

Future Generation Modeling and Mapping Generates Big Data- Model Management is a Must

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This paper discusses the HCFCD's approaches and processes to keep models and maps up to date. Effective models and data were disseminated by FEMA's contractors. The acquisition of computer models is time-consuming, and often it is difficult to locate the correct models. By localizing this task, the local community will be better served by being able to acquire accurate and detailed data in a timely manner. This paper also discusses each of the update process and the implementation of appropriate policies to prevent adverse impacts, and tools developed to efficiently maintain and keep the models up to date into the future. HCFCD is the first CTP approved by FEMA to begin the systematic model and map maintenance process. This is a story of community engagement for keeping the model and map current.

The goal of Model Management at HCFCD is to manage a master set of current and accurate hydrologic and hydraulic models and their supporting data in Harris County. HCFCD developed a supporting tool for model management and the tool is called the Model and Map Management (M3) system. M3 will track on-going projects related floodplain change in the highly active floodplain-related development environment of Harris County. HCFCD also started LOMR Delegation Program as of September 1, 2010. LOMR Delegation is a natural extension of the Model and Map Management Program and combined, they ensure accurate and updated mapping and modeling that would be a significant benefit to the District and FEMA. This presentation will also discuss HCFCD's outreach plan with the 35 communities within Harris County and FEMA. Today all of us are moving towards complex flooding problems modeled and mapped using 1D/2D model and compared with the effective maps. These advance models generate lot of extra information about depth, vector flow, conveyance zone to make a better decision. These advance models generate tons of data, and we need manage bid data. Model management is the only way to be successful for our future modeling and mapping. The author will share his experience and thinks this type of approach will help to protect future flood damage by informing the risk.