

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





Letter of Map Revision (LOMR)

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Bourd of Commissioners 7 East Vermijo Arense Jolorado Springs, CO 80905-2208	This Revision: APR US 2004
Near Mr. Brown:	
The Flood Insurance Study report and Flood his Letter of Map Ravision (LOMR). Piew .OMR for floodplain management purpose community.	I humannee Rate Map for your community have been revised by se use the enclosed associated map pasel(s) revised by this and for all flood insurance policies and renewals issued in your
are concerned without p	
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Cover Letter



Annotated FIS Tables



Determination Document



Annotated FIRM



Annotated FIS Profiles



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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)



MAR 1 0 2004

CERTIFIED MAIL RETURN RECEIPT REQUESTED IN REPLY REFER TO: Case No.: 04-08-0141R Community: Town of Erie, CO Community No.: 080181

The Honorable Barbara Connor Mayor, Town of Erie P.O. Box 750 Erie, CO 80516

Dear Mayor Connor:

This responds to a request that the Department of Homeland Security's Federal Emergency Management Agency (FEMA) comment on the effects that a proposed project would have on the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for your community, in accordance with Part 65 of the National Flood Insurance Study (FIS) report for your community, in accordance effects that a proposed grading project along Coal Creek, associated with the Eric Commons residential and commercial development, would have on the flood hazard information shown on the effective FIRM and FIS report. The proposed project will include excavation and placement of fill along the western bank of Coal Creek from just upstream to approximately 10,000 feet upstream of Perroy Street.

Federal Emergency Management Agency Washington, D.C. 20472

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All data required to complete our review of this request for a Conditional Letter of Map Revision (CLOMR) were submitted with letters from

Our comparison of the corrected effective model to the effective flood hazard information 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 equaled or exceeded in any given year (base flood) for Coal Creek increased compared to the effective Base Flood Elevations (BFEs). The maximum increase in BFE, approximately 2 feet, occurred approximately 8,100 feet upstream of Perry Street.

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





CLOMR Requirements

When a CLOMR is Required

- Proposed projects that:
 - Encroach upon the <u>floodway</u> and cause an increase of greater than 0.00 ft
 - Encroach upon a <u>floodplain</u> 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

Product or Service	User Fee
LOMRs	
Bridge, Culvert, Channel or Combination	\$4,400
Levee, Berm, or Other Structural Measure	\$6,000
As-Built Follow-up to CLOMR	\$4,000
Based Solely on More Detailed Data	\$0

Fee Schedule as of May 2006. <u>Check http://www.fema.gov/fhm/frm_fees.shtm</u> for latest fees.



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Current LOMC Fees

Product or Service	User Fee
CLOMRs	
Hydrology, Bridge, Culvert, Channel, or Combination	\$4,000
Levee, Berm, or Other Structural Measure	\$5,000
LOMRs and CLOMRs for Structural Measures on Alluvial Fans	\$5,600 ¹





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





Section 65.7

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, <u>or</u>
- 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



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Obtaining Backup Data

Map Service Center (<u>msc.fema.gov</u>)

- FIRMs, FISs, and some LOMCs
- FEMA Library (Venkat Venkatraj 703-236-7488)
 - Backup FIS and LOMC data





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: http://www.fema.gov/fhm/en_modl.shtm
- Analysis should be done with the <u>same model</u> 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





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





LOMR Requirements

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



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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



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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





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CHECK-RAS/CHECK-2

- 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







Creating Annotated Profile





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When is my LOMR Effective

LOMRs

Revision Type	Circumstances	Effective Date
SFHA and/or BFEs Decrease	None	Effective on date of LOMR
SFHA and/or BFEs increase	Property owner notification and acceptance, community has compliant ordinances	Effective on date of LOMR
SFHA (only) increase	Property owner notification, no acceptance, community has compliant ordinances	Effective 30 days after date of LOMR
SFHA and/or BFEs increase	Property owner notification, no acceptance, community has compliant ordinances	Effective after 90 day appeal period elapses
SFHA and/or BFEs increase	Property owner notification, no acceptance, community does not have compliant ordinances	Effective 6 months after date of LOMR



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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)





Common CLOMR/LOMR Submittal Problems

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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