

Background

The North Central Texas Council of Governments (NCTCOG) has sponsored the U. S. Army Corps of Engineers (USACE) to develop and maintain hydrologic and hydraulic models to support the Common Vision and Corridor Development Certificate (CDC) Program. The Corridor Development Certificate Process (CDC) affirms local government authority for local floodplain management and establishes a set of Common Regional Criteria and procedures for development within the Trinity River Corridor. The goal of the Corridor Development Certificate is the stabilization of flooding risks along the Trinity River Corridor in North Central Texas. The CDC Process incorporates future watershed conditions as a consideration in floodplain development decisions. As floodplain development continues, standards have been established to ensure that this development does not exacerbate flooding.

The USACE also developed hydrologic and hydraulic models for the Trinity River Corridor as part of the National Flood Insurance Program (NFIP). Floodplain activities are managed by the participating cities with the regulations associated with the NFIP and the Letter of Map Change (LOMC) process.

Recently, FEMA, NCTCOG, and USACE partnered to combine and geo-reference the CDC and NFIP HEC-RAS models in order to develop dual purpose models for the administration of the NFIP LOMC process and the Common Vision/CDC program. It is the goal and objective of FEMA, NCTCOG, and USACE to maintain these models to administer permit activities associated with both the Common Vision/CDC program and the NFIPLOMC process.

Goals and Objectives

This working team (Team) is being created to establish policies and procedures for keeping the NFIP and CDC models simplified and in sync with permit actions from each program incorporated into model files used to support both programs. The Team will issue a document describing these policies and procedures, which will be incorporated as an appendix to the CDC Manual and into the NFIP LOMC instructional documents. The Team will identify resources and funding needs associated with these goals and objectives.

Team Membership

At the time of this draft, the Team is comprised of the following membership:

- Stephanie Griffin, Team Chair - City of Grand Prairie
- Jim Keith - Walter P. Moore and Associates
- Amy Cannon - City of Arlington
- Kim Dewailly - City of Dallas
- Clair Davis - City of Fort Worth
- Craig Ottman - TRWD
- Mike Danella - USACE
- Landon Erickson - USACE
- Alan Johnson – FEMA
- James Pittman – AECOM

- Jacob LeSue - Dewberry
- Mia Brown - NCTCOG

The Team will have the following active subject matter expert (SME) advisory member(s). These members will serve as active advisors to the group and their membership is based on specialized knowledge dealing with the issue of hydraulic modelling using HEC-RAS. These member(s) include:

- Gary Brunner - Hydrologic Engineering Center

The team will receive direction from and report to the following advisory group (AG):

- Edith Marvin - NCTCOG
- Ron Wanhanen - FEMA
- Jerry Cotter - USACE

Scope of Work

Research model library systems that might be used to house the consolidated models to facilitate sharing of the models across agencies and within the private sector.

1. Survey and inventory the models and associated files that comprise the CDC model.
2. Survey and inventory the models and associated files that comprise the FEMA NFIP effective models for the CDC footprint.
3. Identify and outline the NFIP LOMC process/work flow, including both the Conditional Letter of Map Revision (CLOMR) and the Letter of Map Revision (LOMR) processes. Include program processes within local governments.
4. Survey how the NFIP models are stored and archived.
5. Identify and outline the CDC process/work flow for both proposed and constructed projects, including interaction with local governments.
6. Survey how the CDC models are stored and archived.
7. Identify tracking processes within both programs that might be leveraged, to inform permit reviewers and model personnel that maintain the models from each program, as to when permit actions are initiated as well as when it has moved through each phase of the permit process.
8. The team will teleconference with Gary Brunner and his staff from the Hydrologic Engineering Center to better understand file and alternative management capabilities within HEC-RAS.
9. Identify how permit reviewers and model maintenance personnel from each program will track the individual NFIP or CDC permits. Recommend any changes to each program's processes that might be needed to facilitate maintaining a set of synced and/or consolidated models.
10. Identify and define how model files will be stored within HEC-RAS, e.g. alternatives, separate projects, etc. Propose any software (HEC-RAS) changes that would facilitate better management of the model files from each program.
11. Identify and detail a set of processes for incorporating model changes from both programs into the model files being maintained for each program or as combined by the group.
12. Survey and identify web-based solutions for managing the processes online, allowing model check-in/check-out, permit tracking, and mapping. Examples include the Harris County Flood Control District (HCFCD) M3 System and the San Antonio River Authority (SARA) D2MR System.
13. Explore ideas to place responsibility to update model files onto permit applicants.

14. Identify how the new requirements are to be incorporated into the CDC program documentation.
15. Identify how the new requirements are to be incorporated into the NFIP LOMC (CLOMR, LOMR) processes.
16. Quantify resources and costs associated with the proposed changes in workflow/process for each program.
17. Quantify schedule modifications associated with the proposed changes in workflow/process for each program.
18. Document any other impacts on both the CDC and NFIP programs.
19. Submit recommendations to the NCTCOG Flood Management Task Force.
20. Identify the point at which an approved project is incorporated into the respective model. For example, an approved LOMR is incorporated into the NFIP model but not an approved CLOMR because a CLOMR is not an existing condition. An approved CDC project is incorporated into the CDC model.

Deliverables

1. Draft recommendation for the advisory group, FEMA and the FMTF.
2. Workflow and file storage diagrams and charts detailing how the workflow will be structured from each program.
3. Prepare presentations for the AG, FEMA and the FMTF to ensure members understand the proposed changes and their impacts on each program.
4. Final recommendation report for the AG, FEMA and the FMTF.
5. Documentation to be incorporated into the NFIP and CDC program documentation.