MT-2 LOMRs Process

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General Overview of Presentation

- Introduction to LOMRs and CLOMRs
- NFIP Regulations
- How to Obtain Back-up Data
- LOMR/CLOMR Submittal Requirements
- Review Process/Timeline
- Common Problems with Submittals
Letter of Map Revision (LOMR)

- **Basis for Revisions:**
  - New or More Detailed Analyses
    - Updated hydrology
    - Additional hydraulic information (more cross sections, etc.)
    - New topographic information
    - No previous study (Zone A)
  - Physical Changes
    - Projects (bridge/culvert, channelization, levee, etc.)
    - Natural Changes (erosion, subsidence, etc.)
  - Map Updates / Re-issuances
LOMR Requirements

- When is a LOMR Required
  - Any change (increases or decreases) in BFE resulting from physical changes
  - Changes involving:
    - Floodway
    - alluvial fan areas
    - coastal high hazard areas
## Conditional Letter of Map Revision (CLOMR)

- CLOMRs are for proposed projects.
- FEMA’s comment on the effects that a proposed project would have on the FIRM.
- Does not revise map; must be followed by a LOMR request when project is completed.
Conditional Letter of Map Revision (CLOMR)

Typical Elements of a CLOMR Letter

- Project Description
- FEMA’s Comment
- Comparison of Changes
- LOMR submittal requirements
  - Include a copy of CLOMR letter with LOMR submittal
- Community Information

This responds to a request that the Department of Homeland Security’s Federal Emergency Management Agency (FEMA) consider the effects of a proposed project located on the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) map for your community, in accordance with Part 65 of the National Flood Insurance Program (NFIP) regulations. In a letter dated December 15, 2003, requested FEMA evaluate the effects of the proposed grading project along Coal Creek, associated with the Eitel Companies’ residential and commercial development, would have on the flood hazard information shown on the effective FIRM and FIS map. The proposed project will include excavation and placement of fill along the western bank of Coal Creek from just upstream to approximately 1,000 feet upstream of Perry Street.

All data required to complete our review of this request for a Conditional Letter of Map Revision (CLOMR) were submitted with letter from [redacted]. We reviewed the submitted data and the data used to prepare the effective FIRM for your community and determined that the proposed project meets the minimum floodplain management criteria of the NFIP. We currently are reviewing a request for a Letter of Map Revision (LOMR) that is based on improved topographic survey data and updated bridge modeling (Case No. 04-08-00667) for the mouth of Coal Creek, encompassing by this CLOMR. In addition, the requested LOMR will reflect the use of the Texas Company’s flood hazard information and data for the mouth of Coal Creek, which is affected by this CLOMR. The HEC-RAS hydraulic computer model, dated November 4, 2003, is based on revised bridge modeling and updated topographic information, and to review the FIRM and FIS map for Case No. 04-08-00667, was used as the corrected effective model in our review of this CLOMR request. We believe that if the proposed project is constructed as shown on the submitted topographic work maps entitled “Eitel Companies CLOMR Submittal Hydraulic Base Map,” dated November 14, 2003, and the data listed below are received, a revision to the FIRM would be warranted.

One comparison of the corrected effective model to the effective Flood Insurance Rate Map (FIRM) revealed that as a result of the revised bridge modeling and updated topographic information, the elevations of the flood having a 1 percent chance of being exceeded in any given year (1-year flood) for Coal Creek increased compared to the effective Flood Insurance Rate Map (FIRM). The maximum increase in BFE, approximately 4 feet, occurred approximately 1,000 feet upstream of Perry Street.
When a CLOMR is Required

- Proposed projects that:
  - Encroach upon the floodway and cause an increase of greater than 0.00 ft
  - Encroach upon a floodplain when a floodway has not been established and causes an increase of greater than 1.00 ft
    - Includes all existing and anticipated development - 60.3(c)(10)
    - Includes Approximate Zone A
      - May require development of a model
# Current LOMC Fees

<table>
<thead>
<tr>
<th>Product or Service</th>
<th>User Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOMRs</td>
<td></td>
</tr>
<tr>
<td>Bridge, Culvert, Channel or Combination</td>
<td>$4,400</td>
</tr>
<tr>
<td>Levee, Berm, or Other Structural Measure</td>
<td>$6,000</td>
</tr>
<tr>
<td>As-Built Follow-up to CLOMR</td>
<td>$4,000</td>
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<tr>
<td>Based Solely on More Detailed Data</td>
<td>$0</td>
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## Current LOMC Fees

<table>
<thead>
<tr>
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<th>User Fee</th>
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</thead>
<tbody>
<tr>
<td>CLOMRs</td>
<td></td>
</tr>
<tr>
<td>Hydrology, Bridge, Culvert, Channel, or Combination</td>
<td>$4,000</td>
</tr>
<tr>
<td>Levee, Berm, or Other Structural Measure</td>
<td>$5,000</td>
</tr>
<tr>
<td>LOMRs and CLOMRs for Structural Measures on Alluvial Fans</td>
<td>$5,600&lt;sup&gt;1&lt;/sup&gt;</td>
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</tbody>
</table>

<sup>1</sup>Initial Fee Only - $60/hr thereafter

NFIP Regulations

- National Flood Insurance Program (NFIP) Regulations
  - Chapter 44 of the Code of Federal Regulations (44 CFR)
  - Parts 60, 65, and 72 apply to MT-2 LOMCs

- Obtaining the Regulations
  - Regulations can be downloaded at:
    www.access.gpo.gov/nara/cfr/waisidx_02/44cfrv1_02.html
Revisions of Floodways

- **Section 65.7 – Floodway revisions**
  - Copy of public notice distributed by the community stating intent to revise the floodway must be submitted, or
  - Statement by the community that it has notified all affected property owners and affected adjacent jurisdictions
Section 65.10

Mapping of Areas that are Protected by Levees

Section 65.10 describes the data required for Mapping of areas protected by levee systems

- Design criteria (freeboard, closures, embankment protection, foundation stability, interior drainage, etc.)
- Operation plans and criteria
- Maintenance plans and criteria
- Certification requirements
Section 65.12

Revisions Involving Encroachments to Floodways or Base Floodplains

- Section 65.12 must be addressed with a CLOMR (prior to construction of project)
- When encroachment on floodway causes BFE increases greater than 0.00 foot or when encroachment on base floodplain causes increases greater than 1.00 foot, the following must be submitted:
  - Certification that no structures are impacted by the BFE increase
  - An evaluation of alternatives that would not have caused the BFE increase
  - Individual legal notice to all impacted property owners
Obtaining Backup Data

- **Map Service Center** ([msc.fema.gov](https://msc.fema.gov))
  - FIRMs, FISs, and some LOMCs

- **FEMA Library** (Venkat Venkatraj 703-236-7488)
  - Backup FIS and LOMC data
CLOMR/LOMR Requirements

- Required for All LOMRs and CLOMRs
  - MT-2 Forms
    - Available at: http://www.fema.gov/fhm/dl_mt-2.shtm
  - Fee (unless exempt under part 72)
  - Project Narrative
    - Optional, but very helpful
  - Annotated FIRM and/or FBFM
  - Certified topographic work map by a registered professional engineer or licensed surveyor
  - Revision request acknowledged by all impacted communities
Any computer program used to perform H&H analysis in support of a LOMR must meet FEMA criteria.

- FEMA’s acceptable model list:

- Analysis should be done with the same model as the effective, unless
  - Alternative hydraulic methodology is more appropriate
  - Original model not available

- Should evaluate the same recurrence interval(s) as the effective
Revision request tie-ins

- Revision request must be extensive enough to ensure a logical transition between:
  - BFEs – must tie in within 0.5 ft at the transitions
  - Floodplain and floodway boundaries – must tie in to the effective boundaries within 5% of effective FIRM’s scale
CLOMR/LOMR Requirements

- Changed physical conditions
  - Affecting hydrologic conditions
    - Description of change
      - Detention basin, dam, diversion channel
    - Construction (As-Built) plans or survey
    - New hydrologic analysis
      - Hydrologic model (electronic and paper)
      - Basin map
      - Description of inputs
    - Hydraulic analysis using the new discharges
      - Hydraulic model (electronic and paper)
      - Description of inputs if changed from the effective model
  - Revised delineations of the floodplain and floodway boundaries
    - Topographic workmap including the items listed on MT-2 Form 2
Changed physical conditions

- Affecting hydraulic conditions
  - Description of change
    - New bridge or culvert, channelization, levee
  - Construction (As-Built) plans or survey
  - New hydraulic analysis using the effective discharges
    - Hydraulic model (electronic and paper)
    - Description of inputs if changed from the effective model
  - Revised delineations of the floodplain and floodway boundaries
    - Topographic work map including the items listed on MT-2 Form 2
Changed physical conditions

- Involving topographic conditions
  - Description of change
    - Grading or filling
  - New topographic information
  - Revised delineations of the floodplain and floodway boundaries
    - Topographic work map including the items listed on MT-2 Form 2
Incorporating improved data

- Data believed to be better
  - More years of stream gage record
- Documentation of source data
- Explanation why the data will improve results
  - More X-sections added to the hydraulic model
- New hydrologic analysis
- New hydraulic analysis
- Revised delineation of the floodplain and floodway boundaries
LOMR Requirements

- For BFE and SFHA increases
  - Property owner notification
    - All adversely impacted property owners
    - Includes increases of the SFHA and/or shifting

- Floodway Revisions
  - Public notice of floodway revision
  - State approval (if necessary)
  - Revised surcharges between 0.0 and 1.0 ft
    - 1.0 ft is the national surcharge standard some states are more restrictive.
  - Floodway analysis must use the same hydraulic model used to establish BFEs
CLOMR Requirements

- **Section 65.12 Data Requirements**
  - Formal request and appropriate fees
  - Evaluation of alternatives
  - Certification that no structures are impacted
  - Individual legal notices to all impacted property owners
  - Concurrence from all impacted communities

- **Other data requirements**
  - Same as LOMR, except data reflects proposed conditions
Working with Multiple Hydraulic Models

- **Effective Hydraulic Model**
  - The hydraulic analysis used in the effective FIS

- **Duplicate Effective Hydraulic Model**
  - A copy of the effective model reproduced on the requestor’s computer
  - Should not be modified – unless required to allow model to run
    - Adding distance from upstream cross section to bridge
  - If the effective model is not available:
    - New model calibrated to reproduce the FIS profile within 0.5 ft
Working with Multiple Hydraulic Models

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

- **Existing Conditions Model**
  - Modified version of the Duplicate or Corrected Effective model
  - Includes any modifications since the date of the Effective
  - If no modifications since the effective:
    - The Duplicate Effective or Corrected Effective becomes the Existing Conditions
Working with Multiple Hydraulic Models

- **Post-Project/Proposed Conditions Model**
  - Modified version of the Existing Conditions model
  - Includes modifications to reflect the project
  - Ideally, model only includes cross sections within revised reach (including tie-ins) - including additional reach may unnecessarily prolong review

- Clearly label each model to avoid confusion for reviewer
  - If using HEC-RAS, delete any plans that are not pertinent to the LOMR/CLOMR and clearly label all remaining plans
Review Timeline

- **Completion**
  - FEMA required to provide requestor and community with LOMR, CLOMR, or other written comment within 90 days of receipt of all data

- **Case Suspension**
  - Case will be suspended if data request made by FEMA is not fulfilled by applicant within 90 days
  - Partial fulfillment of data request is not adequate and will not prevent suspension of case
  - Extensions are not granted
  - Fees will be lost, new fees required when data submitted again
The FEMA Review Process

Revision Request Received

Administrative Setup

- Case Number Assigned
- Case Logged into Database
- Payment Deposited

Initial Data Review

Is Submittal Complete?

- Yes
  - Review Stopped Until Additional Data Received
  - Data Rec'd in 90 Days?
  - No: Revision Suspended
  - Yes: Note: If Data Rec’d, review timeline starts over.

- No
  - More Data Needed
  - Revision Request Received

Begin Detailed Review

- Revision Granted
- Revision Denied

Revision Request Received

Note: If Data Rec’d, review timeline starts over.
It is recommended that you run CHECK-RAS or CHECK-2 on your hydraulic model prior to submitting for LOMR or CLOMR

- If issues identified by these check programs are not pertinent, please include an explanation in submittal
- CHECK-RAS and CHECK-2 are both available for download at: http://www.fema.gov/plan/prevent/fhm/frm_soft.shtm
Creating Annotated Maps

Effective FIRM

Work Map

Annotated FIRM
Creating Annotated Profile

Effective Profile

Model Results

Annotated Profile
When is my LOMR Effective

LOMRs

<table>
<thead>
<tr>
<th>Revision Type</th>
<th>Circumstances</th>
<th>Effective Date</th>
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<tbody>
<tr>
<td>SFHA and/or BFEs Decrease</td>
<td>None</td>
<td>Effective on date of LOMR</td>
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<tr>
<td>SFHA and/or BFEs increase</td>
<td>Property owner notification and acceptance, community has compliant ordinances</td>
<td>Effective on date of LOMR</td>
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<tr>
<td>SFHA (only) increase</td>
<td>Property owner notification, no acceptance, community has compliant ordinances</td>
<td>Effective 30 days after date of LOMR</td>
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<td>SFHA and/or BFEs increase</td>
<td>Property owner notification, no acceptance, community has compliant ordinances</td>
<td>Effective after 90 day appeal period elapses</td>
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<tr>
<td>SFHA and/or BFEs increase</td>
<td>Property owner notification, no acceptance, community does not have compliant ordinances</td>
<td>Effective 6 months after date of LOMR</td>
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Common CLOMR/LOMR Submittal Problems

- **Most Common Submittal Problems**
  - Project description not clear
  - Project Area vs. Revision Area (not necessarily the same)
  - Fees: what is exempt and what is not
  - Notifications: individual property owners notification or public notice?
  - No Annotated FIRM/FBFM
  - Tie-ins (vertical/horizontal) – Profile, SFHA, and Floodways
    - BFEs tie in within maximum of 0.5 foot, 0.0 foot if at all possible
    - SFHA top width and floodway tie in within 5% of FIRM scale
  - Missing Community Acknowledgement
    - Multiple Community LOMRs
    - Corporate Limit Changes (need annexation agreement or corporate limit map)
Most Common Submittal Problems

- Topographic work map issues
  - Not extensive enough (doesn’t cover entire revision area)
  - No stream centerline/profile baseline
  - No (or incorrect) vertical datum
  - No Certification
  - Not at suitable scale
  - No legend

- Incorrect effective information used (check for recent LOMRs)
- Include Digital Copy of the models
- Map and Model do not match
  - Top widths and stream distances matching within 5% of map scale
- No background information provided
  - If structures, coefficients, drainage areas, etc. change from the effective – the source and reason for change should be documented
QUESTIONS?

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