Turbulent Waters

A case study of Potential FEMA violations

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About Us

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Disclaimer

While we might have a bit of experience in the mysterious ways of FEMA, please note that we are not the all-powerful jurisdictional authority here—that title belongs solely to FEMA. We like to think of ourselves as friendly advisors who've danced this dance a few times, but ultimately, FEMA is the one leading the charge (and making the final calls). So, consider this our humble opinion, based on past encounters with FEMA regulations, but remember, they're the ones holding the official rulebook!

May be in Violation?

Federal Emergency Management Agency
Washington, D.C. 20472

January 9, 2023

The Honorable [redacted]
Mayor, City [redacted]
[redacted]
[redacted]

IN REPLY REFER TO CASE NO.: [redacted]
Community: [redacted]
[redacted] Texas
Community No.: [redacted]
Map Panel Affected: [redacted]
Map Effective Date: September 25, 2009

[redacted]

Dear Mayor [redacted]

We reviewed a Letter of Map Revision Based on Fill request dated October 28, 2022. On the basis of the submitted information and the effective National Flood Insurance Program (NFIP) map, we determined that the property described below is located within the Special Flood Hazard Area (SFHA), the area subject to inundation by the base (1%-annual-chance) flood, and within the regulatory floodway for [redacted] Creek, and that fill has been placed on the property since the designation of the floodway. The property is correctly shown on the effective NFIP map in an SFHA designated Zone AE, with Base Flood Elevations (BFEs) determined.

Property Description: A portion of Lot 2, Block A, [redacted], as described in the Special Warranty Deed recorded as Document No. [redacted], in the Office of the County Clerk, [redacted] County, Texas

Street Address: [redacted] State Highway [redacted]

Flooding Source: [redacted] Creek

We have determined that fill has been placed on the above-referenced property, portions of which lie within the regulatory floodway adopted by your community. In accordance with Subparagraph 60.3(d)(3) of the NFIP regulations, no development may take place within the regulatory floodway if the development would cause an increase in the BFEs. Therefore, the development, including a new path and a new bridge, along [redacted] Creek may be in violation of the regulations.

We have notified our Regional Office in Denton, Texas of this situation. Revisions to the BFEs and/or regulatory floodway must be coordinated by community officials and submitted to our Regional Office for review and approval. Your community should contact Charles Cook of the Federal Emergency Management Agency Region 6 Office, by telephone at (940) 268-9952 or by e-mail at charles.cook4@fema.dhs.gov, for guidance on the specific actions required to resolve this issue.

Flooding Source: [redacted] Creek

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What Triggers a Violation

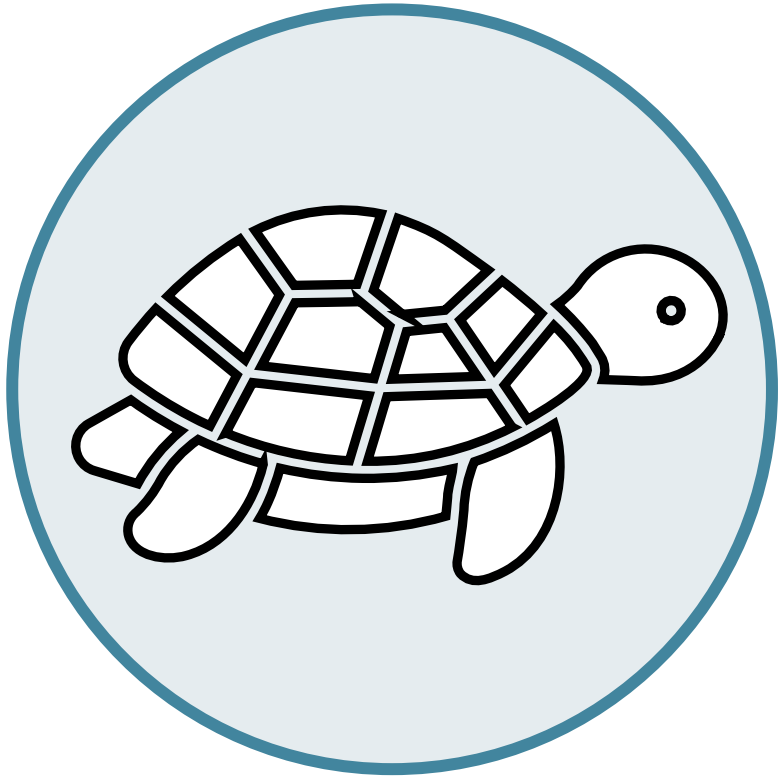
- Improper Development in Floodplains
- Failure to Obtain Necessary Permits
- Non-compliance with NFIP Regulations
- Unapproved Modifications to Structures
- Inaccurate or Misleading Information

Things we have been seeing that trigger potential violations

- Roadways being constructed without notifying FEMA post-construction
  - Most projects have prepared a no impact /No-Rise study, but this was never submitted to FEMA.
- Project constructed in the Floodway without a pre-construction CLOMR
  - Design intended to be outside floodway, but left no room for construction tolerances
- Utility aerial crossings, low water crossings, pedestrian bridges

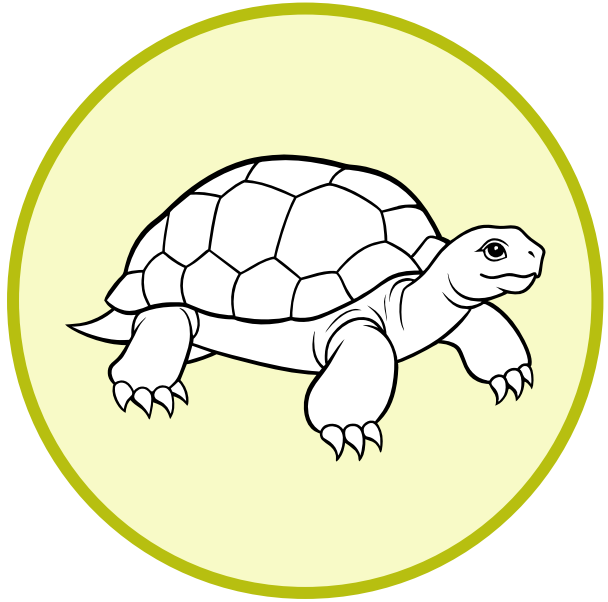
OK, I have been flagged for a potential FEMA violation. Now what?

MT-1 to MT-2 (The look the same but are different)



MT-1 (LOMA, LOMR-F, CLOMR-F)

vs.



MT-2 (LOMR, CLOMR)

Case Study: MT-1

- Developers interested in property east of an existing DOT and between an effective floodway.
- Consultant hired to prepare City FEMA and fully developed floodplain analysis and LOMR-F for proposed fill within floodplain fringe.
- During LOMR-F review process FEMA flags the project for a potential violation for construction within the Floodway.

Now that a Letter of Potential Violation has been sent, what's next? (MT-1)

- Meeting set up between FEMA Region, MT-1 Technical Review Partner, Consultant Engineer and Municipality
- Gather and request studies from the local Municipalities
  - Record drawings, floodplain studies, ect
- Do the improvements fall under:
  - Minor project
  - Certified No-Rise
- If above do not apply or cannot be proven, expect Region to move case to a MT-2 review

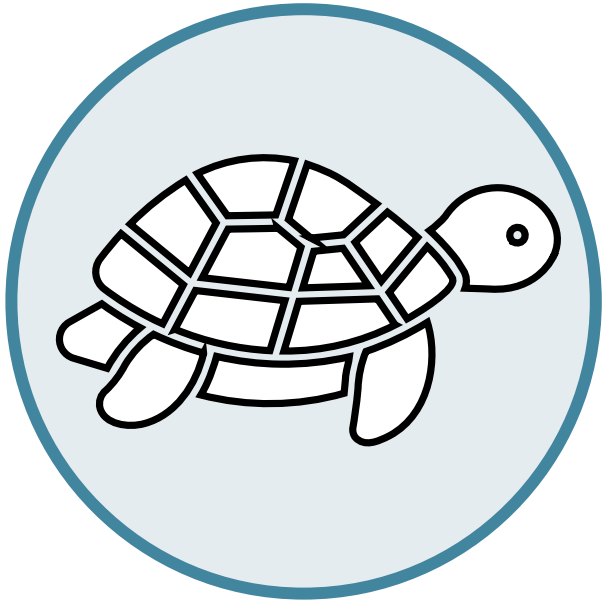
Minor projects

- Small projects that do not increase the natural grade.
  - Paving of a driveway or parking area at existing grade
  - Headwall at grade
- Small obstruction that won't increase BFEs
  - Mailbox or a single telephone pole
- Others.
  - There is almost no likelihood that these minor project by themselves or in combination could cause a measurable rise.

No-Rise Certification

- Signed and seal statement by Registered Professional Engineer required
  - Supporting technical data is required.
  - Generally, a backwater model like HEC-RAS or SWMM products will be required.
  - FEMA has No-Rise Certification templates for use.
- No-Rise defined as 0.00 feet.
- If floodway is needed to be revised, No-Rise Certification not sufficient.
- By holding all developments to 0.00 feet, FEMA ensures that the cumulative impact of multiple projects does not create increases.

MT-1 to MT-2 (The look the same but are different)



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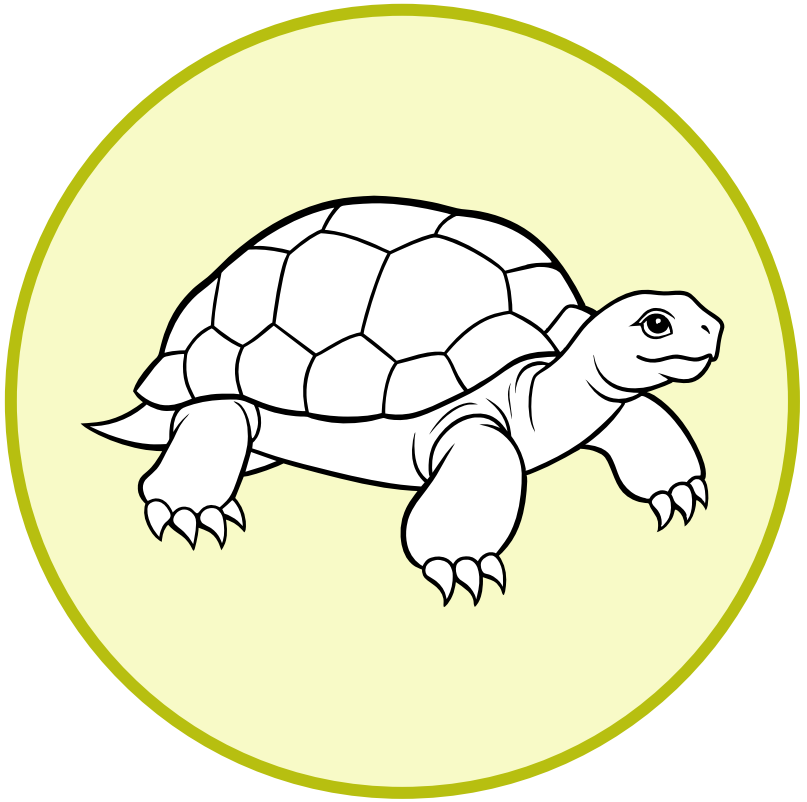


MT-1 (LOMA, LOMR-F, CLOMR-F)

MT-2 (LOMR, CLOMR)

Let's Review

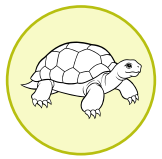
Corrected Effective Model

The corrected effective model is the model that corrects any errors in the duplicate effective model, adds any additional cross sections to the duplicate effective model, or incorporates more detailed topographic information than that used in the current effective model. The corrected effective model must not reflect any manmade physical changes that have occurred since the date of the effective published study. Generally, the updated topography should reflect the physical conditions of the area at the date of the FIRM which incorporated the effective modeling. Physical changes in the hydraulic condition of the stream may have occurred after the date of the effective published study. Sometimes the changes are the result of natural changes, such as a channel "cut-off" at a bend, which may be included in the corrected effective model. Sometimes these are the result of manmade changes which should not be included in the Corrected Effective Model. An error could be a technical error in the modeling procedures or it could be any construction in the floodplain that occurred prior to the date of the effective model but was not incorporated into the current effective model.

Let's Review

Pre-Project (Existing) Conditions Model

The duplicate effective model or corrected effective model is modified to produce the pre-project conditions model to reflect any physical modifications that have occurred within the floodplain since the date of the current effective model, but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the current effective model, this model would be identical to the corrected effective model or duplicate effective model. The pre-project conditions model may be required to support conclusions about the actual impacts of the project associated with the revised or post-project conditions model or to establish more up-to-date models on which to base the revised or post-project conditions model.



Corrective effective Vs. Pre-Project

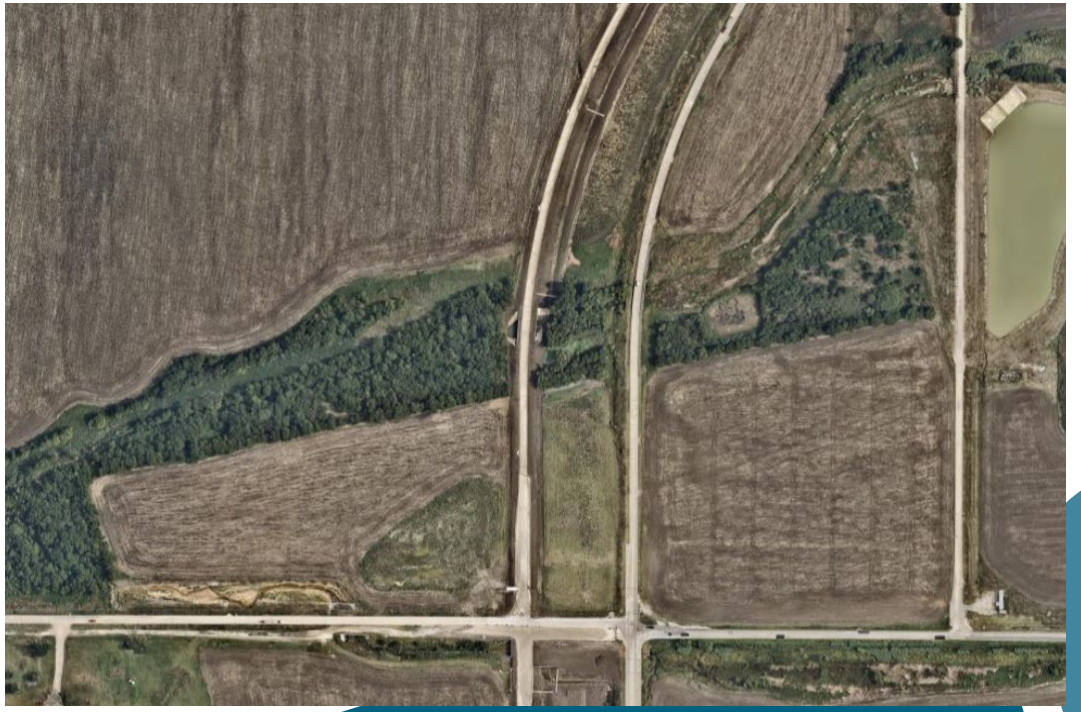
- What does a difference from Pre-Project to Corrective Effective mean?
  - Manmade changes have occurred in the floodplain without FEMA's knowledge.
  - Assigning topographic/additional detail changes to Pre-Project can raise unintended red flags with MT-2 review

Table 1: Pre-Project vs. Revised Existing

River Station	Corrective Effective (ft)	Pre-Project (ft)	Difference (ft)
5761	471.23	471.23	0.00
5643	470.95	470.95	0.00
5521	470.57	470.56	-0.01
5403	469.89	469.88	-0.01
5279	469.13	469.11	-0.02
5125	468.21	468.22	0.01
4937	467.93	467.95	0.02
4701	466.74	466.71	-0.03
4523	466.07	466.05	-0.02
4399	465.67	465.67	0.00

Case Study : Roadway Crossing (MT-2)

- Developers interested in property west of an existing DOT culvert crossing.
- Consultant hired to prepare CLOMR and LOMR for proposed cut and fill within Special Flood Hazard Area
- During preparation of the hydraulic model, Consultant noticed that a second crossing was constructed that was not included in the Effective model.
- Consultant added structure to the model and submitted CLOMR to FEMA for review.
- Letter of potential violation was issued for impacts to Special Flood Hazard Area more than 1.0 ft because of the crossing structure



Now that a Letter of Potential Violation has been sent, what's next?

- Meeting set up between FEMA Region, MT-2 Technical Review Partner, Consultant Engineer and Municipality
- Any additional engineering models needed by the Region to fully understand the impacts cause by the unpermitted activity are discussed
  - Up to the Municipality to prepare the additional modeling/studies
  - Region interested in cumulative impacts of all known projects on the flooding source that could impact the area in question

Now that a Letter of Potential Violation has been sent, what's next?

- MT-2 Technical partner reviews additional data via typical MT-2 Comment Response process.
  - Two paths based on modeling conclusions (based on our experience)
    - Potential Violation Resolved without Field Revision
      - Modifications were in compliance with NFIP regulations
      - Modifications may not have been in compliance with NFIP regulations, but no insurable structures were impacted.
    - If insurable structure was impacted by modifications to the SFHA, Region will require field revisions or structure buyout.

Why does this matter?

- Even if the potential violation is resolved, the municipalities Community Rating System (CRS) score could be impacted
- Region may conduct an audit of the municipalities floodplain management policies and procedures to ensure municipality is following the National Flood Insurance Program mandates
- Violations might lead to increased oversight and stricter regulations for communities. This could mean more rigorous compliance requirements and paperwork

Why does this matter?

- Allocation or availability of federal funds for flood control infrastructure, emergency response, and community resilience initiatives.
- Higher insurance premiums for homeowners and businesses.
- Could result in Community removal from the NFIP and termination of individual insurance policies.

What can I do to limit violations?

- When in doubt submit a CLOMR application
  - Especially if a floodway has been adopted.

Q&A