



A wide-angle photograph of a calm pond or lake. The water is dark blue and reflects the surrounding green trees and the overcast sky. Numerous lily pads are scattered across the surface of the water, particularly in the foreground and middle ground. The shoreline is lined with a thick forest of deciduous trees with vibrant green foliage. The overall atmosphere is peaceful and natural.

Greenway Growth

Trails (brown rectangle)

Parks (green circle)

Landacquisitions for Parks, Preserves (brown rectangle)

Cypress Creek Master Trails Plan (blue wavy line)

Timber Lane Utility District (yellow rectangle)

Map not to scale



Parks, pathways bloom along Cypress Creek as part of Greenway Project

...community organizations united for collaboration in regional government watershed management...

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Perspective

Project Area and Overflow Water Volume

Cypress Creek Overflow Management Plan

		Land Area (Acres)
• Project area in Cypress Watershed	(157 sq. miles)	100,480 ¹
• Project area in Waller County	(60 sq. miles)	38,400
• Total area in Overflow project	270 square miles)	172,800

Master Planned Communities

	Land Area (Acres)
• The Woodlands	28,000
• Bridgeland	11,000
• Fairfield	3,200
• Towne Lake	2,400
• Canyon Lakes	1,800
• Cypress Creek Lakes	1,600
• Coles Crossing	1,500

City

	Land Area (Acres)
• City of Houston (4 th largest city in U.S.)	383,000
• Galveston City	133,000

Volume of Overflow Water:

13,500 cubic feet per second (cfs) ²

Perspective Overflow Project

¹ Approximate area based on H-GAC map of watershed sections provided to CCFCC

² Volume of overflow water per second at the watershed divide (1 cfs equals 748 gallons). Source: HCFCD public meeting in November 2013. Ref: VG #48

President's Letter

April 15, 2015

A year ago the 2013 Annual Report noted the Cypress Creek Watershed,

"Is continuing its metamorphic transitioning from rural agriculture-based beginnings to prominence as the northwestern frontier and transportation hub of Harris County, Texas. And that with this change comes significant metropolitan development challenges among which one of the greatest is the need for answers followed by action implementing solutions to the resulting stormwater drainage issues. Political, financial and private sector commitments, long overdue, are essential." Although this has not changed during 2014, there were both "good news" and "bad news" events. Both are covered in this report."

Further, "There are elements of the Cypress Creek upper watershed which for many years have significantly benefited our downstream communities but are now being lost to new land development. Primary among these which make flood-reduction engineering more difficult are:

- Thousands of acres of rice fields (have acted as reservoirs holding back the drainage).
- Native prairies and forests (have slowed runoff and soaked up much of the rain water),
- The "Cypress Creek Overflow" a topographic feature in the upper watershed where during major storm events the volume of water exceeds the creek channel capacity and flows downhill into the neighboring Addicks Reservoir Watershed thus dramatically reducing the volume flowing downstream into Cypress communities; i.e. think of it as a pressure release valve releasing at peak flooding 13,500 cfs (HCFCD estimate for 1% storm event)

The most prominent "Good news" in 2014 includes:

- Floodplain Preservation: Significant continuing leadership by Jim Robertson, Committee Chair, in development of the Cypress Creek Greenway project. Details are provided in a special section of this report. Efforts by you to provide and garner the support of others is strongly encouraged and does not go unnoticed - - - this collaboration being the essential sustaining glue for this highly valued, long term, quality-of-life building block within our immediate and rapidly growing communities.

- Flood Mitigation: Completion of the Harris County Flood Control District draft report covering the Cypress Creek Overflow Management Plan study and submittal with recommendations to the Texas Water Development Board (TWDB). The next major step in 2015 will be receipt of the TWDB review comments followed by submittal of a report with recommended actions seeking adoption by the Harris County Commissioners Court. After considering the information provided in the report in addition to Stakeholder meetings, the CCFCC board submitted written comments to HCFCF with the understanding given by its project manager that these would be submitted with their report on to the TWDB. A copy of this letter is provided elsewhere in this report.¹
- Flood Events: A Memorial Day major cloudburst followed by continuing rainfall in the Cypress Creek Watershed led to out-of-bank flooding. The "Good News" was (1) there was no floodwaters rising into resident homes and (2) several college students capsized by trying to float Big Cypress but were rescued by a team of "1st responders" from EMS and Fire Department personnel backed with overhead helicopter support. Resulting. This was one of the community "Good News" endings.

The "Bad news" in 2014 centers on regulatory criteria governing design and operation of stormwater detention infrastructure. This much needed reform is deemed essential for new land development in the ongoing transition from prairie-and-forested agriculture-based land to concrete covered urban landscape in the upper per Cypress Creek Watershed. Information is provided in this annual report updating progress made on the Cypress Creek Overflow Management Plan and continuing road blocks encountered notwithstanding efforts by the Cypress Creek Flood Control Coalition board seeking to obtain resolution of stormwater detention regulatory criteria inadequacies in addressing new land development in the upper Cypress Creek Watershed.

The Board of Directors continues its management endeavors of the Cypress Creek Flood Control Coalition with sincere appreciation and gratitude of the supporting role of the members and Cypress Creek Watershed community.

Respectfully,



Year 2014 Annual Report President's Letter

¹ Letter dated October 31, 2014 to Dena Green, P.E. Study Manager,



CYPRESS CREEK FLOOD CONTROL COALITION

12526 Texas Army Trail
Cypress, Texas 77429
Tel: 281-469-5161
Fax: 281-469-5468
e-mail: floodalliance@ccfcc.org
www.ccfcc.org

COPY

June 21 2012

Commissioner R. Jack Cagle
Precinct 4, Harris County
1001 Preston, Suite 950
Houston, Texas 77002

Letter of Appreciation

Dear Commissioner Cagle,

Thank you for meeting with us last week. We had requested the meeting with the two objectives of (1) informing you of the Cypress Creek Flood Control Coalition's role within the overall Cypress Creek watershed's rapidly expanding urban communities, and, (2) asking for your help to return us to the role of providing input on technical issues concerning flood mitigation requirements fundamental to the safety and welfare of these communities.

As discussed, Harris County (acting through the HCFCD) and the resident MUDs located within the Cypress Creek Watershed (including our core membership) have regulatory responsibility for drainage and flood control. As I hope you discerned from the discussions, it is essential the successful collaboration that had existed between HCFCD and CCFCC until 2 years ago be restored. It is with grave concerns we strongly believe that without such collaboration the Harris County "No Adverse Impact" regulatory development requirement will not be achieved.

Several flood control studies approved by Commissioners Court and implemented but abandoned in mid-stream during the last few years are described in the letters copied and provided to you at the meeting for your later reference in the binder entitled, "*Cypress Creek - A Watershed in Transition*". The uncertainties inherent in the significant storm water overflow between the Cypress Creek and Addicks watersheds were also briefly discussed. For these reasons we were especially gratified to learn the new "*Cypress Creek Overflow Management Study*" scope as described in the application for the grant recently awarded by the Texas Water Development Board will include re-evaluation of the criteria for flood control mitigation and its resulting implementation.

In summary, we are pleased the path forward for the parties to remedy the "high centered" condition was established through your much appreciated leadership and resulting decisions prior to conclusion of the meeting, namely:

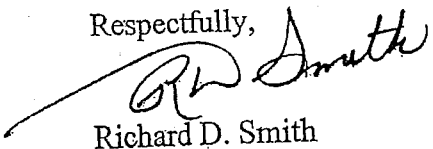
....continued on next page.....

- Agreement on the "Solution" (as per the enclosed copy), and,
- Assignment of Fred Garcia as your liaison with HCFCD, to engage in meeting with CCFCC representatives for the purpose of implementing this solution (subject to your budgeted not-to-exceed 1-hour per month time limit).

In view of the agreed 1-hour time requirement, it will be helpful to everyone if the protocol for these coordination meetings is developed/agreed with Fred in advance; i.e. agenda, meeting notes, etc. We hope you concur.

On behalf of the watershed community at large and our Board of Directors, we are pleased to extend our sincere appreciation.

Respectfully,



Richard D. Smith
President

Encl:

cc: Fred Garcia
Arthur Storey
Michael D. Talbot
Lawrence G. Dunbar
Peter R. Smullen

Solution

COPY

We are proactively geared to achieve solutions through collaboration. (... as per the trailer on our corporate stationary / business cards, etc.).

In this respect we request you, in your Commissioners Court capacity as the governing body of HCFCD and Harris County, to establish the way forward to get the CCFCC/Harris County government process out of the existing high-center immobilized condition. Specifically restart and **restore the successful collaboration process** followed in the past with CCFCC continued engagement in its key watershed stakeholder role being allowed to:

- Review the technical basis of Harris County flood management criteria for achieving NAI.
- ~~Comment~~ Challenge, if deemed appropriate to do so, ^{on} the technical basis of the county's criteria for achieving NAI.

Alternate Solution

Revised as agreed with Commissioner Cagle at today's meeting

R. Smith
6/14/12



CYPRESS CREEK FLOOD CONTROL COALITION

12526 Texas Army Trail
Cypress, Texas 77429
Tel: 281-469-5161
Fax: 281-469-5468
e-mail: floodalliance@ccfcc.org
www.ccfcc.org

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Harris County Flood Control District
9900 Northwest Freeway
Houston, Texas 77092
ATTN: Dena Green, P.E. Study Manager

October 21, 2014

Comments on "Cypress Creek Overflow Management Plan" Draft Report


Thank you for the information provided at the September 25, 2014 Public Meeting. Based on that meeting and our review of the above-referenced draft report posted on the HCFCD website, we are submitting the following comments as requested at the meeting:

1. CCFCC's understanding is the overflow study has determined the following: (1) there will be a significant increase in the volume of overflow runoff resulting from the new development expected in the Upper Cypress Creek Watershed, even with on-site detention; and (2) analysis by the HCFCD project team based on current design standards in the PCPM has concluded there will be no adverse impact (NAI) to residents and property located in the Cypress Creek Watershed from new development in the upper watershed with the proposed overflow project in place.

2. Previously submitted analyses performed by professional engineers for CCFCC concluded that application of the current design standards in the PCPM to new development in the Upper Cypress Creek Watershed does not achieve compliance with Harris County's NAI policy; this being due to the unique drainage characteristics of the undeveloped portions of that watershed, that effect both peak flow rates and runoff volumes. While significant increased runoff volume from future development is acknowledged in the study, as noted above, the study concludes that current design standards adequately address peak flow rate issues with new development. We understand that this increase in runoff volume will be mitigated by application of new development guidelines. While we agree that such mitigation of increased runoff volume is needed, we disagree that peak flow rates are being adequately addressed by current design standards, based on our previously submitted analyses, which have never been formally responded to by the HCFCD.

Thank you again for requesting public comments.

Cordially,


Richard D. (Dick) Smith
President

cc. Board of Directors
L.G. Dunbar, P.E.
James Tynan Kelly
Commissioner R. Jack Cagle

Overflow Plan Report Comments Letter

HARRIS COUNTY

PUBLIC INFRASTRUCTURE DEPARTMENT

1001 Preston, 5th Floor
Houston, Texas 77002
(713) 755-4400

February 9, 2012

Mr. Richard D. Smith, President
Cypress Creek Flood Control Coalition
12526 Texas Army Trail
Cypress, TX 77429

2/11/12

COPY

Subject: Your letter of October 31, 2011

Dear Mr. Smith:

I have read your letter and the attachments which express the Cypress Creek Flood Control Coalition's (CCFCC) concerns about the Harris County Flood Control District (District) and flood control and stormwater management in the Cypress Creek watershed. I have spoken to Mike Talbott about your concerns, and he told me the District is actively working on programs and/or projects that address the CCFCC concerns on a comprehensive level and at a level that provides consistency across the other 21 watersheds. The attachment to this letter will give you answers and more information about the concerns you raise.

The District is very confident in the criteria, means, methods, and techniques being used to serve the flood control needs of the citizens of Harris County. The District also has the empirical data to back up its technical standards. The District is one of the premier agencies of its type in the nation and is widely recognized for the innovative and comprehensive approaches it uses to cope with our natural flood potential. Frankly, Dick, I trust Mike with management of the District, its programs and projects, and I trust that he understands your concerns and is working diligently and in the public's best interest to provide flood damage reduction projects that work, with appropriate regard for community and natural values.

The District has a long history of working with CCFCC, and Mike told me that he and members of his management team have worked hard to provide CCFCC with the technical justification and support for the actions of the District. CCFCC obviously does not agree that the District has done that. The Cypress Creek watershed is one of our 22 watersheds, and the District is a good steward of the Cypress Creek watershed.

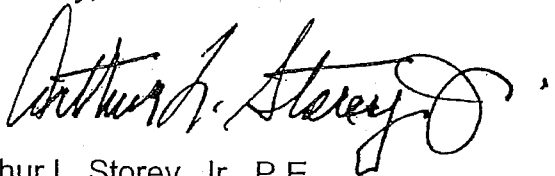
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February 9, 2012
Mr. Richard D. Smith, President
Cypress Creek Flood Control Coalition

Page 2

My observations and directions are these: The District has been very accommodating to you and the CCFCC for the last dozen or so years. You have been granted access to top management and senior technical staff for years. The District has spent a lot of time fulfilling multiple requests for information and for meetings with your organization numerous times, both during daytime and evening hours, on topics CCFCC felt were important. The District will continue to provide CCFCC with information and include you in appropriate stakeholder activities on terms that are acceptable to the District.

Sincerely,



Arthur L. Storey, Jr., P.E.
Executive Director

Attachment: Points of Contention

cc: Commissioner R. Jack Cagle
Commissioner Steve Radack
Michael D. Talbott, P.E.

Attachment

COPY

Points of Contention

Harris County Flood Control District – Cypress Creek Flood Control Coalition

1. Future Conditions Study – The CCFCC wants HCFCD to perform a future conditions study of the Cypress Creek watershed. In other words, what will the flooding potential (flood plains) look like assuming full development of the watershed. While HCFCD stands by the criteria that governs land development, which means that excess runoff generated by land development is mitigated and does not increase flooding risk or negatively impact the existing flood plains, HCFCD is in the process of conducting an analysis that confirms the validity of the existing criteria. HCFCD will be factoring the results of this analysis into the newly-initiated Cypress Creek Overflow Management Study. These are on-going efforts that will be taking place over the course of the next several months to ensure land development and other activities in the watershed are properly managed.
2. Cypress Creek Stormwater Management Program – In 2001, in partnership with the Texas Water Development Board (TWDB) through a \$600,000 grant, HCFCD initiated a 6-part management program for the Cypress Creek watershed. This effort was brought to conclusion in 2003. In the meantime, Tropical Storm Allison occurred in June 2001, which eventually led to the Tropical Storm Allison Recovery Project or TSARP. TSARP was the effort that led to brand new Flood Insurance Rate Maps (flood plain maps) and brand new Flood Insurance Study data and documents. The new TSARP flood plain information and data superseded the information used in the Cypress Creek Stormwater Management Program, but HCFCD was required under the terms of the TWDB grant to bring the program to conclusion. The Cypress Creek Stormwater Management Program information is a resource for an extended initiative that is a countywide Watershed Master Planning effort initiated by HCFCD around the 2006-2007 timeframe.
3. Watershed Master Plans – HCFCD continues to work on the master plans and has developed a wealth of data that is proving to be extremely valuable for assessing existing flooding risks and defining future Capital Improvement Program projects for the Cypress Creek watershed as well as the other major watersheds in the county. We are developing a strategy on how to adopt the draft information (which is electronic), and will be coming to Commissioners Court in the near future to adopt certain elements of the data set.
4. Urban Stormwater Management Study (now known as FloodWise) – This effort is jointly sponsored by HCFCD, Harris County, City of Houston and Texas Department of Transportation. The purpose is to evaluate each entity's drainage criteria for consistency and compatibility and recommend adjustments if needed. One element of the study took much longer than expected, but was recently completed. The effort will be re-started this year with the concurrence of the four funding partners (Houston, Harris County, HCFCD, and TxDOT).
5. Adjustment to Release Rates, Independent Studies and Permitting – These items are related to the discussion points and efforts explained in number 1 above, namely, the Cypress Creek Overflow Management Study.

Primary Source of Cypress Creek Flooding

“ The primary source of damaging floods along Cypress Creek is increased development of the floodplain”¹

Note: This fact should be carefully noted when considering the most recent (2006) population projections by local authorities that the Houston-Galveston area will increase by 3½ million to an astounding 9 million people by 2035 - - - equivalent to the population of Los Angeles.

1

Quoted as stated in General Reevaluation Report Environmental Assessment and Appendices. San Jacinto Rive and Tributaries, Texas Cypress Creek Flood Damage Prevention, U.S. Army Corps of Engineers, July 1998, Chapter 3, page 11).

Year 2014 Highlights

Stormwater Flood Mitigation – Cypress Creek Watershed

- **Cypress Creek Overflow Management Plan.**¹ This engineering study was initiated in 2011 by the Harris County Flood Control District (HCCD) under financial grant requirements stipulated by the Texas Water Development Board (TWDB). The published goal is to establish a set of policies, technical criteria and guidelines to aid Harris County and HCFCD in planning and implementing programs that will allow land development in the upper Cypress Creek and adjoining Addicks Reservoir watersheds to progress with a pre-established regional drainage plan. The principal product per HCFCD will be a series of design guidelines and an implementation plan for moving forward with such development.

The plan is to be designed to (1) function within the U.S. Corps of Engineering restrictions governing operational storage capacity limitations imposed on the Addicks and Barker Reservoirs and, (2) result, when implemented, into a **reduction in the growing increase in flood risks within both the Cypress and Addicks Watersheds.** The reports states, “*Simulations of the two largest recorded storm events on Addicks Reservoir suggest that the increase in the rainfall runoff relationship associated with new development will significantly increase pool elevations in Addicks Reservoir if not mitigated.*” .

The study including a draft report of findings and recommendations was completed this year and submitted to the Texas Water Development Board in November for review and approval.² It describes (and provides schematic plans) for 2 alternative drainage systems. The TWDB review ongoing at the time this report was published is expected to be completed in the 2nd quarter of 2015. It will then be submitted to Harris County Commissioners Court for consideration/approval of the inherent recommendations.

Eight alternative approaches were considered in the process of developing the report. These were narrowed down to the following 2 alternative concepts:

¹ Refer to the CCFCC 2013 Annual Report which is available on the website for more information on the goals, alternative plans, cost and processes of this project. If and when implemented it will be instrumental on future flooding in the Cypress Creek downstream communities and adjoining Addicks Reservoir watershed.

² The draft report can be viewed online at HCFCD website at <http://www.hcfcd.org/cypresscreekoverflow/DraftStudyReport.html>

Stormwater Flood Mitigation continued . . .

- Plan 3 alternative with large Mound Creek detention concentrated in Cypress Watershed before overflow into Addicks at an estimated total implementation cost of \$ 271 million.³
- Plan 5 alternative with large detention in Addicks Watershed (Katy-Hockley -N Cypress) after overflow from Cypress Creek at an estimated total implementation cost of \$ 369 million.

The Cypress Creek Flood Control Coalition review of the draft report was unable to identify recommendations, if any, concerning specific design and operation criteria to control the increased volume and flow rate of storm water runoff which will result from the urban development replacement of prairie and rice field lands. Without appropriate changes to existing regulatory criteria, the end result will be increased flood risks to downstream Cypress communities. The Board of Directors has major concerns that this plan not be adopted by Harris County Commissioners Court without the Court first deliberating on allowing it to progress with this matter not being resolved first.

- **Stormwater Floodplain Management / Land Development Criteria.**

Land development in Harris County is required by law to file applications and obtain permits authoring such development in advance of doing so. This process includes design and operation requirements for the stormwater drainage system which must be built to handle the stormwater throughout the community after the streets, homes and other development are constructed. The transition from natural prairie and forested land dirt surfaces to concrete impervious cover results in significant increase in both the volume and speed of stormwater runoff being carried away from the homes, schools and business buildings/parking lots into adjoining ditches and tributaries which must then funnel this water into Cypress and Little Cypress Creeks.

Harris County regulations require these drainage systems be designed and operated according to criteria which will result in “No Adverse Impact” i.e. no increase in flood risk beyond what exists when the undeveloped land drains during storm events. Further that the County Engineer **shall not approve** such development if it is determined it does not meet the “No Adverse Impact” requirement.

³ See Exhibit #1 for schematics of Alternative Plan 3 and Alternative Plan 5

The Cypress Creek Flood Control Coalition (CCFCC) has carried out engineering technical analysis - - - including analysis using the computer models approved by FEMA - - - to evaluate and determine how effective these requirements will be under full urban development conditions. This was completed in a study by Rice University's Dr. Philip Bedient and a later analysis by independent consultant L.G. Dunbar P.E. Both of these analysis / reports were done under contract to and paid for by the Cypress Creek Flood Control Coalition. Both evaluations demonstrated the existing Harris County regulatory design criteria, when used, do not achieve the "No Adverse Impact" requirement. These evaluations quantified the increased flooding which, if the regulatory criteria are not revised will continue to contribute to the detriment of downstream communities in the watershed.

The technical reports covering these 2 analysis were first submitted in 2012 by CCFCC to HCFCFCD management and the Harris County PID Executive Director. This was followed by sending several follow-up letters in 2014 recommending HCFCFCD reduce the detention outflow allowed to not exceed a maximum 0.3 cfs/acre for detention by new development. The District has refused to comment on both these studies and the recommended release rate.⁴ which as it currently exists when used for new development in the upper Cypress Creek Watershed is contributing to increased flooding to downstream communities.

- **CCFCC Technical Management Committee.**

During a period of nearly 2 years prior to early 2012, several HCFCFCD engineering efforts by HCFCFCD of importance to the Cypress Creek Watershed were effectively abandoned for unknown reasons. Or if not abandoned, the results although requested, were not shared with CCFCC. This included the significant, highly valued "**Future Conditions**" flood risk assessment project - - - a project contracted to PBS&J Engineering. The goal was to determine the Cypress Creek Watershed vulnerability to the impact of future development in the upper watershed and what actions would be available for decision makers to consider in their fiduciary responsibilities to the watershed community

. Unsuccessful CCFCC resolution efforts with HCFCFCD top management led to the CCFCC decision to bring these matters to the attention of Art Storey, Executive Director, Harris County Public Infrastructure and Commissioner Jack Cagle, Precinct 4. This was followed by a meeting with Commissioner Cagle which concluded with direction by the Commissioner that *Fred Garcia*, his assigned HCFCFCD senior management representative be responsible act as the interface who would work with CCFCC's Technical Management Committee to "restart and

⁴ Copies of pertinent letters to Alan Potok on January 03 and February 10, 2014 can be viewed in the CCFCC Annual Report Year 2013 which is available on the CCFCC website.

restore the successful collaboration process followed in the past with CCFCC continued engagement in its key watershed stakeholder role,,,"⁵

However the meetings with HCFCD representatives were discontinued late this year at the decision of CCFCC due to communications breakdowns and failure of HCFCD to initiate and/or provide information consistent with Commissioner Cagle's direction and/or not perform actions which Art Storey, Executive Director, Harris County PID had advised CCFCC and Commissioners Cagle and Steve Radack would be done. This included the disappointing failure to resume the "Floodwise" project which had been implemented in 2006 as a joint undertaking by HCFCD, Harris County, TxDOT and the City of Houston for the purpose of re-examining regulatory (or lack thereof) criteria which must be included in drainage by new development in order to achieve the existing Harris County policy requiring no adverse impact as a result of such development.

For the reasons reported above, the matter was discussed with several elected state representatives which concluded CCFCC should report to and request resolution action be initiated by Commissioners Jack Cagle and Steve Radack. This action was moving forward at year end.

- **Capital Improvement Program (CIP).** The \$200 million per year funding requested by Harris County Flood Control District for all watersheds / projects was not approved by Commissioners Court in 2013. The county budget officer indications were the annual funding level would need to be \$60 million and this carried forward in the 2014 funding approval for the next 5 years. Thus the low priority assigned by the District to regional stormwater detention basins (and other capital projects) required as infrastructure needed by new development continues the long standing dilemma handicapping effective floodplain management in this watershed.⁶
- **Future Conditions Flood Risk Mapping / Modeling. FEMA Technical Mapping Advisory Committee (TMAC).** TMAC is a Federal advisory committee established by law under the Biggert-Waters Flood Insurance Reform Act – 2012. Mandated to review and make recommendations to FEMA on issues / matters related to the national flood mapping program / associated huge insurance losses, it is composed of 20 representatives from Federal, state, local and private sector organizations. One of these is Ms. Cheryl Small, Vice President, CoreLogic located in Austin, Texas. Initial information releases issued by

⁵ Refer to CCFCC letter and attachment to Commissioner Cagle dated June 21, 2012. (Enclosed elsewhere in this report);

⁶ See Exhibit #2 which provides descriptions for 4 projects to be performed in the Big Cypress and Little Cypress Watersheds. Also a Project located in the Addicks Reservoir Watershed which would be part of the Cypress Creek Overflow Management Plan study project.

FEMA describe a requirement for TMAC to investigate and provide recommendations concerning flood risks based on future flood risk impacts. Examples include global warming / rising sea levels and watershed areas containing significant new land development impacts on stormwater runoff. The CCFCC board taking into consideration the ongoing development pressure issues in the upper Cypress Creek Watershed initiated exploratory discussions with TMAC and the Association of State Floodplain Managers executives. The purpose is to determine how the situation existing in the upper Cypress Creek watershed can be brought to the forefront hopefully generating remedial beneficial actions by local government.

Year 2014 highlights

Year 2014

Cypress Creek Greenway Project Annual Report for 2013¹

During 2014 the Cypress Creek Greenway Project (CCGP) continued its efforts toward the creation of a linear greenway along Cypress Creek from west of US 290 to the east where Cypress Creek joins Spring Creek. The greenway will connect existing and future anchor parks along Cypress Creek with a multi-use trail. In addition to our efforts many partners in the Greenway are doing things to make the vision for the Greenway a reality. Below are some highlights from 2014.

- **REI Grant & Cypress Creek Paddling Trail** – In May, 2014, we learned that the Bayou Preservation Association (BPA) in coordination with the Cypress Creek Greenway Project had received a \$15,000 grant from REI. Most of the funds will go toward the development of the Cypress Creek Paddling Trail. The Paddling Trail will extend 35 miles from Telge Park on the west to US 59 on the east. This follows a similarly focused grant which was received last year. BPA is awaiting TWPD personnel's on-the-water examination of the proposed paddling trail following which we anticipate the dedication and opening of the paddle trail..
- **Cypress Park Opening** – Harris County Precinct 3 Parks Department completed and opened the 155 acre Cypress Park adjacent to Cypress Creek on North Eldridge Parkway on 4/19/15. The centerpiece of the park is a 40 acre lake which serves as an amenity for the park and also provides HCFCD-created detention capacity for Cypress Creek. Restrooms, paved trails, a paved and lighted parking area, playground, covered picnic areas, exercise equipment, and equestrian trails are among the amenities within the largely forested park.
- **Continued Park Development** – Timber Lane UD continued development of its extensive park and trail master plan. Additional amenities were added to Cypress Park and construction began late in the year on a pedestrian bridge which will connect across Cypress Creek to Mercer Arboretum. Timber Lane UD hosted a December meeting where students of the Texas A&M Graduate Landscape Architecture Class presented the results of a project titled *Cypress Creek Greenway –East Section (Spring Creek to West of I-45) Hike and Bike Master Plan*. The work was funded by Timber Lane UD under the direction of Professor John Rodick at A&M. Timber Lane UD has almost 5 miles of frontage on Cypress Creek.
- **Cypress Creek/SH 249 Area Trail Master Plan** - Lake Forest UD working with the Cypress Creek Greenway Project secured funding from several partners for the development of a trail master plan for the Cypress Creek/SH 249 area. The approximately 14 square mile area is bisected by Cypress Creek and contains three anchor parks, a preserved natural corridor along the creek, several parks and unconnected trail segments, and a large residential area with a central core including offices, retail, educational facilities and mixed use development. The trail master plan's coordinating board selected EHRA as the landscape architectural firm to

¹ The illustration on the cover page was published in the Community Impact newspaper article by Matt Stephens, Cy-Fair Edition, March 2015

develop the plan which was finalized around the end of the year with a public rollout of the plan in early 2015. Those supporting and funding development of the plan hope that it will be a catalyst and guide for additional trail connectivity within the master plan area.

- **Trash Bash at Collins Park** – On 3/29/14 The Bayou Preservation Association and the Cypress Creek Greenway Project coordinated a Trash Bash event at Collins Park on Cypress Creek as one of 16 Regional Trash bash locations. Approximately 740 volunteers participated and picked up a significant amount of trash along Cypress Creek and its tributaries. This was the 21st annual Trash Bash event, and was the fifth year the event was held at Collins Park.
- **Ponderosa Forest Park Opening** – On 5/3/14 the Ponderosa Forest UD dedicated and opened its 10.5 acre park bordering Cypress Creek at 2002 Woerner Rd. The park includes paved hiking trails, a picnic pavilion, benches, piers overlooking two oxbow ponds, a large grassy play area and a decorative arbor covering a section of the trail.
- **Cypress Creek Regatta** – The first BPA Cypress Creek Regatta was held on Saturday, 9/13/14. There were 43 registered canoes and kayaks which were paddled down the 7.5 mile course from Mercer Arboretum to Jesse Jones Park. It was a very successful event. Precinct 4 Commissioner Jack Cagle was among those who participated.
- **Precinct 4 Trail Projects** – Harris County Precinct 4 is constructing two trail projects near Cypress Creek and SH 249. One trail will connect Matzke Park (which includes a Precinct 4 maintenance facility) to an existing 3 mile trail at Cypresswood Drive. The other trail will connect across the 100 Acre Wood Preserve to existing trails at Jones Road on the west and the Cypress Creek YMCA on the east. Design work is underway for the Matzke Park trail connection and clearing of the trail path has been done for the 100 Acre Wood trail.

Since efforts began on the Cypress Creek Greenway Project in January, 2004, there have been numerous park and trail projects completed within the Cypress Creek corridor. The CCGP has been the catalyst for many of these projects but many have originated independently of the CCGP. However, their presence within the Cypress Creek corridor clearly demonstrate the recognition of the numerous benefits of creating park and trail amenities adjacent to or near Cypress Creek. Below is a summary of Park and Trail Development since January, 2004.

....continued next page.....

Cypress Creek Greenway Project: Summary of Park and Trail Development in Cypress Creek Corridor Since January, 2004 * (12/31/14)

Park Development Projects (includes trails both within and beyond park area)

- Oak Meadow Park (Bridgeland) *Not open to public*
- Bud Hadfield Park (Precinct 3)
- Maxwell Road Park at 12622 Maxwell Road (Precinct 3)
- Little Cypress Creek Preserve (Bayou Land Conservancy and Precinct 4)
- East Shadow Lake Park (Precinct 3)
- Cypress Park (Precinct 3)
- Richard Taylor Park (Lake Forest UD)
- Lakewood Crossing Park (MUD 286)
- Matzke Park (Precinct 4)
- Mandolin Gardens (MUD 230)
- Kickerillo Mischer Preserve (Precinct 4) – development pending
- CyChamp Park (CyChamp UD)
- Cypress Forest Park (Cypress Forest PUD)
- Two (2) Terranova West Parks (Terranova West UD) *Not open to public*
- Lents Family Park West (CNP UD)
- Lents Family Park East (CNP UD)
- Lakes of Cypress Forest (WCID 110) *Not open to public*
- Cypress Forest Lakes (WCID 110) *Not open to public*
- Herman Little Park and Trails (Timber Lane UD)
- Sandpiper Park and Trails (Timber Lane UD)
- Cypress Creek Park and Trails (Timber Lane UD)
- 100 Acre Wood Preserve (Bayou Land Conservancy and Precinct 4)
- Ponderosa Forest UD Park

Trail Development Projects (trails extending significantly beyond core park area)

- Cypress Creek Trail – Phase 1 (Bridgeland) *Not open to public*
- Cypress Creek Trail – Phase 2 (Bridgeland) *Not open to public*
- Faulkey Gully Trail Extension (Faulkey Gully Greenbelt Association and Precinct 4)
- Charterwood Trail on Pilot Gully (Charterwood UD)
- Gourley Nature Trail and expansion of Collins Park and Meyer Park trails (Precinct 4)

... Continued next page.....

- Cypresswood Proper Trails at Lower Collins Park (Precinct 4 and GHORBA)
- Cypress Creek Greenway Trails on HCFCD Acreage (Timber Lane UD)
- Cypresswood Equestrian Trails Project – Equestrian and pedestrian trails (Precinct 4)
- MUD 286 Trail System along Anderson Ditch, Cypress Creek, and Faulkey Gully
- Malcomson Road UD Trail on K142-05-00
- Anderson Ditch (K143-00-00) Trail (Precinct 4) – under development
- 100 Acre Wood Trail extension (Precinct 4) – under development
- Bridge across Cypress Creek and trails connecting Timber Lane UD trails with Mercer Arboretum (Timber Lane UD, Precinct 4, TxDOT) – under development
- Lower Cypress Creek trails and bridge over Cypress Creek connecting along Spring Creek Greenway (Precinct 4)
- Equestrian trails along Turkey Creek connecting to 100+ miles of equestrian trails at IAH (Precinct 4)

Land Acquisitions

- Cole's Crossing Nature Preserve Tract (HCFCD) – 12 acres
- Anderson Woods (HCFCD) – 53 acres
- 100 Acre Woods (Bayou Land Conservancy) - ~100 acres
- Little Cypress Creek Tract (NWHC MUD 10) – 118 acres
- Kickerillo Mischer Preserve - 85 acres
- Cypress Park (agreement between HCFCD and Sprint Sand and Clay) – ~40 acres
- Raveneaux/Cypress Forest Park (Cypress Forest PUD) – 257 acres
- HCFCD buyout areas at Grantwood, Norchester, and Lake Cypress Estates
- Timber Lane UD acquisition of UPRR property for Cypress Creek Park – 80 acres
- Creek Course Park (Precinct 4, formerly west side of Cypresswood Golf Course) – 244 acres
- Cypress Creek frontage on south bank between 100 Acre Wood and YMCA - 2.7 acres
- HCFCD acquired floodway acreage along Cypress Creek where Cutten Road intersects Cypresswood Drive – 2 acres

.....continued next page.....

Other

- Cypress Creek Paddling Trail (Bayou Preservation Association and Cypress Creek Greenway Project) – 35 miles, under development
- Over \$20 million in bonds approved for park and trail projects by utility districts
- Cypress Creek Greenway Case Study completed by The Houston Parks Board with funding from H-GAC Our Great Region 2040
- Trail Master Plan under development for Cypress Creek/SH 249 Area
- HCFCD Bank Stabilization Projects (Meyer Park-2 phases, Kickerillo Mischer Preserve-2 phases, Little Cypress Creek Preserve)

*These parks, trails, and acquisitions listed were developed and/or acquired by MUDs, Precinct 3 and Precinct 4, developers, Bayou Land Conservancy and HCFD.

Jim Robertson, Chairman
Cypress Creek Greenway Project (CCFCC)

Year 2014 Annual Report Cypress Creek Greenway

... Continued next page.....

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Jim Robertson, Chairman
Cypress Creek Greenway Project (CCFCC)

Year 2014 Annual Report Cypress Creek Greenway

01/29/15

Cypress Creek Flood Control Coalition Profit and Loss Standard

January through December 2014

	<u>Jan - Dec '14</u>
Ordinary Income/Expense	
Income	
I - 2 — Resident Voluntary Contribu...	20,755.45
I - 3 — Grant Applications	
3b. — Other Sources	<u>5,000.00</u>
Total I - 3 — Grant Applications	5,000.00
I - 4 — Interest Earnings	<u>5.30</u>
Total Income	25,760.75
Expense	
10 — Office Supplies, Print, Postage	665.77
13 — Contributions & Membership ...	230.00
18 — Engineering/Technical Consu...	93.24
23 — Cypress Creek Greenway Pr...	7,875.23
7 — Administration Expense	2,318.77
11 — Computor ops and maintenanc...	1,500.00
12 — D&O L Liability Insurance	893.00
9 — Earthlink, SBC,DSL,Symantec	<u>1,315.80</u>
Total Expense	<u>14,891.81</u>
Net Ordinary Income	<u>10,868.94</u>
Net Income	<u><u>10,868.94</u></u>

01/29/15

Cypress Creek Flood Control Coalition Balance Sheet Standard

As of December 31, 2014

	<u>Dec 31, '14</u>
ASSETS	
Current Assets	
Checking/Savings	
1.1110 — Checking - Amegy Bank 365...	40,845.41
1.1130 — Investments - Amegy	<u>16,092.49</u>
Total Checking/Savings	<u>56,937.90</u>
 Total Current Assets	 56,937.90
Fixed Assets	
1.1300 — Computer & Office Equipment	<u>2,334.30</u>
Total Fixed Assets	<u>2,334.30</u>
 TOTAL ASSETS	 <u>59,272.20</u>
LIABILITIES & EQUITY	
Equity	
3000 — Opening Bal Equity	24,870.64
3900 — Retained Earnings	23,532.62
Net Income	<u>10,868.94</u>
Total Equity	<u>59,272.20</u>
 TOTAL LIABILITIES & EQUITY	 <u>59,272.20</u>

Cypress Creek Flood Control Coalition

2015 Budget-Proposed

Funds/Expense			2014 Budget	Total 2014	2015 Budget
Funds					
1-1	MUD/HOA Contributions				
1-2	Resident Vountary Contribution		\$20,000	\$25,756	\$24,000
1-3	Grant Applications				
	3a.- Houston Endowment				
	3b. - Other Sources (See Treasurer's Report)				
Total	1-3 Grant Applications				
	Misc				
1-4	Interest Earnings (Includes cking & savings)		\$5	\$5	\$5
Total			\$20,005	\$25,762	\$24,005
Expense					
1	Membership Bus. & Community Outreach		\$700		
2	Annual Meeting				
3	Preservation Committee				
4	IT Mgt-Evaluation Comm.				
5	AWBD Committee				
6	Legal & Accounting Fees & Banking fees				
7	Administration Expense	RD Smith	\$1,500	\$1,329	\$1,500
8	Fed Income Tax Preparation				
9	Earthlink, SBC,DSL,Symantec		\$1,500	\$1,316	\$1,500
10	Office Supplies,Print Postage		\$1,000	\$1,385	\$1,400
11	Computer ops & maint.		\$1,500	\$1,662	\$1,500
12	D&O Liability Insurance		\$1,000	\$893	\$1,000
13	Contributions & membership Dues		\$1,300	\$885	\$1,000
14	Houston-Galveston Area Council				
15	Publications			\$4	
16	Environmental Affairs Committee				
17	Seminar/Conference Expense		\$100		\$100
	Total 1->17		\$8,600.00	\$7,473	\$8,000.00
18	Engr / Tech Consultation			\$93	
	18-1 PY Work to be Paid in '2015				
	Rice Univ. NAI Project				
	LG Dunbar-FEMA Comp/LOMAR (Encumbered)				
	Total 18-1 PY Work to be Paid in '15		\$15,000	\$93	\$12,000
	18-ii CY 2010 Work				
	Rice Univ. NAI Project				
	Future Conditions-begin 4/1/10 (L Dunbar)				
	Houston Endowment for Future Conditions)(Encumbered Grant)				
	Aerial Photo's				
	Total 18-ii-CY 2015 Work				
Total 18	Engr / Tech Consultation		\$15,000		\$14,000
19	Reserve for Future Requirements				
20	Grant Proposal Expense				
21	Operator Fee - Customer Billing				
22	Bookkeeping				
23	Cypress Creek Greenway Project-J Robertson		\$4,000	\$1,957	\$2,000
	23a Meyer Park / REI (Encumbered Grant)				
	23b Memorial Lady Bug (Encumbered Grant)				
	23d Cypress Creek Greenway Project-other			\$5,319	
Total 23	Cypress Creek Greenway project		\$4,000	\$7,275	\$2,000
24	Detention Pond Committee				
25	Contingencies				
26	Misc. office Equipment		\$250		\$250
	Total 18>26				
Total expense			\$250		\$250
Total Income			\$27,850.00	\$14,892	\$24,250.00
			\$20,005.00	\$25,762	\$24,005.00

Cypress Creek Flood Control Coalition
Board and Committee Members
January 01, 2015

Board of Directors

3-year term ending

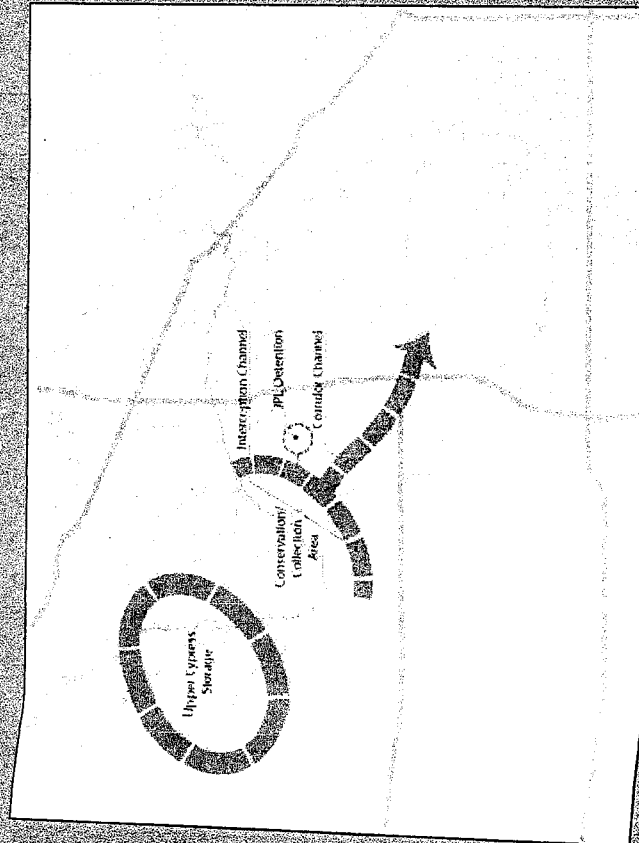
John Porea, Treasurer	2015
James H. Robertson	2017
John J. Sakoloski, Secretary	2015
Autumn L. Selman	2017
Robert L. Shelton	2016
Richard D. Smith, President	2016
Peter R. Smullen, Vice President	2016
Joe Velasco	2017
Carl Zeitler	2015

Committees

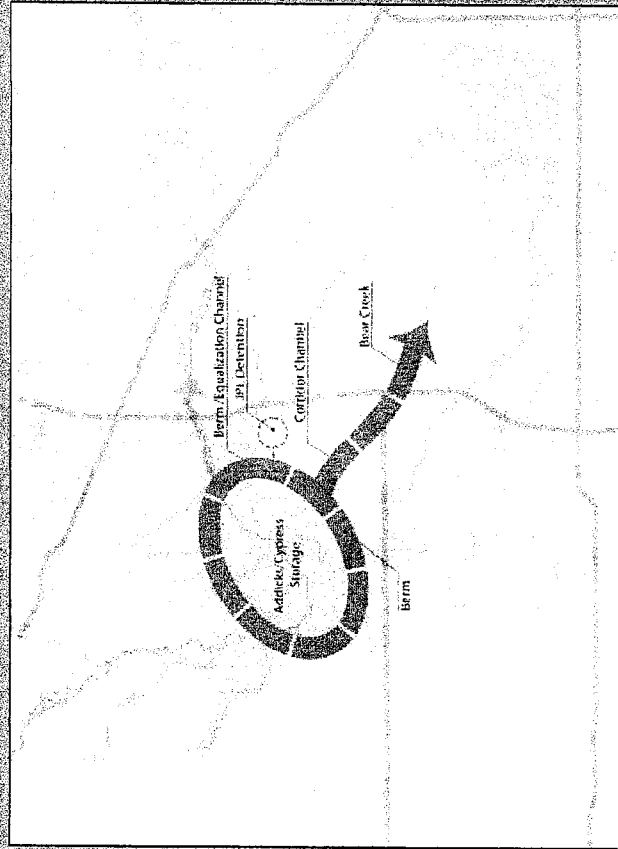
- Communications Committee
Dick Smith, Chair
- Public Relations Committee
John Porea, Chair
- Civic Association / MUD Membership Committee
(*Appointment required to fill vacancy*)
- Technical Management Committee
Pete Smullen, Chair
Autumn Selman
Jack Sakolosky
- Preservation Committee
Patsy Gillham, Chair
- IT Management
Joe Velasco, Chair
- Cypress Creek Greenway Committee
Jim Robertson, Chair

Regional Management Plans for the Cypress Creek Overflow

**Plan 3 Schematic: Mound Creek
Reservoir with Overflow
Conveyance "B"**



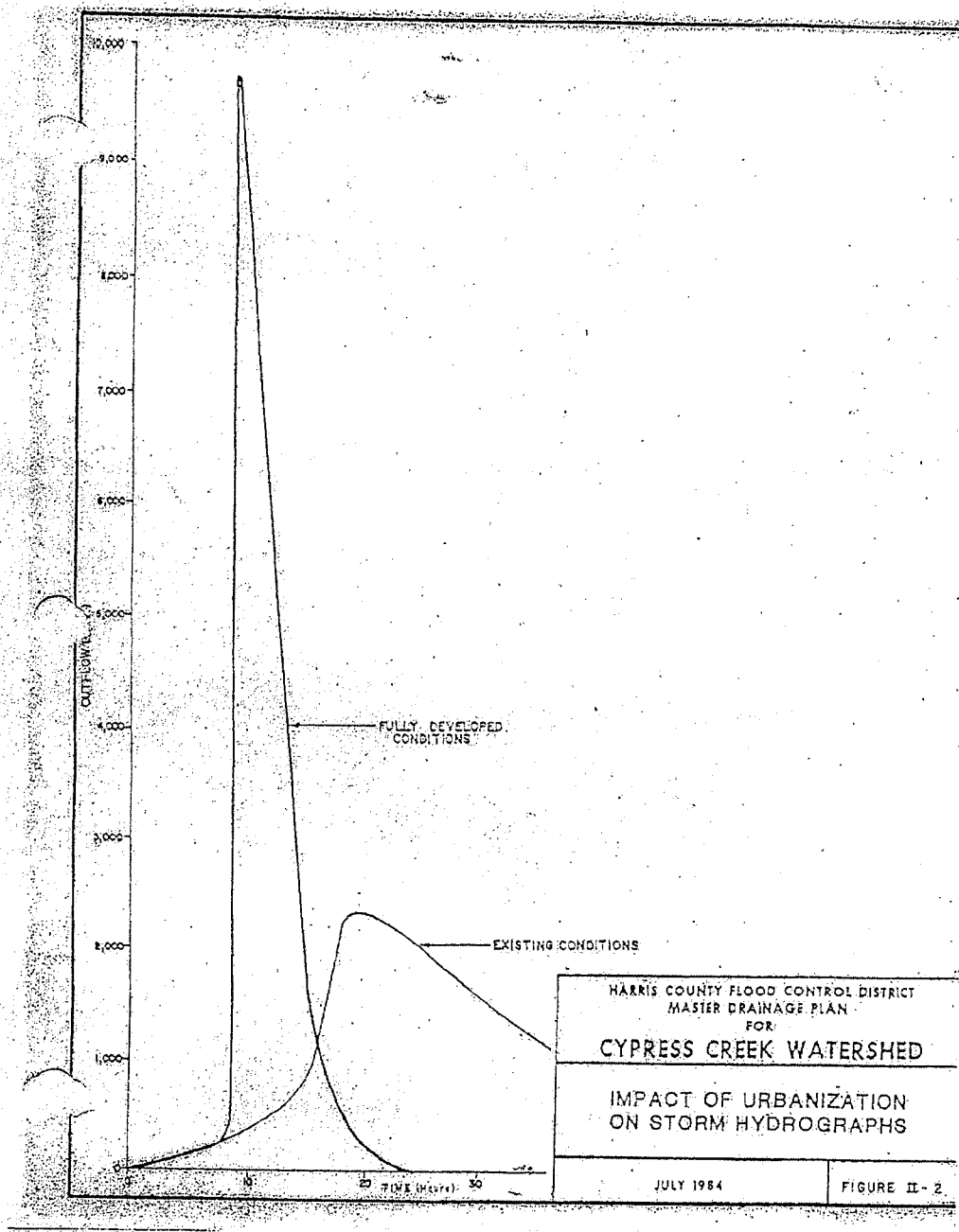
**Plan 5 Schematic: Katy-Hockley N -
Cypress Reservoir**



**Texas Water
Development Board**

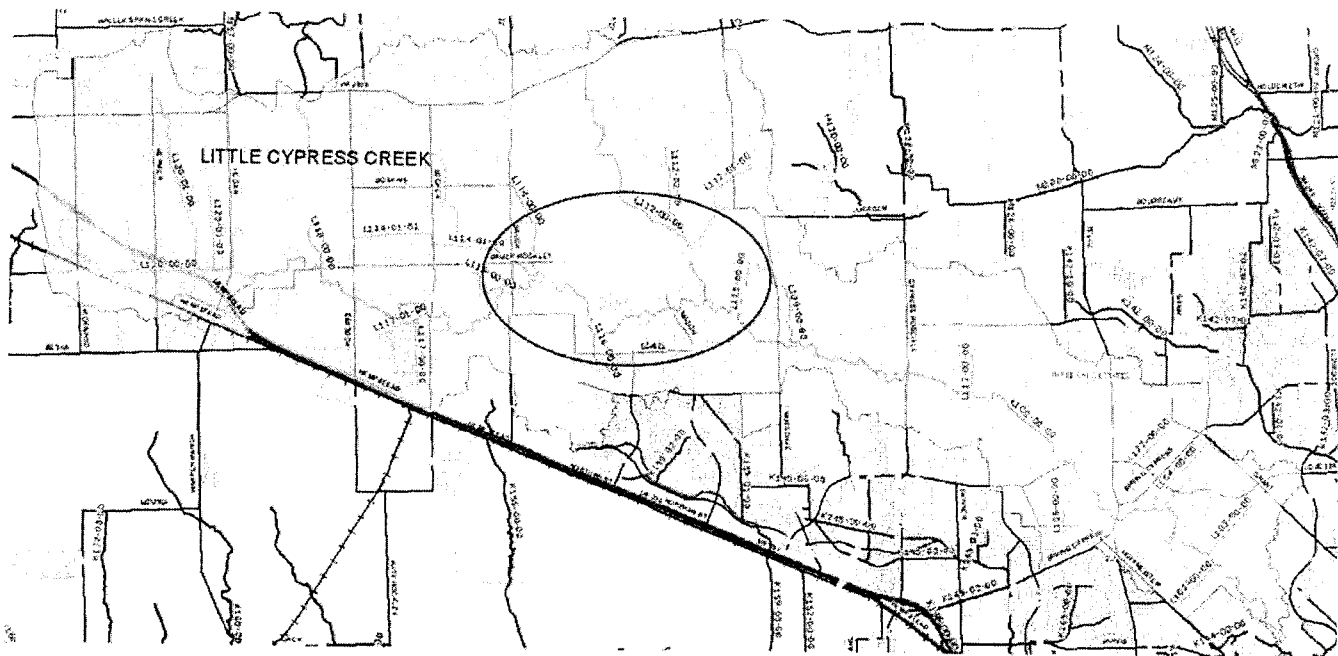


Impact of Urbanization on Stormwater Runoff Cypress Creek Watershed ¹

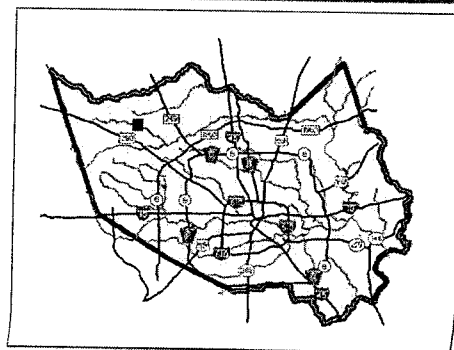


This hydrograph illustrates the stormwater runoff peak base flood elevation and runoff duration for (1) undeveloped land in the upper watershed (lower curve) and (2) the 5X increase but shorter duration at this same location under full development conditions (higher curve).

¹ Source: Cypress Creek Watershed Master Plan prepared by Turner, Collie & Braden. Master Plan was adopted by Harris County Commissioners Court in 11986 and remains today as the only official master plan for the watershed.



Scope: Acquisition of a site for a new regional detention basin in the Little Cypress Creek Watershed. Funding for design, permitting, and initial excavation (possibly through an Excavation and Removal contract) is included under L100-00-00-FP.



Location: North of 290, West of 249 in Unincorporated Harris County
Precinct: 3

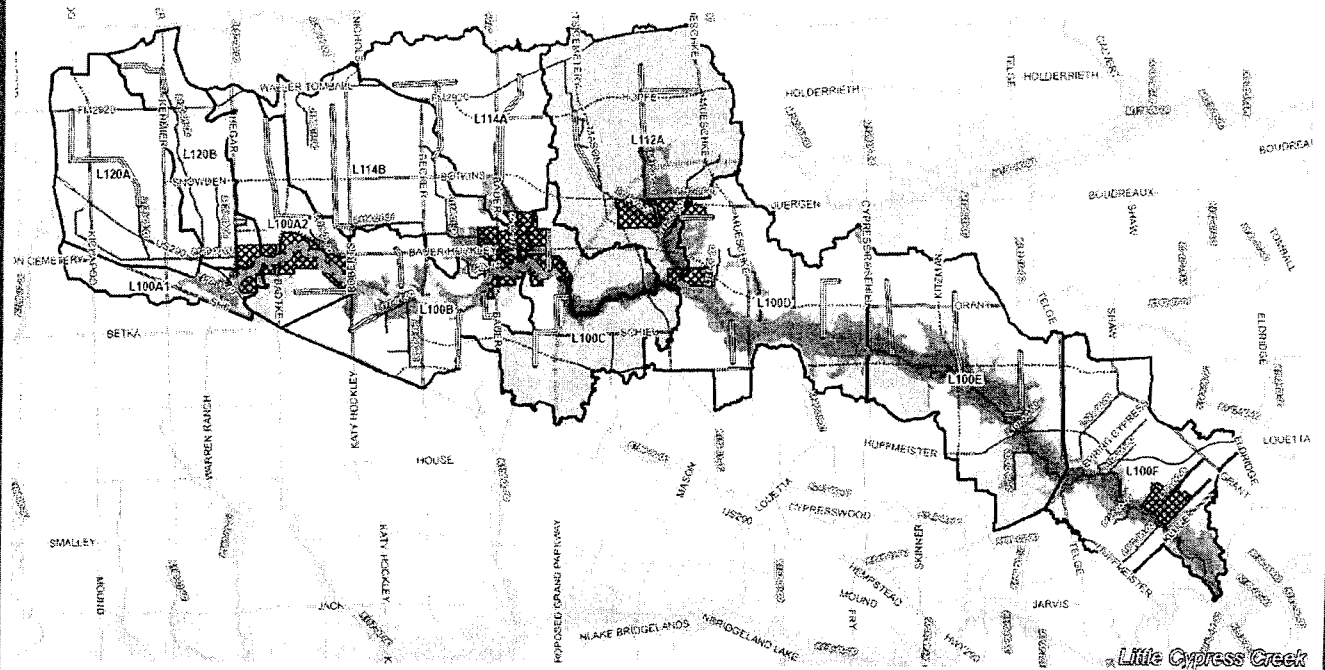
Key Map: 324-328, 368

L500-0X-00-FP

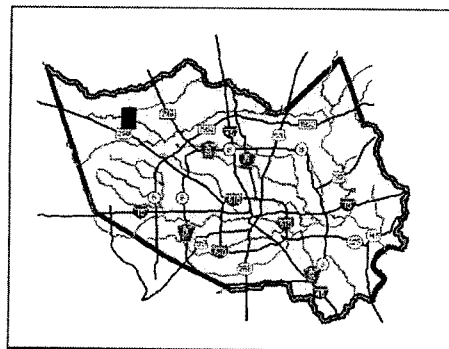
Name: Little Cypress Creek Regional Detention Basin

Category: 3 – Main Channel Flood Damage Reduction Project

Stage	Budget	Fiscal Year
ROW	\$2,000,000	Requested FY 15-16
Design	See L100-00-00-FP	
Construction	See L100-00-00-FP	
Turnover/Startup		
Support Activities		
Total	\$2,000,000	



Scope: Continue development of elements of the sub-regional watershed master plan with Frontier concepts and provide program management services.

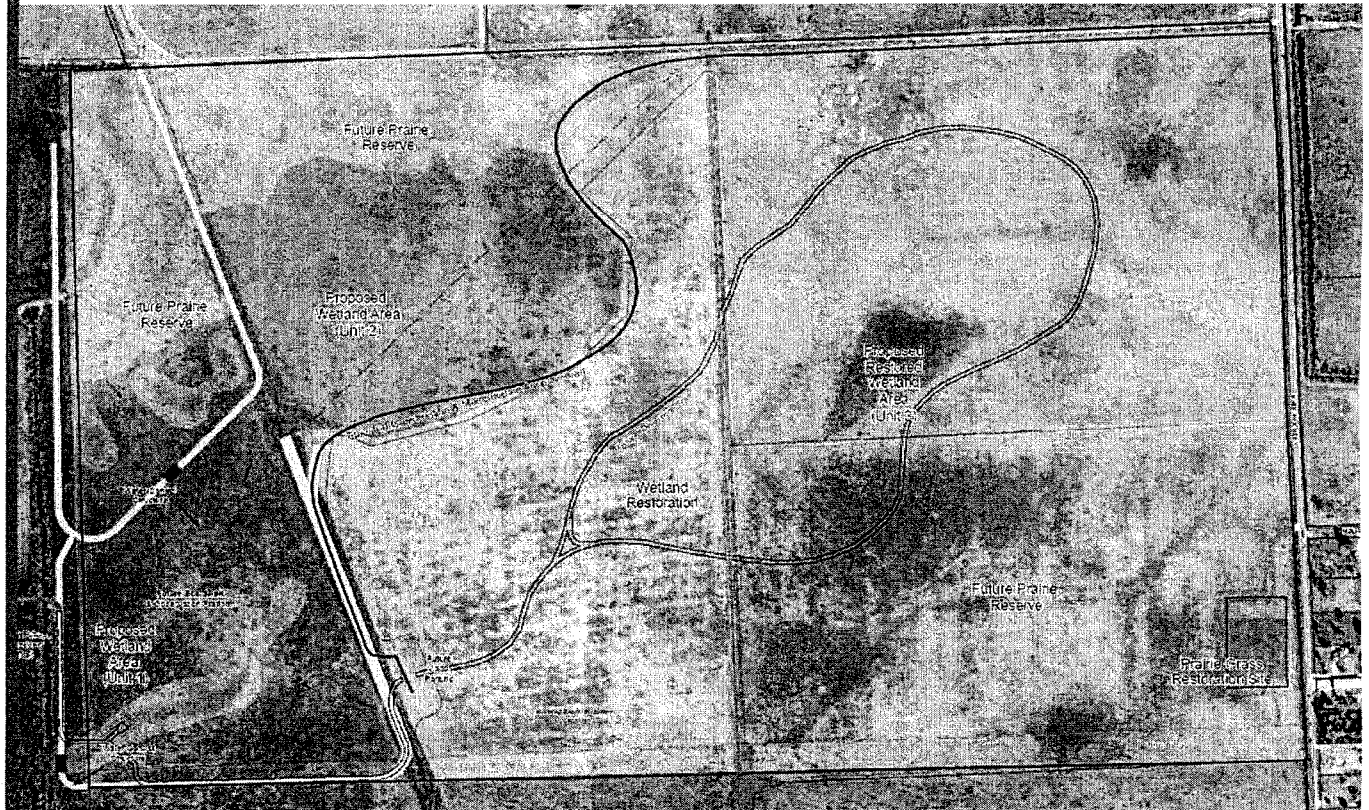
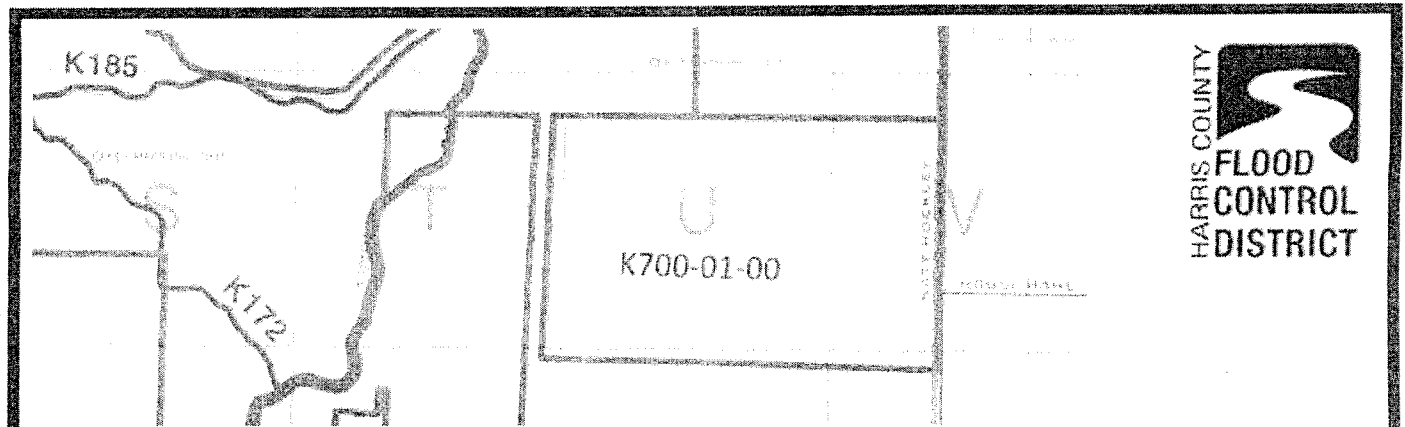


Location: Harris County
Unincorporated
Precincts: 3, 4
Key Map: 324-329

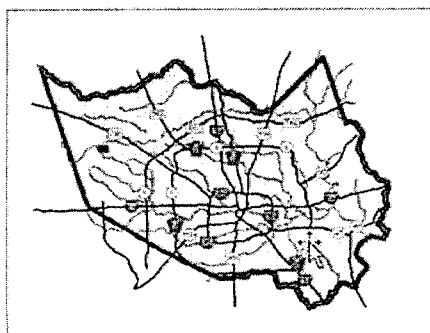
L100-00-00-FP

Name: Little Cypress Creek Sub-Regional Frontier Program
Category: 3 – Main Channel Flood Damage Reduction Project

Stage	Budget	Fiscal Year
Feasibility		
Development	\$290,000	Requested FY 14-15
ROW/Utility Resolution		
Design – Program Mgmt.	\$270,000	Requested FY 15-16
Construction	\$5,800,000	Requested FY 17-18
Turnover/Startup		
Support Activities		
Total	\$6,360,000	



Scope: Construction of wetlands mitigation for impacts at U502-02-00 and U500-02-00. Construction started in August 2013 and was completed in February 2014. Final payment to the Contractor was made in April 2014.



Location: Harris County
(unincorporated)
(near Katy Hockley and House
Hahl Rd)
Precinct: 3
Key Map: 364 U,V

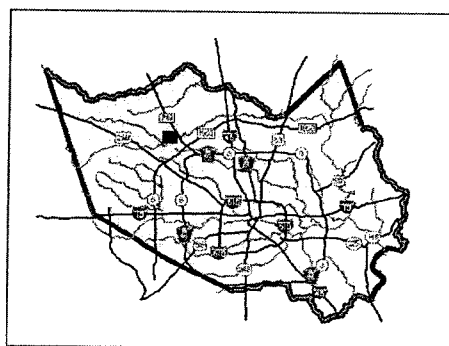
K700-01-00-E001

Name: Site Improvements and Wetlands Construction
Category: 3 – Main Channel Flood Damage Reduction Project

Stage	Budget	Fiscal Year
Feasibility		
Development		
ROW/Utility Resolution		
Design		
Construction	\$100,000	Requested FY 14-15
Turnover/Startup		
Support Activities		
Total	\$100,000	



Scope: Identify and implement a conveyance improvement plan on HCFCF Unit K163-00-00 from a set of previously identified alternatives to improve conveyance within the area of Timber Lakes Estates.



Location: Harris County
Unincorporated Harris County
(Near Cypress N Houston @ Eldridge)
Precinct: 3
Key Map: 368 GLMR

K163-00-00-E001

Name: K163-00-00 Conveyance Improvements in Timber Lake Estates

Category: 4 – Tributary Flood Damage Reduction Project

Stage	Budget	Fiscal Year
Development		
ROW/Utility Resolution	\$1,270,000	Requested FY 14-15
Design		
Construction	\$2,100,000	Requested FY 15-16
Turnover/Startup		
Support Activities		
Total	\$3,370,000	

A map of the Washington, D.C. metropolitan area, showing the Potomac River to the west and south. Major highways (Interstates 495, 270, 267, 266, 265, 264, 263, 262, 261, 260, 259, 258, 257, 256, 255, 254, 253, 252, 251, 250, 249, 248, 247, 246, 245, 244, 243, 242, 241, 240, 239, 238, 237, 236, 235, 234, 233, 232, 231, 230, 229, 228, 227, 226, 225, 224, 223, 222, 221, 220, 219, 218, 217, 216, 215, 214, 213, 212, 211, 210, 209, 208, 207, 206, 205, 204, 203, 202, 201, 200, 199, 198, 197, 196, 195, 194, 193, 192, 191, 190, 189, 188, 187, 186, 185, 184, 183, 182, 181, 180, 179, 178, 177, 176, 175, 174, 173, 172, 171, 170, 169, 168, 167, 166, 165, 164, 163, 162, 161, 160, 159, 158, 157, 156, 155, 154, 153, 152, 151, 150, 149, 148, 147, 146, 145, 144, 143, 142, 141, 140, 139, 138, 137, 136, 135, 134, 133, 132, 131, 130, 129, 128, 127, 126, 125, 124, 123, 122, 121, 120, 119, 118, 117, 116, 115, 114, 113, 112, 111, 110, 109, 108, 107, 106, 105, 104, 103, 102, 101, 100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76, 75, 74, 73, 72, 71, 70, 69, 68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54, 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1) are shown as thick lines. The locations of the 15 study sites are marked with numbered squares (1 through 15) across the map. The map also shows the locations of the 15 study sites marked with numbered squares (1 through 15).

Stage	Budget	Fiscal Year
Program Management	\$130,000	Requested FY 14-17
ROW	\$15,560,000	Requested FY 14-19
Design	\$900,000	Requested FY 14-17
Construction	\$10,000,000	Requested FY 15-18
Turnover/Startup		
Support Activities		
Total	\$26,590,000	

Floodwater Drainage Management Responsibility

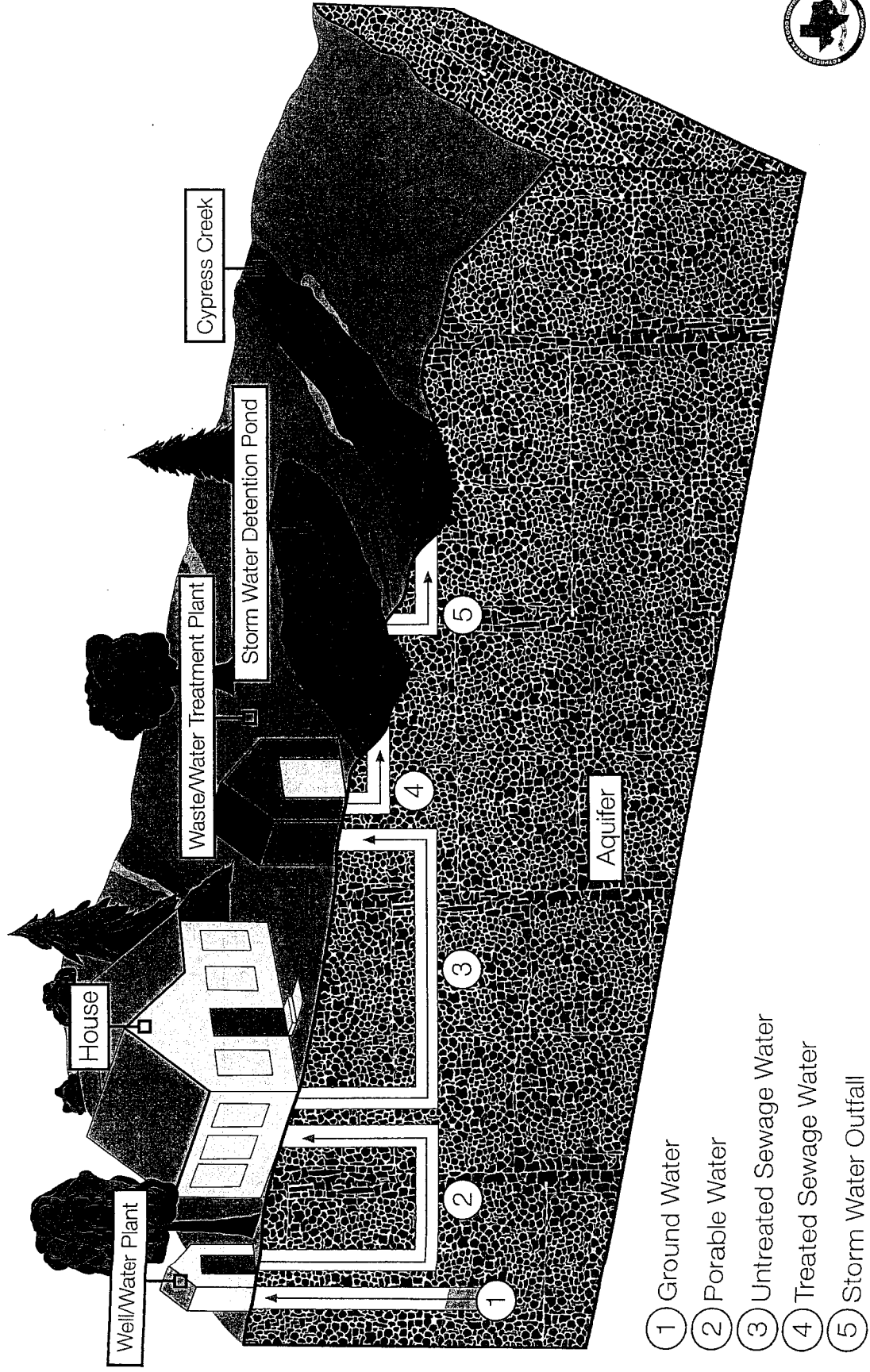
Flood mitigation throughout the Cypress Creek Watershed is a responsibility principally shared by the 4 government entities listed below and shown on the 3 attached illustrations.¹ Thus it requires a systems engineering approach in addressing both design and operational aspects.

1. MUD. Responsible for drainage of stormwater and treated waste water out of their district and into the Cypress Creek main channels and tributaries which their community must rely on for conveyance away from the districts and eventually into Lake Houston where it is or will be returned by the Northwest Regional Water Authority for use in fulfilling their obligations to supply potable water to the residents.
2. The Commissioners Precinct: Storm sewer facilities from inlet to outfall into Cypress Creek.
3. The Harris County Flood Control District: The Cypress Creek channels and tributary point of receipt from the MUD storm sewer outfalls.
4. NWRWA: Transport of Lake Houston water back to the MUD for supply of potable water to the community.

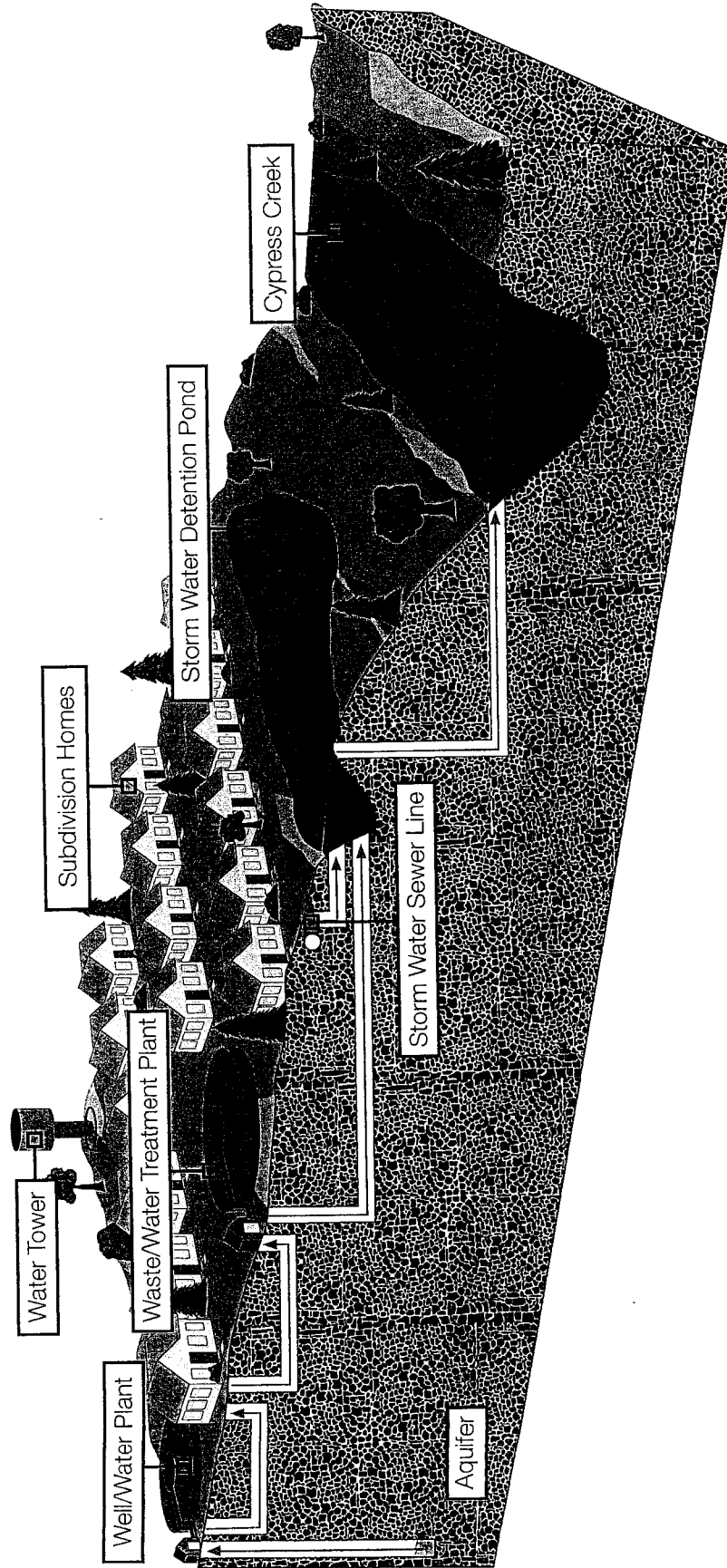
Floodwater Drainage Responsibility

¹ See illustrations entitled "CIRCULATORY SYSTEM / Typical Home & Community Water Transporation",
" CIRCULATORY SYSTEM / Typical Subdivision" and,
" CREEK & TRIBUTARY / Watershed's Veins & Arteries / CIRCULATORY SYSTEM

CIRCULATORY SYSTEM | Typical Home & Community Water Transportation



CIRCULATORY SYSTEM | Typical Home Subdivision



GOVERNMENT RESPONSIBILITY (Stormwater Drainage)

MUD DISTRICT: Within District boundaries to storm sewer inlet.

HARRIS COUNTY PRECINCT #3 & #4: Storm sewer line from inlet to and including outfall.

HCFC: Creek Channel and designated drainage ditches.



CREEK & TRIBUTARY | Watershed's Veins & Arteries

CIRCULATORY SYSTEM

