Procedures for "No-Rise" Certification
For Proposed Developments in the Regulatory Floodway

Section 60.3(d)(3) of the National Flood Insurance Program (NFIP) regulations states that a community shall *"prohibit encroachments, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in __any__ increase in flood levels within the community during the occurrence of the base (100-year) flood discharge."* FEMA defines "any" as meaning a zero increase (greater than 0.00 feet). This analysis is usually called a "no-rise" or "zero-rise" analysis and results in a "no-rise" or "zero-rise" certification, aka "No-Rise Certificate", by a qualified register professional engineer.

__Prior__ to issuing any building, grading or development permits involving activities in a regulatory floodway the community must obtain a no-rise certification, with supporting technical data, stating the proposed development will not impact the pre-project base flood elevations, floodway elevations, or floodway widths. The certification should be obtained from the applicant and be signed, sealed and dated by a licensed professional engineer.

The engineering or "no-rise" certification must be supported by technical data.

The supporting technical data must be based upon hydraulic analyses that utilize the same model used to prepare the effective Flood Insurance Study (FIS) report and Flood Insurance Rate Map (FIRM) or the Flood Boundary and Floodway Map (FBFM) from older studies, unless it is demonstrated that the "effective" hydraulic model is unavailable or its use is inappropriate. If an alternative hydraulic model is used, the new model must be calibrated to reproduce the FIS profiles within 0.5 feet. The hydraulic model used in the analysis must be on FEMA's accepted models list or documentation must be provided showing the model meets the requirements of NFIP regulations, Section 65.6(a)(6). View the list of nationally and locally accepted models that meet NFIP requirements for flood hazard mapping activities.

To support a "no-rise" certification for proposed developments encroaching into the regulatory floodway, a community will require that the following procedures be followed:

1 **CURRENT EFFECTIVE MODEL**
The registered professional engineer obtains a copy of the model used to develop the effective flood insurance study from FEMA (make sure there are no missing LOMCs). Data may be accessed through the Flood Risk Study Engineering Library (FRiSEL). FRiSEL is an online search portal that can be used to access data associated with FEMA flood risk mapping projects that have been uploaded through the Mapping Information Platform (MIP). FRiSEL provides users with a fast, intuitive search and navigation interface for locating, examining, and downloading engineering and support data. For more information on FRiSEL access, please reference "Section 8.2 Flood Risk Study Engineering Library" in FEMA's Guidance Document No. 54: *Guidance for Flood Risk Analysis and Mapping: Mapping Information Platform (MIP) Guidance, November 2023*. If the effective model is not accessible through FRiSEL, users may contact the

FEMA Mapping and Insurance eXchange (FMIX) Customer Care Center.

2 **DUPLICATIVE EFFECTIVE MODEL**
The engineer duplicates the results of the Effective model.

3 **CORRECTED EFFECTIVE MODEL**
The engineer makes any corrections to the Duplicative Effective model such as technical errors or the inclusion of any floodplain changes that occurred **prior to** the date of the Effective model. The Corrected Effective model must not reflect any manmade physical changes since the date of the Effective model. Also, the Corrected Effective model must not allow for any rise resulting from a lack of maintenance for a watercourse that has ever been previously altered.

4 **EXISTING, OR PRE-PROJECT CONDITIONS MODEL**
Revise the Duplicative Effective or the Corrected Effective model to reflect any modifications that have occurred within the floodplain **since** the date of the Effective model but prior to the construction of the project. Generally, one or more additional cross-sections or edits to the 2D mesh will be necessary to model the impacts of the proposed development and any modifications that are made to the channel or overbank areas to compensate for any loss of conveyance.

5 **PROPOSED, OR POST-PROJECT CONDITIONS MODEL**
Modify the Existing Conditions or Pre-Project Conditions model to reflect the proposed development, or post-project conditions, while retaining the currently adopted floodway widths. The engineer compares the results of the Proposed, or Post-Project Conditions model to the Existing, or Pre-Project Conditions model, Corrected Effective model, or Duplicative Effective model, as applicable, to determine if there will be an increase in elevation of the base (100-year) flood or floodway elevations at any existing or new cross-section or evaluation line.

If the results indicate **NO** increase (0.00 feet rise) in either of the elevations, the engineer can prepare and submit the no-rise certification **along with** the supporting technical data to the community.

If the results **do** indicate an increase (rise), the project will need to be modified so that it no longer causes an increase, without any manipulation of the floodway boundary, compensate for the increase, if possible, or there will need to be a floodway revision. For ways to compensate for any increase (rise) see Section 11.2.6, Compensate for Any Rise, in the *Guidance for Flood Risk Analysis and Mapping – Floodway Analysis and Mapping, November 2023* and for floodway revisions, see Section 11.2.7, Floodway Revision. Requests for floodway revisions must come from the community and be obtained **prior** to the issuance of a permit and proceeding with the development.

The "no-rise" supporting technical data and a copy of the engineering certification must be submitted to, reviewed, and approved by the appropriate community official prior to issuing a permit.

The "no-rise" supporting data should include, but may not be limited to:

1. Copy of the Duplicative Effective model

2. Copy of the Corrected Effective model

3. Copy of the Existing Conditions, or Pre-Project Conditions model

4. Copy of the Proposed Conditions or Post-Project Conditions model

5. Effective FIRM or FBFM showing the current regulatory floodway, and Topographic Map showing the effective floodplain and floodway, the additional cross-sections, the site location and the proposed modifications superimposed onto the maps

6. Documentation clearly stating analysis procedures and methodology used. All modifications made to the original Effective FIS model to represent revised existing conditions, as well as those made to the revised Existing Conditions model to represent proposed conditions, should be well documented and submitted with all supporting data.

7. A comparison table showing the results of the 100-year water surface elevations (WSELs) from the Existing, or Pre-Project Conditions model and the Proposed, or Post-Project Conditions model

8. Copy of effective Floodway Data Table from the FIS report

9. Statement defining source of additional cross-section topographic data and supporting information

10. Cross-section plots, of the added cross sections, for revised existing and proposed conditions

11. Certified planimetric information indicating the location of structures on the property

12. Copy of the source from which input for original FIS model was taken

13. CD or digital file with all input and output files

14. Printout of output files from EDIT runs for all three floodway models

15. Any other information deemed necessary by the local floodplain administrator, based on experience or expertise, in order to make an assessment

The engineering "no-rise" certification and supporting technical data **must stipulate NO rise (0.00 feet) of the base (100-year) flood elevations anywhere in the community, at the new cross-sections, and at all existing cross-sections anywhere in the model**. Therefore, the revised computer model should be run for a sufficient distance upstream and downstream of the development site to ensure proper "no-rise" certification and until it demonstrates 0.00 feet rise at two consecutive cross-sections both upstream and downstream of the project

location. Cross sections, at the project limits, that show decreases in WSEL do not meet the requirement for demonstrating 0.00 feet rise at two consecutive cross sections and modeling must be extended until 0.00 feet rise is demonstrated at two consecutive cross sections.

Communities may request "unofficial" assistance/comments from FEMA for the review and approval of the no-rise certification and supporting technical data. To do so, the community must request the assistance in writing and verify that the package is complete. If the community wants "official" assistance/comments from FEMA they must submit a Conditional Letter of Map Revision (CLOMR).

NOTE: This is a brief summary. For more information, see *Guidance for Flood Risk Analysis and Mapping – Floodway Analysis and Mapping, November 2023.*

INSTRUCTIONS FOR THE ENGINEER

Section 60.3(d)(3) of the National Flood Insurance Program (NFIP) regulations states that a community shall *"prohibit encroachments, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway **unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice** that the proposed encroachment would not result in **any** increase in flood levels within the community during the occurrence of the base (100-year) flood discharge."* This certification (an Engineering "No-Rise" Certificate) must be obtained from the applicant and be signed and sealed by a registered professional engineer.

The engineering "no-rise" certification must be supported by technical data based upon hydraulic analyses that utilize the same model used to prepare the effective Flood Insurance Study (FIS) report and Flood Insurance Rate Map (FIRM) or Flood Boundary Floodway Map (FBFM) unless it is demonstrated that the effective hydraulic model is unavailable or its use is inappropriate.

The "no-rise" supporting technical data should include, but may not be limited to the following:

- Copy of the Duplicative Effective model
- Copy of the Corrected Effective model
- Existing, or Pre-Project Conditions model
- Proposed, or Post-Project Conditions model
- Effective FIRM or FBFM showing the current regulatory floodway, and a Topographic Map showing floodplain and floodway, the additional cross-sections, the site location, and the proposed modifications superimposed onto the maps
- Analysis procedures noting modifications made to the original Effective FIS model to represent revised existing conditions, as well as those made to the revised Existing Conditions model to represent proposed conditions

- Comparison table showing the results of the 100-yr WSEL from the Existing Conditions model and the Proposed Conditions model
- Copy of effective Floodway Data Table from the FIS report
- Statement defining source of additional cross-section topographic data and supporting information
- Cross-section plots, of the added cross-sections, for revised existing and proposed conditions
- Certified planimetric information indicating the location of structures on the property
- Copy of the source from which input for original FIS model was taken
- CD, flash drive, or digital file with all input and output files
- Printout of output files from EDIT runs for all three floodway models

The engineering "no-rise" certification and supporting technical data **must stipulate NO rise (0.00 feet) of the base (100- year) flood or floodway elevations anywhere in the community, at the new cross-sections, and at all existing cross-sections anywhere in the model**. Therefore, the revised computer model should be run for a sufficient distance (usually one mile, depending on hydraulic slope of the stream) upstream and downstream of the development site to ensure proper "no-rise" certification and until it demonstrates 0.00 feet rise at two consecutive cross sections both upstream and downstream of the project location.

Failure to follow this guidance may result in notification to the Louisiana State Board of Licensure for Professional Engineers, the Louisiana State NFIP Coordinating Office, and/or FEMA Region VI.

If you have any questions regarding the Engineering "No-Rise" Certificate or need additional information, please contact the State NFIP Coordinator at 225-379-3005.

ENGINEERING "NO-RISE" CERTIFICATE
For Louisiana NFIP Communities

OFFICE USE ONLY

Date Received:_____

File Number:_____

SITE INFORMATION

Date _____

Community _____

Parish _____

Applicant

Name _____

Address _____

Telephone _____

Engineer

Name _____

Address _____

Telephone _____

Project

Address _____

_____

_____

_____

Description of Development:

_____

_____

Principal Use of Premises:

_____

_____

FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

NFIP map(s) and panel(s) affected: _____

Effective date of map: _____

Base Flood Elevation on FIRM: _____

Name of flooding source: _____

SUPPORT DOCUMENTS

Attached are the following documents that support this Engineering "No-Rise" Certification:

- ☐ Copies of the Duplicate Effective, Corrected Effective, Existing or Pre-Project conditions, and Proposed or Post-Project conditions models
- ☐ Analysis procedures documentation
- ☐ Effective FIRM or FBFM and Topo Map

- ☐ Comparative Table showing results of the 100-year WSELs
- ☐ Copy of effective Floodway Data Table
- ☐ Cross-section plots
- ☐ CD, flash drive, or digital file with all input and output files.
- ☐ Printout of output files runs for all three floodway models.

Please see **INSTRUCTIONS FOR THE ENGINEER** for additional documentation that may be required.

CERTIFICATION

This is to certify that I am a duly qualified Professional Engineer licensed to practice in the State of Louisiana. I further certify that the attached engineering data supports the fact the proposed development would not result in any increase in flood levels within the community during the occurrence of a base flood event.

_____   _____
CERTIFIER'S NAME   LICENSE NUMBER

_____
COMPANY NAME   (embossed seal)

_____   _____
SIGNATURE   DATE

_____
TITLE