

### Grass Roots Residents 12-Year Volunteer Effort Successful in Remapping Cypress Creek Watershed Flood Hazard Areas

Residents and business owners who own land in high flood hazard areas often obtain insurance through the National Flood Insurance Program (NFIP). These at-risk areas are identified by FEMA and the Harris County Flood Control District using computer modeling that factor in all aspects of water flow in the 22 Harris County watershed areas. Once prepared and approved, the Flood Insurance Rate Maps (FIRMs) are used to determine NFIP insurance premium rates, land use regulation and urban planning.

The Hurricane Allison flooding disaster in 2001 triggered a 2-year, \$30+ million government project to upgrade existing flood maps for all 22 watersheds. The cornerstone of this project to model "Current Conditions" topography and storm water runoff as of 2001 was the use of technology and modeling more advanced and with greater accuracy than what had previously been used for existing flood maps. However, review of this upgraded mapping in the Cypress Creek Watershed by technical engineering experts paid by the Cypress Creek Flood Control Coalition (CCFCC) identified significant inaccuracies such that the FIRMs were deemed unsuitable for the purposes intended. Based on these findings, independent appeals seeking corrective action were filed by CCFCC, the Sierra Club and Houston Voters Against Flooding. All were denied by FEMA.

A CCFCC decision to quickly request the Harris County Flood Control District's (HCFCD) Planning Department to work together with CCFCC to determine and correct the inaccuracies of the FEMA computer modeling was successful. Identified inaccuracies included (1) major omission of properties existing within the floodplains, (2) significant discrepancy in calculated runoff rates, and, (3) peak flood elevations being under-calculated by as much as 4-feet less than what was actually occurring in the upper watershed during major storms.

In a separate action, the Sierra Club filed litigation in federal court seeking to stop the forthcoming FEMA adoption of the flawed floodplain modeling / maps. However the government proceeded to do so, thereby putting them into use for determination of risk-based flood insurance premiums and regulation of permit applications filed for new land development.

The HCFCD/CCFCC team successfully identified the causes / corrective actions required to resolve the computer modeling issues and then submitted these to FEMA which approved the modeling "fixes" and resulting accuracy corrections and released the revised mapping for public review / comment. However new appeals / comments during this 2<sup>nd</sup> public review phase were submitted by several respondents, including one seeking to prevent FEMA adoption which, if successful, would result in continued use of the inaccurate models and maps. Although FEMA denied this appeal, the respondent was given the opportunity last year to request and obtain review of their claim by a Scientific Resolution Panel (SRP) of national engineering and scientific experts.

The SRP review completed in December 2012 concluded with the decision / recommendation that the inaccurate computer models and flood maps adopted by FEMA on June 8, 2007 be revised to reflect the improvements made by the HCFCD/CCFCC project team. FEMA has now accepted the panel's findings and on April 16th issued what is called the "Letter of

Final Determination" notification to Harris County Judge Emmett and the City of Houston requiring adoption of these changes in their floodplain management mapping and related regulatory actions. Visit [www.floodsrp.org/panels](http://www.floodsrp.org/panels) for more information on this SRP review and decision. As a result of this latest development the action taken by Harris County Commissioners Court in August 2008 at CCFCC request requiring this "Best Available Data" be used for purposes of new land development permits from that time forward is now official and the current incorrect maps will be replaced effective October 16, 2013.

This has been a prolonged 12-year process during which the CCFCC progress was heavily dependent upon their expenses being paid thru volunteer donations of their grass roots members. The resulting benefits to the community will include:

- Improved accuracy in identification of flood hazard locations,
- Greater safety in new home / road elevations,
- Creation of "Current Conditions" computer models which are essential as a baseline for research into "Future Conditions" impact of full urban development, and,
- A much needed greater understanding of the Cypress Creek overflow into and its resulting risk impact upon the adjoining Addicks Reservoir watershed.

Look Upstream articles are written and/or provided by the Cypress Creek Flood Control Coalition (CCFCC) as a public service. Also visit web site, [www.ccfcc.org](http://www.ccfcc.org) or for more information on flood protection, environmental preservation, flood insurance and membership or e-mail [floodalliance@ccfcc.org](mailto:floodalliance@ccfcc.org).

