

## LOOK UPSTREAM

MAY 2009

### Could The Next Storm Be Worse?

This front page headline bannered the May 3, 2009 article in the Houston Chronicle by Mike Snyder telling the world of another major flood earlier in the week in Harris County – an area with the nationally acclaimed reputation as having the most repetitive flood losses in the United States. The rain storm moved in with citizens receiving no warning as to the severity which would follow in the middle of the night when 7 to 9-inch rainfalls occurred in the upper Harris/Waller County line reaches of the Cypress Creek Watershed. Lacking capacity to hold the downpour, it is likely significant overflow occurred causing rapidly rising waters to top the Cypress Creek stream banks before flowing into the Addicks Reservoir. Neighborhoods in the remaining 30 mile downstream areas experienced out-of-bank flooding in streets and yards but essentially minimum flooding within their homes. For the reasons listed below, we believe the future will not be so kind and that the answer to the Chronicle's headline question is unfortunately "YES".

Research by the Texas Forest Service undertaken at CCFCC request, determined that within the Cypress Creek Watershed, runoff volume doubles and peak depth increases by 2 ½ when land is converted from forest/agriculture use to hard surface pavement. Taking this fact and exploding urban development growth in the Upper Watershed into account, the reason for the belief that storm water flooding in this watershed will worsen is a history of technical analysis focused on developing effective flood damage mitigation shows the resulting findings and recommendations reported to government decision makers seem to have often gone unanswered. Key among these is:

- In 2 ½ decades less than 1,000 acres have been acquired of over 20,000

identified for storm water detention in the master plan adopted by Commissioners Court in 1984. Responsibility for implementation and funding was never fixed.

- The flood mapping adopted by FEMA in 2007, based on urban development conditions as of December 2001, is rapidly becoming out dated due to new subdivision/urban development.
- The FEMA computers used to develop the 2007 mapping under-calculated the base flood elevation depth by nearly 4 feet in the Upper Watershed. Although knowing the data was seriously flawed, FEMA without merit denied our appeal and adopted the mapping; an action which is now being challenged in the federal courts through a lawsuit filed by the Sierra Club.
- A funding and implementation plan has never been put forward to Commissioners Court to authorize regional detention basins (85,000 acre feet storage capacity) strategically located in the Upper Watershed as specified in an 1991 engineering study commissioned by HCFCF.
- A regional flood damage reduction plan completed by the Texas Water Development Board and HCFCF in 2003 recommended 7 new detention facilities in the Little Cypress tributary watershed and 3 regional basins in the Upper Watershed Mound Creek tributary area. It is unknown why recommended priority actions have not been implemented nor why the plan was not submitted to Commissioners Court seeking adoption.

On the positive side, facts which may be reason for hope include:

- HCFCF responding to CCFCC's request recommended to Harris County Commissioners Court that the results of a 3-year undertaking which remedied the shortcomings in the FEMA floodplain computers be enacted for regulation of new development. This undertaking instituted by CCFCC and carried out in a joint HCFCF/CCFCC effort was successful and the Court adopted the recommendation in August 2008.
- As described above, the limitations of the FEMA generated floodplain maps fail to show changes expected to occur in floodplain borders, depth and drainage volume/flow rates as a result of full urban development. Directly addressing this gap in critical knowledge, agreement has been reached at CCFCC's request and with Harris County Commissioner's Court approval to conduct what will be a highly touted joint research project using the FEMA recalibrated computers to simulate full urban development of the Cypress Creek Watershed. Called the "Future Conditions Flood Hazard Boundary" research project, work will commence during the 2nd quarter of this year.

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

