Faster CLOMR’S and LOMR’S

Improving your times
With FEMA Map Changes
CLOMR/LOMR Model Sequence

- Effective Model (FEMA FIS)
  - +/- 0.1 feet change allowed
  - Only minor adjustment to allow the model to run.

- Duplicate Effective Model
  - Any valid change allowed

- Corrected Effective Model
  - 0 rise for changes in floodway.
  - 0.1 ft. max increase for changes in floodplain
  - Update model with corrections or natural changes only; more detailed topography, new flows, etc.

- Pre-Project Model
  - Any rise in floodway subject to regulation 65.12

- Post-Project Model
  - Update model with new bridges/culverts, fill, channelization, etc.
  - Update model with proposed project.
Hydraulic Review

- Approved Models
  - https://www.fema.gov/numerical-models-meeting-minimum-requirements-national-flood-insurance-program

- FEMA Engineering Library
  - https://www.fema.gov/engineering-library
  - https://www.fema.gov/how-order-technical-administrative-support-data

- Hydraulic Models Required
  - Duplicate Effective
  - Corrected Effective
  - Pre-project
  - Post-project

- Digital format: Executable (Make Sure They Run!)
Hydraulic Review

• Effective Hydraulic Model
  • The hydraulic analysis used in the effective FIS or LOMR

• Duplicate Effective Hydraulic Model
  • A copy of the effective model reproduced on the requestors computer (Use Effective Discharges)
  • Should not be modified – unless required to allow model to run
    • E.g. adding distance from upstream XS to bridge
  • If the effective model is available:
    • Should match within 0.1 foot at all locations
  • If the effective model is not available:
    • New model calibrated to reproduce the FIS profile within 0.5 ft
Hydraulic Review

- Corrected Effective Model
  - Corrects errors in the duplicate effective
  - Adds cross sections
  - More detailed historic topography
  - May include new hydrology
  - Must NOT reflect man-made changes since the date of the effective model

- Pre-Project Conditions Model (Avoid “Existing”)
  - Modified Duplicate or Corrected Effective model
  - Includes any modifications since the date of the Effective
  - New hydrology if revised
  - If no modifications since the effective: The Duplicate Effective or Corrected Effective = the Pre-Project Conditions

- Post-Project Conditions Model
  - Modified version of the Pre-Project Conditions model
  - Includes modifications to reflect the project
Hydraulic Review

• Why all the models?
  • Isolate Changes
  • Identify Corrections
  • Evaluate Comparisons
  • Potential Violations

• Effective FIS data vs. Duplicate Effective
  • Should match within 0.1 foot at all locations
    • 0.5 ft if effective model is not available
  • Ensures:
    • The correct model is being used
    • The data was transferred correctly to the requestor’s equipment
    • Revised data integrated into effective
Hydraulic Review

• Duplicate/Corrected Effective vs. Pre-Project
  • How do they compare?
  • Are there any potential violations?

• Existing vs. Post-Project
  • What are the incremental impacts of the project?

• Effective vs. Post-Project
  • Impact on the FIRM and FIS
  • Adverse impact notification