Community Engagement – The Way To Go

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Program Manager
Harris County Flood Control District

ASFPM 2013 Conference
Hartford, CT, June 9-14, 2013
Overview

- Background
- Model Management
- LOMR Delegation
Harris County Open Channel Network

Area = 1,756 Square Miles
5,500 Channels
5,500 Miles of Channels
Population = 4.8 Million (County)
2.1 Million (Houston)
Harris County Terrain

340’ Elevation change in feet  0’
Tropical Storm
The Scale of Our Work
Identified Flood Plains
Why Model Management

Protect the investment

Current and accurate information to local community & FEMA
Recognized the different objectives of FEMA, Floodplain Administrators, and HCFCD

Recognized the limitations of some communities (financial and technical)

How do we (HCFCD, FEMA and Local Floodplain Administrators) maintain the models and supporting data?
OUR MISSION

Provide flood damage reduction projects that work, with appropriate regard for community and natural values.
Model Management Objectives

- Continually manage and maintain the integrity of the effective model set
- Foster a partnership between HCFCD and the Floodplain Administrators
- Facilitate and expedite model and data distribution
- Coordinate concurrent development activities in watersheds
Model Management How?

- Continuous Updates
- Watershed Wide Updates
- LOMR Delegation
- M3 is the Support System
Standards

Those who maintain the integrity of the models and supporting data must ensure model modifications are made in a consistent manner so others can easily understand changes.

Harris County Flood Control District

Model and Map Management System (M3)

Model and Map Management (M3) System

The Harris County Flood Control District's Model and Map Management (M3) System is an interactive tool designed to manage changes to the Federal Emergency Management Agency's (FEMA) effective floodplain model data for Harris County. The goal of the M3 System is to distribute NEMO effective models to the general public, track ongoing changes to the models resulting from development projects, and facilitate communication between FEMA, Harris County Flood Control District, Local Floodplain Administrators, and the community. For more information regarding the M3 System please contact M3 Customer Service.

FEMA Effective Model Request

To check current FEMA effective models, please select from the following options below:

- Information Model Request
- M3 Model Request

Information Model Request

Request models for research purposes or analysis of development projects located entirely outside of the FEMA regulatory floodplains.

REQUEST

M3 Model Request

Request models for analysis of development projects located in the FEMA regulatory floodplain and/or preparation of FEMA Letter of Map Change Submittals.

REQUEST

Notice

1. The hydrologic (HEC-HMS) and hydraulic (HEC-RAS) models used to create the FEMA Revised Preliminary Flood Insurance Rate Maps are no longer valid, and all FEMA effective models for Harris County are available through the M3 system.
2. All FEMA effective models for development projects tracked by the M3 System will comply with the HEC-14 hydrologic and hydrologic modeling and management standards.
3. The official model software versions are HEC-HMS 3.0.0 and HEC-RAS 3.0.4. The use of different software versions must be pre-approved by the Harris County Flood Control District.
4. For general guidance regarding hydrologic and hydraulic methodologies utilized in Harris County, please download the HEC-14 Hydrology and Hydraulics Guidance Manual.

Downloads

- HEC-HMS 3.0.0 (ZIP: 15.0 MB, 6/18/2007)
- HEC-RAS 3.0.4 (ZIP: 15.0 MB, 6/18/2007)

To download and save a file to disk:

1. Right-click the link and choose the option, "Save Target As..."
2. Macintosh: click the link and choose the option, "Download Link to Disk"
Standards

www.hcfcd.org/m3
Model & Map

Channel Cross Sections tied to LiDAR
GIS DATA FORMAT STANDARDS FOR DELIVERABLES

FEMA CLOMR / LOMR SUBMITTALS

Planning Department
5/25/2011

This document is to be followed by outside Agencies in formatting their Geographic Information System (GIS) data supporting their Federal Emergency Management Agency (FEMA) Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) submittals to the specifications and requirements of the Harris County Flood Control District.
Modeling Standards Highlights

- Model Version (HEC-HMS/HEC-RAS)
  - HEC-HMS (v3.3.0)
  - HEC-RAS (v3.0.1)
- No model truncation (Section 4.3.3)
- Use current model set (Section 5.2)
- Tracking number (Section 5.2)
- New/modified cross sections (Section 3.4.4)
- Nomenclature change (Section 3.2)
Continuous Updates

Objective:
Continually update the models and associated data sets due to changes in Floodplain and Floodways which require a LOMR

Challenges:
- Many LOMRs throughout Harris County
- Multiple LOMR projects – one stream
Our Agreement with FEMA

Mapping Activity Statement (MAS)
– Continuous Update Process (MAS No. 14)
– HCFCD Custodian of models
Memorandum of Understanding

- HCFCD Responsibilities:
  - Provide current/accurate models from web
  - Provide technical resource
  - Provide training (yearly workshops)
  - Cursory review

- Local Community Responsibilities:
  - Obtain models from HCFCD
  - Follow Standards
  - Provide HCFCD a copy of map revision submittal for review prior to signing Community Acknowledgement Form
Continuous Update

Harris County Flood Control District

FEMA Approval

Model to FEMA
What is M3?
M3 Model Explorer
Welcome to the Harris County Flood Control District (HCFCD) M3 Checker Tool

This tool will allow you to prepare a submittal package and conduct acceptability checking for your LOMR or OLMR application. Fill out the fields below, and then move from tab to tab using the navigation buttons below. At Step 7, you will do a final quality control of your submittal and prepare your submittal package, which you can then submit to HCFCD for review using the HCFCD M3 Web Portal (http://www.hcfcd.org/M3).

To get started:
Specify the folder on your hard drive that holds the HEC-RAS and HEC-HMS Project, GIS files, and study report for the submittal.
C:\Projects\HCFCD\SubmitAllCases\FromKari\M100002
Then specify the folder in which you want your submittal to be compiled.
C:\Projects\HCFCD\SubmitAllCases\FromKari\M100002_submit2

Basic Submittal Information
M3 Tracking Number: M100002
OK
Study Watershed: M - WILLOW CREEK
OK
Description: HydrologyModel
OK

Submitting Organization Information
Organization Name: PBSI
OK
Address: 1250 Wood Branch Park Drive
OK
City: Houston
OK
State: TX
Zip: 77079
OK

Contact Information
First Name: Steve
OK
Middle:
Last: Bourne
OK
Email: sbourne@pbsi.com
OK
Phone: (281) 493-5160
OK

Note: Successful processing of your submittal and submittal of the package through the M3 Web Portal does not guarantee approval of the M3 submittal. Additional acceptability and engineering review checks followed by a detailed engineering review will be performed by HCFCD after submittal. Please acknowledge your acceptance of these conditions by checking the 'I Accept' box below.
M3 Functionality

Model and Map Management (M3) System

- Distribute models and supporting data
- Track changes to models
- Facilitate communication between projects
- Assist HCFCD in the review process
Average 20 to 30 LOMRs per year
Continuous Updates with LOMR Delegation

Proposed LOMR

FEMA Approval

LOMR Delegation

Model to FEMA

Update Master

Local Review
LOMR Delegation Program
Improve Program Process Time
LOMR Delegation Program

The Harris County Flood Control District has been selected by the Federal Emergency Management Association (FEMA) to participate in the Letter of Map Revision (LOMR) Delegation Program. This program delegates select agencies across the country the responsibility of performing the technical review function for Letters of Map Revision (LOMRs) and Conditional Letters of Map Revision (CLOMRs) in their local community on behalf of FEMA. To date, there are only four other agencies across the country who have been selected to participate. Other requests such as Physical Map Revisions (PMRs), Letters of Map Amendment (LOMAs), and Letters of Map Revision Based on Fill (LOMR-Fs) will continue to be reviewed by FEMA. The District officially began receiving these submittals for Harris County on September 1, 2010.

The District performing this role provides several benefits to the community, which include:

1. Local management of engineering models/supporting data and floodplain maps
2. Knowledge of local area issues and projects
3. Coordination of adjacent active LOMRs/CLOMRs
4. Availability to discuss submittals with District staff

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> Contact Us
> Case Review Status
> LOMR and CLOMR Location Map
> HelpForm and Documents
> HelpForm Links
> News/Other Info
HCFCD LOMR Delegation Program Review Summary

Last Updated: May 16, 2013

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<tr>
<th>Status</th>
<th>Currently at HCFCD</th>
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<tr>
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<tr>
<td>Completed since 9/1/10</td>
<td>41</td>
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<td>TOTAL</td>
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LOMR Review Status (PDF, 57KB, 05/16/13)
### LOMR DELEGATION

**HCFCD LOMR Delegation Program Review Status - Active**

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<tr>
<th>Date Received</th>
<th>FEMA Case No.</th>
<th>Description</th>
<th>Type of Submission</th>
<th>HCFCD Unit No.</th>
<th>Community</th>
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<td>9/30/12</td>
<td>11-06-3910P</td>
<td>Lake Estates on North Eldridge</td>
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**HCFCD LOMR Delegation Program Review Status - Complete**

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<td>Fallbrook Drive Bridge Extension</td>
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<td>Harris County/City of Houston</td>
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LOMR DELEGATION

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Type an address in the address search bar and click “Find”.

The map will zoom to that address and the floodplains will appear. A text window also will appear with information specific to the address entered, including contact information for the local floodplain administrator and watershed information with a link to that watershed’s information page on www.hcfcd.org.
Benefits of the Program

Most current and accurate models and supporting data come directly from HCFCD – one source
HCFCD, FEMA and local communities are all in the same datum
Knowledge of local area and issues
Accessible during review process
Technical resource
Cut down review time
Reduce the Risk
QUESTIONS????

Reduce the risk and rediscover the beauty.