 14-28-1](#)) prohibits the construction of residences or abodes within a floodway and requires all other construction, excavation, or filling activities within a floodway to receive prior written approval from the Department of Natural Resources (the "Department"). With regard to the Department's approval, the Act further states that the director shall issue a permit only if in the opinion of the director the applicant has clearly proven that the structure, obstruction, deposit, or excavation will not do any of the following:

- (1) Adversely affect the efficiency of or unduly restrict the capacity of the floodway.
- (2) Constitute an unreasonable hazard to the safety of life or property.
- (3) Result in unreasonably detrimental effects upon fish, wildlife, or botanical resources.

In deciding whether to issue a permit, the director shall consider the cumulative effects of the structure, obstruction, deposit, or excavation when added to past, present, and reasonably foreseeable future actions.

Modeling guidelines (General Guidelines for the Hydrologic – Hydraulic Assessment of Floodplains in Indiana) were developed and published by the Department's Division of Water and are available on the Division's website at:

[https://www.in.gov/dnr/water/surface-water/indiana-floodplain-mapping/  
general-guidelines-for-the-hydrologic-hydraulic-assessment/](https://www.in.gov/dnr/water/surface-water/indiana-floodplain-mapping/general-guidelines-for-the-hydrologic-hydraulic-assessment/)

Training sessions were held in 2002 in Plymouth, Indianapolis, and Jeffersonville to assist consultants in the development of effective flood modeling submittals. The Natural Resources Commission endorsed the General Guidelines in this Information Bulletin published on May 1, 2003, in the Indiana Register at 26 IR 2701.

As a consequence, the Division of Water no longer participates directly in project specific flood model development as part of a permit application. Personnel in the Division of Water serve as reviewers.

**2. Review Procedures**

The procedures for the review of submitted computer modeling as part of a permit application are as follows:

- All submitted modeling is evaluated based on the modeling guidelines outlined in the General Guidelines for the Hydrologic – Hydraulic Assessment of Floodplains in Indiana.
- Submitted modeling should be prepared under the supervision of a professional engineer with knowledge of generally accepted modeling principles.
- Within the Division of Water, Engineering Services Center (ESC) staff is available to meet with a consultant to discuss modeling for a project, or to answer questions that a consultant may have in the process of developing a model. ESC staff does not perform a preliminary review of a model before a permit application is submitted.
- A submitted model should be accompanied by a completed modeling checklist and project evaluation table as described in the General Guidelines for the Hydrologic – Hydraulic Assessment of Floodplains in Indiana. Refusal to submit this information will result in the denial of the permit application.
- ESC staff will comment on modeling using the abeyance process but will not change models or correct explicit modeling errors.
- Only explicit modeling errors will be noted and identified as deficiencies. The rationale behind any aspects of the submitted modeling that are "engineering judgment" (such as Manning's "n" values or coefficients) should be documented in the submitted checklist or model report. Failure to document "engineering judgment" is an explicit modeling error.
- An abeyance determination may state the comments are not inclusive. If the modeling is incomplete or contains inaccurate or outdated data, mistakes may not be apparent until the applicant clarifies the model.
- ESC staff is available to discuss projects before a submittal or after an abeyance letter is mailed. Design details are the responsibility of the applicant and the consultant. ESC staff will not suggest design changes to make a project approvable.
- A model submittal with a project evaluation table that shows an excessive surcharge as a result of the proposed project will not be reviewed. The applicant will be notified through an abeyance letter that the project as submitted is not approvable. ESC staff may review model submittals with excessive surcharges if the applicant:
  - (a) clearly demonstrates that the surcharge is contained entirely on the applicant's property; or
  - (b) identifies the project as a public works project for which flood easements have been or will be secured for all areas subject to excessive surcharges.
- The initial abeyance period for model revisions is 45 days. Upon written request by the applicant, ESC staff may grant extensions of time.

- The applicant is responsible for supporting the technical merits of modeling or project alternatives. ESC staff would provide testimony as to the circumstances of their review.

### 3. History

This Information Bulletin was approved by the Commission and published in the Indiana Register on May 1, 2003 (26 IR 2701). On January 16, 2007, the Commission reaffirmed the First Amendment ([20070214-IR-312070083NRA](#)). On July 19, 2011, the Commission approved the Second Amendment ([20110803-IR-312110433NRA](#)) to conform to current practice and to update website links. On September 21, 2021, the Commission approved this Third Amendment updating URL links and making other technical changes.

*Posted: 10/20/2021 by Legislative Services Agency*  
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