



**GREATER HOUSTON  
FLOOD MITIGATION  
PROJECTS  
BY WATERSHED**

Updated April 10, 2018



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## GREATER HOUSTON FLOOD MITIGATION CONSORTIUM

Through the Greater Houston Flood Mitigation Consortium, leading researchers from institutions across Texas have come together to compile, analyze and share a rich array of scientifically-informed data about flooding risk and mitigation opportunities.

We want to protect and sustain our residents, particularly those most vulnerable, as well as our environment and our economy. We believe it is critical for our public officials to have access to the best possible information available to inform their deliberations. Similarly, we think our residents also deserve access to the best information that will help them better understand and advocate for the options that work best for their families and communities.

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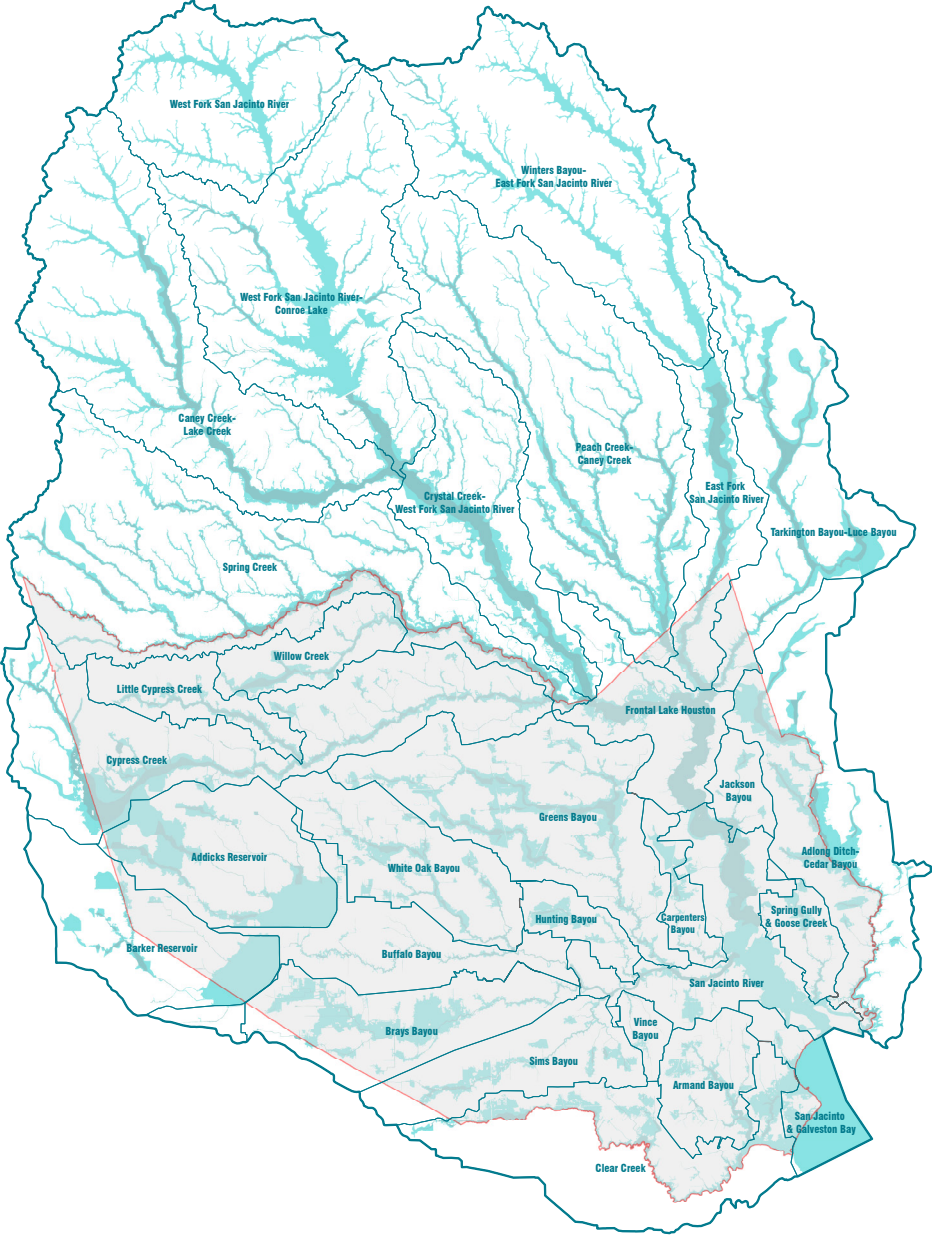
### **Project Manager**

Huitt-Zollars

### **Learn More**

[HoustonConsortium.com](http://HoustonConsortium.com)

# SCOPE OF STUDY AREA





# ABOUT THIS DOCUMENT

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This document examines infrastructural projects across the San Jacinto Basin aimed at flood mitigation. The projects included range from the early 1990s to early 2018. This document is organized by watershed such that each watershed includes the following information

## **Maps of Projects Within Each Watershed**

Each watershed section starts with a locator map and a localized map that identifies the various types of projects located in that watershed, and the stage they are in.

## **Project Tables Within the Watershed**

The tables are grouped by the type of project: channel-related projects, detention projects, reservoirs, programs, or studies. These are the major projects to the best of our knowledge, found in the reports listed in Appendix 1. There may be other projects that have not been included in this document.

## **The Stage of Each Project**

The tables reflect whether a project has been completed, planned, designed, or is under construction, and whether it is a proposed project. Proposed projects are the ones that have been proposed by a group outside the Harris County Flood Control District (HCFCD) and the budget associated with those are a rough estimate. The designations for stage are:

- Completed as of 2017
- Planned but no funding allocated as of 2017
- Designed as of 2017
- Construction means under construction as of 2017
- Proposed by non-federal groups and no funding allocated

## **Source of Project Data**

The tables include a column that indicates the source. A complete list of sources can be found in Appendix 1.

## **Budget**

Each of the project tables show an associated budget in a column. Totals by stage of project can be found at the beginning of each watershed section.

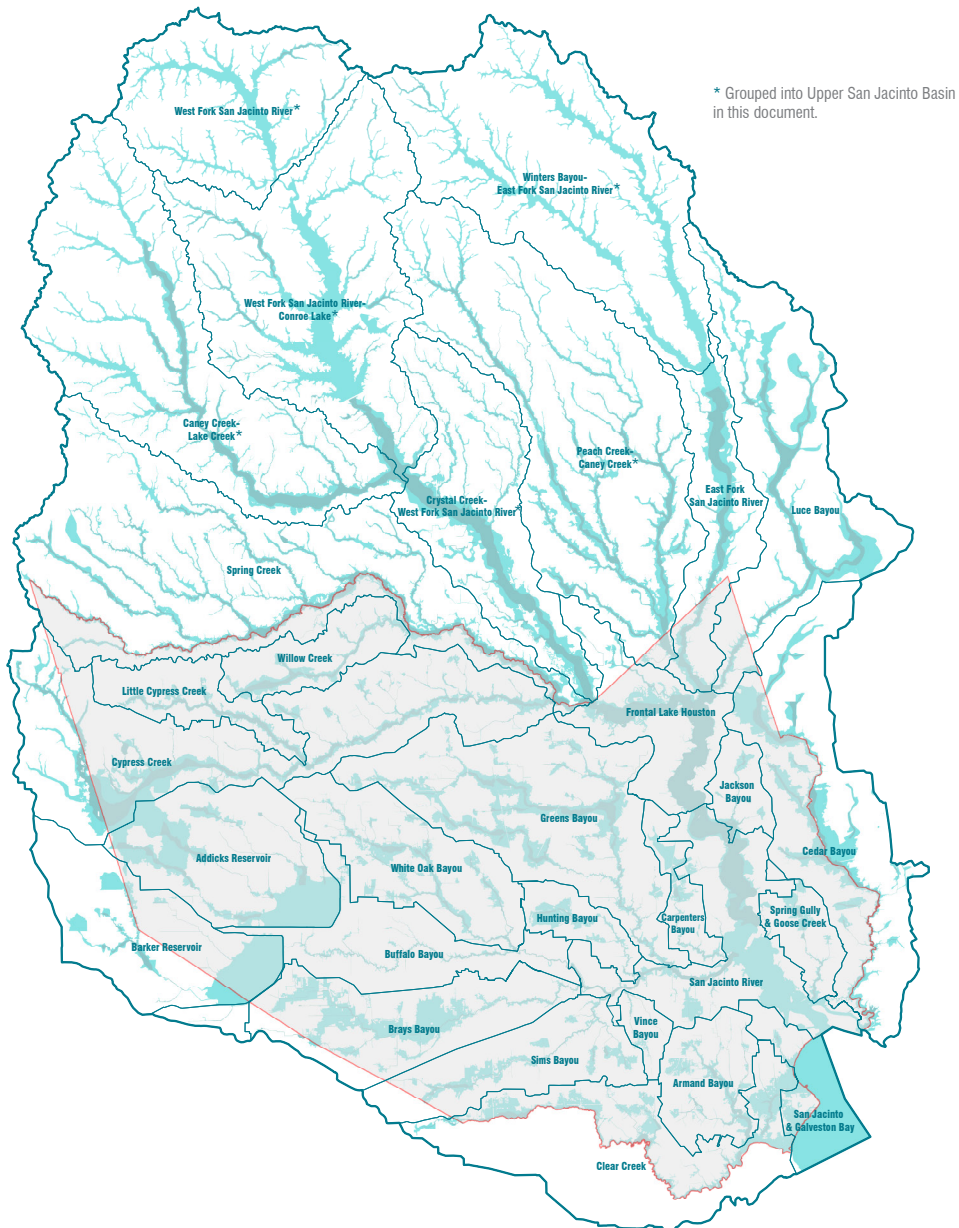
## **Land Area, Population, and Stream Length**

This information comes primarily from the Harris County Flood Control District. Estimates of the population inside the watershed boundary have been calculated from 2010 Census data.

## **Damages and Claims from Tropical Storm Allison, Hurricane Ike, and Hurricane Harvey**

The total amount of damages in dollars and the number of claims from each of these flood events has been estimated based on National Flood Insurance Program (NFIP) claims. For Hurricane Harvey, these are estimates as of November, 2017. There are inherent shortcomings in this information, because anyone who does not own flood insurance or did not file a claim is not reflected in these numbers. Additionally, a measure of damages in dollars is not an accurate representation of the total impact of flooding on lives, families, homes, businesses, and incomes.

# WATERSHEDS



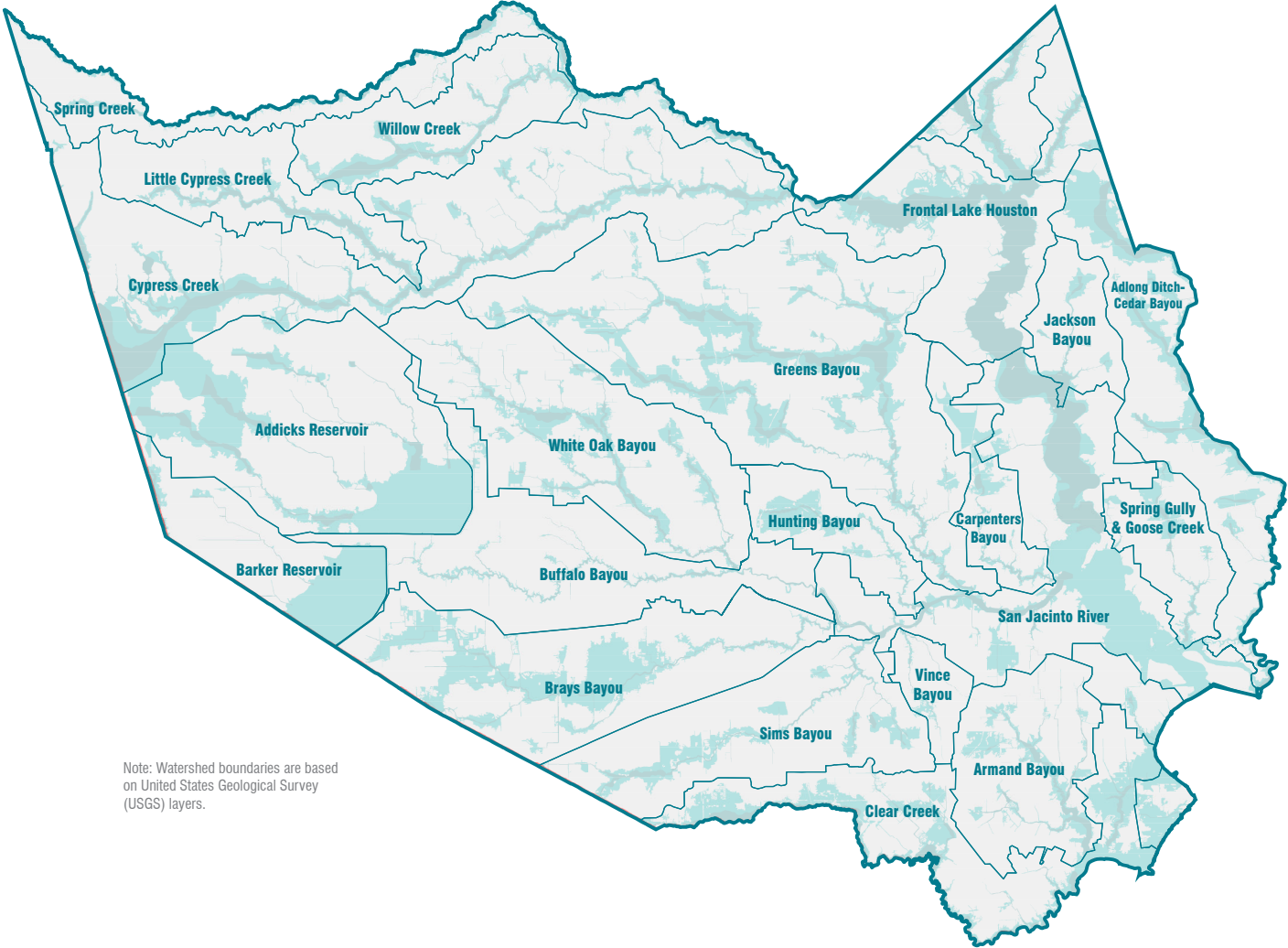
There are 30 watersheds, 25 of which are in Harris County. Some are large, some are small, some densely populated, some rural. All have experienced considerable flooding.

This document catalogs flood infrastructure plans and projects in all of these watersheds. It includes proposed projects (whether funded or not) as well as projects that have been completed since the early 1990s or are under construction as of 2017. These include projects by Harris County Flood Control District (HCFCD) and the US Army Corps of Engineers (USACE) as well as projects proposed by other public entities and private interest groups.

Some watersheds have been the focus of major planning and engineering efforts. On Brays Bayou, for example, HCFCD is nearly two decades into a \$480 million flood control project that is now 80% complete. Some have coordinated “programs” of multiple projects. Others have seen only isolated projects, and on others studies are underway that will define future projects even if there are no defined projects on the books.



# HARRIS COUNTY WATERSHEDS

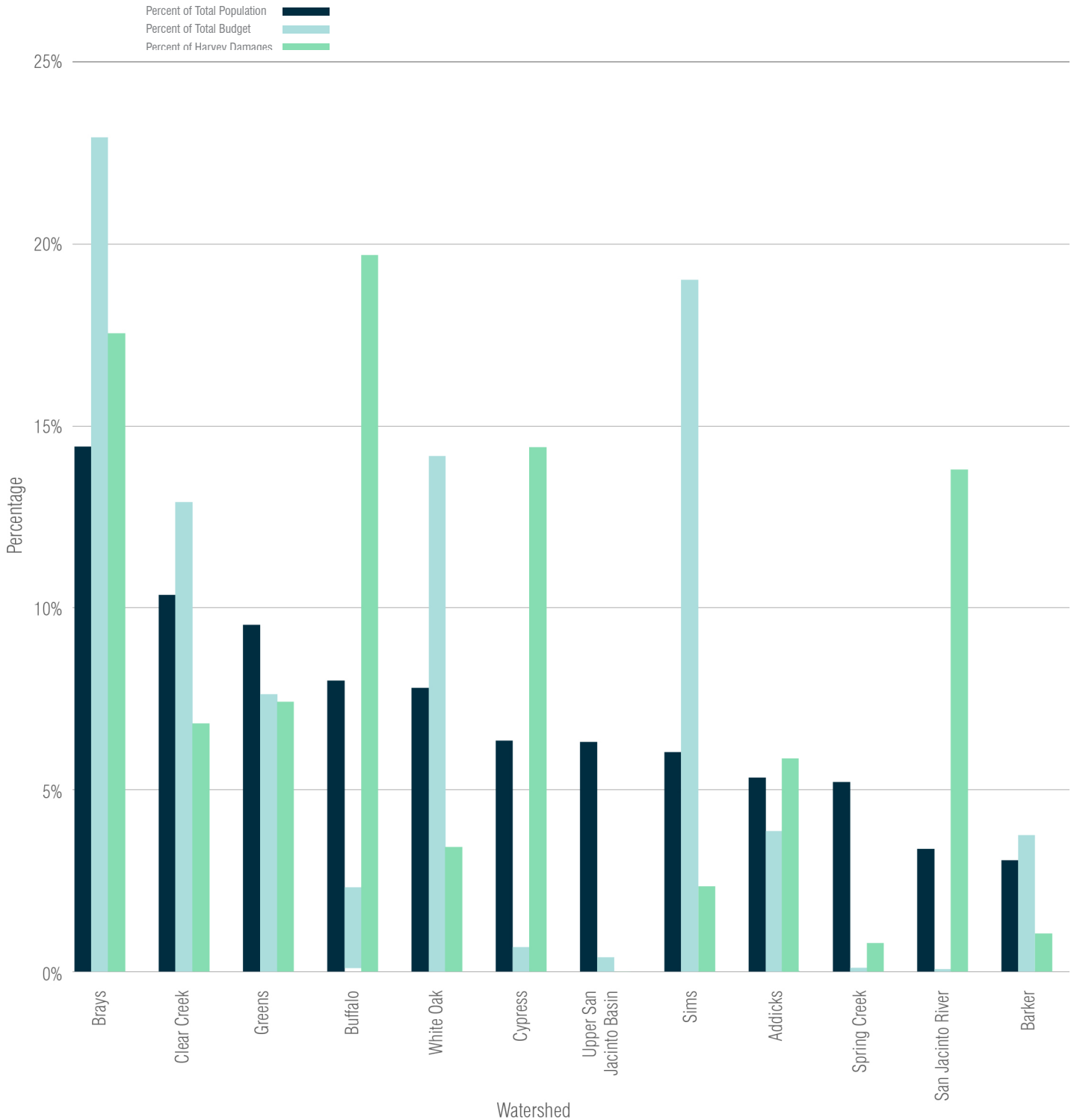


Note: Watershed boundaries are based on United States Geological Survey (USGS) layers.

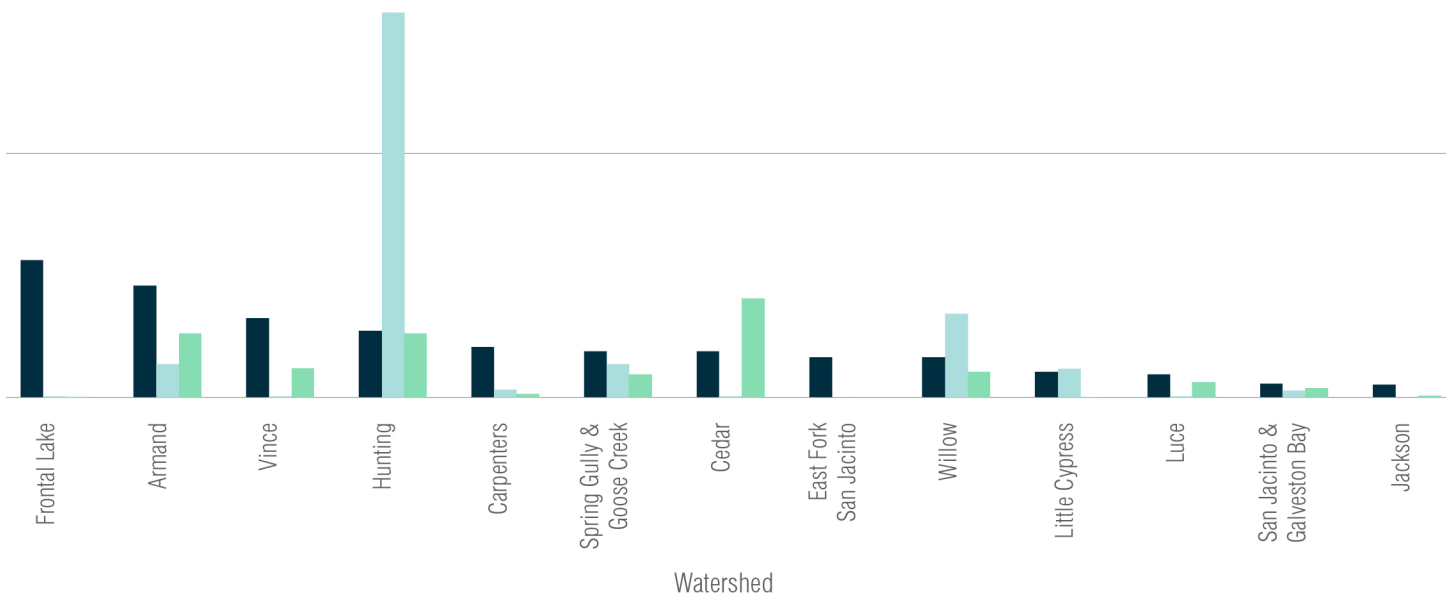
In addition to the list of projects and studies in this document that are specific to each watershed, Governor Abbott's *Rebuilt Texas Request for Federal Assistance Critical Infrastructure Projects* document has also proposed a Metropolitan Houston Regional Watershed Assessment study for \$3,000,000.

# WATERSHED ANALYSES

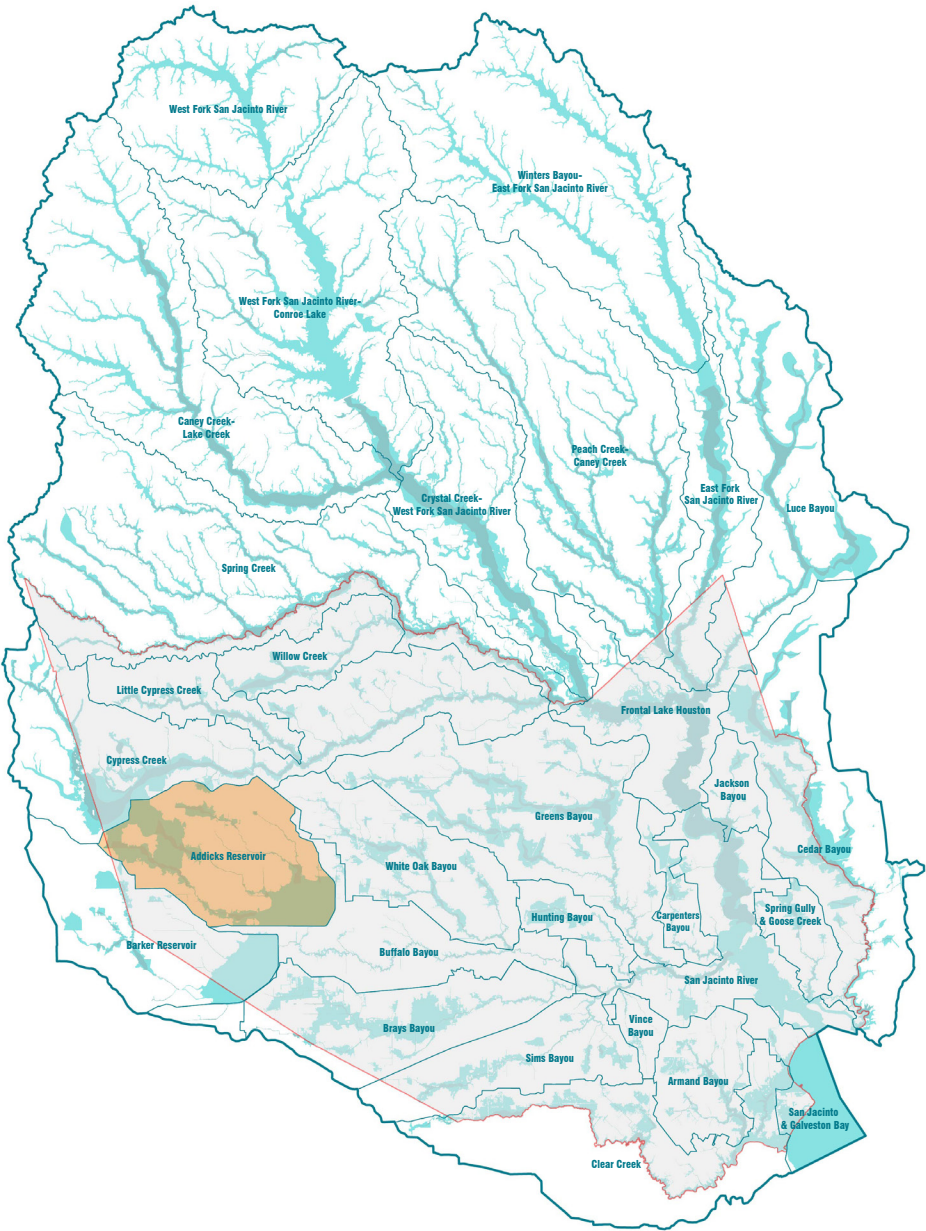
This graph looks at the distribution of population, and budget spent or allocated on projects across the entire San Jacinto Basin, as well as Hurricane Harvey damages in dollars for the watersheds where data is available. The budget per watershed includes money spent on completed projects since the early 1990s, funds spent on projects under construction, and funds attached to projects that had been identified before Hurricane Harvey. The Hurricane Harvey damages are based on National Flood Insurance Program (NFIP) claims as of November 2017.



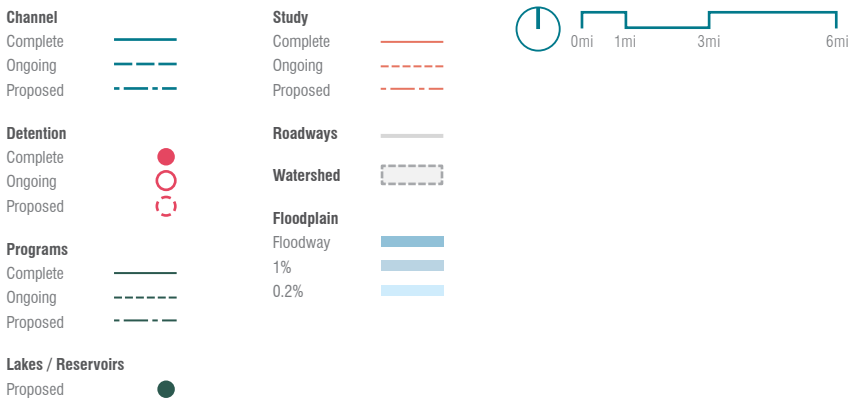
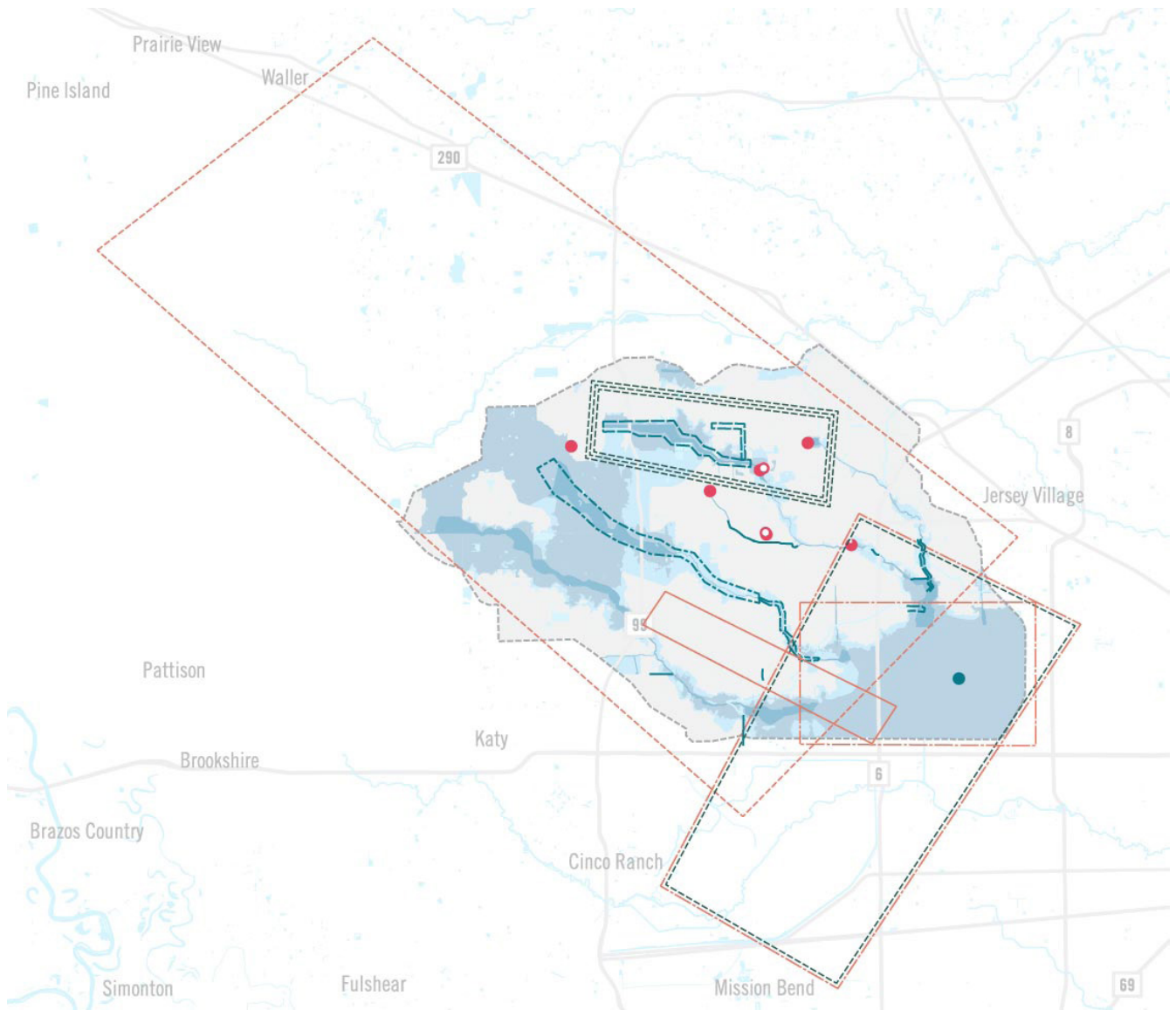
	% OF TOTAL POPULATION	WATERSHED POPULATION	% OF TOTAL BUDGET	BUDGET PER WATERSHED	% OF HARVEY DAMAGES	HARVEY DAMAGES
Brays	14%	800,682	23%	\$496,356,585	18%	\$164,536,910
Clear Creek	10%	574,172	13%	\$279,363,308	7%	\$63,980,473
Greens	10%	528,720	8%	\$165,085,888	7%	\$69,564,864
Buffalo	8%	444,602	2%	\$50,343,239	20%	\$184,651,450
White Oak	8%	433,250	14%	\$306,705,497	3%	\$32,160,022
Cypress	6%	351,882	1%	\$14,756,881	14%	\$135,172,490
Upper San Jacinto Basin	6%	350,000	0%	\$8,675,000	N/A	N/A
Sims	6%	334,727	19%	\$411,565,145	2%	\$21,893,485
Addicks	5%	295,694	4%	\$83,716,203	6%	\$55,030,247
Spring Creek	5%	289,476	0%	\$2,375,006	1%	\$7,390,500
San Jacinto River	3%	187,570	0%	\$1,619,969	14%	\$129,409,865
Barker	3%	169,429	4%	\$81,274,105	1%	\$9,750,868
Frontal Lake Houston	3%	156,472	0%	\$7,820	N/A	N/A
Armand	2%	127,350	1%	\$16,946,427	1%	\$12,211,341
Vince	2%	89,753	0%	\$18,084	1%	\$5,500,012
Hunting	1%	75,908	8%	\$175,921,766	1%	\$12,302,286
Carpenters	1%	57,249	0%	\$3,866,830	0%	\$711,800
Spring Gully & Goose Creek	1%	52,386	1%	\$14,440,505	0%	\$4,343,553
Cedar	1%	51,840	0%	\$416,667	2%	\$18,945,343
East Fork San Jacinto	1%	45,890	0%	\$166,667	N/A	N/A
Willow	1%	45,890	2%	\$37,302,668	1%	\$4,914,309
Little Cypress	1%	28,879	1%	\$12,777,593	N/A	N/A
Luce	0%	26,000	0%	\$166,667	0%	\$2,852,650
San Jacinto & Galveston Bay	0%	14,952	0%	\$3,310,650	0%	\$1,707,825
Jackson	0%	14,014	0%	0	0%	\$301,000
<b>TOTAL</b>	<b>100%</b>	<b>5,546,787</b>	<b>100%</b>	<b>2,167,179,170</b>	<b>100%</b>	<b>937,331,293</b>



# ADDICKS RESERVOIR



Addicks Reservoir, completed in 1948 by the US Army Corps of Engineers (USACE), provides flood control for the Buffalo Bayou watershed. About 130 square miles drain into the reservoir, which in turn drains into Buffalo Bayou. Development in this watershed started in the 1980s and continues today, accelerated by the construction of the Grand Parkway. HCFCD has several projects under construction and in planning to create new flood control infrastructure as the prairie is developed. The Addicks watershed is also the site of the proposed “third reservoir,” which is intended to capture water flowing overland from the Cypress Creek watershed into Addicks. There was significant damage from Harvey in this watershed, particularly to homes built inside the reservoir pool.



STATISTICAL DATA	
Watershed Area	138 square miles
Watershed Population	295,694
Open Stream	159 miles
Budget for Complete Projects	\$5,655,314
Budget for Projects Under Construction	\$69,850,000
Budget for Ongoing Projects	\$8,210,889
Total Budget for Watershed	\$83,716,203
Budget per Capita	\$283
Budget for Proposed Projects	\$750,650,000
Allison Damages (Claims)	\$219,264 (16)
Ike Damages (Claims)	\$2,824,088 (235)
Harvey Damages (Claims)	\$55,030,247 (2,468)

# ADDICKS RESERVOIR

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Morton Road Channel Modifications	Mason Road to South Mayde Creek	Completed	HCFCF Data	\$2,409,733
U106-00-00 Rehabilitation	Rehabilitation of channel U106-00-00 to restore conveyance capacity.	Construction	HCFCF - CIP '18	\$1,250,000
U102-00-00 Rehabilitation	Rehabilitation of channel U102-00-00 to restore conveyance capacity.	Construction	HCFCF - CIP '18	\$1,000,000
Upper Langham Creek Frontier Program Revegetation and Environmental Enhancements	Revegetation of Langham Creek Corridor includes establishing permanent stormwater interceptor wetlands, geomorphic fp stabilization, stormwater quality enhancements & habitat improvements.	Construction	HCFCF - CIP '18	\$1,000,000
U107-00-00 Rehabilitation	Rehabilitation of channel U107-00-00 to restore conveyance capacity.	Construction	HCFCF - CIP '18	\$800,000
Rehabilitation	Greenhouse downstream 6900 +/- to Barker Cypress	Completed	HCFCF Data	\$511,765
Rehabilitation	U/S end to Saums Rd.	Completed	HCFCF Data	\$141,676
Channel Revegetation and Environmental Enhancements	Revegetation of tributary including establishing permanent stormwater interceptor wetlands for stormwater quality enhancements.	Construction	HCFCF - CIP '18	\$100,000
TS Francis Damage	Addicks Reservoir to W. Little York Road	Completed	HCFCF Data	\$73,959
Pilot Channel Desilt	Morton upstream to Appletree Hill	Completed	HCFCF Data	\$8,469
Dinner Creek Channel Restoration Project	Repair severe slope erosion and remove sediment from a 4,8000 ft section from Greenhouse Rd to Freeman Rd. Replaced 25 damaged interceptor structures, installed riprap, and removed sediment	Completed	HCFCF Website	\$-
Survey	Addicks Satsuma Road to the confluence of U106-00-00.	Completed	HCFCF Data	\$-
			<b>TOTAL</b>	<b>\$7,295,601</b>

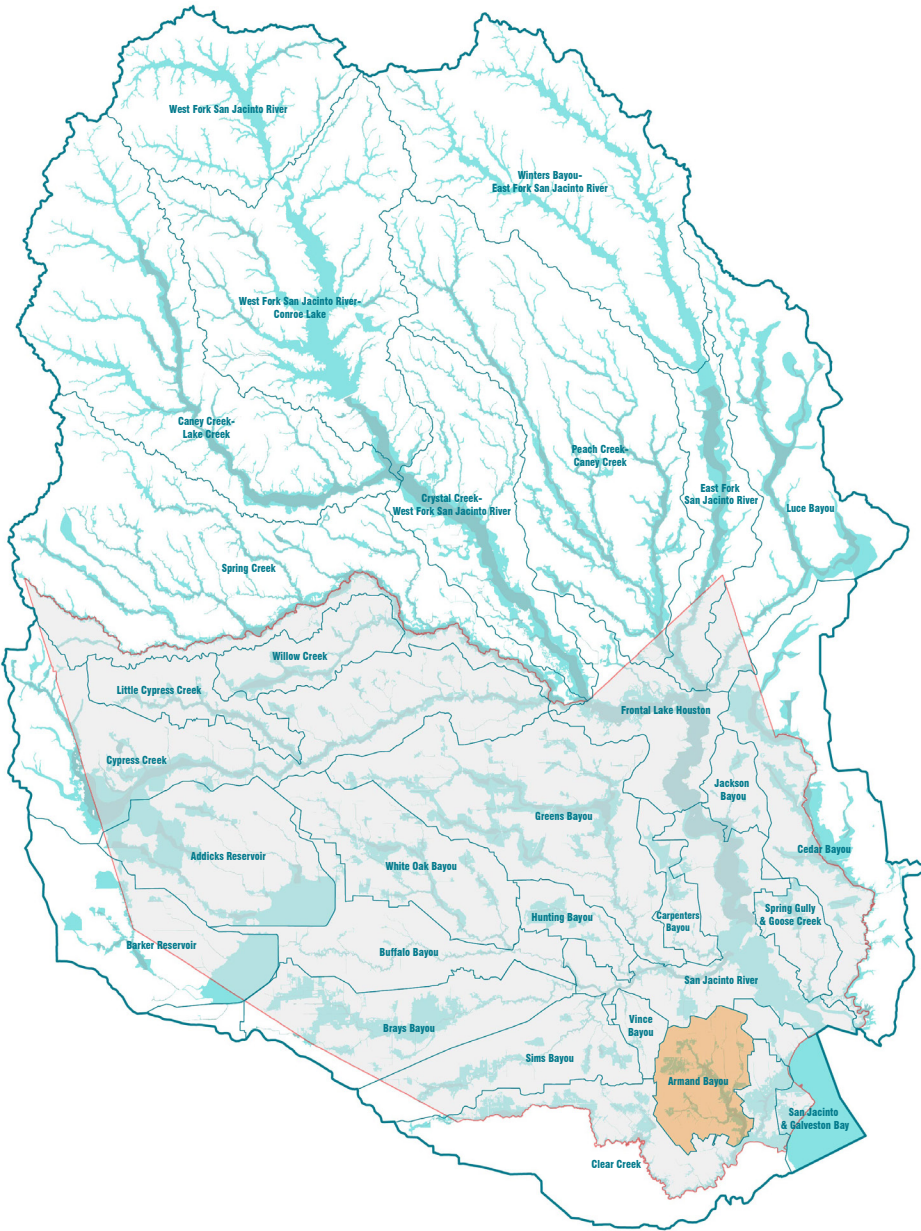
NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Final Detention Basin Improvements	Northeast corner of Barker Cypress and West Road, 0.5 miles east of Barker Cypress.	Completed	HCFCF Data	\$1,690,583
Dinner Creek Stormwater Detention Basin	Stabilization of stormwater detention basin U520-01-00	Planned	HCFCF - CIP '17	\$1,400,000
Greenhouse Stormwater Detention Basin Construction, Phase 2 of 2	Funding for excavation of the U500-02-00 stormwater detention basin phase 2.	Construction	HCFCF - CIP '18	\$500,000
Basin Acquisition	Josey Ranch County Park.	Completed	HCFCF Data	\$294,670
Stormwater Detention Basin Revegetation and Environmental Compensatory Mitigation	Revegetation of the Greenhouse Stormwater Detention Basin. Includes establishment of permanent wetlands and riparian corridor, and reforestation planting for compensatory environmental mitigation of anticipated stream impacts.	Construction	HCFCF - CIP '18	\$200,000
Basin Acquisition	LANGHAM CREEK - D/S Queenston Blvd.	Completed	HCFCF Data	\$17,509
Basin Acquisition	Dinner Creek at Greenhouse Road	Completed	HCFCF Data	\$5,010
Sediment Removal	Rustic Lake	Completed	HCFCF Data	\$1,942
			<b>TOTAL</b>	<b>\$4,109,713</b>

NAME (PROGRAMS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Investigation of Desilting Channels that Drain to Addicks and Barker Reservoirs	Assess and repair impacts from flood events on Horsepen Creek U106-00-00, Bear Creek U102-00-00, Langham Creek U100-00-00, Addicks Reservoir construction access road U107-00-00	Designed	HCFCF Website	\$6,660,889
			<b>TOTAL</b>	<b>\$6,660,889</b>

NAME (RESERVOIRS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Third Reservoir	Construct third reservoir	Proposed	West Houston Assoc., Rebuild TX	\$500,000,000
Addicks Reservoir	Restore dam & detention area, including removing dirt and vegetation within reservoir	Proposed	Ed Emmett's list, West Houston Assoc.	\$250,000,000
Addicks and Barker Reservoir Outlets	Reconstructing Addicks and Barker outlets	Construction	USACE	\$65,000,000
			<b>TOTAL</b>	<b>\$815,000,000</b>

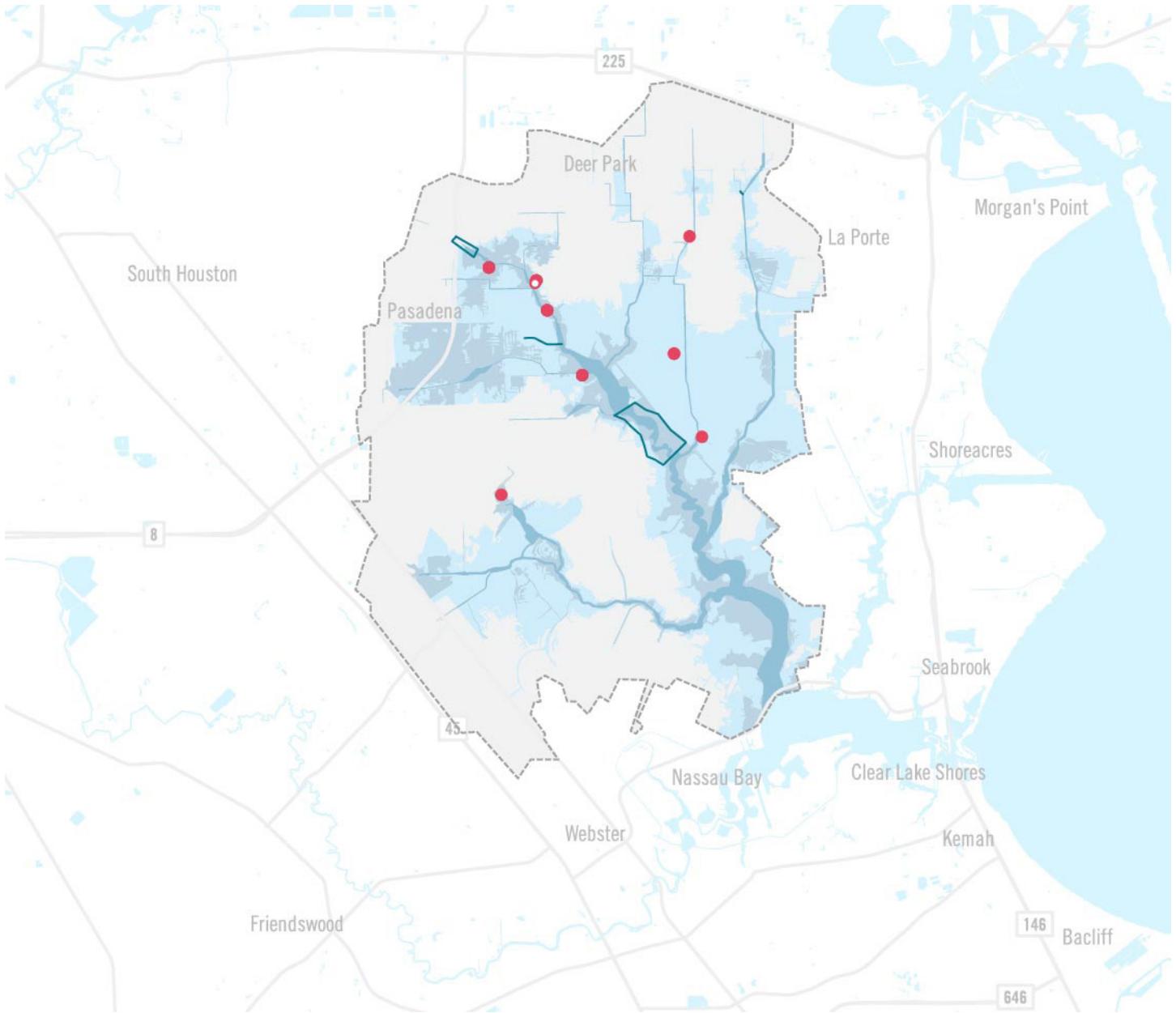
NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Addicks and Barker Reservoir Dam System Improvement Study	Study regarding required improvement to the Addicks and Barker Reservoir Dam System.	Proposed	Rebuild TX	\$1,500,000
Addicks Reservoir Watershed Model and Map Update	Update hydrologic and hydraulic computer models for Addicks reservoir watershed resulting in revised FIRM	Proposed	HCFCF 2017 Briefing	\$1,140,000
South Mayde Creek Flood Risk Reduction Preliminary Engineering Report	Preliminary engineering report to develop a flood risk reduction project on South Mayde Creek.	Completed	HCFCF - CIP '18	\$500,000
Cypress Creek Overflow Management Plan (3rd Reservoir)	Continuation of the planning study to address special watershed management needs in Cypress Creek and Addicks Reservoir watersheds. Study is partially funded through a Texas Water Development Board grant.	Planned	CCFCC/ HCFCF - CIP '18	\$150,000
			<b>TOTAL</b>	<b>\$3,290,000</b>

# ARMAND BAYOU



Armand Bayou flows southward into Clear Lake, draining portions of Pasadena, Deer Park, and Houston. Much of the watershed is developed, but considerable open space and natural habit has been preserved. HCFCF has completed several detention basins in this watershed.





- Channel**
- Complete
- Ongoing
- Proposed
  
- Detention**
- Complete
- Ongoing
- Proposed
  
- Programs**
- Complete
- Ongoing
- Proposed
  
- Lakes / Reservoirs**
- Proposed

- Study**
- Complete
- Ongoing
- Proposed
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway
- 1%
- 0.2%



STATISTICAL DATA	
Watershed Area	60 square miles
Watershed Population	127,350
Open Stream	86 miles
Budget for Complete Projects	\$16,796,427
Budget for Projects Under Construction	\$150,000
Budget for Ongoing Projects	0
Total Budget for Watershed	\$16,946,427
Budget per Capita	\$133
Budget for Proposed Projects	0
Allison Damages (Claims)	\$50,979,379 (1,698)
Ike Damages (Claims)	\$3,444,245 (515)
Harvey Damages (Claims)	\$12,211,341 (1,481)

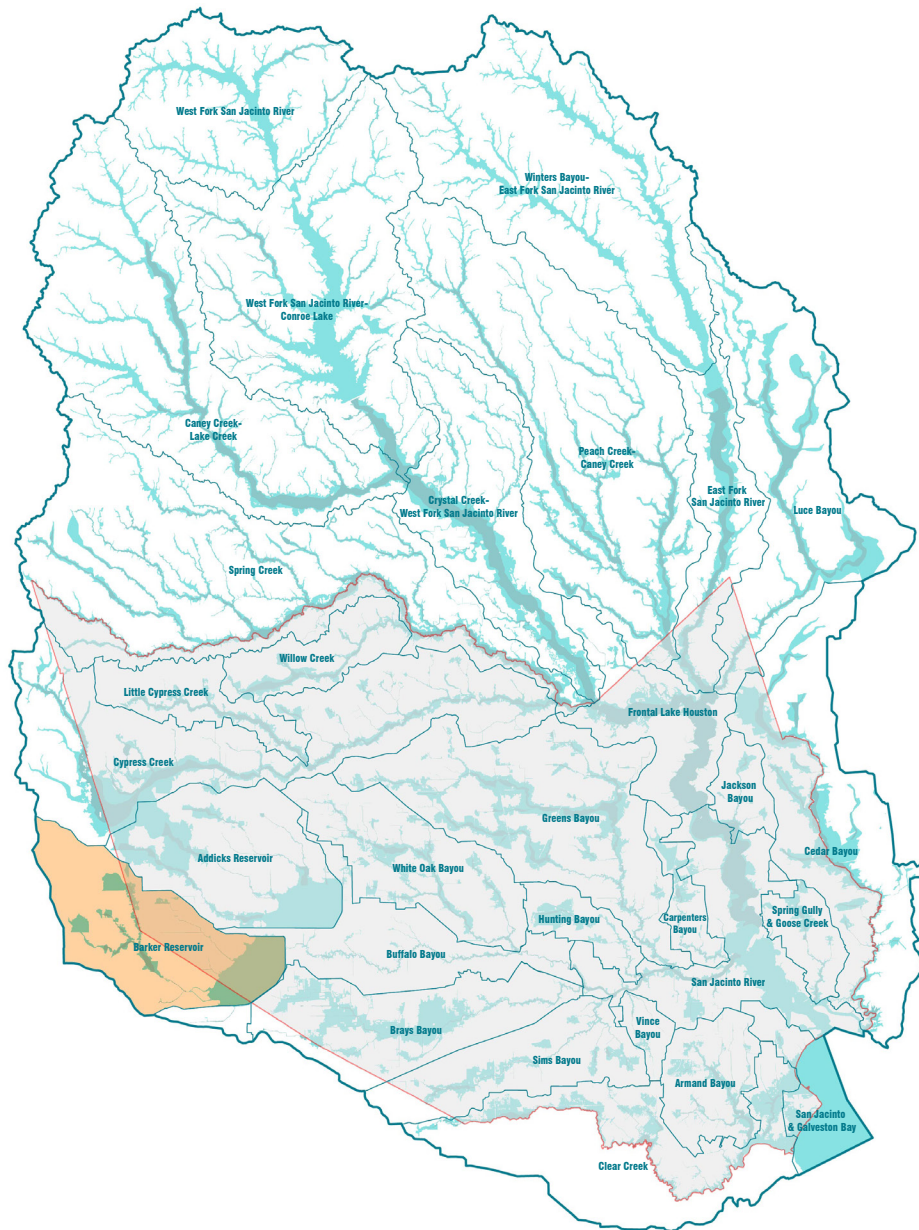
# ARMAND BAYOU

PROJECTS (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Floodway Right of Way Acquisition	Purchase of approximately 125 acres of forested riparian area in floodway along Armand Bayou located downstream of Geno-Red Bluff Road to channel B107-00-00	ROW/Utility	HCFCF - CIP '18	\$600,000
Armand Bayou Stormwater Conveyance Improvements	Channel improvements along 2,300 ft-section of Armand Bayou to mitigate for increased stormwater flows as a result of expanding the toll road	Planned	HCFCF Website	\$-
Channel Enclosure	Between "L" Street and B106-00-00	Completed	HCFCF Data	\$-
			<b>TOTAL</b>	<b>\$600,000</b>

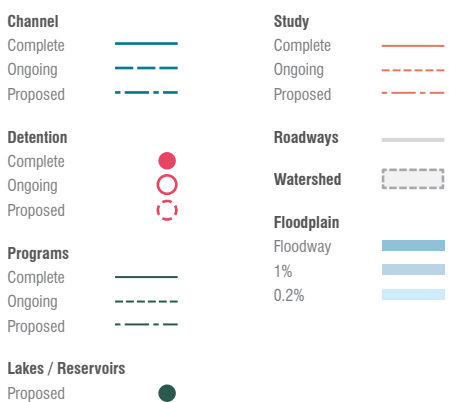
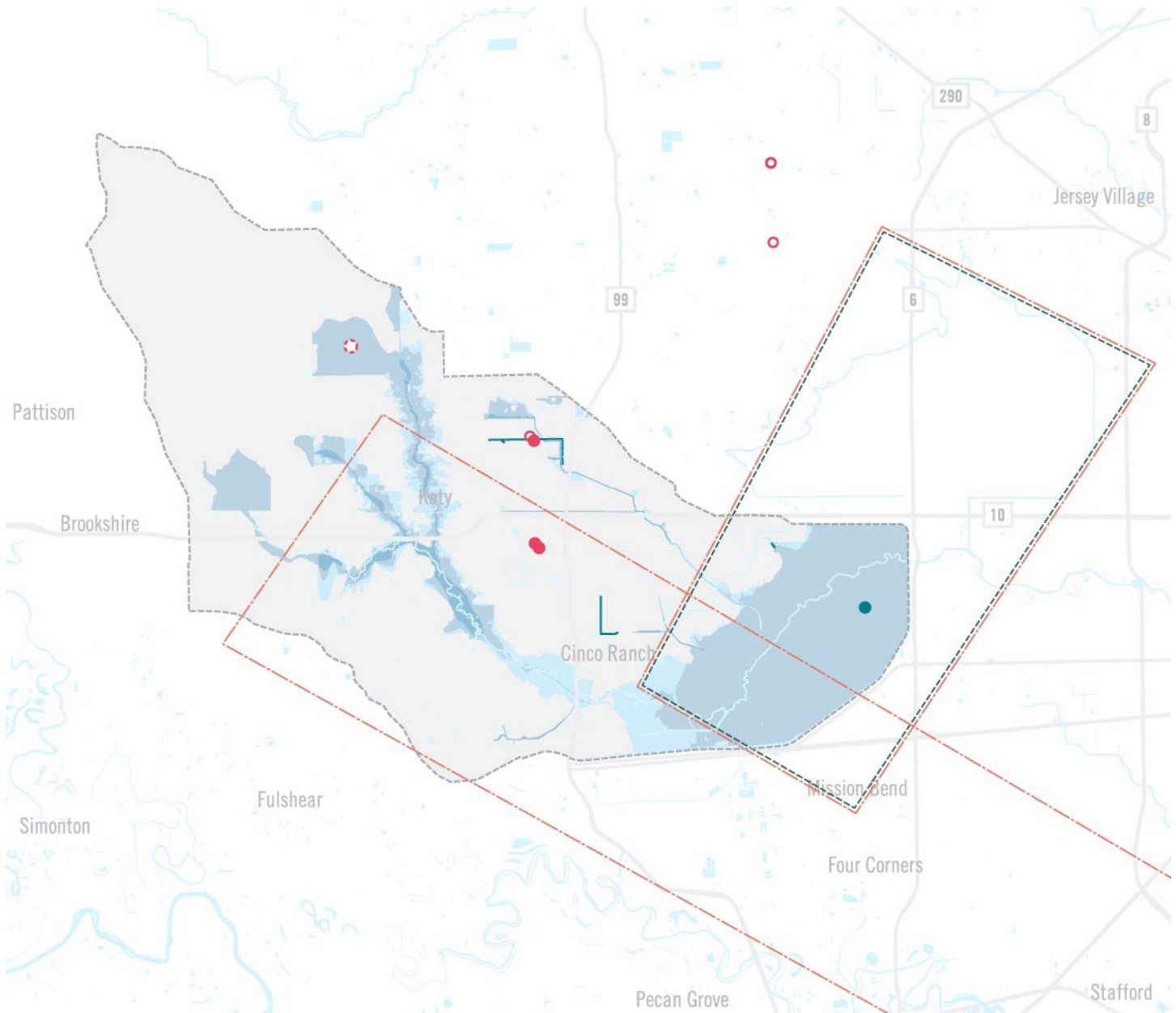
PROJECTS (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
ROW Acquisition - Basin	South of Fairmont Pkwy, west of Unit B109-00-00	Completed	HCFCF Data	\$3,304,000
Basin Improvements, Phase 1	Fairmont Parkway Detention Basin, North of Fairmont Parkway and Armand Bayou.	Completed	HCFCF Data	\$2,776,976
Basin Improvements, Phase 1	Red Bluff Road Stormwater Detention Basin, located at Red Bluff Road and Spencer Highway.	Completed	HCFCF Data	\$2,389,689
Basin Improvements, Phase 2	Spencer Road Basin	Completed	HCFCF Data	\$2,278,711
ROW Acquisition - Basin	North of Red Bluff, east of Unit B109-00-00	Completed	HCFCF Data	\$1,984,000
ROW Acquisition - Basin	The property is located north of Genoa Red Bluff Road and Armand Bayou.	Completed	HCFCF Data	\$1,964,233
ROW Acquisition - Basin	18 acre ballfield site for expansion of the Red Bluff Road Basin	Completed	HCFCF Data	\$632,471
Revegetation for Environmental Enhancements - B500-02-00	The project is located at: Key Map 578B, North of Fairmont Parkway and East of Space Center Blvd. in Pasadena, TX. The basin is bisected by Armand Bayou (HCFCF Unit No. B100-00-00).	Completed	HCFCF Data	\$251,684
Water Quality Planting Project and Project/Planting Maintenance	Willow Springs Basin	Completed	HCFCF Data	\$211,439
Baywood Basin Improvements, Phase 1	Armand Bayou and Genoa-Red Bluff	Completed	HCFCF Data	\$184,376
Site Stabilization of Red Bluff Stormwater Detention Basin	Final site grading, installation of back slope interceptors, swales and pilot channels.	Construction	HCFCF - CIP '18	\$150,000
ROW Acquisition - Basin	Red Bluff Road Basin	Completed	HCFCF Data	\$102,491
ROW Acquisition - Basin	46 acres, Fairmont Parkway Basin	Completed	HCFCF Data	\$49,195
Basin Improvements, Phase 1	Spencer Road Basin	Completed	HCFCF Data	\$43,417
Basin Repairs	Genoa Red Bluff	Completed	HCFCF Data	\$12,221
Basin Repairs	Genoa Red Bluff	Completed	HCFCF Data	\$9,478
Topo Survey	Near Chiropractic College.	Completed	HCFCF Data	\$1,095
Sediment Removal	Space Center	Completed	HCFCF Data	\$952
			<b>TOTAL</b>	<b>\$16,346,427</b>



# BARKER RESERVOIR



Barker Reservoir, completed in 1945, provides flood control for the Buffalo Bayou watershed. Its watershed is nearly identical in size to the Addicks Watershed, and like Addicks, it has seen significant development in the last few decades. Large parts of the upper watershed, though, are still native prairie and agricultural land. Roughly half the watershed is in Fort Bend County, with the other half in Harris County.



STATISTICAL DATA	
Watershed Area	126 square miles
Watershed Population	169,429
Watershed Population (Harris County)	88,895
Open Stream	126 miles
Budget for Complete Projects	\$9,483,217
Budget for Projects Under Construction	\$65,130,000
Budget for Ongoing Projects	\$6,660,889
Total Budget for Watershed	\$81,274,105
Budget per Capita	\$480
Budget for Proposed Projects	\$275,050,000
Allison Damages (Claims)	\$2,231 (2)
Ike Damages (Claims)	\$122,314 (32)
Harvey Damages (Claims)	\$9,750,868 (666)

# BARKER RESERVOIR

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Mason Creek Extension & Detention	Franz Road to Katy-Hockley Cut-Off	Completed	HCFCF Data	\$8,395,758
Survey for De-silt	Entire length of the unit.	Completed	HCFCF Data	\$18,771
Center Flow Line Dip Out	D/s of Kingsland Blvd.	Completed	HCFCF Data	\$2,948
Survey for Encroachment marking	2500' +/- D/S Katy Hockley Cutoff Rd.	Completed	HCFCF Data	\$2,848
<b>TOTAL</b>				<b>\$8,420,326</b>

PROJECTS (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Cane Island Flood Reduction Project	Construct detention US of Pitts Road to reduce DS flows. Will provide 2,800 c-ft of detention and remove 147 structures and 476 ac from floodplain US and DS of Morton Rd	Proposed	Rebuild Texas	\$72,800,000
Katy ISD Site	East of Porter Road	Completed	HCFCF Data	\$1,049,901
Mason Creek Stormwater Detention Basin Revegetation and Environmental Enhancements	Establishing permanent emergent and forested wetlands for stormwater quality enhancement, habitat improvement, and site stabilization in accordance with permit requirements.	Construction	HCFCF - CIP '18	\$130,000
Detention Basin Rehab	500-ft North of Kingsland Blvd.	Completed	HCFCF Data	\$8,003
Detention Basin Rehab	500-ft North of Kingsland Blvd.	Completed	HCFCF Data	\$4,987
<b>TOTAL</b>				<b>\$73,992,891</b>

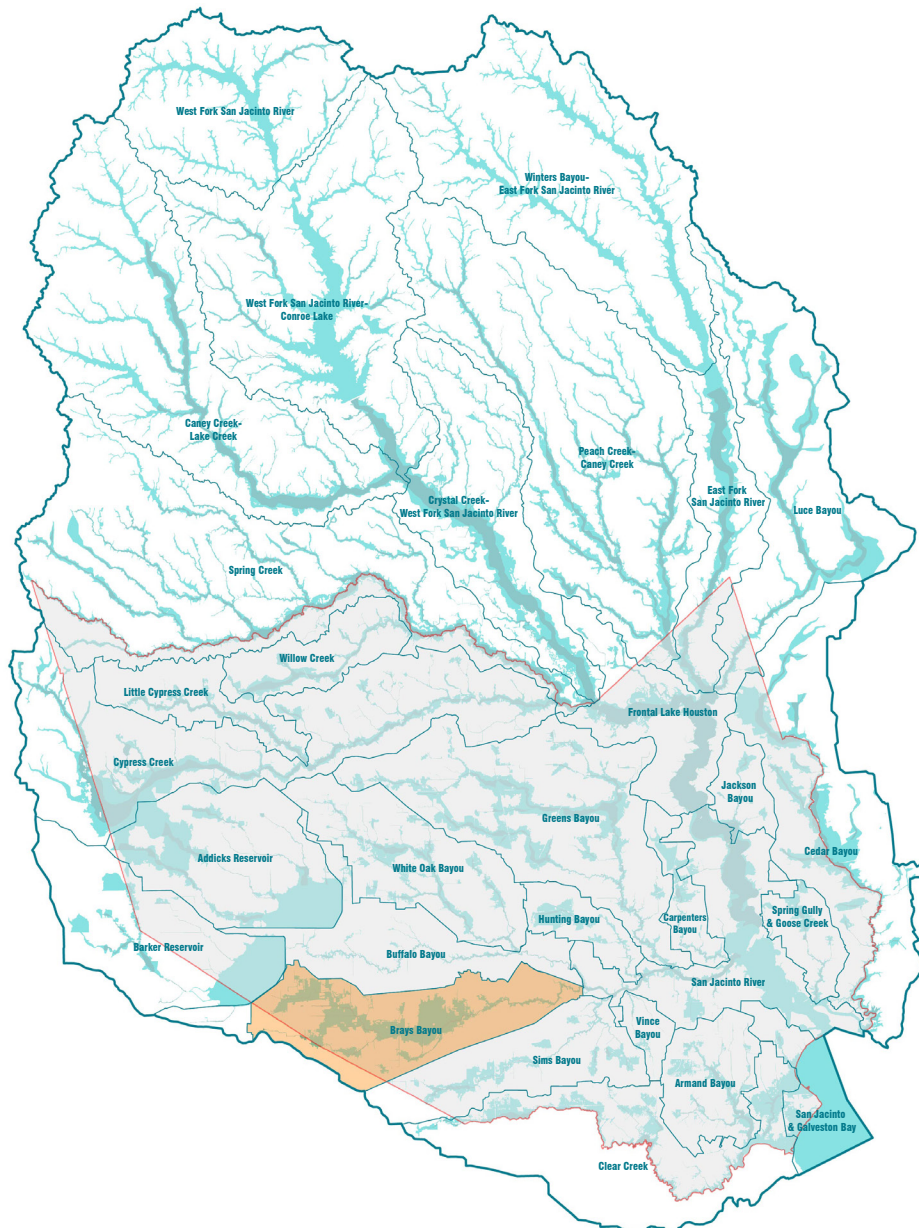
NAME (PROGRAMS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Investigation of Desilting Channels that Drain to Addicks and Barker Reservoirs	Assess and repair impacts from flood events on Horsepen Creek U106-00-00, Bear Creek U102-00-00, Langham Creek U100-00-00, Addicks Reservoir construction access road U107-00-00	Designed	HCFCF Website	\$6,660,889
<b>TOTAL</b>				<b>\$6,660,889</b>

NAME (RESERVOIRS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Barker Reservoir	Restore dam & detention area, including removing dirt and vegetation within reservoir	Proposed	Ed Emmett's list	\$200,000,000
Addicks and Barker Reservoir Outlets	Reconstructing Addicks and Barker outlets	Construction	USACE	\$65,000,000
<b>TOTAL</b>				<b>\$265,000,000</b>

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Addicks and Barker Reservoir Dam System Improvement Study	Study regarding required improvement to the Addicks and Barker Reservoir Dam System.	Proposed	Rebuild TX	\$1,500,000
Fort Bend County Regional Watershed Assessment	Study regarding the Fort Bend County Regional Watershed.	Proposed	Rebuild TX	\$750,000
<b>TOTAL</b>				<b>\$2,250,000</b>

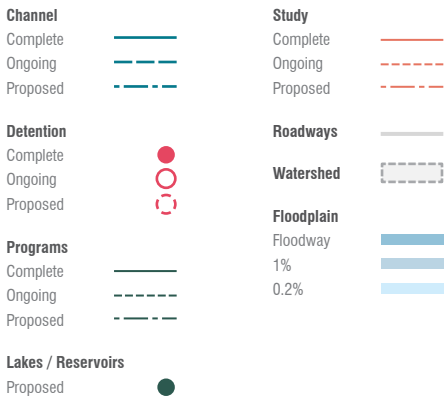
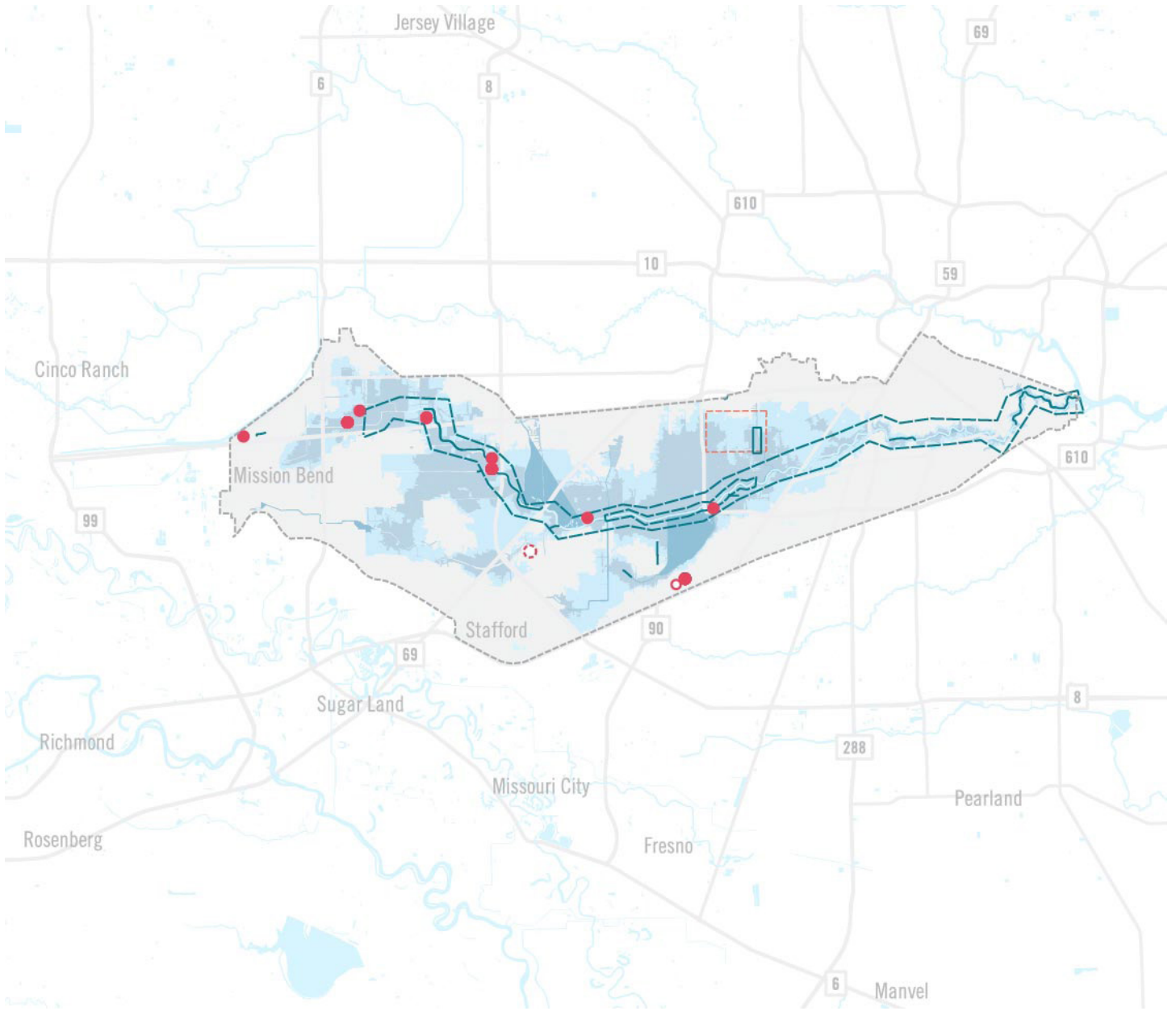


# BRAYS BAYOU



Brays Bayou has long been the site of frequent flooding. The watershed is now entirely developed, and most of the development occurred before the adoption of detention regulations. The federally funded Project Brays includes channel improvements, bridge replacements, and several large regional detention basins. Over \$350 million has been spent on this project, but more work remains. The project will largely reduce flood risk, but even when complete, the project is not expected to completely eliminate the flooding issues in the watershed, leaving several neighborhoods in the mapped 100-year flood plain. The Brays Bayou watershed has been repeatedly hit by heaving flooding in recent years, including Harvey and Allison.





STATISTICAL DATA	
Watershed Area	127 square miles
Watershed Population	800,682
Watershed Population (Harris County)	717,198
Open Stream	121 miles
Budget for Complete Projects	\$388,356,585
Budget for Projects Under Construction	\$96,000,000
Budget for Ongoing Projects	\$12,000,000
Total Budget for Watershed	\$496,356,585
Budget per Capita	\$620
Budget for Proposed Projects	\$100,750,000
Allison Damages (Claims)	\$155,887,043 (2,940)
Ike Damages (Claims)	\$8,059,657 (1,180)
Harvey Damages (Claims)	\$164,536,910 (10,036)

# BRAYS BAYOU

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	Budget
Project Brays	Project Brays is a cooperative effort between HCFCD and USACE comprised of 75 projects, including widening 21 miles of Brays Bayou, replacing or modifying 32 bridges, and adding 4 stormwater basins	Completed	HCFCD - CIP '17	\$384,000,000
Project Brays	Project Brays is a cooperative effort between HCFCD and USACE comprised of 75 projects, including widening 21 miles of Brays Bayou, replacing or modifying 32 bridges, and adding 4 stormwater basins	Construction	HCFCD - CIP '17	\$96,000,000
Brays Bayou Channel Improvements	Channel conveyance improvements on Brays Bayou	Design	HCFCD	233000000*
DS 101 Mouth to Lawndale	Brays Bayou, from mouth to Lawndale St	Completed	HCFCD Data	16701629*
Upper Brays Bayou Sediment Removal	U.S. 59 to Old Westheimer	Completed	HCFCD Data	2260252.1*
DS 112 - Mason Park (Fresh Water Intertidal Marsh)	Brays Bayou, along the north bank of Mason Park.	Completed	HCFCD Data	1501597.32*
Earthen Repairs of Brays Bayou, Boone to W Houston Center Blvd	Boone Rd upstream to West Houston Center Blvd.	Completed	HCFCD Data	\$633,991
Channel Enclosure	West Bellfort to D139-04-00	Completed	HCFCD Data	\$590,340
TS Allison Damage	D100-00-00 to S. Braeswood Drive	Completed	HCFCD Data	\$15,036
Tropical Storm Allison Damage Assessments - Brays Bayou	Between Sylvan and Lawndale First repair site - 800' downstream of Sylvan (Site #20 in report) Second repair site - 1800' downstream of Sylvan (Site #22 in report)	Completed	HCFCD Data	\$10,413
Enclose channel	Willowbend to D139-04-00	Completed	HCFCD Data	\$3,884
Channel Enclosure - (bid w/W140-04-00) 99B	D136-00-00 to 1500' upstream	Completed	HCFCD Data	\$3,281
Channel improvements/desilt	1000 ft of D112-09-00 and D112 between D140 and Hummingbird	Completed	HCFCD Data	\$2,613
Brays Bayou Bank Repair	Reconstruction of section of Brays Bayou southern bank west of Scott St.	Completed	HCFCD Website	\$-
Pilot Channel / Daylight	U/S end of D100-00-00 to Old Westheimer Rd. (West on Alief -Clodine Rd. to Old Westheimer Rd North to D100-00-00 West along the R.O.W. to the beginning of D100-00-00.)	Completed	HCFCD Data	\$-
Poor Farm Ditch Conveyance Improvements	Conveyance improvements along Brays Bayou Tributary from University to Bellaire	Planned	HCFCD - CIP '17	\$-
Two failed storm sewer outfalls and washouts	800' & 1200' downstream of Wilcrest	Completed	HCFCD Data	\$-
			<b>TOTAL</b>	<b>\$481,259,558</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
City of West University Place Flood Control Detention Area Project	Create a flood control detention area for the City of West University Place near the I-69 South/Beltway 88 interchange	Proposed	Rebuild Texas	\$100,000,000
DS 17 - Eldridge Stormwater Detention Basin	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park	Completed	HCFCD Data	\$14,779,931*
DS 17 - Eldridge Stormwater Detention Basin	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFCD Data	\$14,779,930*
DS 209 - Comp 4 Ph 2, Comp 5 Ph1	Willow Waterhole Stormwater Detention Basin, located near South Main and South Post Oak Blvd.	Completed	HCFCD Data	\$13,378,141*
DS 23 - Eldridge Detention Basin Comp 1		Completed	HCFCD Data	\$12,199,016*
DS 203 - Comp 2, Drain	Willow Waterhole Stormwater Detention Basin, located near South Main and South Post Oak Blvd.	Completed	HCFCD Data	\$8,743,341*

DS 15 - Eldridge Stormwater Detention Basin	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFC Data	\$7,942,198*
Basin Improvements, DS204	Willow Waterhole Stormwater Detention Basin, located near South Main and South Post Oak Blvd.	Completed	HCFC Data	\$7,719,124*
DS 25 - Eldridge Detention Basin, Comp 2, Ph 7 DS 25	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFC Data	\$7,566,569*
DS 10 - Basin Improvements,	Old Westheimer Road Stormwater Detention Basin, located near Old Westheimer Road and Westpark Street.	Completed	HCFC Data	\$7,389,772*
ROW Acquisition - Basin	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFC Data	\$6,847,996*
Willow Waterhole	Provide additional regional detention and drainage improvements for the Willow Waterhole	Construction	Missouri City CIP	\$6,500,000*
DS 16 - Eldridge Stormwater Detention Basin	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFC Data	\$5,399,835*
Basin Improvements, DS5	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$4,973,993*
Basin Improvements, DS7	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$4,936,571*
Basin Improvements, DS7	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd	Completed	HCFC Data	\$4,936,571*
Basin Improvements, DS6	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$3,945,019*
DS 13 - Eldridge Stormwater Detention Basin	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFC Data	\$3,507,802*
DS 22 - Basin Improvements Arthur Storey Park	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$3,093,479*
COH Interlocal Agreement for the Meyer Tract	West Loop 610 & Brays Bayou	Completed	HCFC Data	\$3,091,380
DS 20 - Eldridge Stormwater Detention Basin	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFC Data	\$3,054,984*
DS 04 - Basin Improvements	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$2,510,893*
DS 206 - Comp 4 Ph 1 & Comp 5 Ph 1	Willow Waterhole Stormwater Detention Basin, located near South Main and South Post Oak Blvd.	Completed	HCFC Data	\$2,485,706*
DS 21 - Basin Improvements	Old Westheimer Road Stormwater Detention Basin, located near Old Westheimer Road and Westpark Street	Completed	HCFC Data	\$2,467,599*
DS 21 - Basin Improvements	Old Westheimer Road Stormwater Detention Basin, located near Old Westheimer Road and Westpark Street.	Completed	HCFC Data	\$2,467,598*
Basin Improvements, DS18	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$2,139,448*
Basin Improvements, DS8	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$2,137,560*
DS 24 - Basin Improvements Arthur Storey Park	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd..	Completed	HCFC Data	\$2,115,565*
DS 01 - Basin Improvements	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFC Data	\$1,998,250*
DS 11 - Basin Improvements	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFC Data	\$1,495,820*

# BRAYS BAYOU

ROW Acquisition - Basin	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFCF Data	\$1,452,951*
DS 09 - Basin Improvements	Eldridge Road Stormwater Detention Basin, located near Eldridge Road and West Park.	Completed	HCFCF Data	\$1,119,039*
DS 60 - Channel Vegetation & Landscaping FY 07-08	Landscaping at Old Westheimer Basin, PH 1, DS 60	Completed	HCFCF Data	\$528,933*
DS 80 - Vegetation & Landscaping FY 07-08	Landscaping at Willow Waterhole Basin, PH 1, DS 80	Completed	HCFCF Data	\$526,544*
DS 02 - Basin Improvements	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFCF Data	\$371,940*
Brays Bayou Federal Flood Control Project, Landscaping	Project Brays	Completed	HCFCF Data	\$336,282*
Willow Waterhole Master Plan	Willow Waterhole Stormwater Detention Basin, located near South Main and South Post Oak.	Completed	HCFCF Data	\$327,902*
DS 50 - Vegetation & Landscaping FY 07-08	Landscaping at Eldridge Basin, Ph 1, DS 50	Completed	HCFCF Data	\$274,212*
DS 70 - Vegetation & Landscaping FY 07-08	Landscaping at Arthrur Storey Park Basin, Ph 1, DS 70	Completed	HCFCF Data	\$243,065*
Basin Improvements	Old Westheimer Road Stormwater Detention Basin, located near Old Westheimer Road and Westpark Street.	Completed	HCFCF Data	\$220,756*
Brays Bayou Federal Flood Control Project, Landscaping	Project Brays	Completed	HCFCF Data	\$205,785*
Brays Bayou Federal Flood Control Project, Landscaping	Project Brays	Completed	HCFCF Data	\$188,209*
Vegetation & Landscaping for Willow Waterhole, DS 83	Project Brays	Completed	HCFCF Data	\$161,868*
Brays Bayou Federal Flood Control Project, Landscaping	Project Brays	Completed	HCFCF Data	\$136,058*
Basin Improvements, Phase 1	Willow Waterhole Stormwater Detention Basin, located near South Main and South Post Oak.	Completed	HCFCF Data	\$64,904*
Brays Bayou Federal Flood Control Project, Landscaping	Project Brays	Completed	HCFCF Data	\$47,181*
HC Multiple Use Feasibility Study	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFCF Data	\$10,390*
Alternative Control Structure	Arthur Storey Park, located near the Sam Houston Tollway and Bellaire Blvd.	Completed	HCFCF Data	\$9,540*
Small detention pond excavation	Brays Bayou Dr. and Braeburn Valley St.	Completed	HCFCF Data	\$5,647
Placement of Granite Blocks-Rafferty Tribute	South of South Willow Dr. and North of Gasmer	Completed	HCFCF Data	\$3,141*
Brays Bayou Federal Flood Control Project DS 65, Landscaping & Vegetation at Old Westheimer Basin, PH 2		Completed	HCFCF Data	\$0*
Brays Bayou Federal Flood Control Project, Landscaping	Project Brays	Completed	HCFCF Data	\$0*
Vegetation & Landscaping, DS 93	Project Brays	Completed	HCFCF Data	\$0*
			<b>TOTAL</b>	<b>\$103,097,027</b>

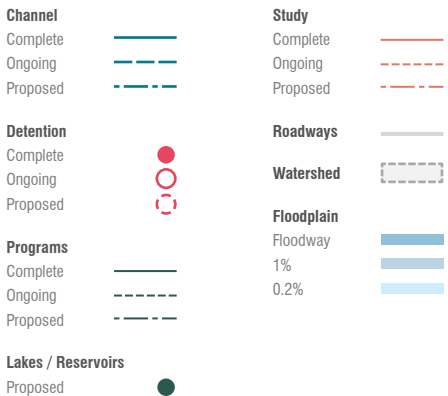
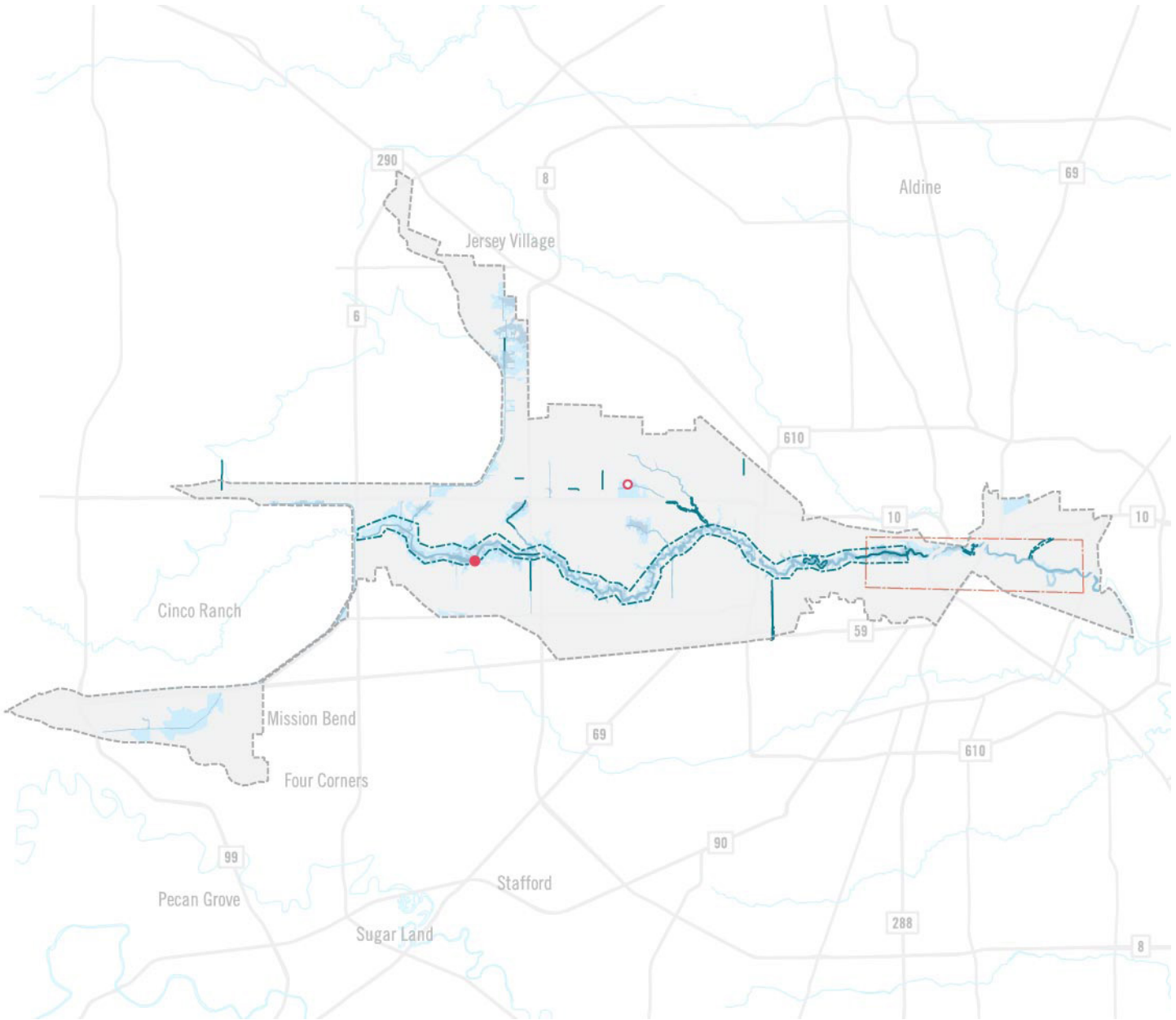
\* Included in Project Brays

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Poor Farm & Kilmarnock Ditches Studies & Improvements	Investigation of alternative improvements for man-made drainage channels. Regional study Completedd in 2002, Poor Farm Ditch study Completedd in 2009, and Kilmarnock Ditch Study Completedd in 2013.	Planned	HCFCF - CIP '17	\$12,000,000
Fort Bend County Regional Watershed Assessment	Study regarding the Fort Bend County Regional Watershed.	Proposed	Rebuild TX	\$750,000
			<b>TOTAL</b>	<b>\$12,750,000</b>

# BUFFALO BAYOU



Buffalo Bayou is unusual among Harris County's watersheds. Its lower reach is widened and dredged to create the Houston Ship Channel. It is navigable as far as downtown Houston. Upstream from downtown, it is the only major bayou within the city of Houston that was not lined in concrete. Addicks and Barker reservoirs, which drain into Buffalo, have endured limited flood damage in this watershed since the 1940s. Hurricane Harvey, however, caused considerable damage due, in part, to releases from the reservoirs. The main stem of Buffalo Bayou has not seen major flood control infrastructure work in recent years, but there are proposals for major changes near Downtown, including the North Canal, which would essentially move the confluence of White Oak and Buffalo, increasing conveyance capacity.



STATISTICAL DATA	
Watershed Area	102 square miles
Watershed Population	444,602
Open Stream	106 miles
Budget for Complete Projects	\$36,093,239
Budget for Projects Under Construction	\$11,700,000
Budget for Ongoing Projects	\$2,550,000
Total Budget for Watershed	\$50,343,239
Budget per Capita	\$113
Budget for Proposed Projects	\$4,020,747
Allison Damages (Claims)	\$29,417,413 (733)
Ike Damages (Claims)	\$14,053,165 (892)
Harvey Damages (Claims)	\$184,651,450 (5,084)



# BUFFALO BAYOU

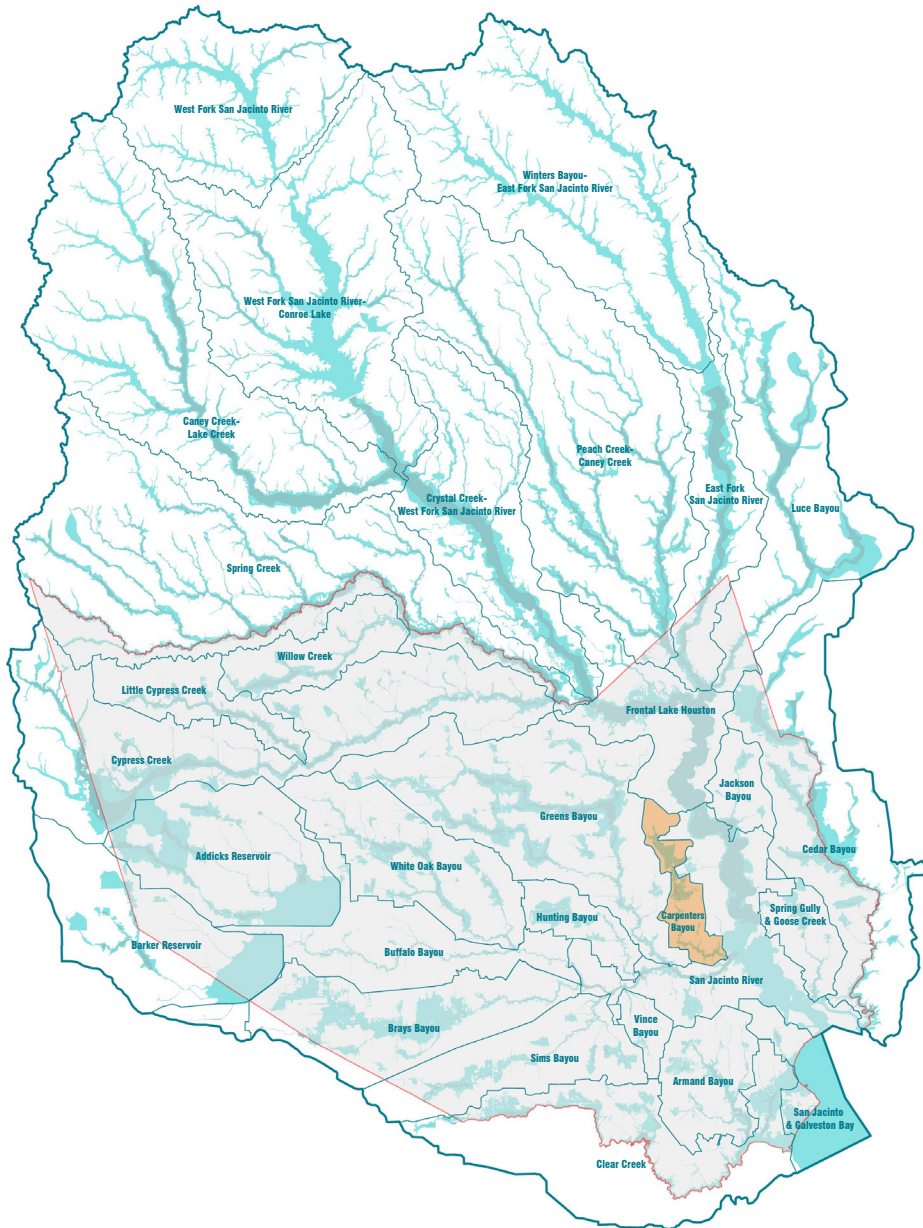
NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Conveyance Improvements, Phase 2	Located east of 610 and parallel to UPRR tracks from San Felipe to Richmond	Completed	HCFCF Data	\$14,559,761
Conveyance Improvements, Phase 1	Unit W129-00-00, from Raintree Place Townhomes upstream to the Westpark Outfall	Completed	HCFCF Data	\$10,162,098
Channel Conveyance Restoration at Buffalo Bayou Park	Sabine Road to Shepherd Drive	Completed	HCFCF Data	\$6,643,498
Memorial Park Demonstration Project	Proposed stream restoration project on Buffalo Bayou.	Construction	HCFCF Website	\$6,000,000
Spring Branch Stabilization Project	Major channel repairs to stabilize Spring Branch Creek between Memorial Drive and Chimney	Construction	HCFCF - CIP '18	\$5,700,000
Terry Hershey Park Emergency Repair Project	Addressed damages on banks of Buffalo Bayou in Terry Hershey Park during major floods of 2016	Completed	HCFCF Website	\$3,700,000
Buffalo Bayou Conveyance and Grade Stabilization at Commerce St	Removal of building, widening of the channel and construction of slope stabilization (1119 Commerce St.)	Planned	HCFCF - CIP '17	\$1,250,000
Buffalo Bayou Pilot Project	Sabine Street to 1800 feet upstream	Completed	HCFCF Data	\$554,603
Channel Conveyance Improvements, Phase 3 of 3 from Richmond Ave to Westpark Dr	Design and construction of third phase of channel conveyance improvements along W129-00-00 which will increase capacity by reconstructing approximately 2,500 linear feet of channel.	Designed	HCFCF - CIP '18	\$500,000
Emergency Stabilization of Retaining Wall	Approximately 235 foot repair located upstream of Memorial Drive and adjacent to the Park Laureate office building	Completed	HCFCF Data	\$89,540
TS Francis Storm Damage	Memorial to IH10	Completed	HCFCF Data	\$73,976
Harris County System Repairs	Tanner Road to Brittmoore Park Drive	Completed	HCFCF Data	\$53,932
Underwater Imaging-Bottom Delineation	At the Confluence with White Oak Bayou	Completed	HCFCF Data	\$14,534
Survey for Desilt	Entire reach of the unit from Brittmoore downstream to its mouth.	Completed	HCFCF Data	\$7,375
Tropical Storm Allison Damage Assessment	600' downstream of Swallow Street at sheet pile wall	Completed	HCFCF Data	\$6,928
Buffalo Bayou Conveyance	Increase the conveyance capacity of Buffalo Bayou in the critical reach from Allen's Landing to McKee Street by widening and channeling the Bayou banks	Proposed	Buffalo Bayou Partnership	\$-
Channel Enclosure	Entire length (Windfern to E125-00-00)	Completed	HCFCF Data	\$-
Channel Enclosure	Gessner to Witte Road	Completed	HCFCF Data	\$-
Channel Enclosure	Most upstream end south of Long Point downstream to W140-01-00	Completed	HCFCF Data	\$-
Channel Enclosure	Westview to upper end	Completed	HCFCF Data	\$-
Japhet Creek Master Plan	Future plans to purchase adjacent property and develop master plan for Japhet Creek	Proposed	Buffalo Bayou Partnership	\$-
Slope Repair and Desilt	Briar Forest to Riverview	Completed	HCFCF Data	\$-
Buffalo Bayou Conveyance	Increase Buffalo Bayou conveyance	Proposed	USACE	\$-
			<b>TOTAL</b>	<b>\$49,316,245</b>



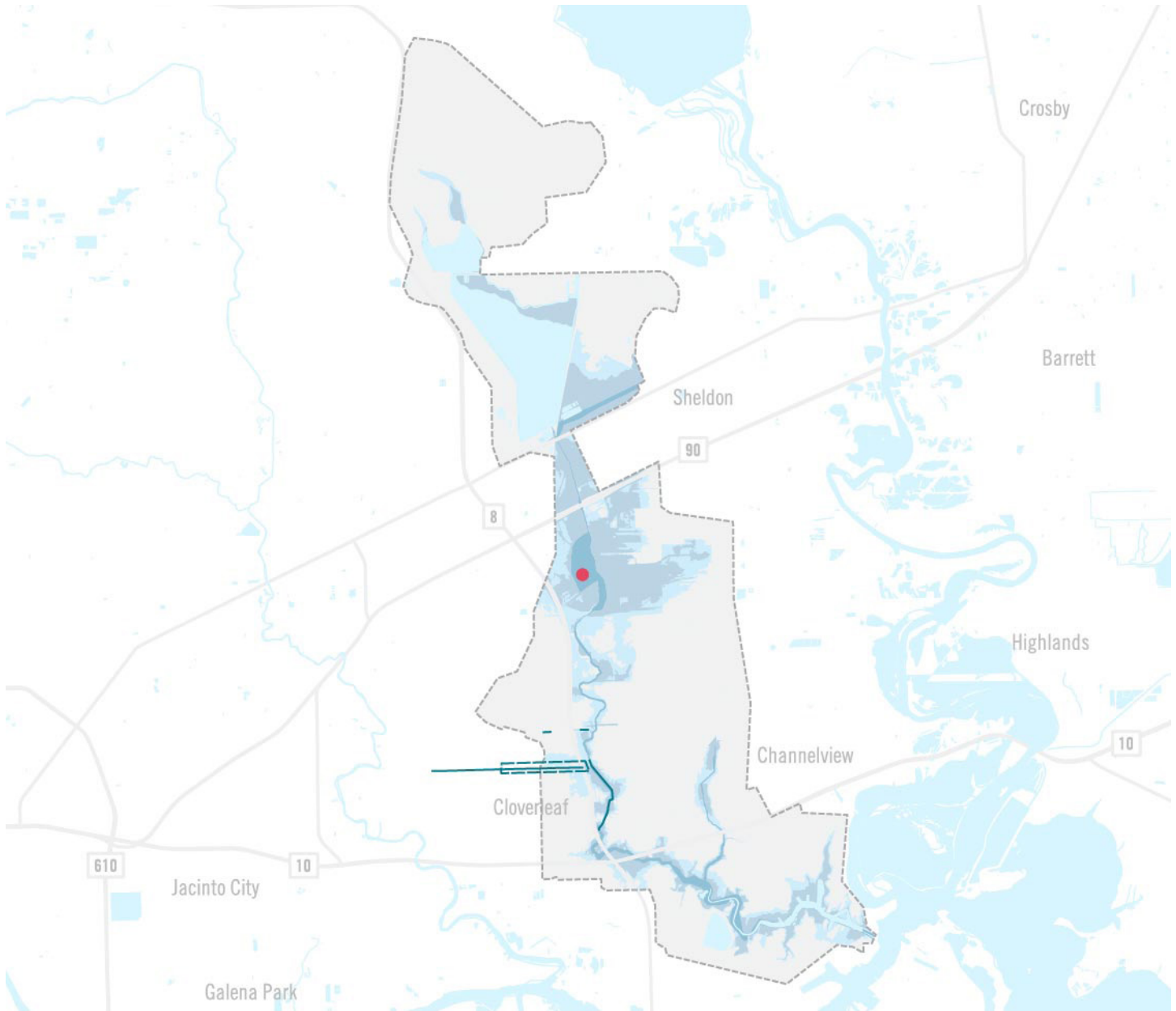
<b>NAME (DETENTION)</b>	<b>DESCRIPTION</b>	<b>STAGE</b>	<b>SOURCE</b>	<b>BUDGET</b>
Campbell Rd Detention at Briar Branch	Detention at Briar Branch	Planned	Spring Valley CIP	\$800,000
Linear Detention Basin	Terry Hershey Park - Kirkwood Road on Buffalo Bayou	Completed	HCFCF Data	\$226,994
			<b>TOTAL</b>	<b>\$1,026,994</b>

<b>NAME (STUDIES)</b>	<b>DESCRIPTION</b>	<b>STAGE</b>	<b>SOURCE</b>	<b>BUDGET</b>
North Canal Bypass	Direct floodwater flow carried by Buffalo Bayou and White Oak through downtown by creating channels that bypass problematic flood-causing configurations of the two bayous.	Proposed	Buffalo Bayou Partnership/ HCFCF - CIP '17	\$4,020,747
			<b>TOTAL</b>	<b>\$4,020,747</b>

# CARPENTERS BAYOU



The Carpenters Bayou watershed, sandwiched between Greens Bayou to the west and the San Jacinto River to the east, is only 25 square miles. The lower portions of the watershed are heavily industrialized and populated, but the upper reaches still have large undeveloped tracts. Sheldon Reservoir, originally built for water supply, is now managed by Texas Parks and Wildlife Department as a wildlife management area.



- Channel**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Detention**
- Complete ●
- Ongoing ○
- Proposed ○
  
- Programs**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Lakes / Reservoirs**
- Proposed ●

- Study**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway —
- 1% —
- 0.2% —



STATISTICAL DATA	
Watershed Area	25 square miles
Watershed Population	57,249
Open Stream	44 miles
Budget for Complete Projects	\$3,699,152
Budget for Projects Under Construction	\$167,678
Budget for Ongoing Projects	0
Total Budget for Watershed	\$3,866,830
Budget per Capita	\$68
Budget for Proposed Projects	0
Allison Damages (Claims)	\$5,120,760 (171)
Ike Damages (Claims)	\$1,378,364 (70)
Harvey Damages (Claims)	\$711,800 (166)



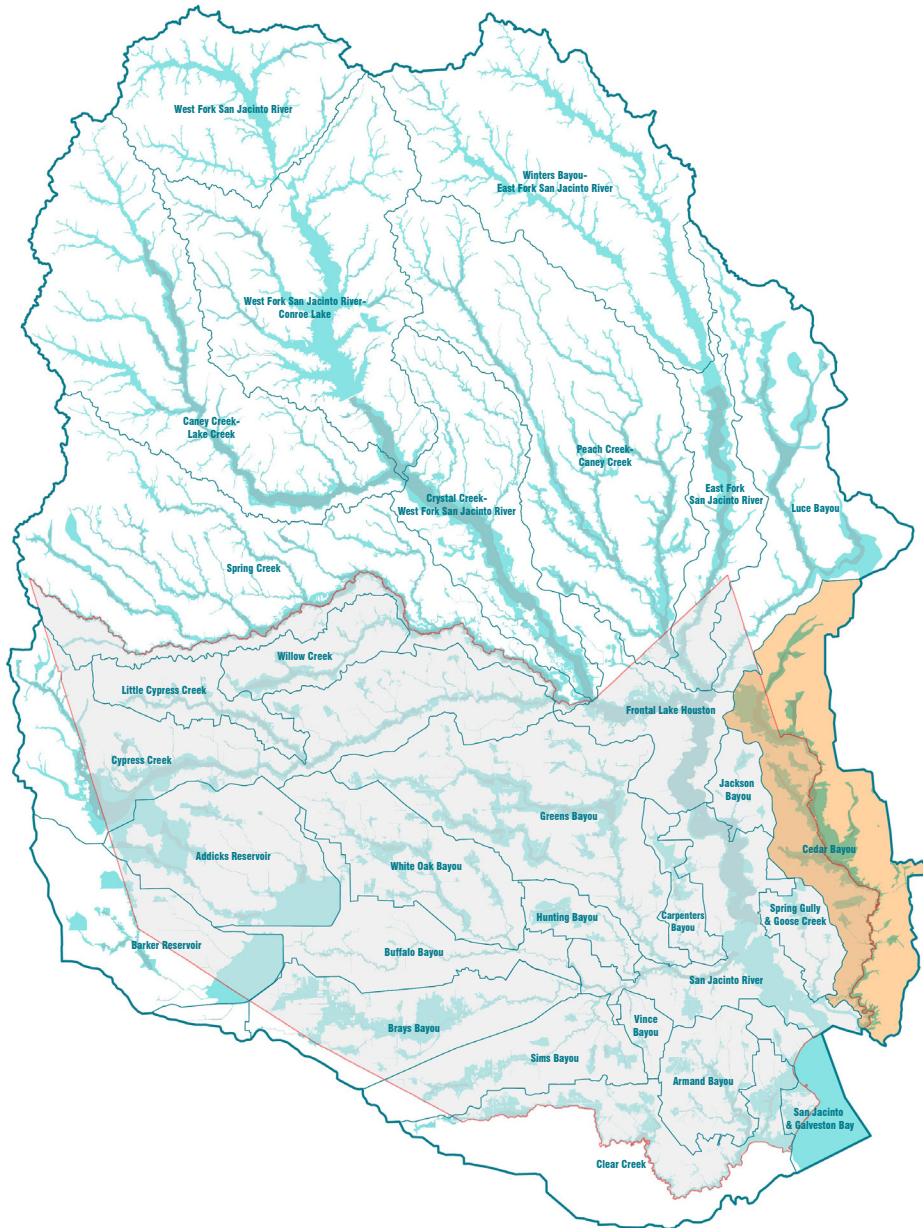
# CARPENTERS BAYOU

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Carpenters Restoration Project	Major maintenance project to repair bank failures and erosion on Carpenters Bayou Completed 2013	Completed	HCFCFCD Website	\$3,000,000
Channel Modification at Channelwood Park	Channelwood Park - Along east bank of Carpenter's Bayou south of Woodford Rd. & adjacent to Channelwood Park	Completed	HCFCFCD Data	\$269,679
Carpenters Bayou Tributary Erosion Repair	Repair erosion and remove sediment along a 1.2-mile section.	Construction	HCFCFCD Website	\$167,678
TS Francis Damage	Just upstream of N100-00-00	Completed	HCFCFCD Data	\$2,674
Channel Enclosure	Beltway 8 to Uvalde	Completed	HCFCFCD Data	\$-
TS Allison Damage	Blackrock to N111-01-00	Completed	HCFCFCD Data	\$-
			<b>TOTAL</b>	<b>\$3,440,030</b>

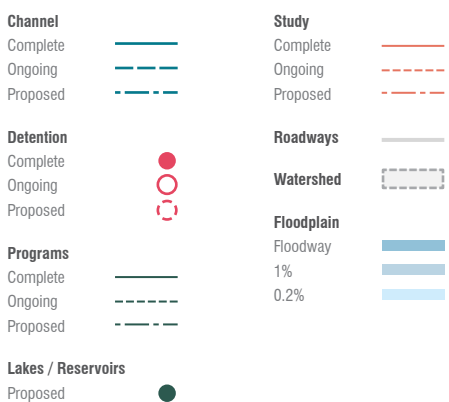
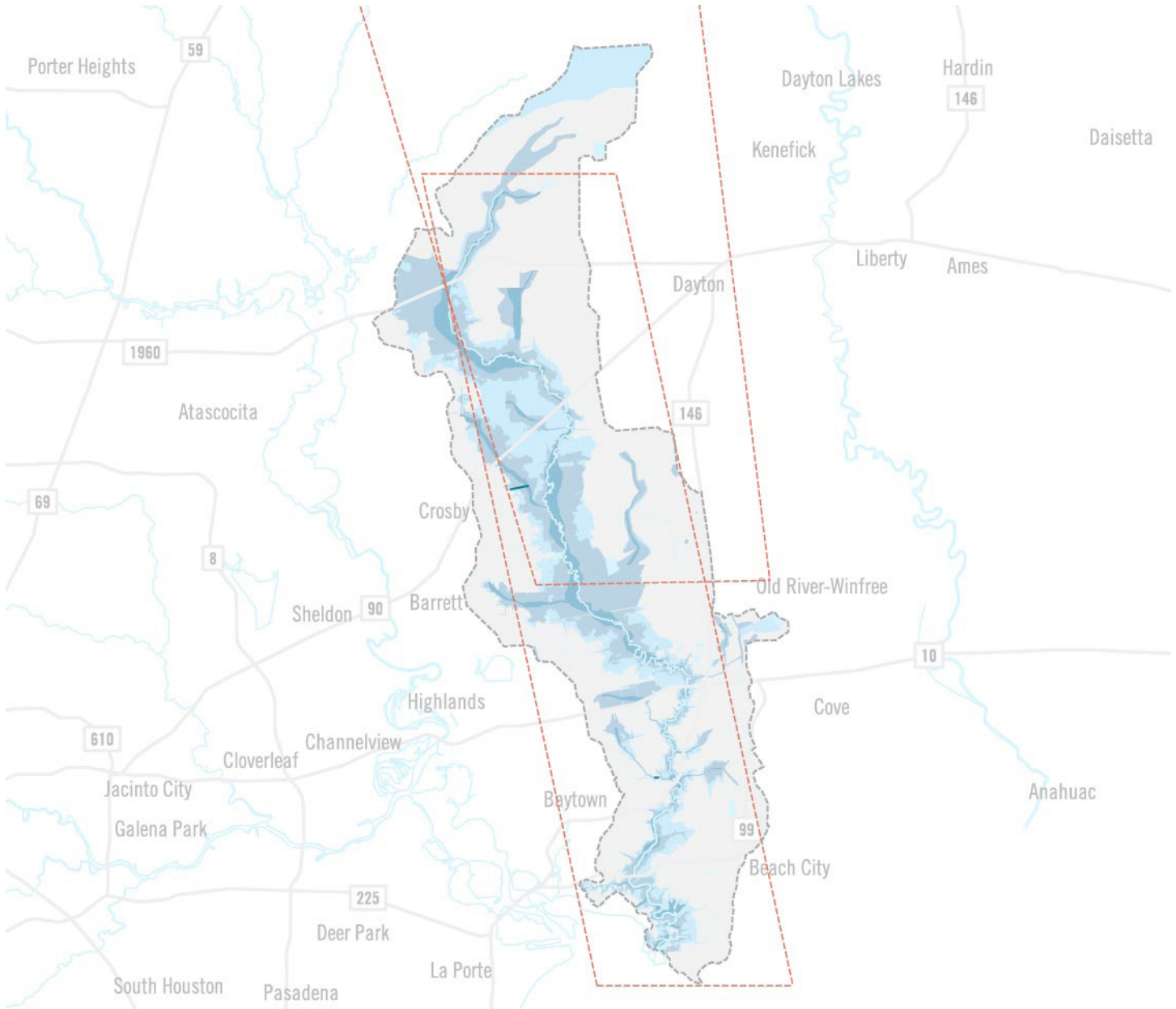
NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Basin Improvements	New U.S. 90 and East Belt	Completed	HCFCFCD Data	\$382,052
N500-01 LOMR	Carpenters Bayou Regional Detention Basin	Completed	HCFCFCD Data	\$44,748
			<b>TOTAL</b>	<b>\$426,799</b>



# CEDAR BAYOU



Cedar Bayou runs north south to the east of the San Jacinto River draining into Galveston Bay. The bayou forms the boundary between Harris County and Liberty and Chambers counties. The watershed is largely rural, but there is considerable development near I-10.



STATISTICAL DATA	
Watershed Area	202 square miles
Watershed Population	51,840
Watershed Population (Harris County)	36,878
Open Stream	128 miles
Budget for Complete Projects	0
Budget for Projects Under Construction	0
Budget for Ongoing Projects	\$416,667
Total Budget for Watershed	\$416,667
Budget per Capita	\$8
Budget for Proposed Projects	0
Allison Damages (Claims)	\$20,512 (4)
Ike Damages (Claims)	\$6,225,978 (157)
Harvey Damages (Claims)	\$18,945,343 (881)



# CEDAR BAYOU

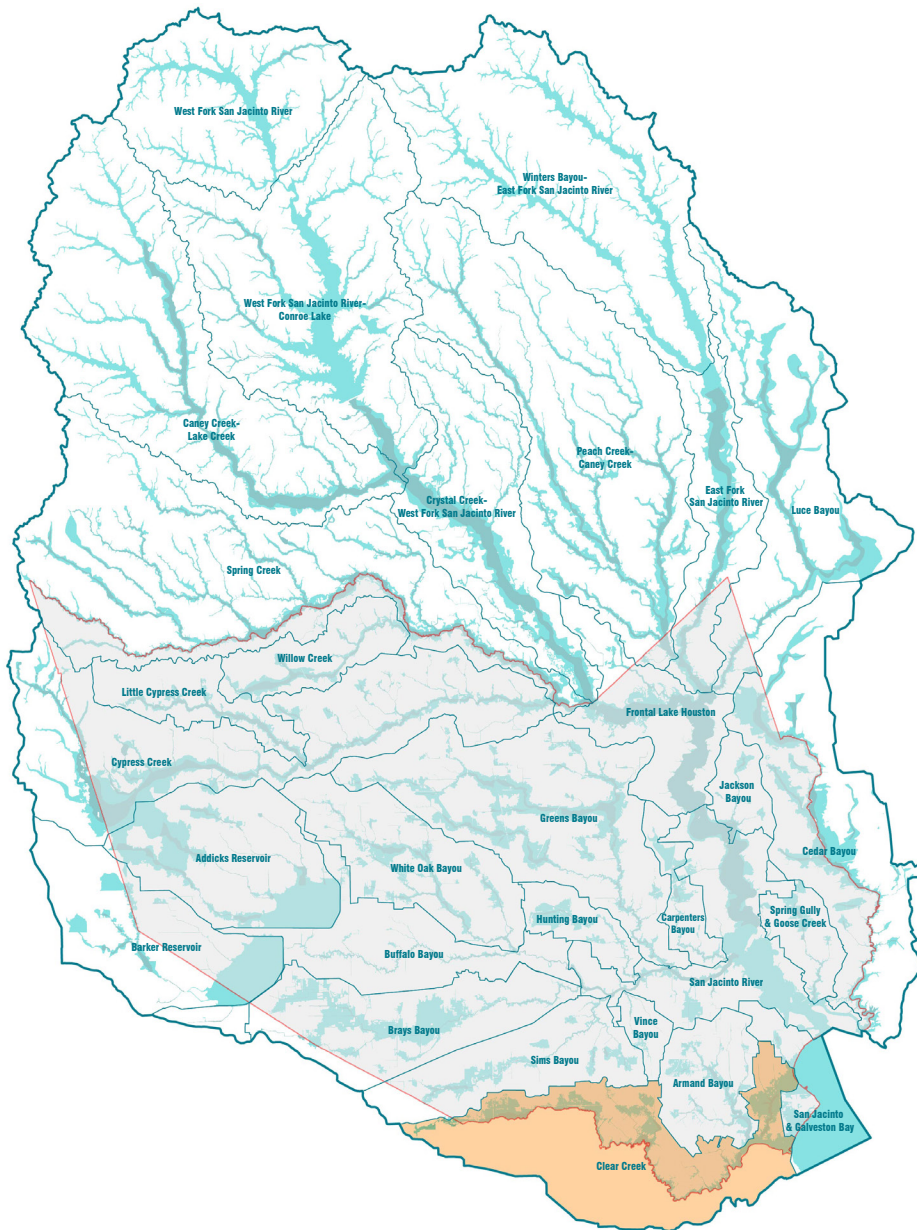
NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Plunge Pool	At Tompkins	Completed	HCFCF Data	\$-
Survey Grade of Channel	Adlong School Road downstream to Q128-00-00	Completed	HCFCF Data	\$-
			<b>TOTAL</b>	<b>\$-</b>

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Cedar Bayou Master Planning and Mitigation Evaluation	Funding to Completed the feasibility study for flood risk reduction. \$450,000 more committed. An implementation plan will be developed for improvements to the main stem, studied streams and some unstudied tributaries within Harris County.	Planned	HCFCF - CIP '18	\$250,000
Liberty County Master Drainage Study	Completed a master drainage study on all watersheds	Planned	HGAC Hazard Mitigation Plan	\$166,667
			<b>TOTAL</b>	<b>\$416,667</b>

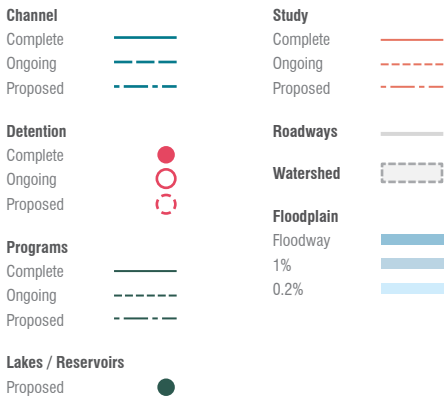
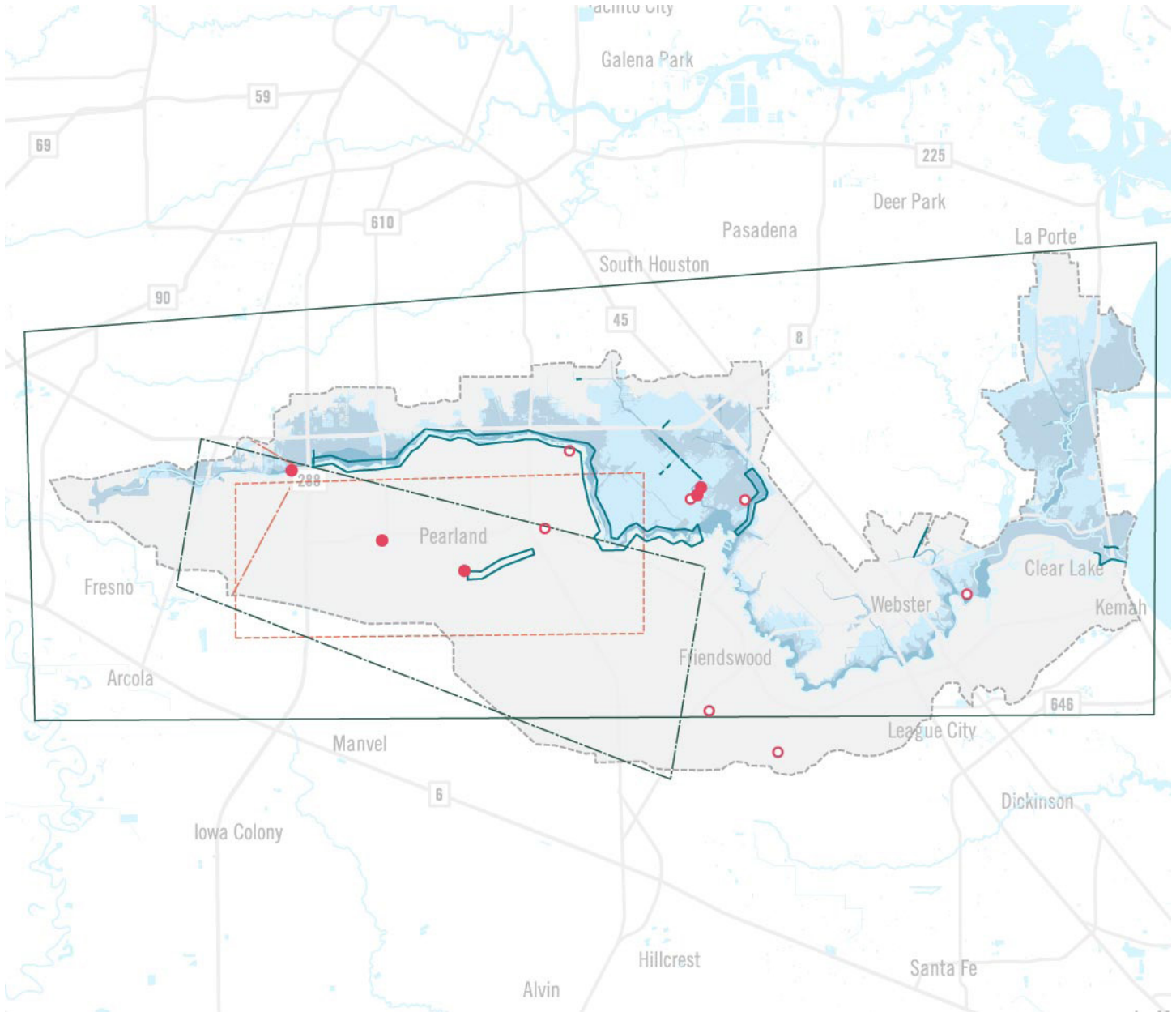




# CLEAR CREEK



Clear Creek flows eastward into Galveston Bay, forming the southern Harris County line. It has seen significant flooding and has a wide mapped floodplain. The watershed has seen rapid development over the past few decades as agricultural land is replaced by subdivisions. Multiple major projects, including detention and channel improvements, are under construction or in planning.



STATISTICAL DATA	
Watershed Area	197 square miles
Watershed Population	574,172
Watershed Population (Harris County)	164,172
Open Stream	154 miles
Budget for Complete Projects	\$212,793,964
Budget for Projects Under Construction	\$22,900,000
Budget for Ongoing Projects	\$43,669,344
Total Budget for Watershed	\$279,363,308
Budget per Capita	\$487
Budget for Proposed Projects	\$50,750,000
Allison Damages (Claims)	\$57,538,122 (1,961)
Ike Damages (Claims)	\$167,522,163 (2,822)
Harvey Damages (Claims)	\$63,980,473 (4,458)

# CLEAR CREEK

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Mud Gully Channel Improvements	A construction project to improve stormwater conveyance and reduce future flood damages on a tributary of Clear Creek commonly known as Mud Gully or Beamer Ditch.	Construction	HCFCF - CIP '17	\$4,400,000
Channel Improvements	Sagedown Rd. to Hall Rd, Clear Creek Drainage Area	Completed	HCFCF Data	\$1,004,260
USACE/USGS Coordination-Post Hurricane Ike Repairs	Gated structure at second outlet, Clear Creek	Completed	HCFCF Data	\$315,000
Channel Enclosure - (bid w/E116-05-03) 99A	SBW8 to Kirkway	Completed	HCFCF Data	\$56,443
FY 2005 Second Outlet Scour Investigation	2,000 feet upstream of the Gated Structure to 1,600 feet east of Todville Road bridge	Completed	HCFCF Data	\$43,000
Survey for Desilt	A107-03-00 to u/s end where concrete low flow begins.	Completed	HCFCF Data	\$7,825
TS Allison Damage	10' u/s and 10' d/s of Moers Road	Completed	HCFCF Data	\$2,609
TS Allison Damage	5' d/s of Sagecanyon behind 10302 Sagedowne	Completed	HCFCF Data	\$840
Clear Creek Channel Improvements	15.1 miles of channel rectification on Clear Creek; 500 ac-ft of in-line stormwater detention	Planned	HCFCF	\$-
Combine Dual Channels	A100-00-00 to 1800' upstream	Completed	HCFCF Data	\$-
Mary's Creek Channel Improvements	2.1 miles of channel rectification on Mary's Creek	Planned	HCFCF	\$-
TS Allison Damage	Dead end of Sagevale Street	Completed	HCFCF Data	\$-
Turkey Creek Channel Improvements	2.4 miles of channel rectification on Turkey Creek	Planned	HCFCF	\$-
			<b>TOTAL</b>	<b>\$5,829,977</b>

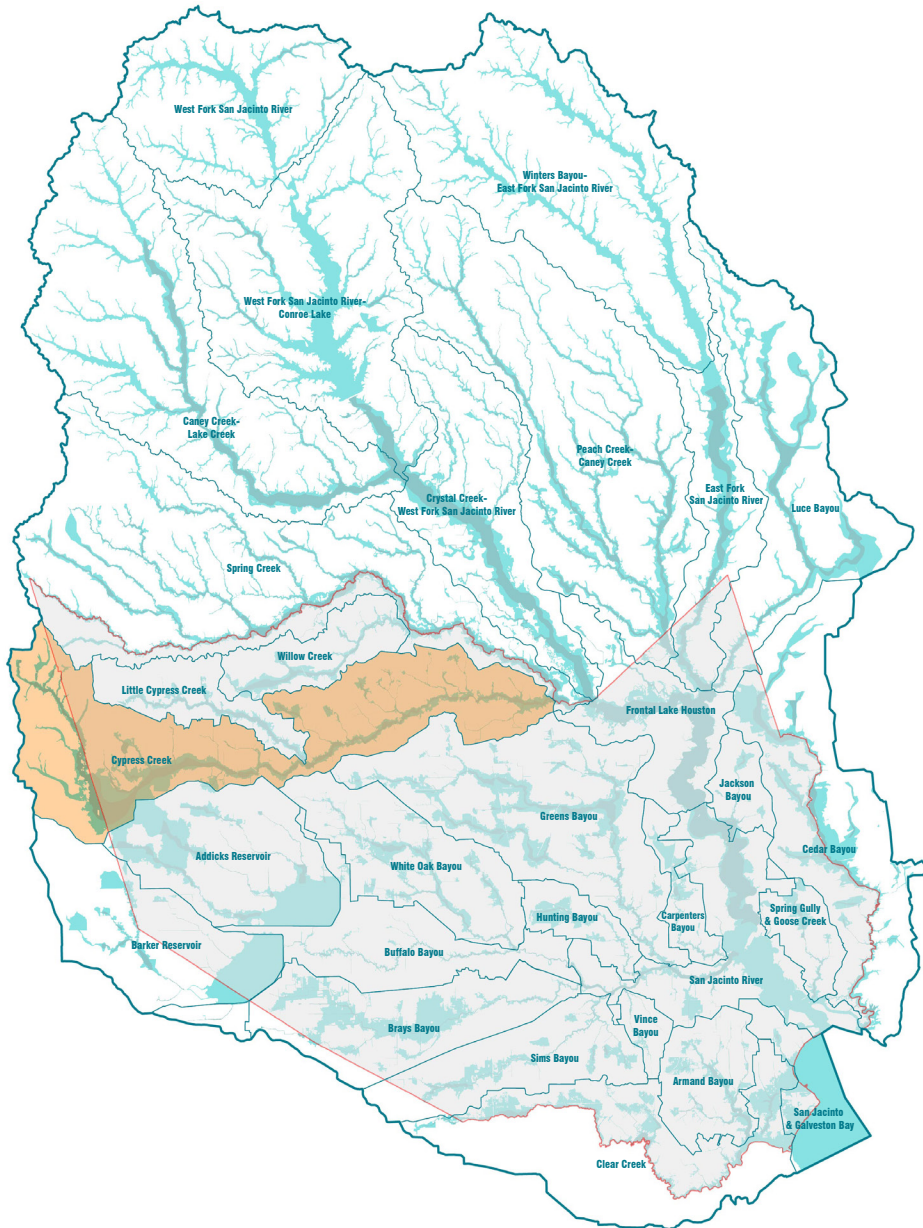
NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Magnolia Creek	Extension of Magnolia Creek to the west to provide an outfall ditch and provide detention	Planned	League City Master Plan	
Clear Creek Flood Damage Reduction Project	a 900 acre-feet detention basin along Mary's Creek, and environmental enhancements - part of larger Clear Creek project	Completed	Rebuild Texas	\$200,000,000
South Panhandle Detention	Construct detention	Planned	Friendswood CIP	\$22,967,000
South Belt Stormwater Detention Basin (Phase 2)	Excavation of 2nd phase of basin to reduce flood damages on Mud Gully/Beamer Ditch and Clear Creek	Construction	HCFCF - CIP '18	\$17,100,000
North Panhandle Detention	Construct detention	Planned	Friendswood CIP	\$8,192,000
Southeast Quadrant of Old Townsite Drainage	Sub-regional drainage and detention plan to utilize volume in Baker's Landing pond and develop detention pond along Old Alvin.	Planned	Pearland CIP	\$6,240,308
South Belt Stormwater Detention Basin (Phase 1)	Excavation of first phase of basin to reduce flood damages on Mud Gully/Beamer Ditch and Clear Creek	Completed	HCFCF - CIP '17	\$5,900,000
D.L. Smith Detention Pond Expansion Phase I	Phase I will expand the detention facility by approximately 150 ac-ft to the west of McHard Road outfall ditch and south of the pipeline easement.	Planned	Pearland CIP	\$5,888,036
Cullen/FM 518 Detention Pond	Sub-regional detention pond. First phase to include ROW acquisition and ditch & storm sewer improvements	Completed	Pearland CIP	\$4,789,000
Dredging of Lake Nassau	Dredging of Lake Nassau	Construction	Nassau Bay CIP	\$1,400,000

ROW Acquisition - Basin	Property is located south of South Fork Blvd. and east of Mud Gully, Unit A120-00-00.	Completed	HCFCF Data	\$384,935
Lower Kirby Urban Center Regional Detention	Regional stormwater detention for area bounded by BW8 to the north, Clear Creek to the south, Kirby Drive to the west, and SH288 to the east.	Completed	Pearland CIP	\$226,864
			<b>TOTAL</b>	<b>\$273,088,143</b>

NAME (PROGRAMS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Brazoria County Channel De-Snagging Project	De-Snagging of the channels in waterways in Brazoria County.	Proposed		\$50,000,000
Clear Creek Floodplain Management Plan	Clear Creek Watershed	Completed	HCFCF Data	\$63,188
			<b>TOTAL</b>	<b>\$50,063,188</b>

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Fort Bend County Regional Watershed Assessment	Study regarding the Fort Bend County Regional Watershed.	Proposed	Rebuild TX	\$750,000
Pearland Master Drainage Plan	Incorporate all studies and improvements to date and develop base model, developed cooperatively with Brazoria Drainage District #4	Planned	Pearland CIP	\$382,000
			<b>TOTAL</b>	<b>\$1,132,000</b>

# CYPRESS CREEK



Cypress Creek flows eastward into Lake Houston in northern Harris County, from the Katy Prairie through the East Texas woods. It is one of the most rapidly developing watersheds in the county. Much of the stream is natural, and Harris County has been acquiring land to create a continuous greenway. Plans for a third reservoir have been studied for the upper watershed but these are unlikely to benefit lower Cypress watershed since the overflow goes to Addicks.



# CYPRESS CREEK

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Cypress Creek Channel Restoration Project	Repaired severe erosion along Cypress Creek from Champion Forest Dr to Stuebner-Airline Rd including construction of gentle side slopes and channel bench to control erosion in 2013	Completed	HCFCF Website	\$3,000,000
Cypress Creek Tributary K163-00-00 Conveyance Improvements	ROW acquisition	ROW/Utility	HCFCF - CIP '18	\$1,520,000
Dry Gully Erosion Repairs, Louetta Road to Northbridge Drive	Repair channel slopes, armor bottom of channel with buried riprap, and replace damaged outfall pipes on 2,000 ft-long segment of Dry Gully	Planned	HCFCF Website	\$513,404
Rehab	Cypresswood Dr. to 900-feet downstream & Lockridge to 1,650-feet upstream	Completed	HCFCF Data	\$415,082
Drainage Structure Rectification	J109-01 @ Cypresswood	Completed	HCFCF Data	\$290,000
Channel Desilt and Conveyance Improvements	K140-00-00 to the upstream end.	Completed	HCFCF Data	\$133,770
TS Allison Damage	300' downstream of Center Court Drive	Completed	HCFCF Data	\$7,595
Channel Enclosure	Strack Road to existing 72" storm sewer, approximately 1200' downstream	Completed	HCFCF Data	\$4,549
TS Francis Damage	At K500-05-00	Completed	HCFCF Data	\$4,163
Seals Gully Erosion Repairs	Repair of severe erosion of channel side slopes and removal of failed/outdated drop structure	Completed	HCFCF Website	\$-
TS Francis Damage	Entire reach	Completed	HCFCF Data	\$-
			<b>TOTAL</b>	<b>\$5,888,563</b>

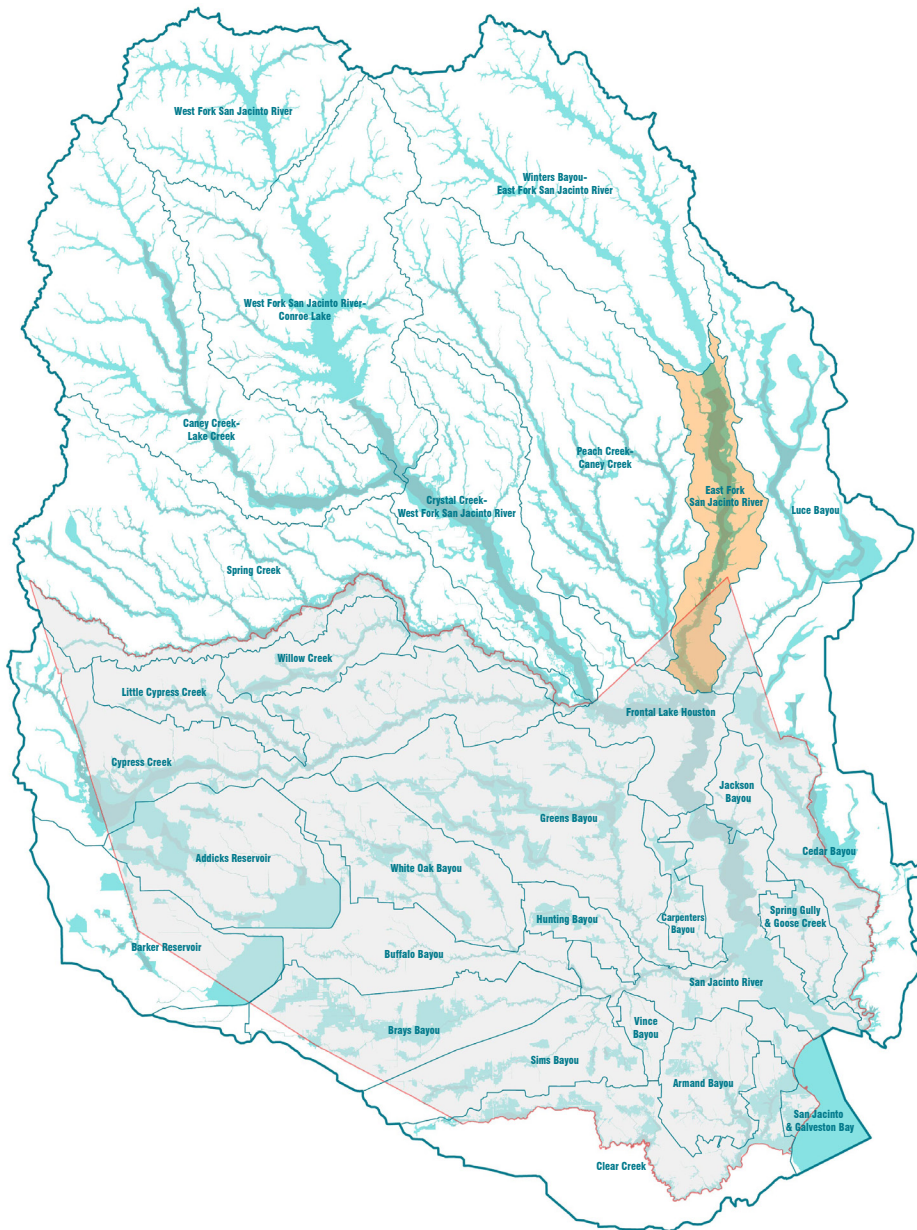
NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
ROW Acquisition - Basin	Katy Prairie (County line to Katy Hockley Cutoff Road, West & East respectively, & from Cypress Creek on the North & FM 529 on the South)	Completed	HCFCF Data	\$5,129,234
Cypress Park Basin Improvements	N. Eldridge & Cypress Creek	Completed	HCFCF Data	\$1,837,066
Basin Improvements	U/S of Cypresswood & Jones Road	Completed	HCFCF Data	\$1,213,716
Site Improvements and Wetland Construction	Created and restored 95 ac of wetland habitat on Katy Prairie near intersection of Katy-Hockley and House Hahl Rd in 2014. Provides mitigation for Greenhouse and John Paul's Landing Stormwater Detention Basins.	Completed	HCFCF Website	\$203,000
Site Preparation Activity	The Stormwater Detention Basin at Cypress Park, located near Cypress Creek and North Eldridge Pkwy.	Completed	HCFCF Data	\$129,987
Katy Prairie Management	Katy Prairie	Completed	HCFCF Data	\$91,210
Basin Acquisition	Northern bank of Cypress Creek west of N. Eldridge Road.	Completed	HCFCF Data	\$40,558
Turf Establishment at the Weir Structure	Weir structure of the K500-05-00 basin at K100-00-00	Completed	HCFCF Data	\$15,856
TS Allison Damage	Detention basin	Completed	HCFCF Data	\$15,336
Cypress Park Basin Interim Land Use Plan	The Stormwater Detention Basin at Cypress Park, located near Cypress Creek and North Eldridge Parkway.	Completed	HCFCF Data	\$14,055
Basin Rehabilitation	K100-00-00 at Cypresswood Drive	Completed	HCFCF Data	\$7,754
Pilot Channel Desilt	K524-01-00	Completed	HCFCF Data	\$7,511
Floodplain Acquisition	Downstream of Hardy Road	Completed	HCFCF Data	\$7,200
Sediment Removal	K531-02-00 outfall inlet.	Completed	HCFCF Data	\$4,587
Sediment Removal	K500-12-00	Completed	HCFCF Data	\$1,251
			<b>TOTAL</b>	<b>\$8,718,318</b>



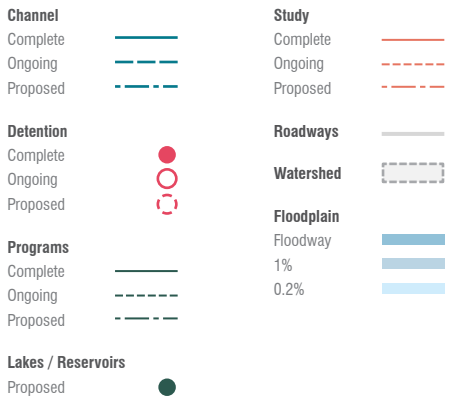
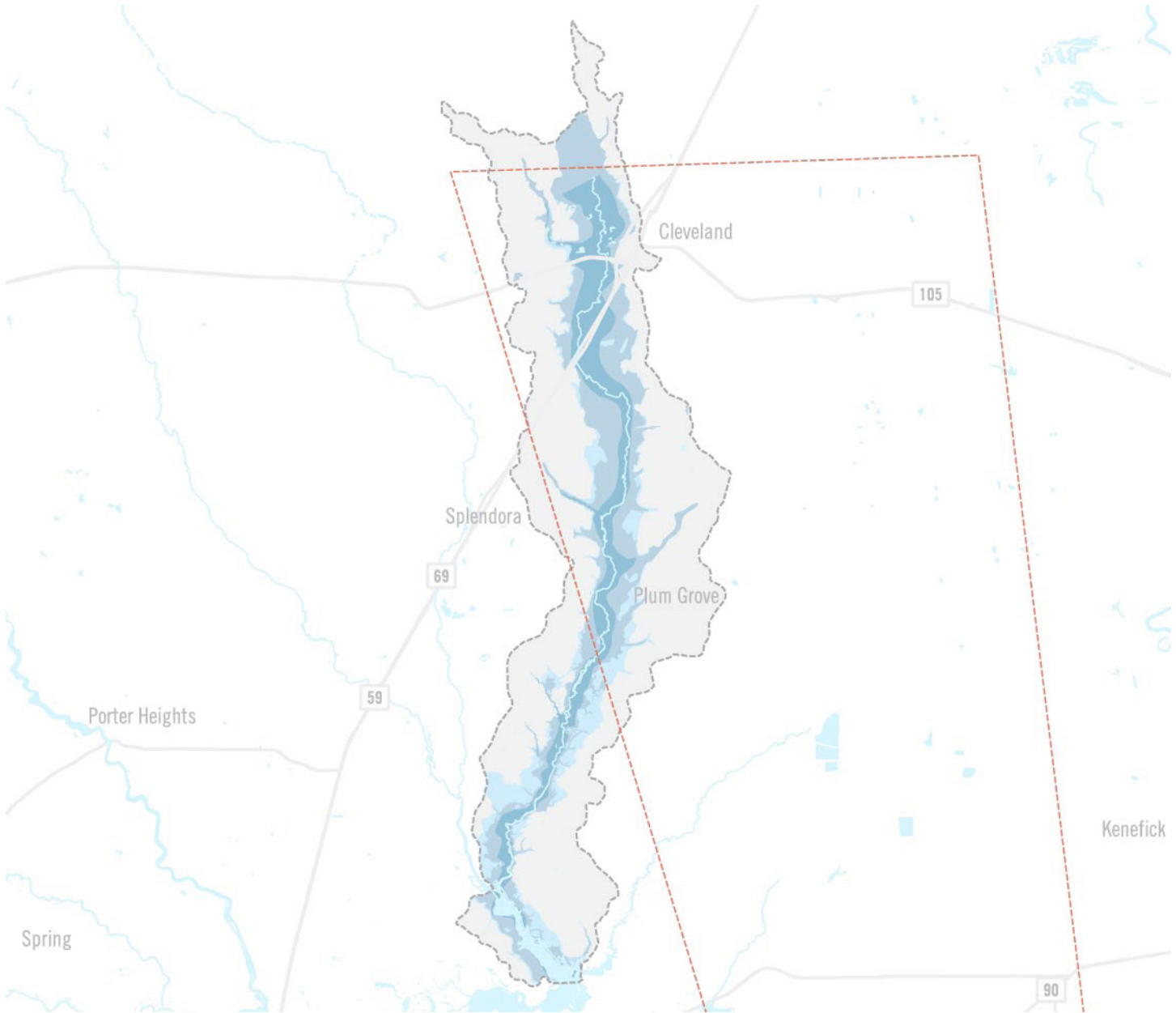
NAME (RESERVOIRS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Third Reservoir	Third reservoir to mainly benefit Addicks but will have an impact on Cypress watershed as well.	Proposed	West Houston Association, Rebuild Texas	
			<b>TOTAL</b>	<b>\$0</b>

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Cypress Creek Overflow Management Plan	Study and manage over of 60 sq miles of Cypress Creek watershed that overflow into Harris County	Completed	Cypress Creek Flood Control Coalition/ HCFCFCD	
Cypress Creek Overflow Management Plan (3rd Reservoir)	Continuation of the planning study to address special watershed management needs in Cypress Creek and Addicks Reservoir watersheds. Study is partially funded through a Texas Water Development Board grant.	Planned	CCFCC/ HCFCFCD - CIP '18	\$150,000
			<b>TOTAL</b>	<b>\$150,000</b>

# EAST FORK SAN JACINTO



The East Fork of the San Jacinto River empties into Lake Houston east of Kingwood. The watershed is heavily wooded, with some populated areas around Cleveland to the north. There are no currently proposed flood control projects in this watershed.



STATISTICAL DATA	
Watershed Area	54 square miles
Watershed Population	45,890
Open Stream	56 miles
Budget for Complete Projects	0
Budget for Projects Under Construction	0
Budget for Ongoing Projects	\$166,667
Total Budget for Watershed	\$166,667
Budget per Capita	\$4
Budget for Proposed Projects	0
Allison Damages (Claims)	N/A
Ike Damages (Claims)	N/A
Harvey Damages (Claims)	N/A

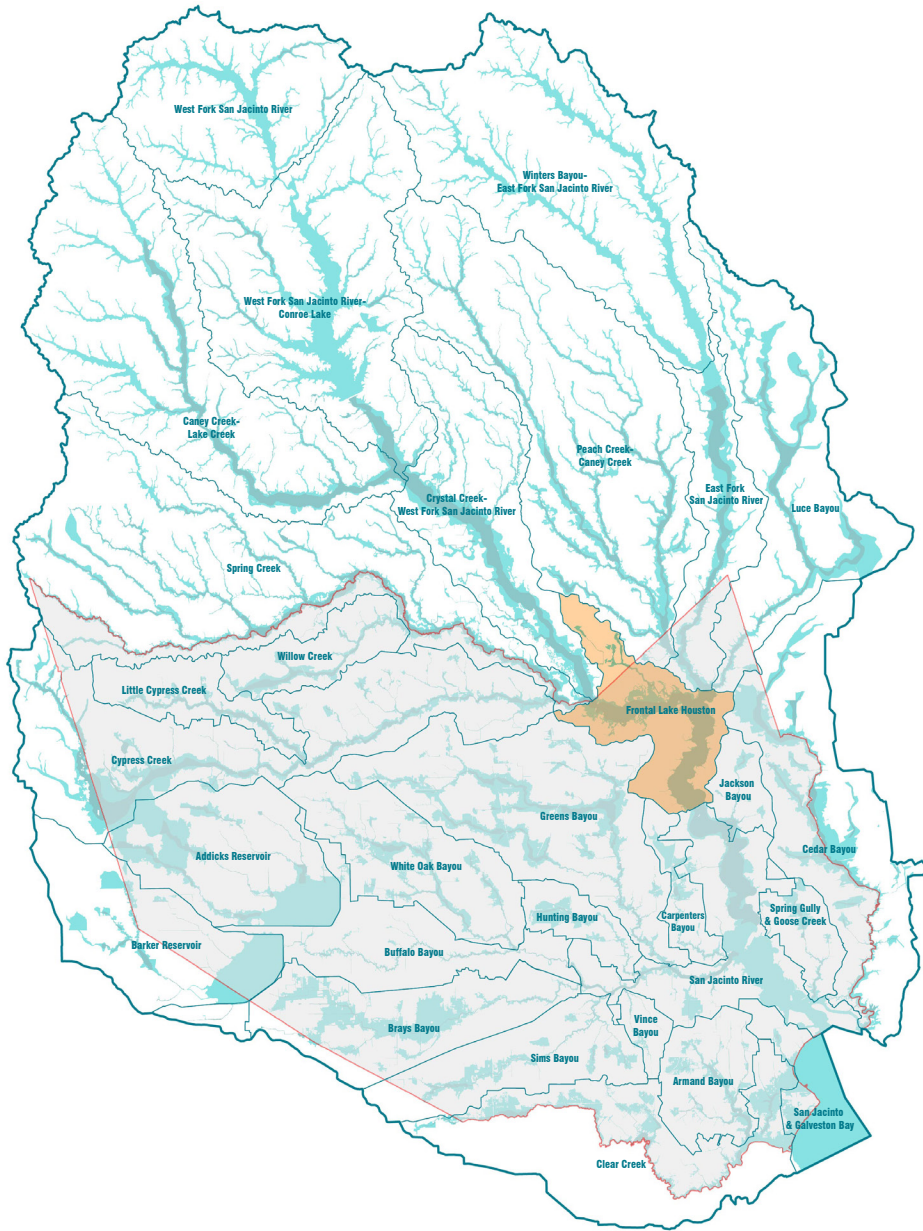


# EAST FORK SAN JACINTO

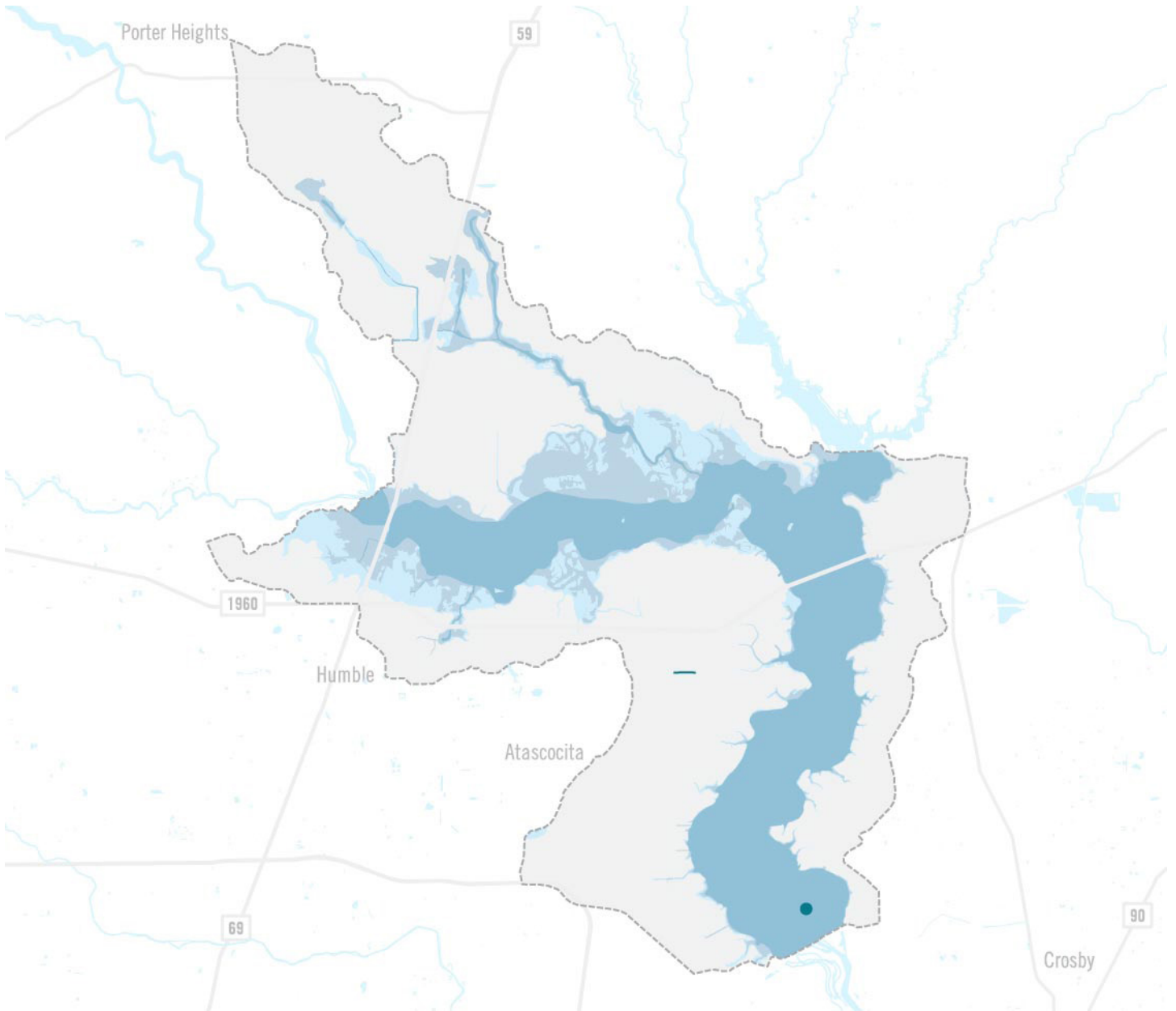
NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Liberty County Master Drainage Study	Complete a master drainage study on all watersheds	Planned	HGAC Hazard Mitigation Plan	\$166,667
			<b>TOTAL</b>	<b>\$166,667</b>



# FRONTAL LAKE HOUSTON



The Frontal Lake Houston watershed includes Lake Houston itself and land that drains directly into it. The lake is managed by the city of Houston for water supply, not flood control. Harvey caused significant flooding along its banks, particularly in Kingwood.



- Channel**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Detention**
- Complete ●
- Ongoing ○
- Proposed ◻
  
- Programs**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Lakes / Reservoirs**
- Proposed ●

- Study**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway —
- 1% —
- 0.2% —



STATISTICAL DATA	
Watershed Area	212 square miles
Watershed Population	156,472
Open Stream	N/A
Budget for Complete Projects	\$7,820
Budget for Projects Under Construction	0
Budget for Ongoing Projects	0
Total Budget for Watershed	\$7,820
Budget per Capita	0
Budget for Proposed Projects	-
Allison Damages (Claims)	N/A
Ike Damages (Claims)	N/A
Harvey Damages (Claims)	N/A



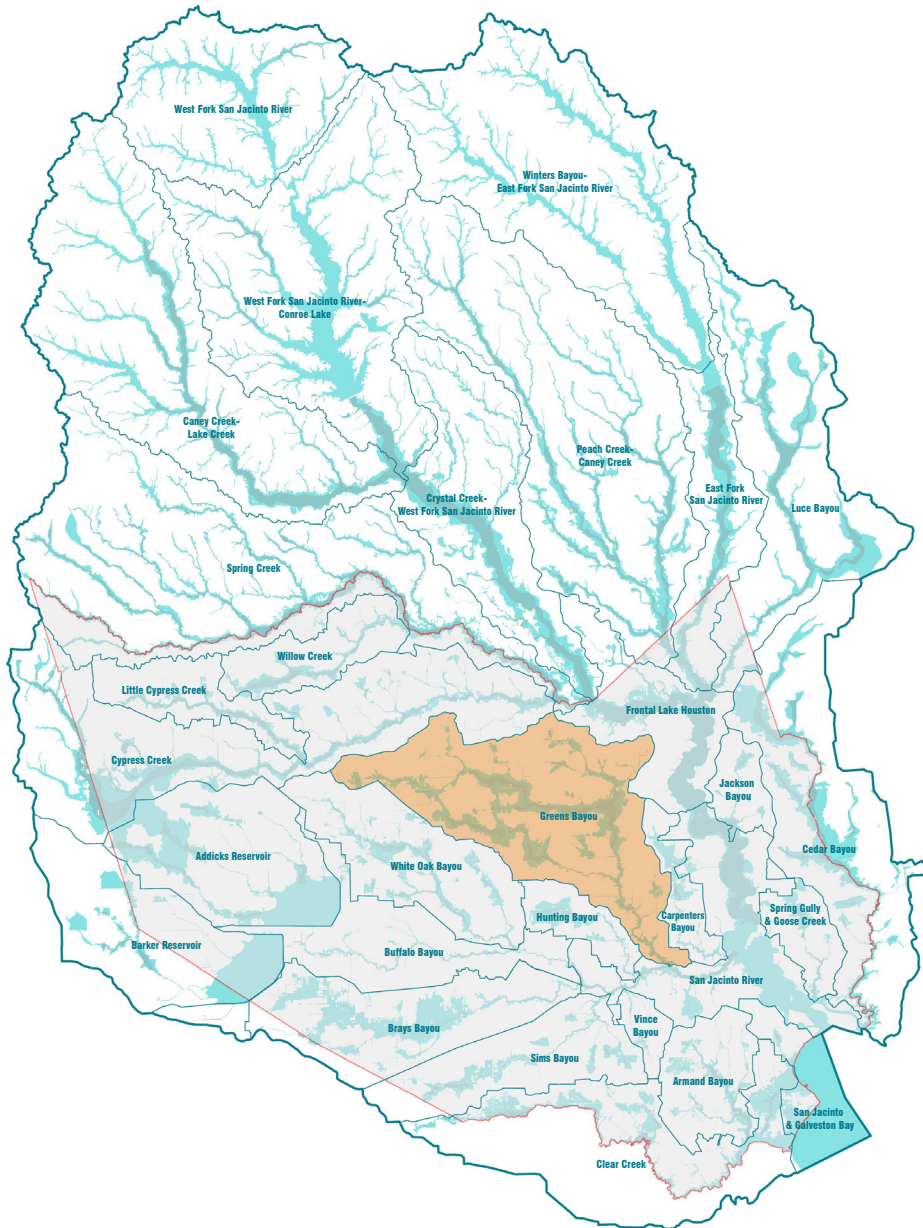
# FRONTAL LAKE HOUSTON

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Pilot Channel Cut	Downstream of Atasca South at box culvert outfall to 1000' +/- downstream till daylighted.	Completed	HCFCF Data	\$7,820
			<b>TOTAL</b>	<b>\$7,820</b>
NAME (RESERVOIR)	DESCRIPTION	STAGE	SOURCE	BUDGET
Lk Houston	Restore Lake Houston to maximum capacity. San Jacinto River Authority to create retention/detention upstream.	Planned	Ed Emmett's list	
			<b>TOTAL</b>	<b>0</b>

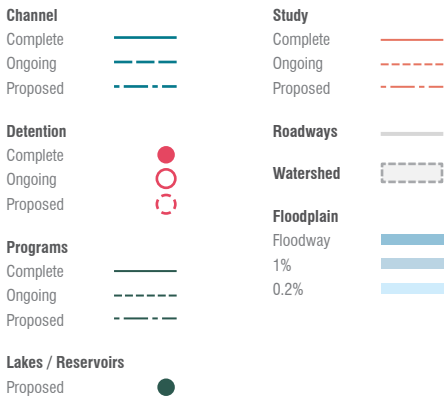
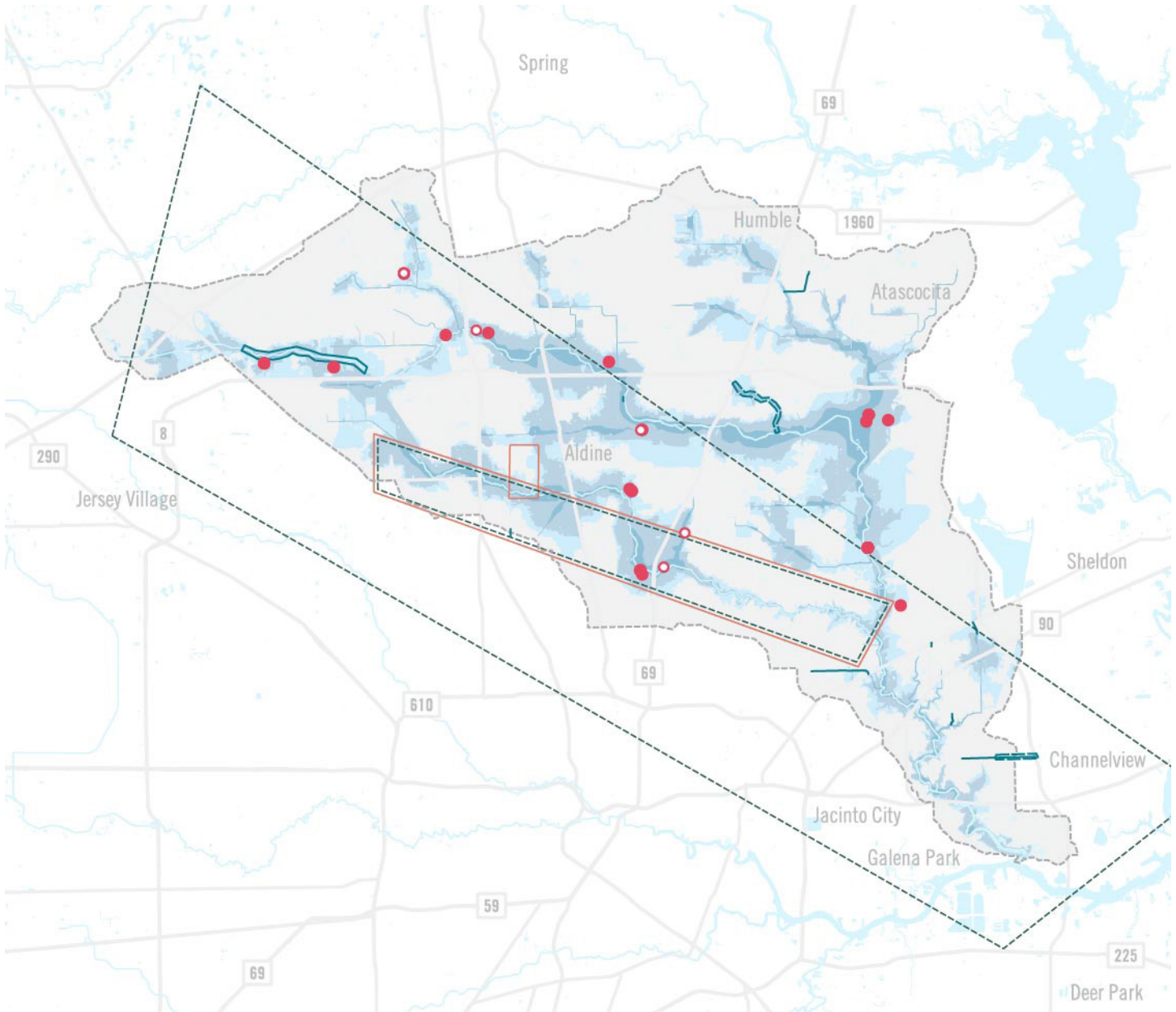




# GREENS BAYOU



Greens Bayou, along with its tributary, Halls Bayou, drains much of northeast Houston and areas of unincorporated Harris County. It has been the site of repeated flooding in areas like Greenspoint. As part of the “Progress Greens” project, multiple major regional detention basins have been built or are under construction, and this watershed has been a primary area of interest for buyouts.



STATISTICAL DATA	
Watershed Area	212 square miles
Watershed Population	528,720
Open Stream	308 miles
Budget for Complete Projects	\$83,290,908
Budget for Projects Under Construction	\$77,639,980
Budget for Ongoing Projects	\$4,155,000
Total Budget for Watershed	\$165,085,888
Budget per Capita	\$312
Budget for Proposed Projects	0
Allison Damages (Claims)	\$186,286,719 (4,749)
Ike Damages (Claims)	\$47,059,032 (2,047)
Harvey Damages (Claims)	\$69,564,864 (5,153)

# GREENS BAYOU

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Greens Bayou Federal Project	Right of way and utility adjustments for the Greens Bayou federal project	ROW/Utility	HCFCF - CIP '17	\$3,800,000
Natural Channel Restoration	From Wallisville Road to P107-00-00	Completed	HCFCF Data	\$1,543,187
Earthen Channel Restoration	FM 527 (Mesa Road) to the Union Pacific Railroad tracks parallel to the old Highway 90.	Completed	HCFCF Data	\$658,608
Smith Road Channel Diversion	Designed for a channel project to reduce flood risks along channel P133-00-00 and improve outfall capacity for drainage systems on Smith Road.	Designed	HCFCF - CIP '18	\$350,000
Carpenters Bayou Tributary Erosion Repair	Repair erosion and remove sediment along a 1.2-mile section.	Construction	HCFCF Website	\$167,678
TS Allison Damage	25' downstream of Aldine Bender	Completed	HCFCF Data	\$63,833
TS Allison Damage	Downstream of Beaumont Hwy. (Old Hwy. 90)	Completed	HCFCF Data	\$38,098
Rock Removal from Channel Bottom	Downstream side of Old Hwy 90 at box culverts	Completed	HCFCF Data	\$198
Channel Enclosure	Beltway 8 to Uvalde	Completed	HCFCF Data	\$-
Restore Channel Capacity	City of Humble	Completed	HCFCF Data	\$-
			<b>TOTAL</b>	<b>\$6,621,602</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Kuykendahl & Glen Forest Stormwater Detention Basin	Excavation of Kuykendahl & Glenforest Stormwater Detention Basin	Construction	HCFCF - CIP '17	\$62,900,000
Hall Park Stormwater Detention Basin	Relocation of utilities and excavation of Hall Park Stormwater Detention Basin	Construction	HCFCF - CIP '17	\$13,572,302
Stormwater Detention Basin at Keith-Wiess Park	Keith-Wiess Park, located west of Hwy 59 and south of Aldine Mail Road.	Completed	HCFCF Data	\$12,086,057
ROW Acquisition - Basin	The property is located near I-45 and Greens Road.	Completed	HCFCF Data	\$11,107,957
ROW Acquisition - Basin	Bretshire Stormwater Detention Basin, located west of Hwy 59 near Little York Road.	Completed	HCFCF Data	\$10,504,902
ROW Acquisition - Basin	Aldine-Westfield Road Stormwater Detention Basin, located near Aldine-Westfield Road and North Sam Houston Roll Road.	Completed	HCFCF Data	\$9,725,434
Stormwater Detention Basin at Keith-Wiess Park	Keith-Wiess Park, located west of Hwy 59 and south of Aldine Mail Road	Completed	HCFCF Data	\$9,725,434
Basin Improvements, Phase 1	Garners Stormwater Detention Basin, located near Greens Bayou at confluence with Garners Bayou.	Completed	HCFCF Data	\$6,119,384
ROW Acquisition - Basin	North of N. Sam Houston Tollway, adjacent to Antoine Rd and W. Greens Rd	Completed	HCFCF Data	\$4,260,869
ROW Acquisition - Basin	Garners Stormwater Detention Basin, located near Greens Bayou at confluence with Garners Bayou.	Completed	HCFCF Data	\$3,322,690
ROW Acquisition - Basin	West of Ella Blvd., north of Spears Road, off of Unit P145-00-00	Completed	HCFCF Data	\$2,444,031
Hopper Road Stormwater Detention Basin	Land acquisition, design and project preparation for the P518-10-00 stormwater detention basin and associated channel conveyance improvements to reduce flood risks along channel P118-14-00.	Planned	HCFCF - CIP '18	\$2,400,000
Lauder Road Stormwater Detention Basin	Conduct hydrology and hydraulic analysis and other work efforts associated with the design and construction of the stormwater detention basin.	Planned	HCFCF - CIP '18	\$800,000

Halls Bayou Regional Detention at Parker Road	Regional detention	Completed	City of Houston CIP	\$707,833
Pedestrian Bridges Over HCFCD Units P118-00-00 and P118-19-00 at Keith-Wiess Park	Keith-Wiess Park, located west of Hwy 59 and south of Aldine Mail Road.	Completed	HCFCD Data	\$700,671
ROW Acquisition - Basin	90.61 acre tract at the confluence of P100-00-00 and P138-00-00	Completed	HCFCD Data	\$603,935
ROW Acquisition - Basin	Antoine Road at Greens Bayou	Completed	HCFCD Data	\$595,081
Bretshire Stormwater Detention Basin Final Design	North of Parker Road, West of Jensen Drive	Completed	HCFCD Data	\$519,022
ROW Acquisition - Basin	Cutten Road Stormwater Detention Basin, located near Cutten Road and SH 249.	Completed	HCFCD Data	\$429,266
Drainage Improvements	Garrett Road, adjacent to P500-01-00.	Completed	HCFCD Data	\$298,640
Revegetation for Environmental Enhancements	North of Parker, West of US 59	Completed	HCFCD Data	\$252,113
Emergency Action Plan for Lower Greens Bayou Regional Detention Facility	Key Map: 415Z and 416N,PQ,S,T,U,W,X,Y West of John Ralston and north of Tidwell	Completed	HCFCD Data	\$88,340
FEMA LOMR	Greens Bayou, from confluence with P121-00-00 to Garners Bayou	Completed	HCFCD Data	\$81,986
Revised Basin Design	Cutten Road Stormwater Detention Basin, located near Cutten Road and SH 249.	Completed	HCFCD Data	\$76,893
ROW Acquisition - Basin	Greens Bayou at P146-00-00 at Ella Blvd	Completed	HCFCD Data	\$46,445
Detention Control Structure	Cutten Road Stormwater Detention Basin, located near Cutten Road and SH 249.	Completed	HCFCD Data	\$39,004
Sediment Removal	Lockwood Entrance	Completed	HCFCD Data	\$21,948
ROW Acquisition - Basin	North side of Greens Bayou west of John F. Kennedy Road.	Completed	HCFCD Data	\$17,476
Site Preparation Activities		Completed	HCFCD Data	\$16,411
E&R Greens & Garners Bayou Regional Detention Basin	The basin is located in the Greens Bayou Wetlands Mitigation Bank, near the confluence of P130-00-00 (Garners) & P100-00-00 (Greens)	Completed	HCFCD Data	\$11,792
Garrett Road Stormwater Detention Basin	Detention basin located on a 1,529-ac site near Tidwell Rd and John Ralston Rd Complete in 1998	Completed	HCFCD	\$0
Basin Improvements, Phase 1	On P100 between P121 & Garrett Rd.	Completed	HCFCD Data	\$0
Basin Improvements, Phase 2	P500-01 site between P122 & Garrett Rd.	Completed	HCFCD Data	\$0
Greens Bayou Regional Detention		Completed	HCFCD Data	\$0
ROW Acquisition - Basin	Ella Blvd & Kuykendahl	Completed	HCFCD Data	\$0
ROW Acquisition - Basin	ENRON Site - North Fork Greens Bayou Regional Detention Site	Completed	HCFCD Data	\$0
			<b>TOTAL</b>	<b>\$153,475,917</b>

NAME (PROGRAMS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Progress Greens	Suite of flood damage reduction projects currently active in Greens Bayou to reduce flooding risks and damages within 213 sq mi of watershed. Partnership between HCFCD, USACE, and FEMA	Construction	HCFCD Website	\$1,000,000
Halls Ahead Flood Risk Reduction Program Implementation	Development of a prioritization and phasing of flood risk reduction projects identified in the Halls Ahead study.	Planned	HCFCD - CIP '18	\$605,000
			<b>TOTAL</b>	<b>\$1,605,000</b>



# GREENS BAYOU

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Halls Bayou Federal Feasibility Study	Halls Bayou Watershed	Completed	HCFCF Data	\$2,983,369
P118-26 Flood Risk Reduction Preliminary Engineering Report	Preliminary engineering report for a channel and stormwater detention project to reduce flood risks along channel P118-26-00.	Completed	HCFCF - CIP '18	\$400,000
			<b>TOTAL</b>	<b>\$3,383,369</b>

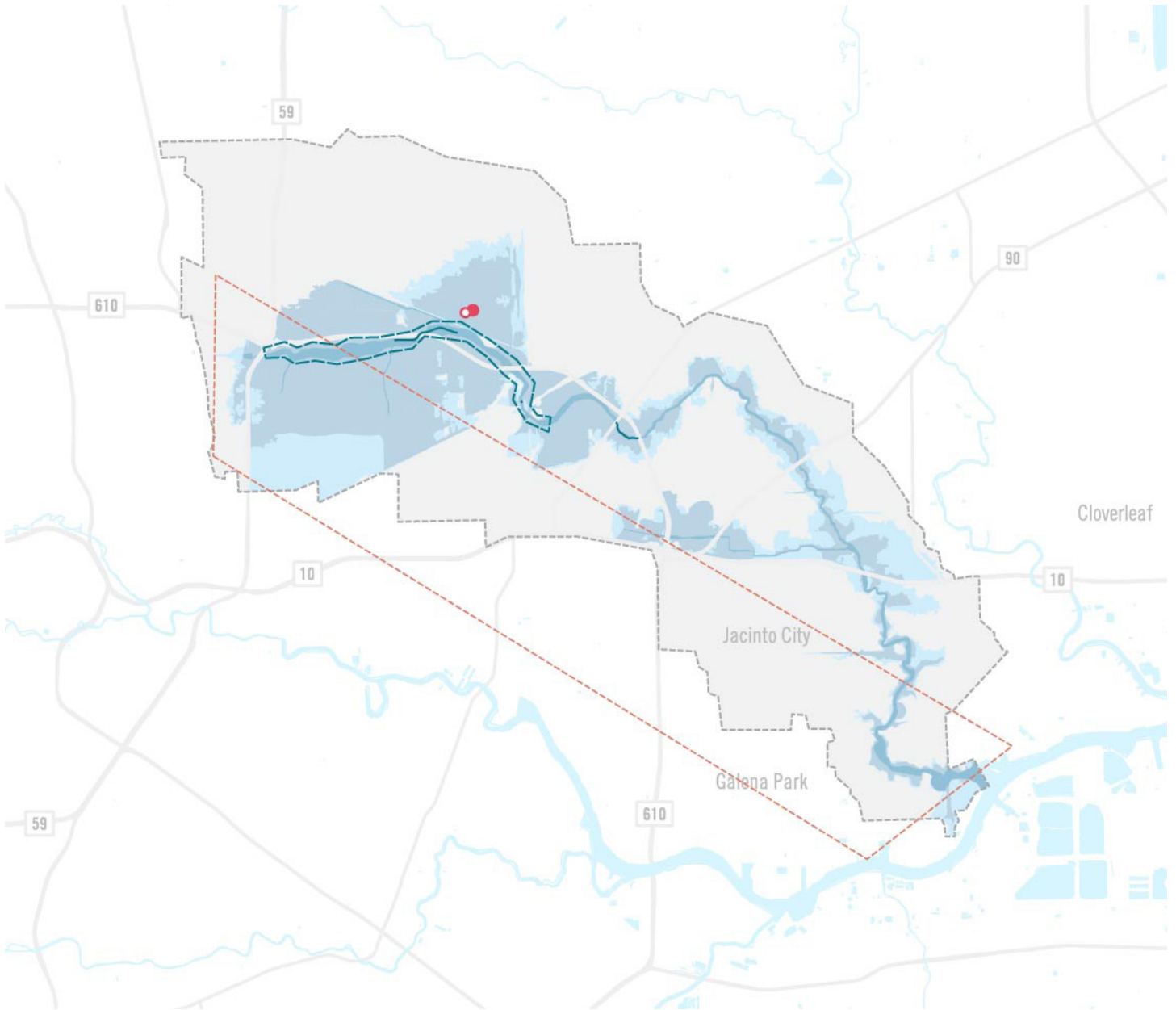


# HUNTING BAYOU



Hunting Bayou is a relatively small watershed in Northeast Houston, bounded by Greens/Halls to the north and east, Buffalo to the south, and White Oak to the west. The neighborhoods in its upper reaches, including Kashmere, have flooded repeatedly. Multiple projects, including channel improvements and detention, are under construction, and further studies are underway.





- Channel**
- Complete
- Ongoing
- Proposed
  
- Detention**
- Complete
- Ongoing
- Proposed
  
- Programs**
- Complete
- Ongoing
- Proposed
  
- Lakes / Reservoirs**
- Proposed

- Study**
- Complete
- Ongoing
- Proposed
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway
- 1%
- 0.2%



STATISTICAL DATA	
Watershed Area	30 square miles
Watershed Population	75,908
Open Stream	45 miles
Budget for Complete Projects	\$64,771,766
Budget for Projects Under Construction	\$111,150,000
Budget for Ongoing Projects	\$0
Total Budget for Watershed	\$175,921,766
Budget per Capita	\$2,318
Budget for Proposed Projects	0
Allison Damages (Claims)	\$30,387,052 (704)
Ike Damages (Claims)	\$5,650,537 (357)
Harvey Damages (Claims)	\$12,302,286 (1,149)

# HUNTING BAYOU

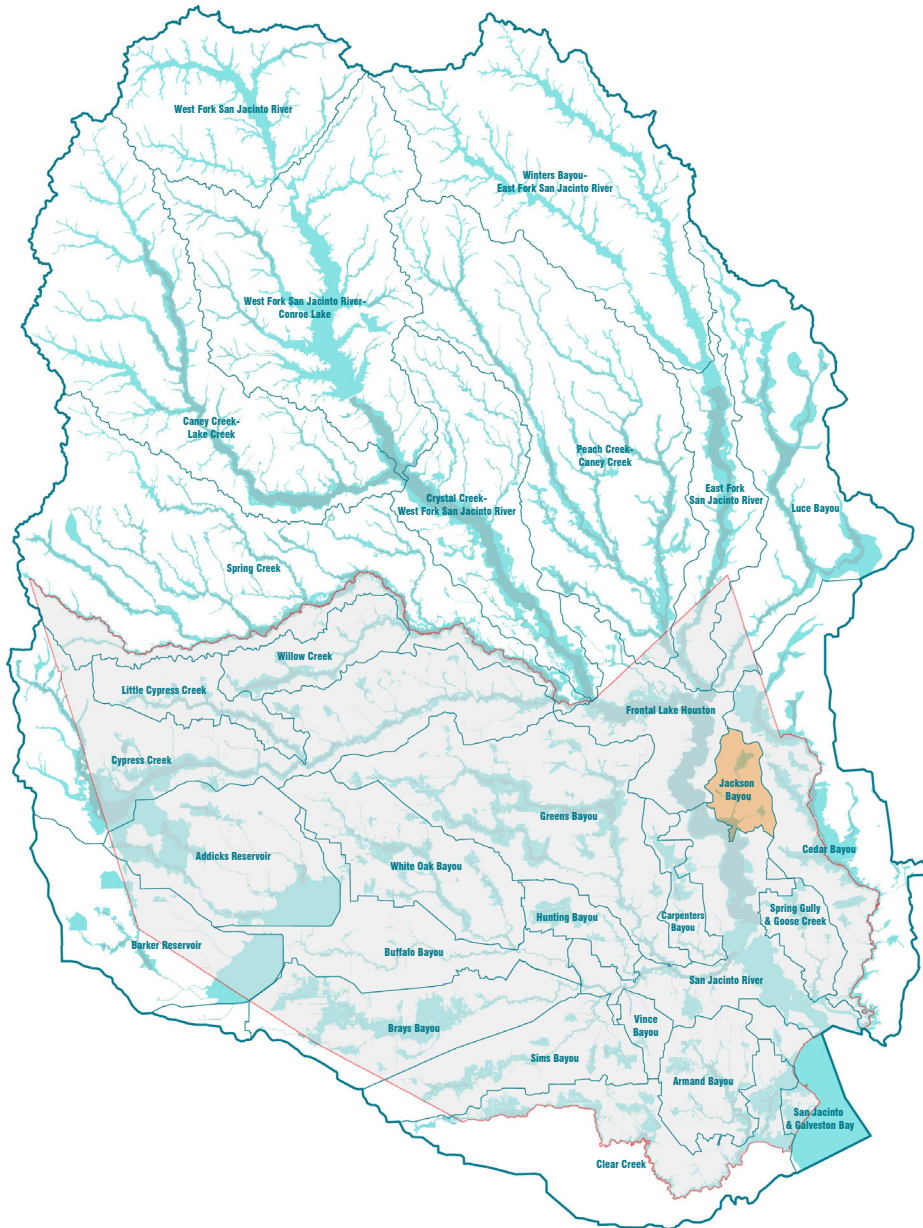
NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Hunting Bayou Flood Risk Management Project (Project Hunting)	Risk management project related to Hunting Bayou. 35% complete.	Construction	HCFCF - CIP '17	\$111,150,000
Hunting Bayou Flood Risk Management Project (Project Hunting)	Risk management project related to Hunting Bayou. 35% complete.	Completed	HCFCF - CIP '17	\$59,850,000
Terminal Subdivision Mainline Bridge Replacement	Englewood Yard Terminal near Liberty Road and Hunting Bayou	Completed	HCFCF Data	\$894,903*
Channel Improvements	Homestead Rd. to H110	Completed	HCFCF Data	\$593,768*
TS Allison Damage	McCarty to IH610	Completed	HCFCF Data	\$6,388
Hunting Bayou Channel Improvements	3.8 miles of grass-lined channel conveyance improvements on Hunting Bayou	Designed	HCFCF - CIP '17	\$-
			<b>TOTAL</b>	<b>\$171,006,388</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Homestead Stormwater Detention Basin (Phase 3 of 3)	Excavation of Homestead Stormwater Detention Basin Phase 3 (final phase) and construction of the control structure.	Construction	HCFCF - CIP '18	\$8,665,000*
ROW Acquisition - Basin	North of Hunting Bayou between H108-00-00 and H119-00-00.	Completed	HCFCF Data	\$4,915,378
Basin Improvements, Phase 1	Unit H500-01-00, North of Hunting Bayou in the Area of Homestead Road north of North Loop 610	Completed	HCFCF Data	\$1,903,024*
			<b>TOTAL</b>	<b>\$4,915,378</b>

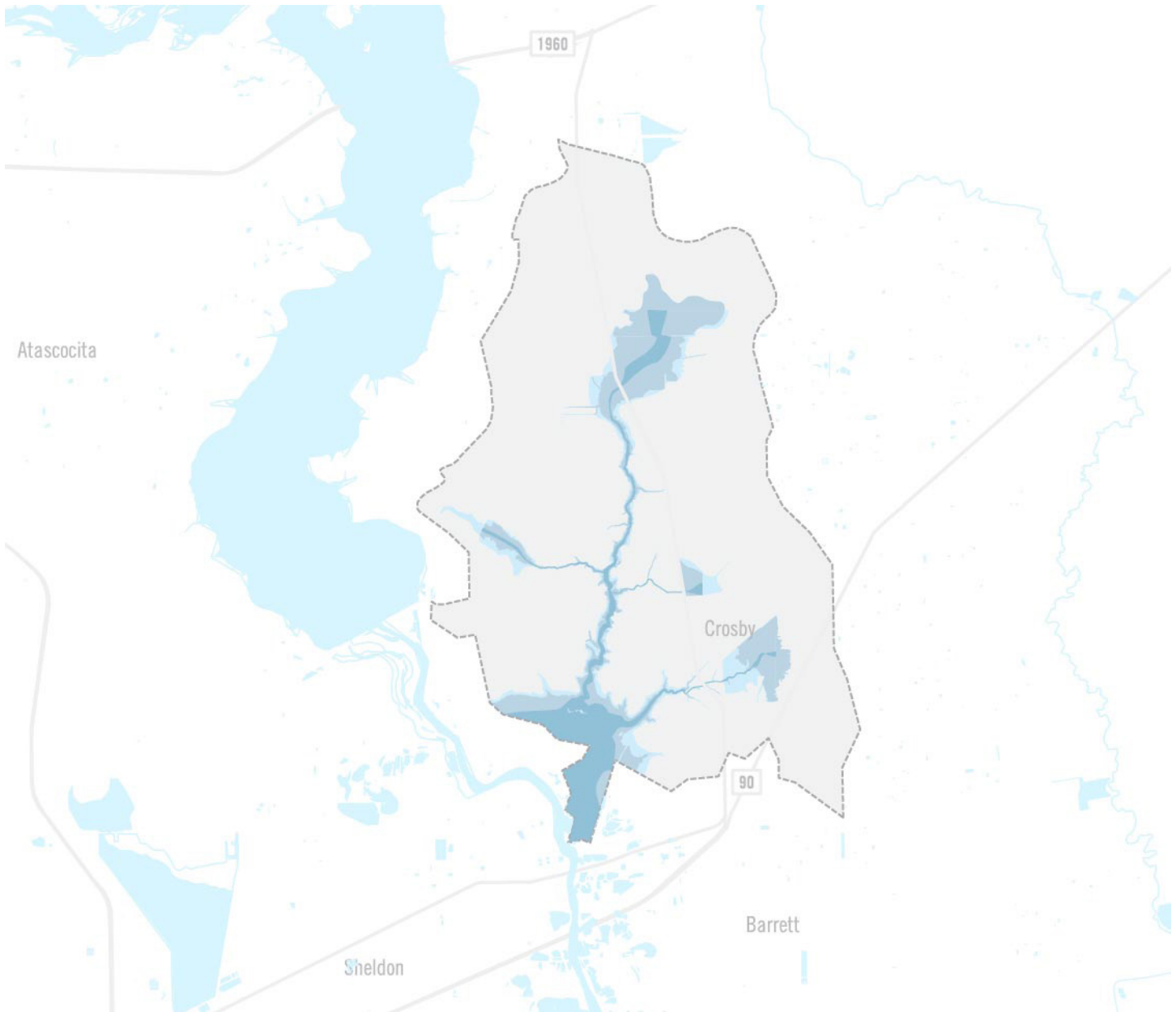
\* Included in Project Hunting



# JACKSON BAYOU



Jackson Bayou drains into the San Jacinto River just south of the Lake Houston dam. No flood control projects are proposed there.



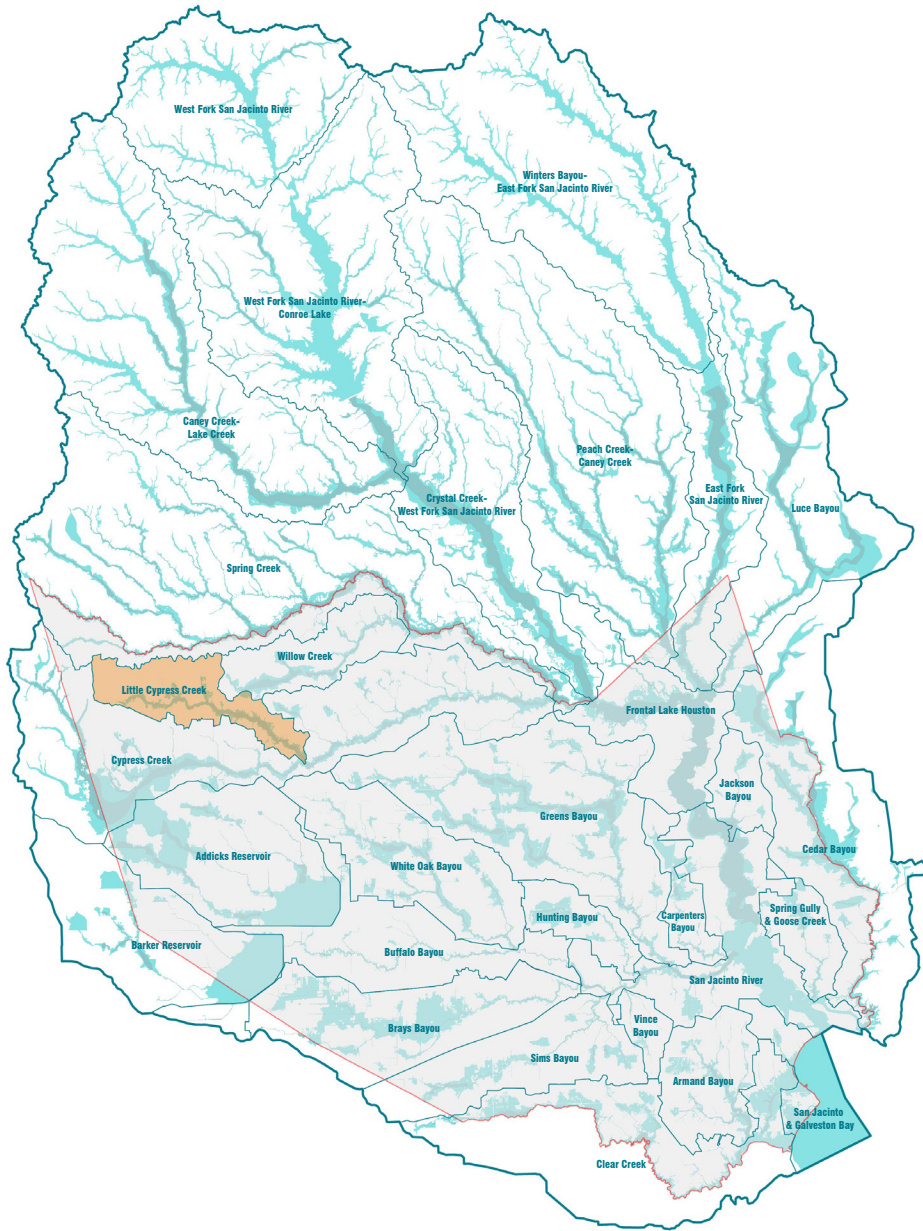
- Channel**
- Complete
- Ongoing
- Proposed
  
- Detention**
- Complete
- Ongoing
- Proposed
  
- Programs**
- Complete
- Ongoing
- Proposed
  
- Lakes / Reservoirs**
- Proposed

- Study**
- Complete
- Ongoing
- Proposed
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway
- 1%
- 0.2%

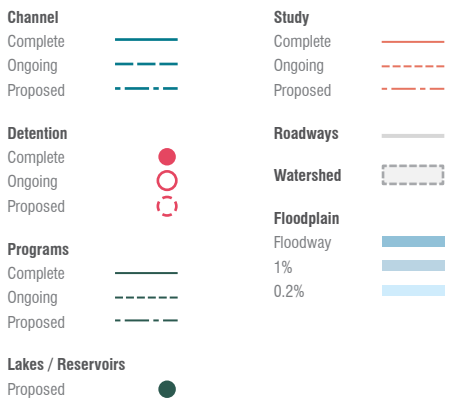
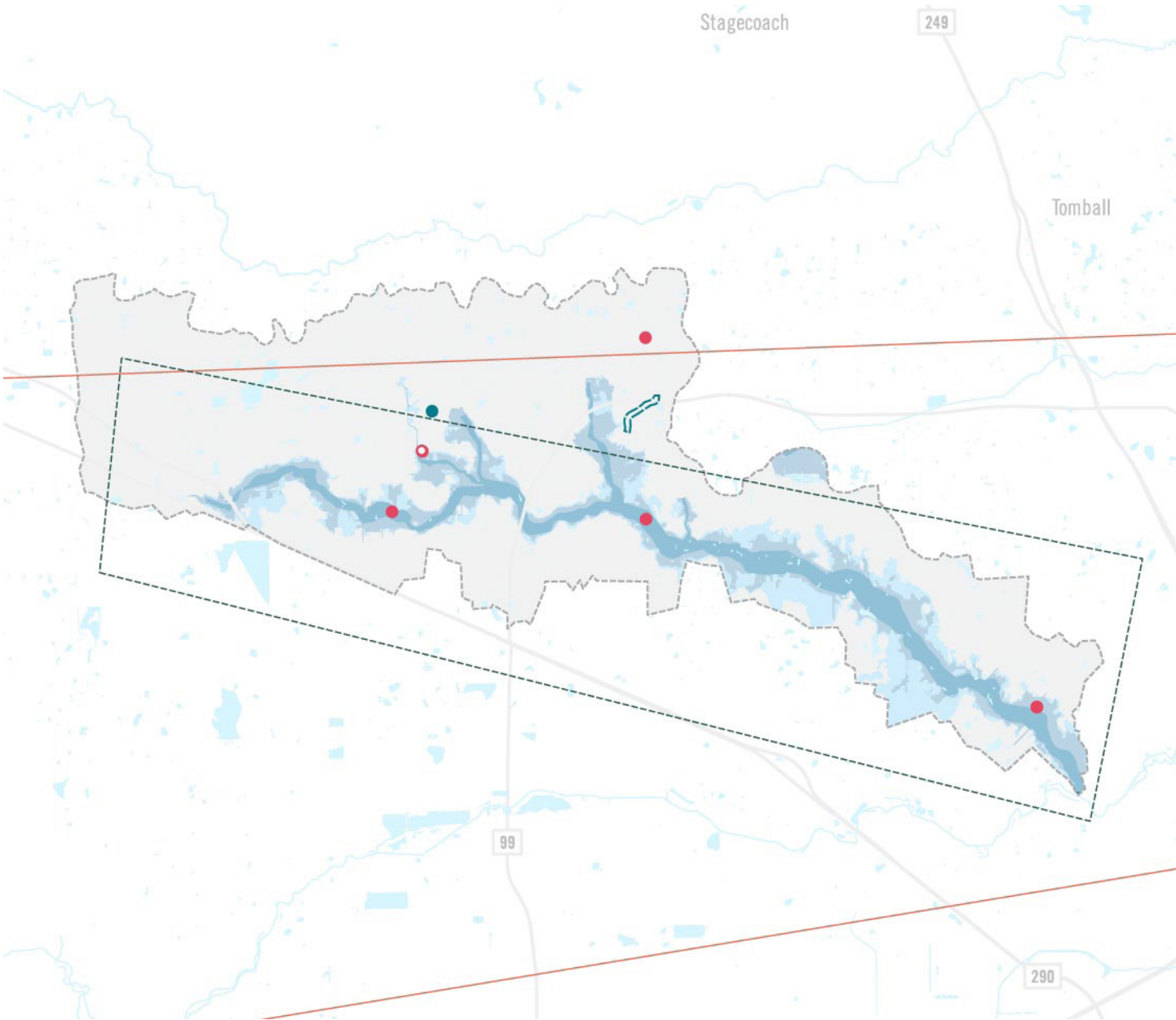


STATISTICAL DATA	
Watershed Area	25 square miles
Watershed Population	14,014
Open Stream	36 miles
Budget for Complete Projects	0
Budget for Projects Under Construction	0
Budget for Ongoing Projects	0
Total Budget for Watershed	0
Budget per Capita	0
Budget for Proposed Projects	0
Allison Damages (Claims)	0 (0)
Ike Damages (Claims)	\$13,200 (12)
Harvey Damages (Claims)	\$301,000 (68)

# LITTLE CYPRESS CREEK



Little Cypress Creek is a tributary of Cypress Creek in its upper watershed. It is being rapidly developed. HCFC has been building detention basins and putting in flood control infrastructure in conjunction with new subdivisions.



STATISTICAL DATA	
Watershed Area	50 square miles
Watershed Population	28,879
Open Stream	56 miles
Budget for Complete Projects	\$7,747,593
Budget for Projects Under Construction	\$3,330,000
Budget for Ongoing Projects	\$1,700,000
Total Budget for Watershed	\$12,777,593
Budget per Capita	\$442
Budget for Proposed Projects	\$300,000,000
Allison Damages (Claims)	N/A
Ike Damages (Claims)	N/A
Harvey Damages (Claims)	N/A

# LITTLE CYPRESS CREEK

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Channel Conveyance Improvements Along L112-01-00	Modifications to existing TxDOT detention basin and construction of new grasslined channel parallel to existing L112-02-00 channel.	Construction	HCFCFCD - CIP '18	\$130,000
<b>TOTAL</b>				<b>\$130,000</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
John Paul's Landing Basin	John Paul's Landing Park, Upper Bear Creek and Upper Langham Creek	Completed	HCFCFCD Data	\$4,170,871
Mueschke West Stormwater Detention Basin	Acquisition of right-of-way for a regional stormwater detention basin adjacent to Mueschke Road to reduce flood risks along Little Cypress Creek. This basin is part of the Little Cypress Creek Frontier Program.	ROW/Utility	HCFCFCD - CIP '18	\$2,000,000
Zube Park Stormwater Detention Basin Improvements	Phase II Construction of a control structure for Zube stormwater det basin L500-01-00	Completed	HCFCFCD - CIP '17	\$1,500,000
13.26 Acre Acquisition	L500-02-00, Tract B, west of L103-00-00	Completed	HCFCFCD Data	\$38,816
Site Preparation Activity	Hockley Rd. west of Bauer Rd.	Completed	HCFCFCD Data	\$22,994
Mitigation Monitoring for L500-02-00-Y001	L500-02-00-Y001 - Little Cypress Creek Upstream of Kluge Road	Completed	HCFCFCD Data	\$14,912
Bauer-Hockley Detention Basin Improvements	Weir connecting basin to Little Cypress Creek tributary	Designed	HCFCFCD Website	
Kleb-Mueschke Stormwater Detention Basin	Stormwater detention basin on a 106-acre site of Kleb Woods	Completed	HCFCFCD/ Cypress Creek Flood Control Coalition	
<b>TOTAL</b>				<b>\$7,747,593</b>

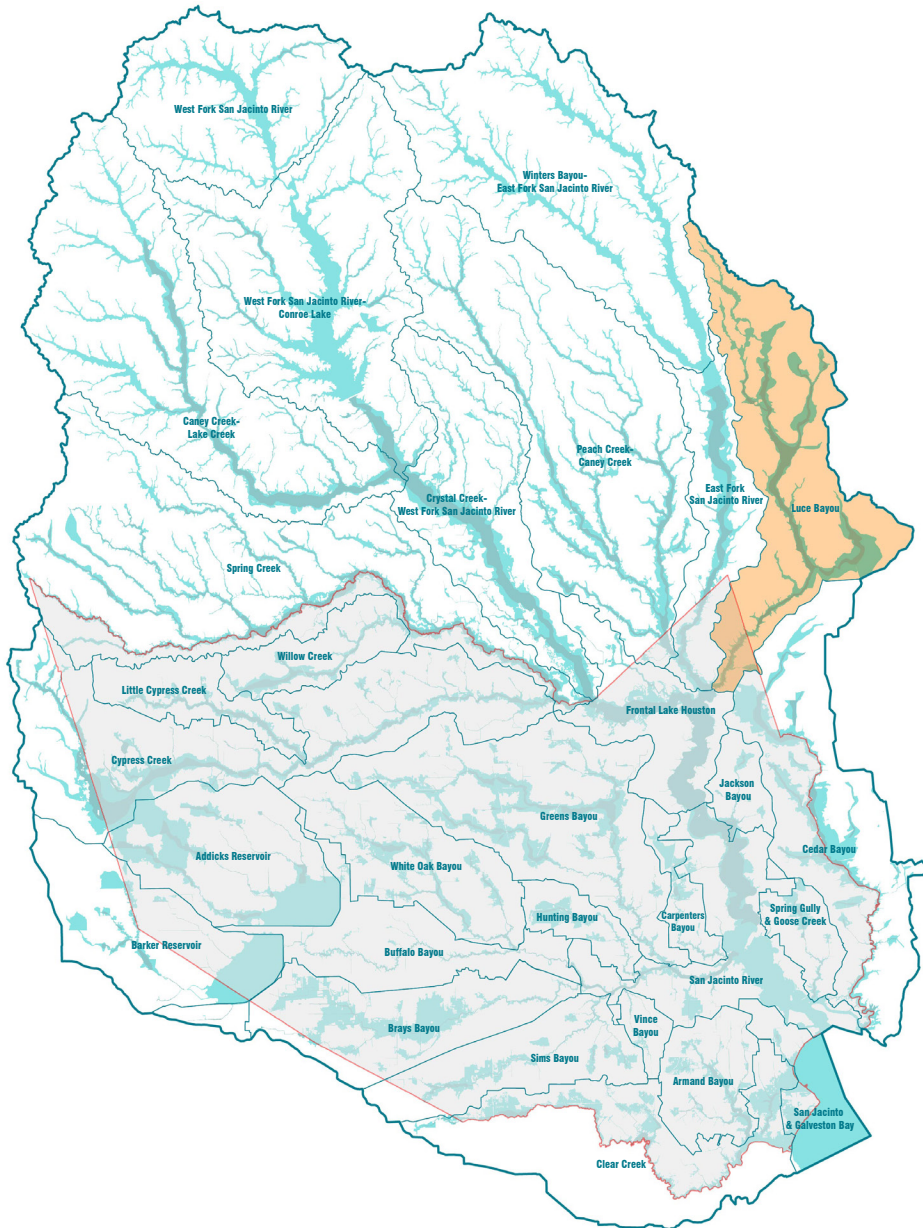
NAME (PROGRAMS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Upper Langham Creek Frontier Program	Construction associated with implementation of the Upper Langham Creek Frontier Improvement Plan.	Construction	HCFCFCD - CIP '18	\$2,200,000
Little Cypress Creek Frontier Program	Strategic effort to plan for and implement effective regional flood risk management soln. in conj. w/ private land development.	Designed	HCFCFCD - CIP '17	\$1,300,000
Upper Langham Creek Frontier Program Revegetation and Environmental Enhancements	Revegetation of the Langham Creek corridor associated with implementation of the Upper Langham Frontier Improvement Plan.	Construction	HCFCFCD - CIP '18	\$1,000,000
Upper Langham Creek Frontier Program Management	Program management and design associated with implementation of the Upper Langham Creek Frontier Improvement Plan.	Designed	HCFCFCD - CIP '18	\$400,000
<b>TOTAL</b>				<b>\$4,900,000</b>

NAME (RESERVOIRS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Little Cypress Creek Reservoir	Construct	Proposed	West Houston Association	\$300,000,000
<b>TOTAL</b>				<b>\$300,000,000</b>

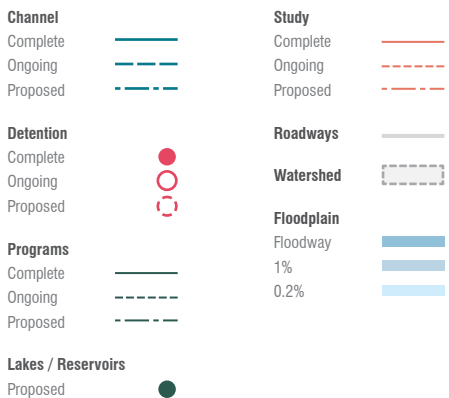
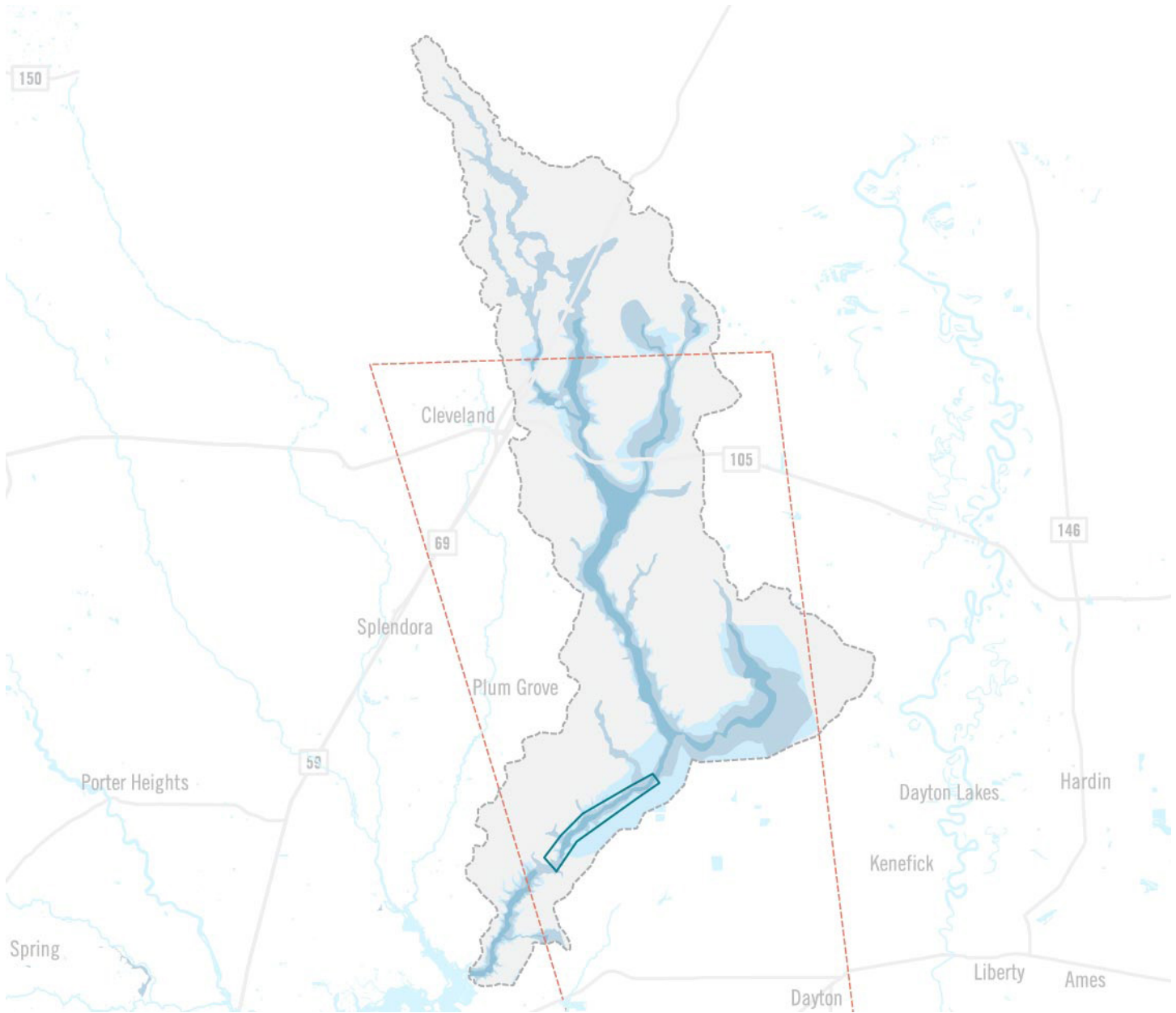


NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Cypress Creek Overflow Management Plan	Study and manage over of 60 sq miles of Cypress Creek watershed that overflow into Harris County	Completed	Cypress Creek Flood Control Coalition/ HCFC	
			<b>TOTAL</b>	<b>\$0</b>

# LUCE BAYOU



Luce Bayou drains into Lake Houston from the northeast. The watershed is largely undeveloped and heavily wooded.



STATISTICAL DATA	
Watershed Area	73 square miles
Watershed Population	26,000 approx.
Watershed Population (Harris County)	7,689
Open Stream	35 miles
Budget for Complete Projects	0
Budget for Projects Under Construction	0
Budget for Ongoing Projects	\$166,667
Total Budget for Watershed	\$166,667
Budget per Capita	\$6
Budget for Proposed Projects	0
Allison Damages (Claims)	\$11,243 (3)
Ike Damages (Claims)	\$132,629 (10)
Harvey Damages (Claims)	\$2,852,650 (86)



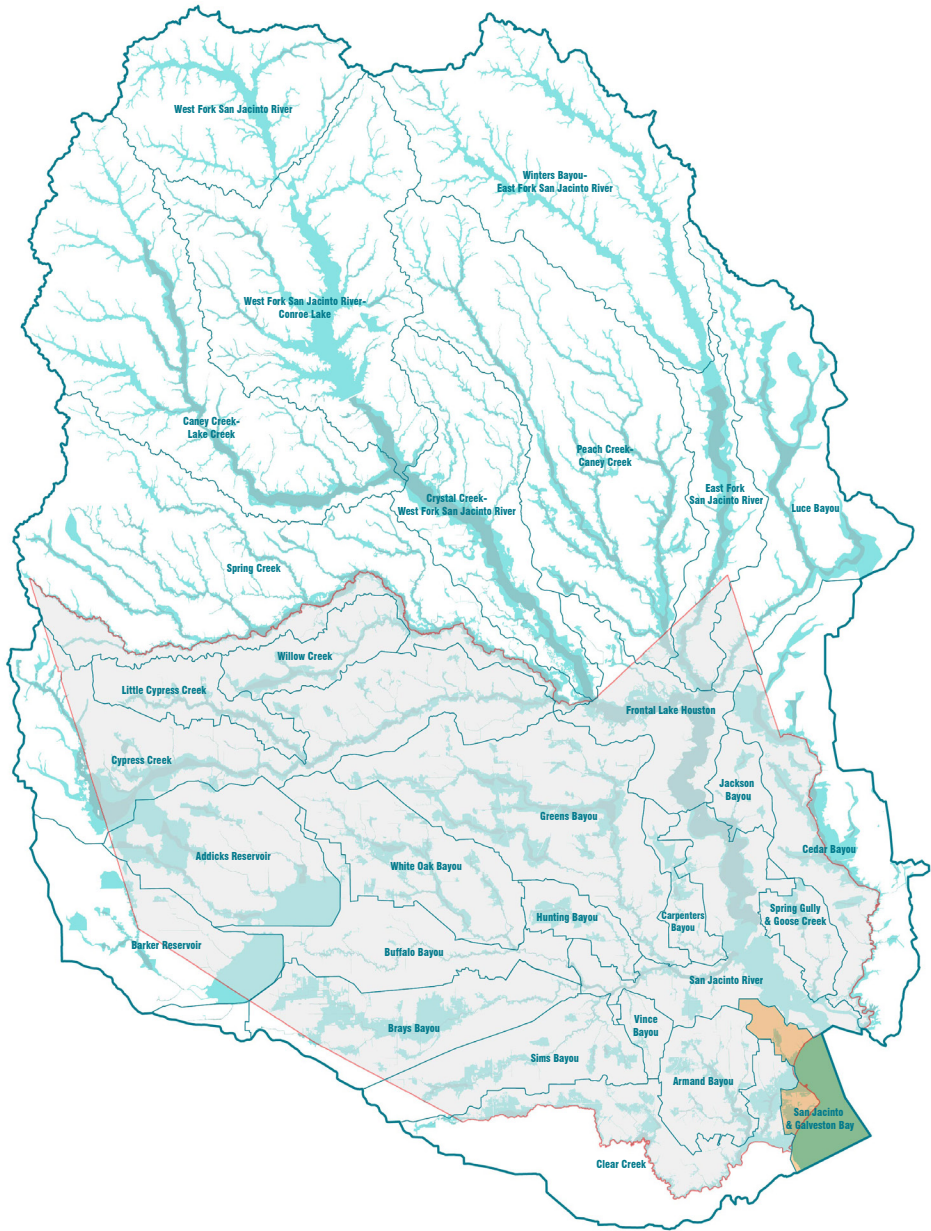
# LUCE BAYOU

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Liberty County Channels	Rechannelize existing feeder creeks that flow from north to south and improve drainage for stormwater runoff	Planned	HGAC Hazard Mitigation Plan	\$-
			<b>TOTAL</b>	<b>\$0</b>

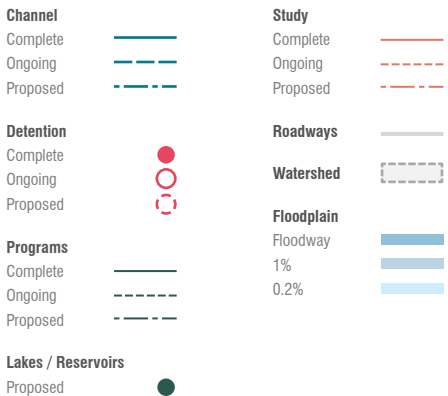
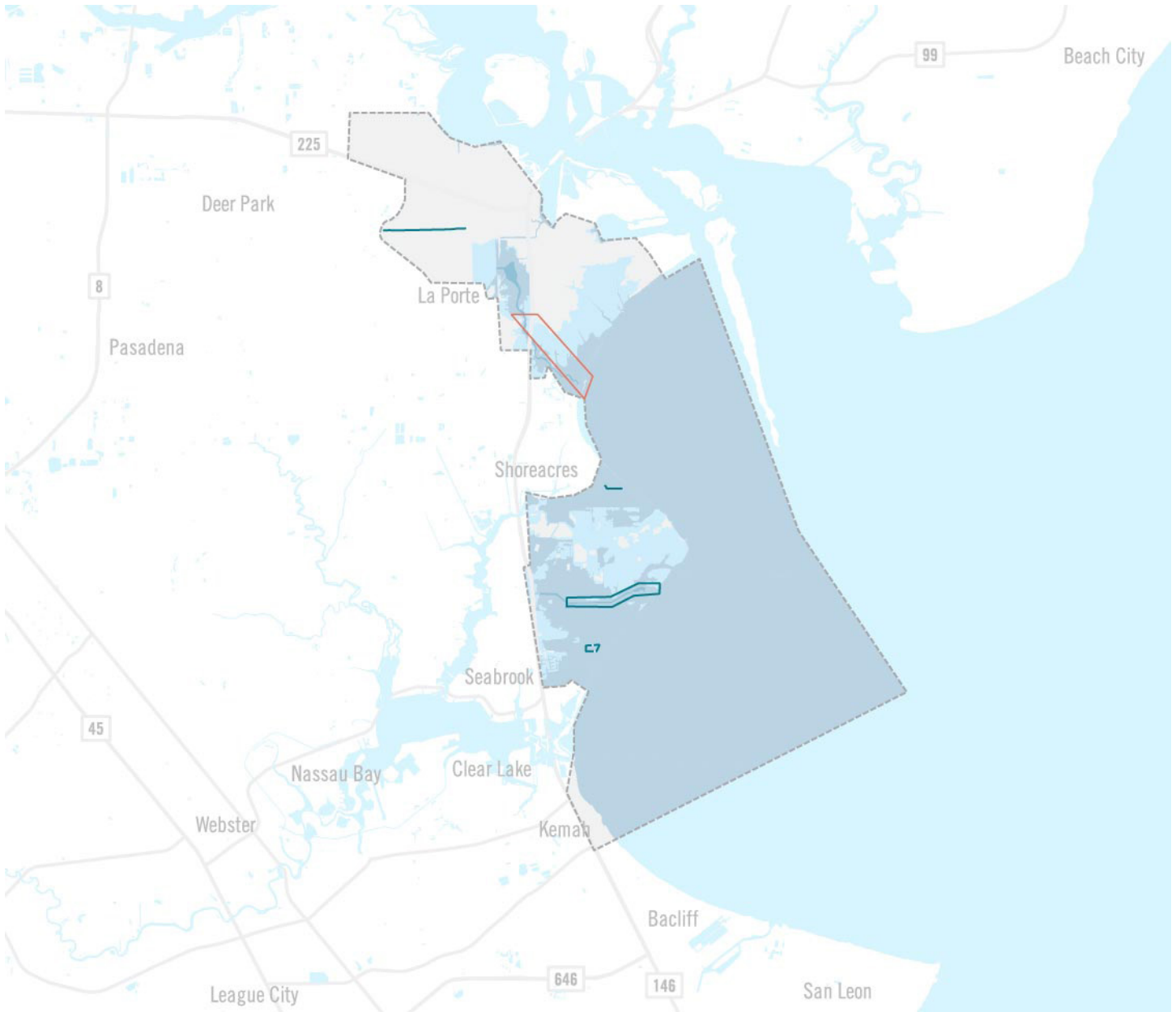
NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Liberty County Master Drainage Study	Completed a master drainage study on all watersheds	Planned	HGAC Hazard Mitigation Plan	\$166,667
			<b>TOTAL</b>	<b>\$166,667</b>



# SAN JACINTO & GALVESTON BAY



The Galveston Bay watershed includes areas which drain directly to the west side of Galveston Bay within Harris County. Several of these side channels have seen significant investment by HCFCF.



STATISTICAL DATA	
Watershed Area	20 square miles
Watershed Population	14,952
Open Stream	24 miles
Budget for Complete Projects	\$305,026
Budget for Projects Under Construction	\$213,131
Budget for Ongoing Projects	\$2,792,493
Total Budget for Watershed	\$3,319,650
Budget per Capita	\$221
Budget for Proposed Projects	0
Allison Damages (Claims)	\$3,319,036 (145)
Ike Damages (Claims)	\$59,099,013 (925)
Harvey Damages (Claims)	\$1,707,825 (259)



# SAN JACINTO & GALVESTON BAY

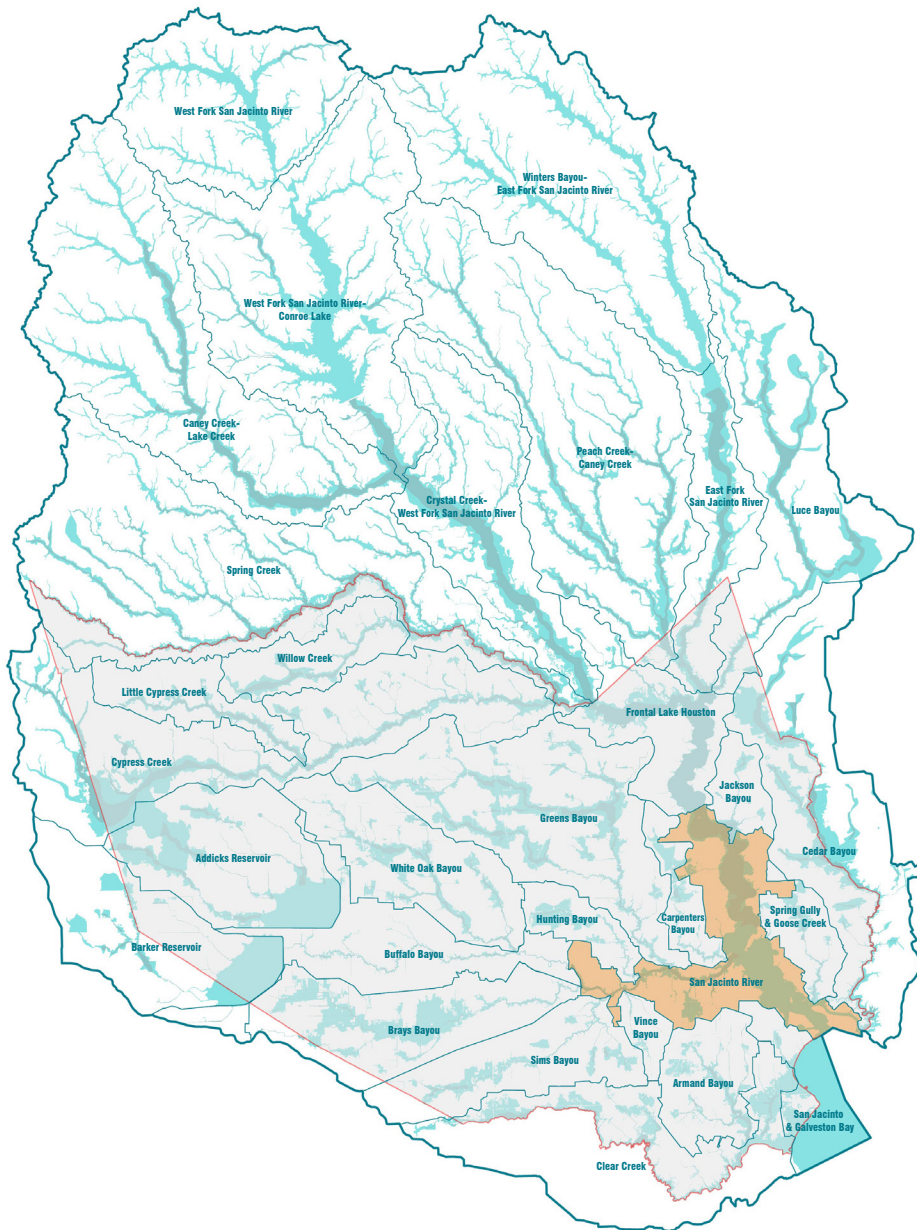
NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Lower Pine Gully	Drainage improvements to Lower Pine Gully	Planned	Seabrook CIP	\$2,792,493
Hester Gully	Drainage improvements to Hester Gully	Construction	Seabrook Current Projects	\$213,131
Channel Enclosure	Open channel from Lot 16 to Lot 20 on Bay Colony Drive.	Completed	HCFCF Data	\$137,804
Enclosure	Upstream of Sunrise Drive in Shoreacres	Completed	HCFCF Data	\$58,969
Survey	From upstream end to approximately 4800' downstream to Valley View.	Completed	HCFCF Data	\$13,844
			<b>TOTAL</b>	<b>\$3,216,241</b>

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
Watershed Study for Little Cedar Bayou	Watershed Study for Little Cedar Bayou	Completed	HCFCF Data	\$94,409
			<b>TOTAL</b>	<b>\$94,409</b>

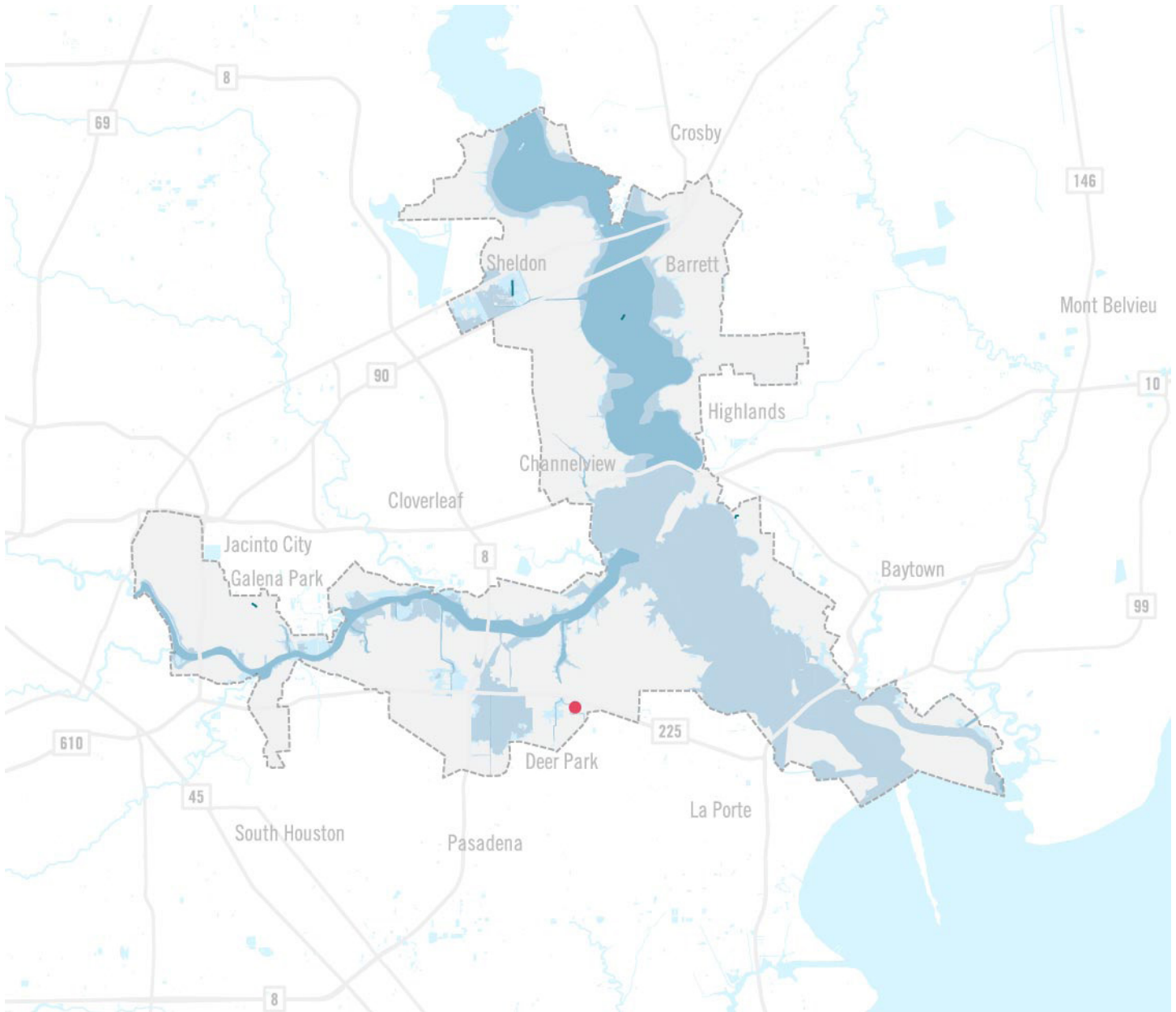




# SAN JACINTO RIVER



The designated San Jacinto River watershed includes the San Jacinto River downstream of Lake Houston as far as the Baytown bridge, where it flows into Galveston Bay, as well as the Houston Ship Channel. HCFC has built detention on side channels of the Ship Channel. The river itself, though, is managed by the San Jacinto River Authority, which operates the dam on Lake Houston. The river's floodplain south of the dam includes residential areas which have flooded repeatedly.



- Channel**
- Complete
- Ongoing
- Proposed
  
- Detention**
- Complete
- Ongoing
- Proposed
  
- Programs**
- Complete
- Ongoing
- Proposed
  
- Lakes / Reservoirs**
- Proposed

- Study**
- Complete
- Ongoing
- Proposed
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway
- 1%
- 0.2%



STATISTICAL DATA	
Watershed Area	487 square miles
Watershed Population	187,570
Open Stream	310 miles
Budget for Complete Projects	\$1,619,969
Budget for Projects Under Construction	0
Budget for Ongoing Projects	0
Total Budget for Watershed	\$1,619,969
Budget per Capita	\$9
Budget for Proposed Projects	0
Allison Damages (Claims)	\$24,320,521 (862)
Ike Damages (Claims)	\$22,042,414 (552)
Harvey Damages (Claims)	\$129,409,865 (2,965)



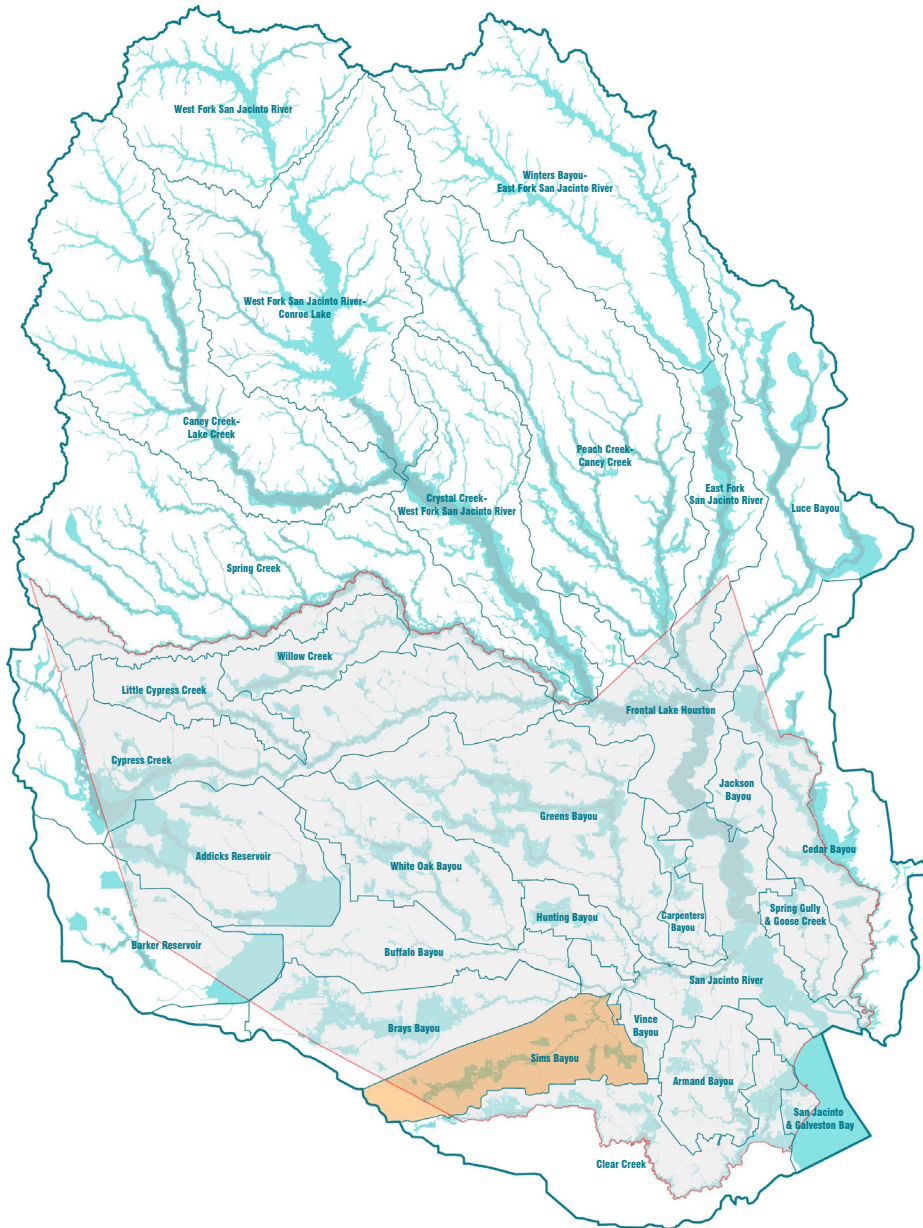
# SAN JACINTO RIVER

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
TS Allison Damage	300' downstream of Center Street	Completed	HCFCF Data	\$767
Granite Block Installation	2400 Lake Road	Completed	HCFCF Data	\$566
Channel Enclosure	From the Lamkin Rd. to Sunshine Lane	Completed	HCFCF Data	\$-
Channel Enclosure	N. Burnett Drive to 200' upstream	Completed	HCFCF Data	\$-
			<b>TOTAL</b>	<b>\$1,332</b>

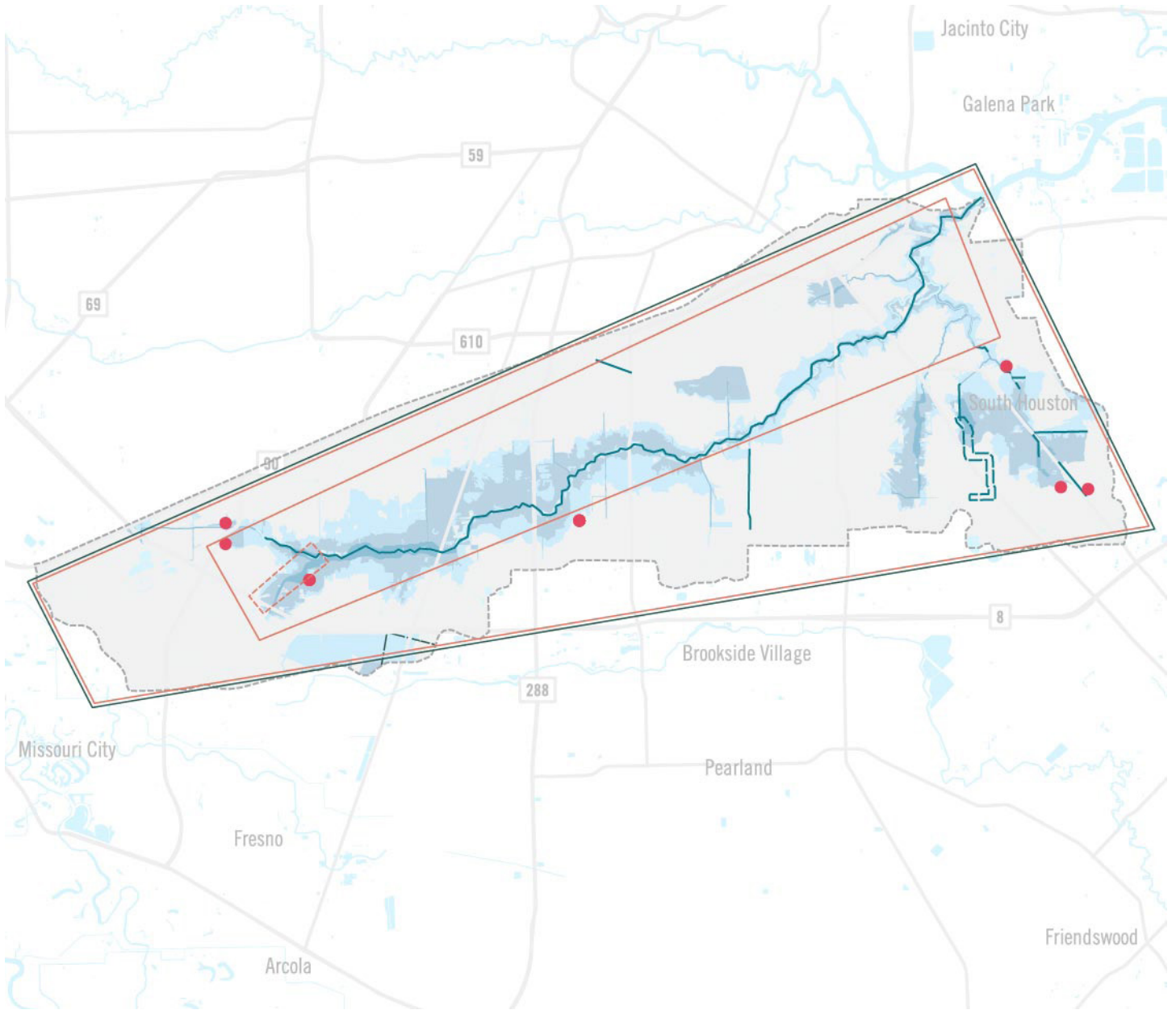
NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Patricks Bayou Stormwater Detention Basin	In the City of Deer Park, west of East Blvd and SH 225	Completed	HCFCF Data	\$1,618,637
			<b>TOTAL</b>	<b>\$1,618,637</b>



# SIMS BAYOU



Sims Bayou runs east-west, parallel and in between Braes Bayou and Clear Creek. The watershed is largely developed, with some stretches of open space. Construction on a \$379 million federally funded flood control project started in 1994 and was completed in 2015. This is the only one of the current round of major bayou-wide federal projects to be complete, and a showcase for HCFCD's current design philosophy. The project included channel improvements that replaced an engineered concrete channel with a channel what was deliberately designed to function in a more natural way and provide green space and wildlife habitat as well as major regional detention basins and reconstructed bridges.



**Channel**  
 Complete ———  
 Ongoing - - - -  
 Proposed - · - · -

**Detention**  
 Complete ●  
 Ongoing ○  
 Proposed □

**Programs**  
 Complete ———  
 Ongoing - - - -  
 Proposed - · - · -

**Lakes / Reservoirs**  
 Proposed ●

**Study**  
 Complete ———  
 Ongoing - - - -  
 Proposed - · - · -

**Roadways**  
 ———

**Watershed**  
 □

**Floodplain**  
 Floodway ———  
 1% ———  
 0.2% ———



STATISTICAL DATA	
Watershed Area	94 square miles
Watershed Population	334,727 approx.
Watershed Population (Harris County)	284,727
Open Stream	121 miles
Budget for Complete Projects	\$409,165,145
Budget for Projects Under Construction	\$2,100,000
Budget for Ongoing Projects	\$300,000
Total Budget for Watershed	\$411,565,145
Budget per Capita	\$1,230
Budget for Proposed Projects	\$750,000
Allison Damages (Claims)	\$41,511,803 (1,826)
Ike Damages (Claims)	\$12,802,082 (909)
Harvey Damages (Claims)	\$21,893,485 (2,383)

# SIMS BAYOU

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Sims Bayou Federal Flood Damage Reduction Project	Partnership project between USACE and HCFCF for 19.3 miles of bayou enlargements along Sims Bayou, replacement or modification of 22 bridges, and construction of 3 stormwater basins Completed in 2015	Completed	HCFCF Website	\$379,000,000
Conveyance Improvements, Phase 2	This project begins at C106-08-01 and extends upstream of Coronation Street.	Completed	HCFCF Data	\$3,812,413
Channel Conveyance Improvements long C106-03-00, Phase 3 of 3	Continuation of improvements along channel C106-03-00. This project includes installation of concrete side slopes, low flow section, and box culverts from South Houston city limits to Gulf Freeway.	Construction	HCFCF - CIP '18	\$2,100,000
Channel Improvements	Scarlet Drive to Orem Drive	Completed	HCFCF Data	\$1,957,755
Channel Conveyance Improvements (Phase 2)	Construction of 5,300 lf of concrete channel improvements, includes concrete side slope, low flow section, and box culverts	Completed	HCFCF - CIP '17	\$1,854,873
Channel Enclosure	Scott St. to Cullen Blvd.	Completed	HCFCF Data	\$985,039
Pearl Hall Ditch	C106-08-00 to 12th Street, City of South Houston	Completed	HCFCF Data	\$572,260
TS Allison Damage	Forest Oaks to 1100' upstream	Completed	HCFCF Data	\$85,244
TS Allison Damage	15' downstream of York on west slope	Completed	HCFCF Data	\$33,958
TS Allison Damage	1. 15' upstream of Georgia on south slope 2. 75' downstream of Georgia on north slope	Completed	HCFCF Data	\$14,437
Channel Enclosure	Between Allen Genoa and C106-00-00	Completed	HCFCF Data	\$-
Slope Failure and Channel Desilt	Lavann to Edgebrook	Completed	HCFCF Data	\$-
			<b>TOTAL</b>	<b>\$390,415,979</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
South Richey Stormwater Detention Basin	Construction of South Richey Stormwater Detention Basin to mitigate for conveyance improvements to Berry Bayou tributary C106-03-00 in the Sims Bayou watershed.	Completed	HCFCF - CIP '17	\$8,566,411
The Hill at Sims Greenway	Midreach Stormwater Detention Basin, located near Scott Street and Orem Street.	Completed	HCFCF Data	\$7,536,704
Basin Improvements	Sims Bayou at Blue Ridge Road	Completed	HCFCF Data	\$2,608,287
Site Stabilization - Phase 2	South of Sims Bayou and East of SH 288	Completed	HCFCF Data	\$651,509
Basin Improvements	Sims Bayou at South Post Oak	Completed	HCFCF Data	\$620,546
Regional Detention Acquisition	Upper C106-08-00 area, Shaver Road Site	Completed	HCFCF Data	\$86,172
Regional Detention Acquisition	Upper Berry Bayou area, Crenshaw Rd Site	Completed	HCFCF Data	\$20,346
Revegetation and Environmental Enhancements	East of Sims Bayou, west of Scott Street, south of Airport Rd. in Houston, Texas	Completed	HCFCF Data	\$7,836
Pilot Channel Desilt	C547-01-00	Completed	HCFCF Data	\$5,646
Pilot Channel Desilt	North side and south side of Orem	Completed	HCFCF Data	\$5,220
			<b>TOTAL</b>	<b>\$20,108,677</b>

NAME (PROGRAMS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Sims Bayou Regional Project	Sims Bayou Watershed	Completed	HCFCF Data	
			<b>TOTAL</b>	<b>\$0</b>



<b>NAME (STUDIES)</b>	<b>DESCRIPTION</b>	<b>STAGE</b>	<b>SOURCE</b>	<b>BUDGET</b>
Fort Bend County Regional Watershed Assessment	Study regarding the Fort Bend County Regional Watershed.	Proposed	Rebuild TX	\$750,000
Sims Bayou Flood Plain Study	Sims Bayou Watershed	Completed	HCFCF Data	\$395,416
Sims Bayou Regional Plan Update	Entire main stem with FEMA studied tributaries added	Completed	HCFCF Data	\$345,073
C147-00-00 Flood Risk Reduction Study	Evaluate and identify an appropriate alternative to reduce flood risks along channel C147-00-00 and evaluate potential alternatives in conjunction with the City of Houston and Fort Bend County.	Planned	HCFCF - CIP '18	\$300,000
			<b>TOTAL</b>	<b>\$1,790,489</b>

# SPRING CREEK



Spring Creek runs east-west, forming the northern Harris County line. The watershed is rapidly developing but still has considerable open space.



**Channel**  
 Complete  
 Ongoing  
 Proposed

**Detention**  
 Complete  
 Ongoing  
 Proposed

**Programs**  
 Complete  
 Ongoing  
 Proposed

**Lakes / Reservoirs**  
 Proposed

**Study**  
 Complete  
 Ongoing  
 Proposed

**Roadways**

**Watershed**

**Floodplain**  
 Floodway  
 1%  
 0.2%



STATISTICAL DATA	
Watershed Area	284 square miles
Watershed Population	289,476 approx.
Watershed Population (Harris County)	39,349
Open Stream	111 miles
Budget for Complete Projects	\$58,573
Budget for Projects Under Construction	0
Budget for Ongoing Projects	\$2,316,433
Total Budget for Watershed	\$2,375,006
Budget per Capita	\$8
Budget for Proposed Projects	\$533,333,333
Allison Damages (Claims)	\$182,328 (15)
Ike Damages (Claims)	\$121,753 (26)
Harvey Damages (Claims)	\$7,390,500 (290)



# SPRING CREEK

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
J131 Drainage Area	Channel conveyance improvements for existing development	Planned	Tomball Master Plan	\$2,216,433
Bear Branch	Assess Bear Branch Drainage System, upstream and downstream of reservoir for silt accumulation and flow restrictions	Planned	SJRA	\$100,000
TS Francis Damage	Downstream of Rudolph Road to upstream of Baker Rd	Completed	HCFCF Data	\$58,573
			<b>TOTAL</b>	<b>\$2,375,006</b>

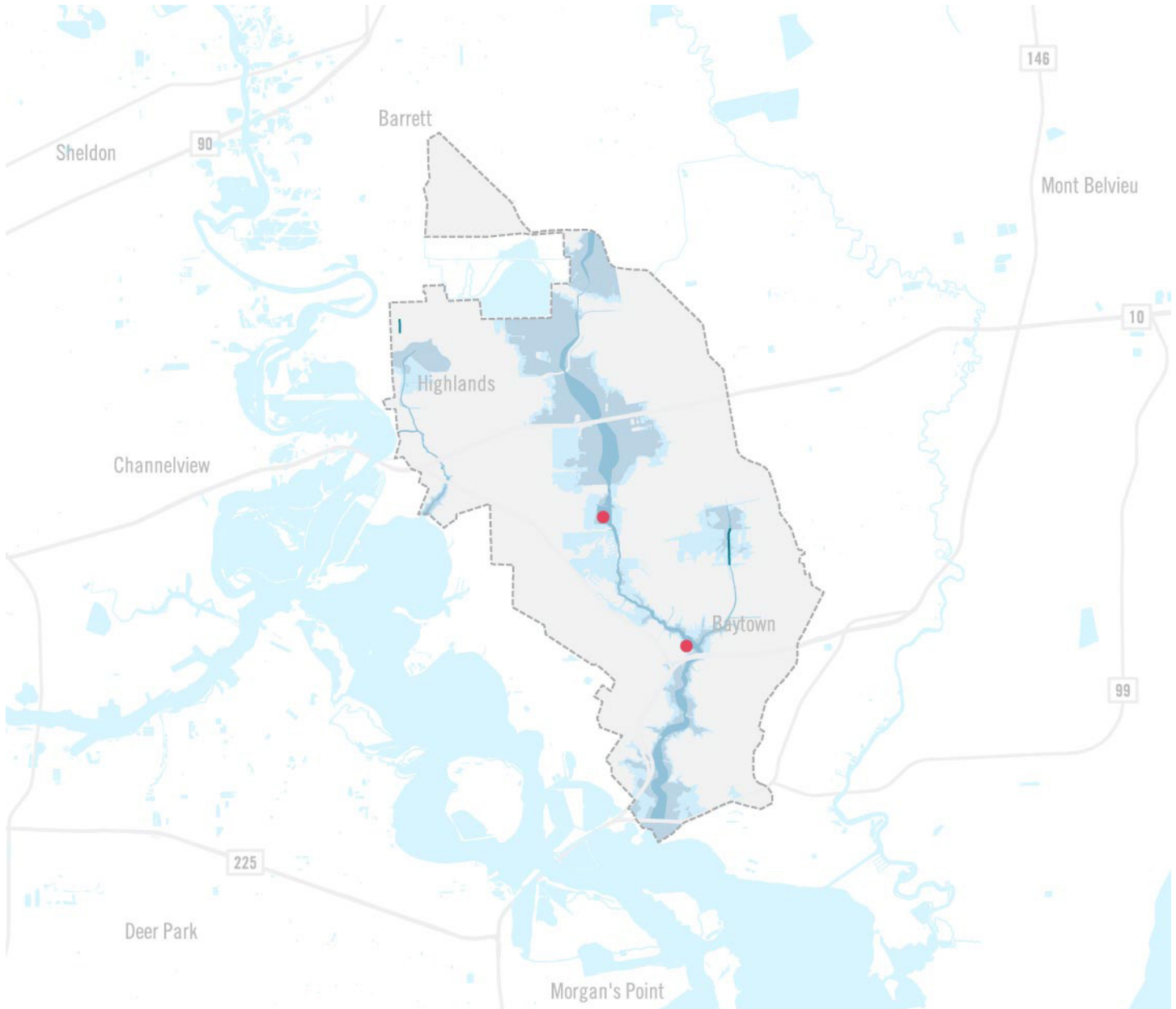
NAME (RESERVOIRS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Montgomery County Reservoirs Project	Project will secure property, engineer and construct a new reservoir system along			
Lake Creek, Little Lake Creek and Spring Creek watersheds.	Proposed	Rebuild TX		
			<b>TOTAL</b>	<b>\$533,333,333</b>



# SPRING GULLY & GOOSE CREEK

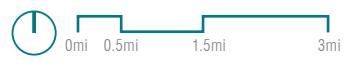


Spring Gully and Goose Creek are small, heavily developed watersheds in the city of Baytown. A major flood control project was recently completed.



- Channel**
- Complete
- Ongoing
- Proposed
  
- Detention**
- Complete
- Ongoing
- Proposed
  
- Programs**
- Complete
- Ongoing
- Proposed
  
- Lakes / Reservoirs**
- Proposed

- Study**
- Complete
- Ongoing
- Proposed
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway
- 1%
- 0.2%



STATISTICAL DATA	
Watershed Area	32 square miles
Watershed Population	52,386
Open Stream	60 miles
Budget for Complete Projects	\$14,440,505
Budget for Projects Under Construction	0
Budget for Ongoing Projects	0
Total Budget for Watershed	\$14,440,505
Budget per Capita	\$276
Budget for Proposed Projects	0
Allison Damages (Claims)	\$30,792 (4)
Ike Damages (Claims)	\$4,646,218 (123)
Harvey Damages (Claims)	\$4,343,553 (540)



# SPRING GULLY & GOOSE CREEK

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Goose Creek Flood Damage Reduction Project	Goose Creek, from Baker Road to West Lynchburg-Cedar Bayou Road	Completed	HCFCF Data	\$10,849,243
Centerline Flow Line Dip Out	East Houston downstream to College Street	Completed	HCFCF Data	\$3,696
			<b>TOTAL</b>	<b>\$10,852,939</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Basin Improvements	West Lynchburg-Cedar Bayou Road Stormwater Detention Basin, located near Goose Creek and West Lynchburg-Cedar Bayou Road.	Completed	HCFCF Data	\$3,437,723
Regional Detention Basin	North of Spur 201, west of Goose Creek	Completed	HCFCF Data	\$149,844
			<b>TOTAL</b>	<b>\$3,587,566</b>

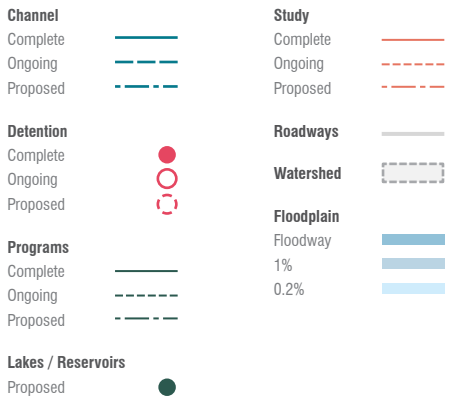
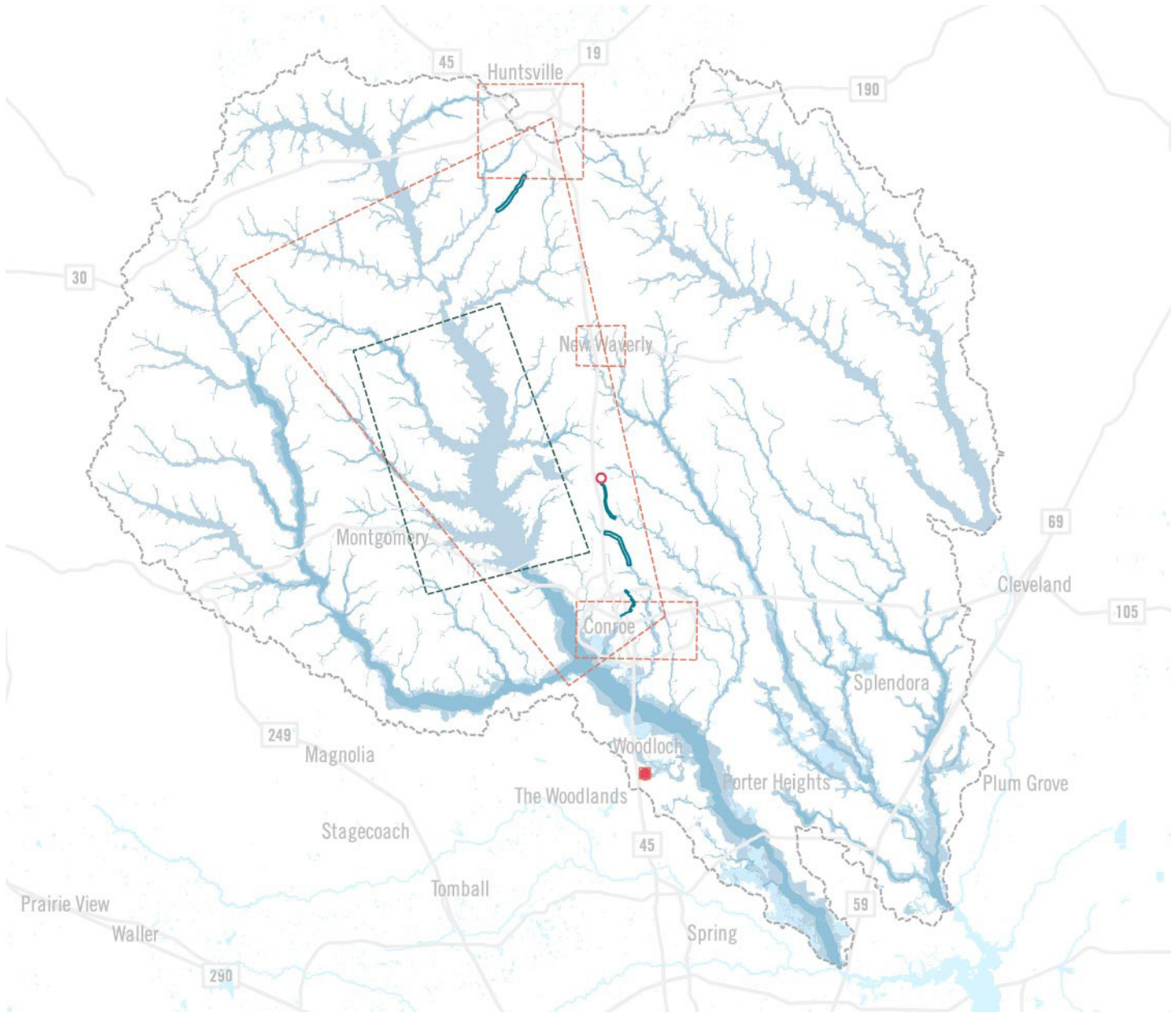




# UPPER SAN JACINTO BASIN



The upper San Jacinto River is a large watershed stretching across multiple counties. Despite the large area, though, flood control investments are modest, likely because much of the watershed is undeveloped, including the 250 square mile Sam Houston National Forest.



STATISTICAL DATA	
Watershed Area	1,667 square miles
Watershed Population	350,000 approx.
Open Stream	N/A miles
Budget for Complete Projects	\$1,150,000
Budget for Projects Under Construction	\$2,250,000
Budget for Ongoing Projects	\$5,275,000
Total Budget for Watershed	\$8,675,000
Budget per Capita	\$25
Budget for Proposed Projects	-
Allison Damages (Claims)	N/A
Ike Damages (Claims)	N/A
Harvey Damages (Claims)	N/A

# UPPER SAN JACINTO BASIN

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Alligator Creek Phase 2	Drainage rehabilitation project of 8,900 linear feet of channel; clearing, channel re-alignment, and slope stabilization	Construction	City of Conroe CIP	\$2,250,000
Alligator Creek Phase 1	Drainage rehabilitation project of 4,500 linear feet of channel	Completed	City of Conroe CIP	\$1,150,000
Panorama Village Channels	Rechannelize upstream of Stewards Creek tributary to reclaim detention and flood capability of Panorama Lake	Planned	HGAC Hazard Mitigation Plan	\$730,000
McDonald Creek	Enhance McDonald Creek drainage	Planned	HGAC Hazard Mitigation Plan	\$250,000
Crystal Creek Widening	Widen and re-grade Crystal Creek from Montgomery Street to Powell Street to reduce flooding issues	Planned	HGAC Hazard Mitigation Plan	\$200,000
			<b>TOTAL</b>	<b>\$4,580,000</b>

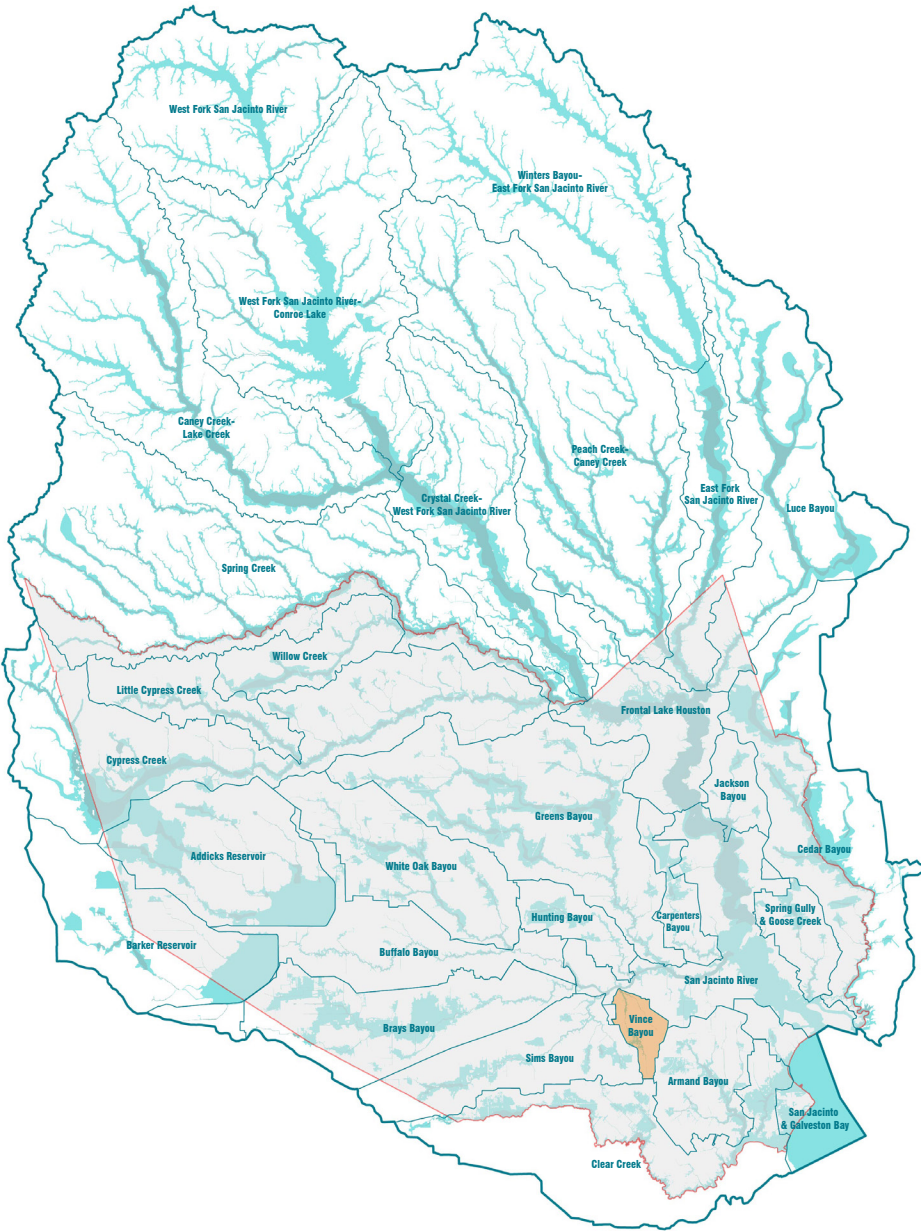
NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Eastside Regional Detention Pond PER	PER for regional detention pond to provide mitigation for development on the east side of IH-45.	Completed	Shenandoah CIP	
Willis Detention Pond	Build stormwater detention pond on north end of John F. Kennedy and Turner Drive	Planned	HGAC Hazard Mitigation Plan	\$200,000
			<b>TOTAL</b>	<b>\$200,000</b>

NAME (PROGRAMS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Lake Conroe Dam Failure Plan	Implement Lake Conroe Dam failure plan, including education and awareness for affected neighborhoods	Planned	HGAC Hazard Mitigation Plan	\$100,000
			<b>TOTAL</b>	<b>\$100,000</b>

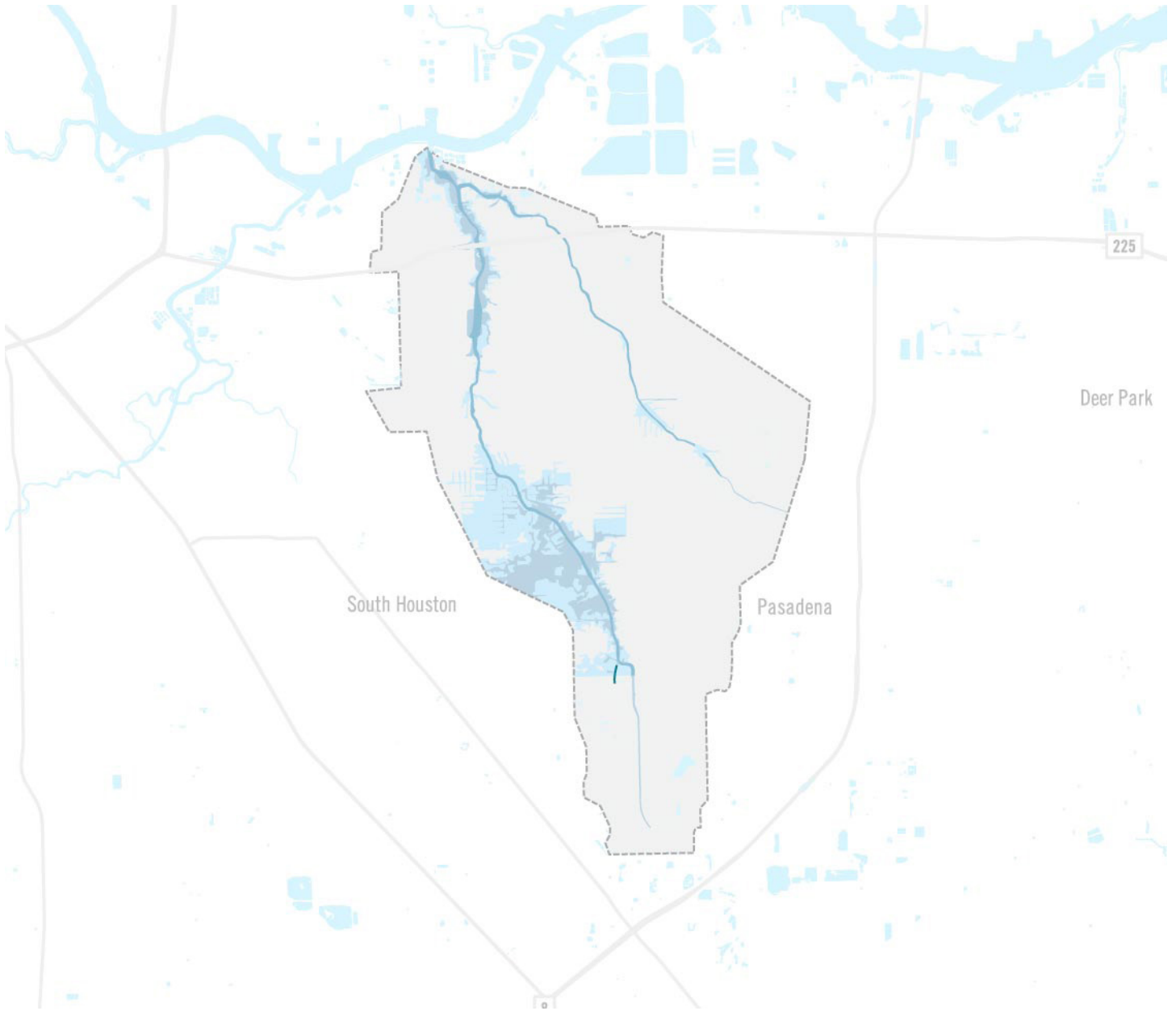
NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
New Waverly Floodplain Study	Floodplain study for all watershed in City. Generate BFE and identify mitigation activities.	Planned	HGAC Hazard Mitigation Plan	\$2,500,000
Lake Conroe Watershed Study	Study of West Fork Sn Jacinto River Watershed, including hydrologic and hydraulic modeling to prepare a flood protection plan	Planned	SJRA	\$720,000
Huntsville Drainage Study	Completed master drainage study on all watersheds to lead to projects in several creeks	Planned	HGAC Hazard Mitigation Plan	\$500,000
Conroe Regional Detention Study	Regional detention feasibility study	Planned	HGAC Hazard Mitigation Plan	\$75,000
Shenandoah East Relief Pond PER	PER for regional detention to identify solutions that meet the needs of the city without developer involvement.	Completed	Shenandoah CIP	
			<b>TOTAL</b>	<b>\$3,795,000</b>



# VINCE BAYOU



Vince Bayou runs north-south through heavily populated parts of Pasadena, draining to the Houston Ship Channel. It has seen repeated flooding. An analysis has been done by HCFCD, but no major projects have been completed or planned.



- Channel**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Detention**
- Complete ●
- Ongoing ○
- Proposed ○
  
- Programs**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Lakes / Reservoirs**
- Proposed ●

- Study**
- Complete —
- Ongoing - - -
- Proposed - · - · -
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway —
- 1% —
- 0.2% —



STATISTICAL DATA	
Watershed Area	16 square miles
Watershed Population	89,753
Open Stream	19 miles
Budget for Complete Projects	\$18,084
Budget for Projects Under Construction	0
Budget for Ongoing Projects	0
Total Budget for Watershed	\$18,084
Budget per Capita	0
Budget for Proposed Projects	0
Allison Damages (Claims)	\$9,035,747 (391)
Ike Damages (Claims)	\$1,223,559 (115)
Harvey Damages (Claims)	\$5,500,012 (660)



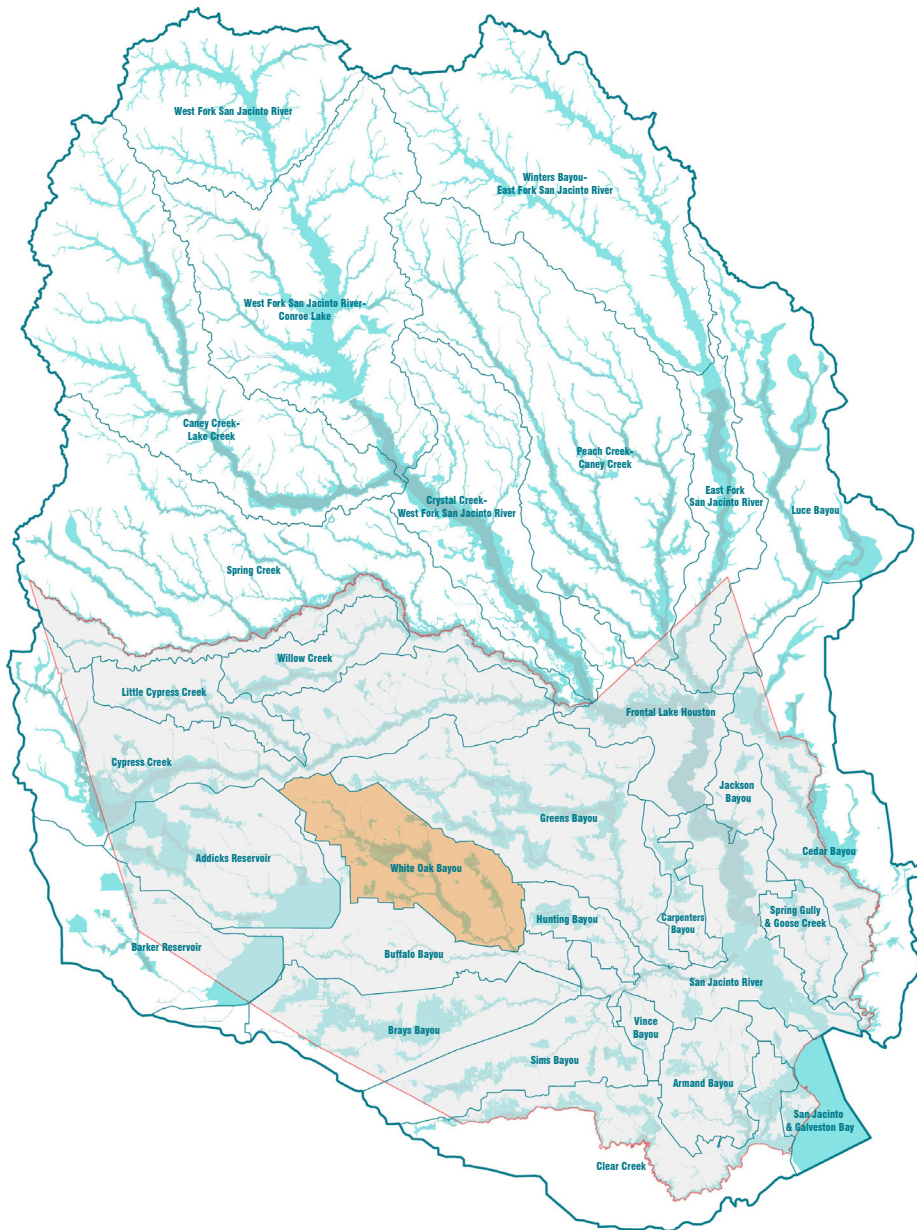
# VINCE BAYOU

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Drainage Analysis	Fairmont Parkway to Young Street	Completed	HCFC Data	\$18,084
			<b>TOTAL</b>	<b>\$18,084</b>

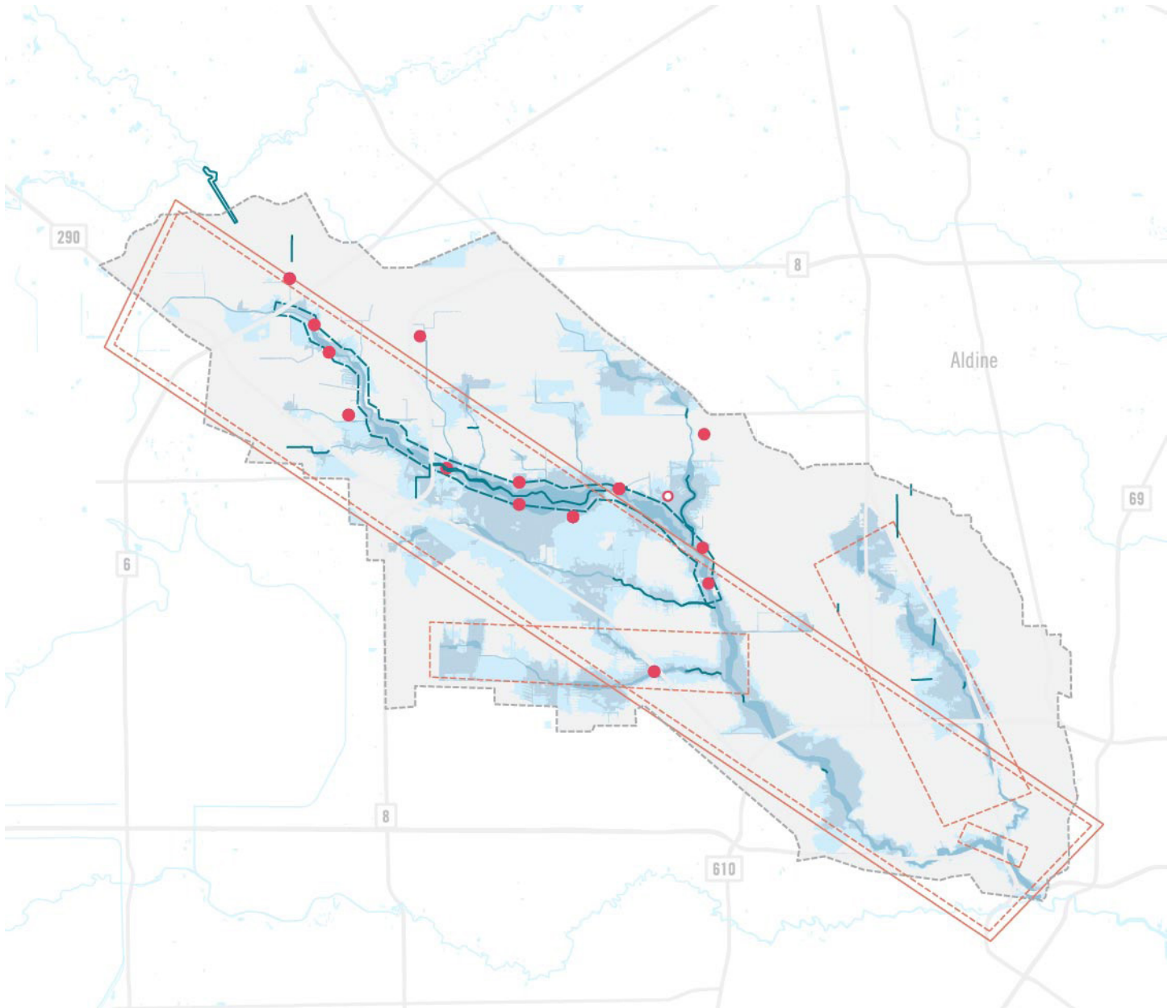




# WHITE OAK BAYOU



White Oak Bayou is one of the largest watersheds within the City of Houston and the site of repeated flooding. It was hit especially hard by Allison. The flood control district has implemented more than a dozen major detention basins in this watershed, along with some channel improvements, and it has also been the site of significant buyouts. More projects are being studied. White Oak flows into Buffalo Bayou in Downtown Houston and is a significant contributor to flooding there. The confluence of the two waterways causes backwater upstream. The proposed North Canal would increase capacity through this junction by allowing White Oak floodwaters to bypass two tight bends in Buffalo Bayou.



- Channel**
- Complete
- Ongoing
- Proposed
  
- Detention**
- Complete
- Ongoing
- Proposed
  
- Programs**
- Complete
- Ongoing
- Proposed
  
- Lakes / Reservoirs**
- Proposed

- Study**
- Complete
- Ongoing
- Proposed
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway
- 1%
- 0.2%



STATISTICAL DATA	
Watershed Area	111 square miles
Watershed Population	433,250
Open Stream	146 miles
Budget for Complete Projects	\$109,005,497
Budget for Projects Under Construction	\$1,100,000
Budget for Ongoing Projects	\$196,600,000
Total Budget for Watershed	\$306,705,497
Budget per Capita	\$708
Budget for Proposed Projects	\$4,020,747
Allison Damages (Claims)	\$209,973,989 (4,430)
Ike Damages (Claims)	\$49,139,147 (1,884)
Harvey Damages (Claims)	\$32,160,022 (3,591)

# WHITE OAK BAYOU

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
Vogel Creek Channel Conveyance Improvements	Modifications to creek increasing width from 30 to 150-165 feet. Completed in June 2008.	Completed	HCFCFCD Website	\$23,700,000
Conveyance Improvements, E122-00-00 to Beltway 8, and E500-03-00 Basin Expansion	White Oak Bayou, from North Houston Rosslyn Road to Beltway 8, and work on Units E500-02-00 and E500-03-00	Completed	HCFCFCD Data	\$7,081,312
Jersey Village Channel Conveyance Improvements	Jersey Village Channel, located adjacent to the City of Jersey Village	Completed	HCFCFCD Data	\$6,929,536
Brickhouse Gully Concrete Channel Lining Replacement Project	Replaced old, failing concrete channel lining along Brickhouse Gully. Last phase finished in 2012	Completed	HCFCFCD Website	\$3,064,000
Conveyance Improvements	Tower Oaks Blvd to Mile Drive	Completed	HCFCFCD Data	\$3,003,765
Channel & Detention Conveyance Improvements	Meadowlink Subdivision area from Rittenhouse to Canino	Completed	HCFCFCD Data	\$2,825,740
White Oak Bayou Channel Restoration	Beltway 8 to Bingle	Completed	HCFCFCD Data	\$672,880
Cole Creek Erosion Repair Project	Repaired and rebuilt eroded side slopes of Cole Creek from its confluence with White Oak Bayou upstream to Burlington Northern Santa Fe Railroad bridge Completed in 2013.	Completed	HCFCFCD Website	\$576,000
Channel Enclosure	N. Main to Harvard	Completed	HCFCFCD Data	\$127,214
PER	Length of open channel: I-45 d/s to confluence.	Completed	HCFCFCD Data	\$118,721
Cellular Confinement Rehab	Breen Road to 800' downstream	Completed	HCFCFCD Data	\$58,289
Channel Enclosure (Bid w/A120-08-00) 99A	Tidwell to Golf	Completed	HCFCFCD Data	\$51,498
TS Allison Damage	1500' downstream of Riggs Road	Completed	HCFCFCD Data	\$45,994
Channel Enclosure	Canino Road downstream 1000 feet to Sewage Treatment Plant	Completed	HCFCFCD Data	\$45,056
Channel Enclosure	E-40 1/2 St. u/s to Brinkman	Completed	HCFCFCD Data	\$44,209
Survey	Highway 290 u/s to Fairview	Completed	HCFCFCD Data	\$34,544
TS Allison Damage	600' downstream of W. Tidwell	Completed	HCFCFCD Data	\$15,371
TS Francis Damage	18th Street	Completed	HCFCFCD Data	\$1,500
TS Francis Damage	Railroad trestle upstream of W. T.C. Jester	Completed	HCFCFCD Data	\$174
Stabilized shell erosion	1,050' d/s of Alabonson on the north slope.	Completed	HCFCFCD Data	\$-
Survey for Desilt	Entire reach of the unit.	Completed	HCFCFCD Data	\$-
TS Francis Damage	At Lakeview bridge	Completed	HCFCFCD Data	\$-
White Oak Bayou Channel Improvements	15.3 miles of grass-lined channel conveyance improvements on White Oak Bayou	Designed	HCFCFCD	\$-
			<b>TOTAL</b>	<b>\$48,395,804</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
ROW Acquisition - Basin	South of White Oak Bayou, East of Jones Road	Completed	HCFCF Data	\$5,351,780
Basin Improvements, Phase 3	Hollister Stormwater Detention Basin - NE of intersection of W. Little York and Hollister.	Completed	HCFCF Data	\$5,085,855
ROW Acquisition - Basin	South of White Oak Bayou, West of Jones Road	Completed	HCFCF Data	\$4,537,576
Basin Improvements	White Oak Bayou at Westbelt	Completed	HCFCF Data	\$4,219,672
Jersey Meadows Stormwater Detention Basin Expansion	Northwest part of Jersey Village	Completed	HCFCF Data	\$4,119,277
White Oak Bayou Detention Basin at Vogel Creek	W. Little York & Vogel Creek	Completed	HCFCF Data	\$3,801,457
Mitigation Plan	South Basin at Fairbanks-North Houston Road	Completed	HCFCF Data	\$3,409,120
Fallbrook Regional Detention Basin Excavation	White Oak Bayou West of Jones Rd	Completed	HCFCF Data	\$2,848,042
ROW Acquisition - Basin	Jersey Village Basin	Completed	HCFCF Data	\$2,618,329
Basin Improvements	South Basin at Fairbanks North Houston	Completed	HCFCF Data	\$2,585,039
Ranchstone Stormwater Detention Basin	White Oak Bayou East of Jones Rd	Completed	HCFCF Data	\$2,431,237
Stormwater Detention Basin and Utility Relocation, Brickhouse Gully at U.S. 290	Brickhouse Gully Stormwater Detention Basin, located on Brickhouse Gully west of Hwy 290.	Completed	HCFCF Data	\$2,350,233
Basin Improvements	Hollister Road Basin	Completed	HCFCF Data	\$2,112,645
Basin Improvements	D/S of N Houston-Rosslyn Road	Completed	HCFCF Data	\$2,074,433
Detention Basin Improvements	E. Side of White Oak Bayou	Completed	HCFCF Data	\$1,980,427
Inwood Stormwater Detention Project	Excavation of a stormwater detention basin to help reduce flood risks along White Oak Bayou.	Construction	HCFCF - CIP '18	\$1,100,000
ROW Acquisition - Basin	West Montgomery Road and Vogel Creek (Paradise Cemeteries)	Completed	HCFCF Data	\$1,095,330
ROW Acquisition - Basin	Hollister Road Basin	Completed	HCFCF Data	\$1,011,058
Basin Improvements	North Basin at Fairbanks North Houston	Completed	HCFCF Data	\$317,233
Basin Improvements	E132-00-00 and E132-02-00	Completed	HCFCF Data	\$269,098
Mitigation Planting	N. Houston-Rosslyn Rd. to BNRR	Completed	HCFCF Data	\$197,600
Revegetation and Site Stabilization	Fallbrook Detention Basin	Completed	HCFCF Data	\$121,342
Expansion of Detention Basin	Hollister Road and West Little York Road	Completed	HCFCF Data	\$103,375
Revegetation and Site Stabilization	Brickhouse Detention Basin	Completed	HCFCF Data	\$101,823
Basin E535-01-00 Survey & Geotech Services	Jersey Village Basin	Completed	HCFCF Data	\$62,158
Mitigation Monitoring for E500-04-00-Y004	E500-04-00-Y001 White Oak	Completed	HCFCF Data	\$11,325
Basin Improvements	FM 1960 & Jones Rd.	Completed	HCFCF Data	\$7,332
Desilt Channel Through Detention Basin	Detention Basin from N. Houston-Rosslyn Road to BNRR	Completed	HCFCF Data	\$1,977
MCG Assistance to FMT	E141-02-00 and E141-00-00	Completed	HCFCF Data	\$634
Remove Rock Filter Dam	Bottom of detention basin at outfall pipe	Completed	HCFCF Data	\$0
ROW Acquisition - Basin	White Oak Bayou at Westbelt	Completed	HCFCF Data	\$0
ROW Exchange	E532-01-00	Completed	HCFCF Data	\$0
Vision Workshop	Detention basin at Hollister and E100-00-00	Completed	HCFCF Data	\$0
Wetland Mitigation Project	NE corner of White Oak Bayou and Fairbanks North Houston Road	Completed	HCFCF Data	\$0

**TOTAL \$53,925,406**

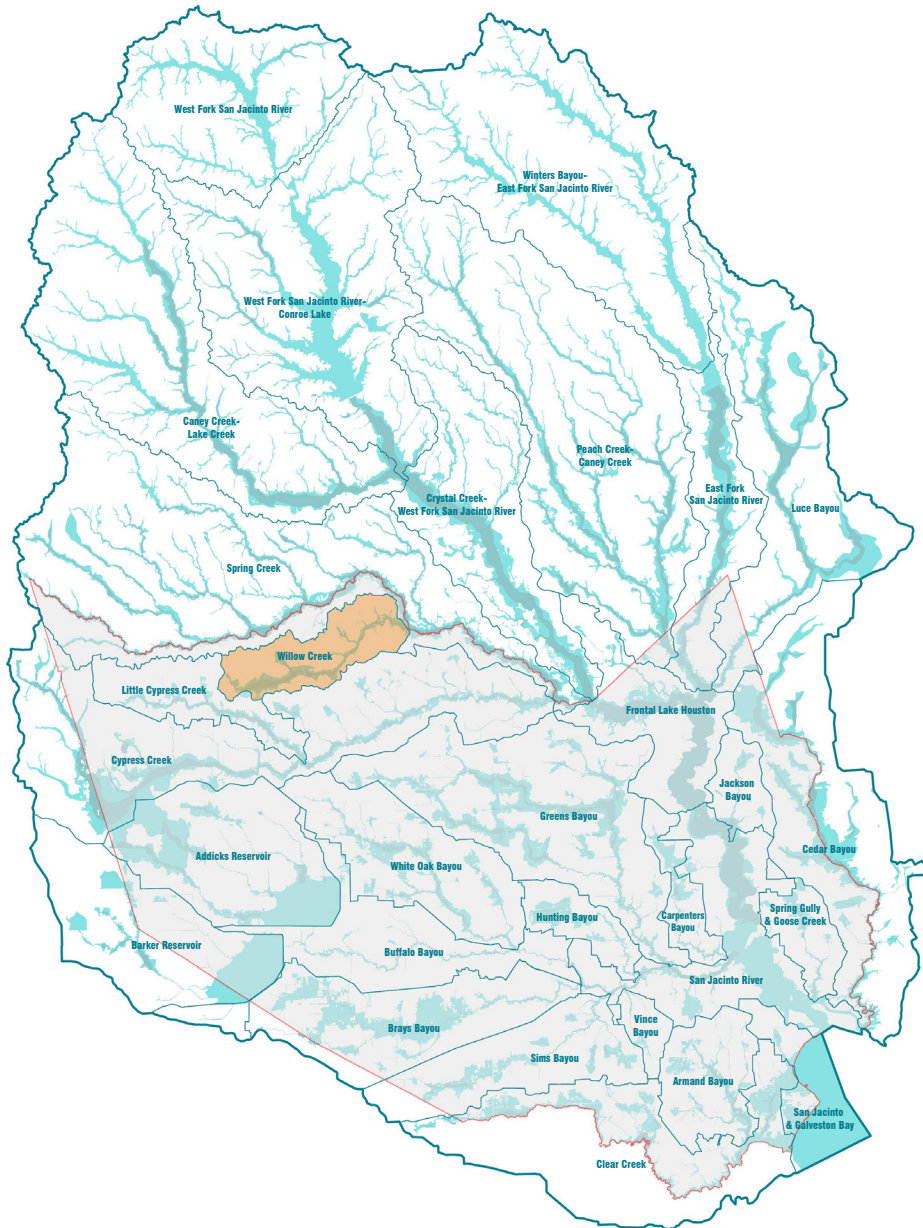


# WHITE OAK BAYOU

NAME (STUDIES)	DESCRIPTION	STAGE	SOURCE	BUDGET
White Oak Bayou Risk Management Project	Risk management project related to White Oak Bayou.	Planned	HCFCF/ Rebuild TX	\$166,000,000
Lower White Oak Bayou Channel Restoration Study	Completed 2017 study options resulting include removal of partial concrete lining on reach of White Oak Bayou	Planned	HCFCF Website	\$30,000,000
White Oak Bayou Federal Study	White Oak Bayou Watershed	Completed	HCFCF Data	\$7,784,288
North Canal Bypass	Direct floodwater flow carried by Buffalo Bayou and White Oak through downtown by creating channels that bypass problematic flood-causing configurations of the two bayous.	Proposed	Buffalo Bayou Partnership/ HCFCF - CIP '17	\$4,020,747
Brickhouse Gully Flood Risk Reduction Study	A study in partnership with the City of Houston to identify alternatives and a recommended plan to reduce flood risks along Brickhouse Gully.	Planned	HCFCF - CIP '18	\$300,000
Little White Oak Bayou Flood Risk Reduction Study	Identify and evaluate alternatives for a recommended plan to reduce flooding risk along Little White Oak Bayou. Study limits are from Loop 610 to the upstream headwaters.	Planned	HCFCF - CIP '18	\$300,000
			<b>TOTAL</b>	<b>\$208,405,035</b>

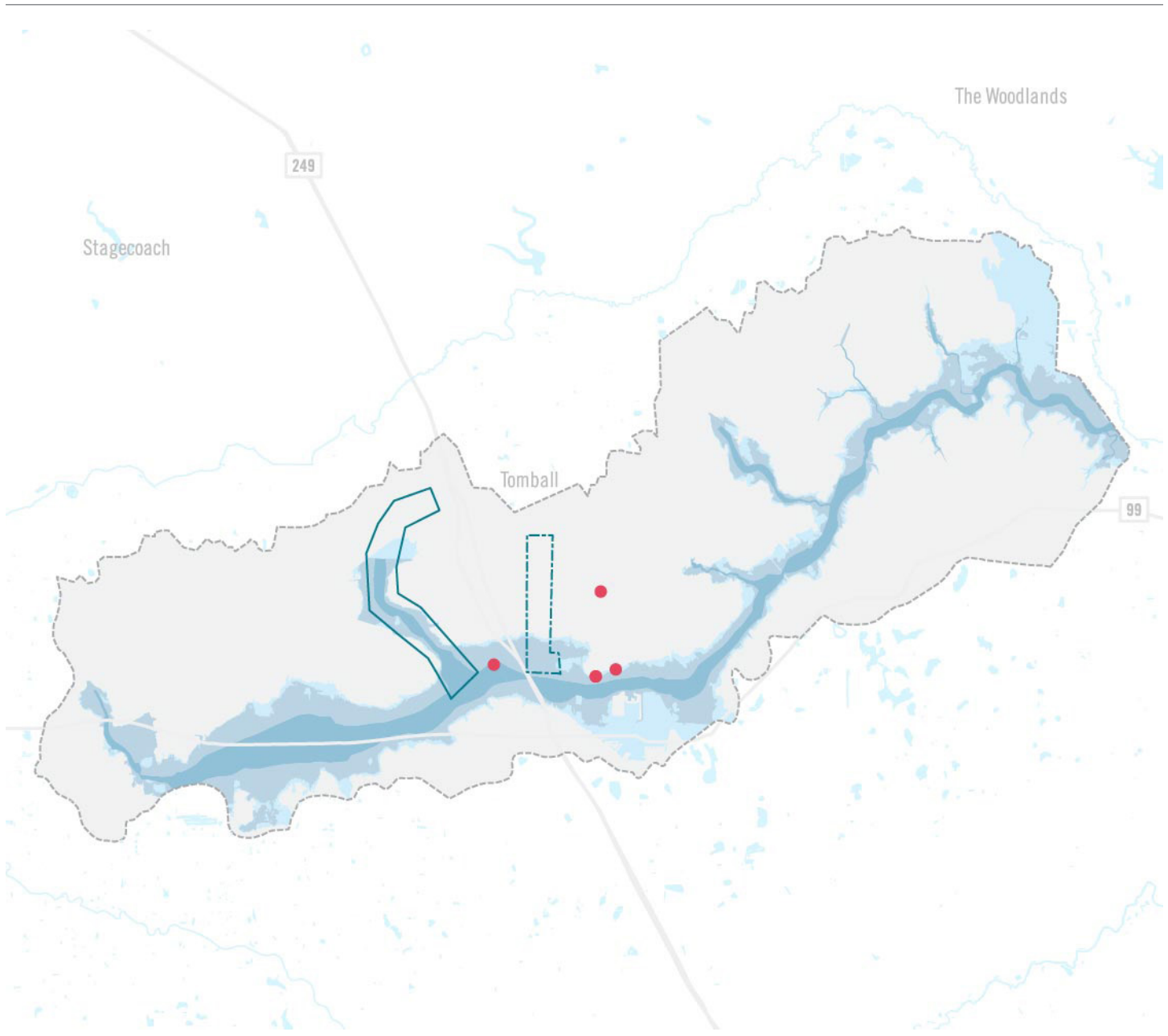


# WILLOW CREEK



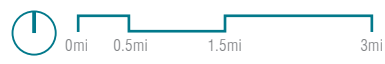
Willow Creek flows into Spring Creek, draining a rapidly developing area along the Grand Parkway. Multiple detention basins have been completed, along with improvements to side channels.





- Channel**
- Complete —
- Ongoing - - -
- Proposed - · -
  
- Detention**
- Complete ●
- Ongoing ○
- Proposed □
  
- Programs**
- Complete —
- Ongoing - - -
- Proposed - · -
  
- Lakes / Reservoirs**
- Proposed ●

- Study**
- Complete —
- Ongoing - - -
- Proposed - · -
  
- Roadways**
- 
  
- Watershed**
- 
  
- Floodplain**
- Floodway —
- 1% —
- 0.2% —



STATISTICAL DATA	
Watershed Area	65 square miles
Watershed Population	45,890
Open Stream	56 miles
Budget for Complete Projects	\$11,148,476
Budget for Projects Under Construction	0
Budget for Ongoing Projects	\$26,154,192
Total Budget for Watershed	\$37,302,668
Budget per Capita	\$813
Budget for Proposed Projects	0
Allison Damages (Claims)	\$1,765,589 (57)
Ike Damages (Claims)	\$1,489,122 (69)
Harvey Damages (Claims)	\$4,914,309 (227)



# WILLOW CREEK

NAME (CHANNELS)	DESCRIPTION	STAGE	SOURCE	BUDGET
M124 Drainage Area	Channel conveyance improvements for existing development	Planned	Tomball Master Plan	\$21,818,344
M121 Drainage Area	Channel M121 to connect to Hardin Street drainage ditch and relieve downtown flooding south of FM 2920	Planned	Tomball Infrastructure Master Plan	\$4,335,848
			<b>TOTAL</b>	<b>\$26,154,192</b>

NAME (DETENTION)	DESCRIPTION	STAGE	SOURCE	BUDGET
Acquisition of Detention ROW	West of Willow Creek, Holderrith and SH 249	Completed	HCFC Data	\$6,228,424
M118 Drainage & Detention Basin	M118 drainage basin west of Hyfsmith-Kohrville to Willow Creek to provide relief drainage system and reduce or eliminate on-site detention	Completed	Tomball CIP	\$3,600,000
M118 Drainage & Detention Basin	M118 drainage basin west of Hyfsmith-Kohrville to Willow Creek to provide relief drainage system and reduce or eliminate on-site detention	Completed	Tomball CIP	\$1,100,000
Regional Basin Acquisition	Willow Creek, downstream of SH 249	Completed	HCFC Data	\$160,793
Property Acquisition - Phase II	Willow Creek, downstream of SH 249, at Unit M121-00-00	Completed	HCFC Data	\$59,260
			<b>TOTAL</b>	<b>\$11,148,476</b>



# APPENDIX 1: SOURCES

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Buffalo Bayou Partnership Buffalo Bayou Master Plan  
City of Conroe Capital Improvement Program Fiscal Year 2015-2016  
City of Conroe Capital Improvement Program Fiscal Year 2016-2017  
City of Houston Fiscal Year 2018-2022 Capital Improvement Plan  
City of Manvel Capital Improvements Program FY 2016-FY 2020  
City of Missouri City Capital Improvement Program Drainage Projects  
City of Pearland Capital Improvement Program 2017-2021  
City of Pearland Capital Improvement Program 2018-2022  
City of Shenandoah Council Monthly Report Capital Projects December 2016  
City of Tomball Infrastructure Master Plan & Capital Recovery Fee Determination 2012 to 2022  
City of Tomball, Texas Master Drainage Plan 2012-2030 May 2014 by Rydan & Associates LLC  
Cypress Creek Flood Control Coalition 2016 Annual Report  
Fiscal Year 2018 Civil Works Budget of the U.S. Army Corps of Engineers May 2017  
Friendswood Capital Improvement Program 2017 Update  
Harris County Flood Control District Capital Improvement Program, FY 2017 Annual Review – June 2016  
Harris County Flood Control District Capital Improvement Program, FY 2017-2018  
Harris County Flood Control District GIS Data – Completed Channel & Detention Projects  
Harris County Flood Control District Website – Projects & Studies  
Harris County Flood Control District 80 Years of Service Adapting to Change Federal Briefing 2017  
Houston-Galveston Area Council Regional Hazard Mitigation Plan 2011 Update  
Judge Emmett's 15-point Flood Control Proposals  
League City Drainage Program Capital Improvement Projects FY 2017-FY 2021  
Nassau Bay Adopted Budget Fiscal Year 2016-2017  
Rebuild Texas Request for Federal Assistance Critical Infrastructure Projects October 31, 2017  
San Jacinto River Authority Bear Branch Project Summary  
San Jacinto River Authority Lake Conroe Project Summary  
Seabrook Capital Improvement Projects FY18-FY23+  
Seabrook Website – Current Projects  
Tomball CIP Report Project Status, Proposed Projects, & On-Going Projects Engineering Division June 9, 2014  
West Houston Association "A Comprehensive Flood Protection Plan for a Better Houston"  
West Houston Association "Houston, We Have a Flood Control Problem" October 2017 Presentation by John S. Moody, Sr. and Augustus "Auggie" Campbell  
West Houston Association Hurricane Harvey Response Plan Brief October 2017



