

# HYDROLOGIC DATA FOR URBAN STUDIES IN THE HOUSTON, TEXAS, METROPOLITAN AREA, 1981

By Fred Liscum

---

U.S. GEOLOGICAL SURVEY  
Open-File Report 85-163



Prepared in cooperation with the CITY of HOUSTON

Austin, Texas

1985

UNITED STATES DEPARTMENT OF THE INTERIOR

William P. Clark, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

---

For additional information  
write to:

District Chief  
U.S. Geological Survey  
300 East 8th Street  
Austin, TX 78701

Copies of this report can  
be purchased from:

Open-File Services Section  
Western Distribution Branch  
Box 25425, Federal Center  
Denver, CO 80225  
Telephone: (303) 234-5888

# CONTENTS

	Page
Introduction-----	1
Location and description of the area-----	2
Data-collection methods-----	4
Precipitation data-----	4
Runoff data-----	14
Water-quality data-----	18
Selected references-----	20
Compilation of data-----	21
San Jacinto River basin:	
South Mayde Creek:	
Buffalo Bayou near Addicks, Tex.-----	22
Buffalo Bayou at West Belt Drive, Houston, Tex.-----	25
Bettina Street Ditch drainage basin-----	32
Bettina Street Ditch at Houston, Tex.-----	35
Storm of April 23, 1981-----	36
Storm of May 3-5, 1981-----	38
Storm of May 30-31, 1981-----	42
Buffalo Bayou at Piney Point, Tex.-----	46
Buffalo Bayou at Houston, Tex.-----	47
Whiteoak Bayou:	
Whiteoak Bayou drainage basin-----	50
Cole Creek drainage basin-----	52
Bingle Road Storm Sewer drainage basin-----	54
Bingle Road Storm Sewer at Houston, Tex.-----	57
Storm of July 6-7, 1981-----	61
Storm of Aug. 12, 1981-----	63
Cole Creek at Deihl Road, Houston, Tex.-----	65
Storm of April 23-25, 1981-----	66
Storm of May 3-6, 1981-----	67
Storm of Aug. 30-Sept. 1, 1981-----	69
Brickhouse Gully drainage basin-----	71
Brickhouse Gully at Clarblak Street, Houston-----	74
Storm of April 23-24, 1981-----	75
Storm of Aug. 30-Sept. 3, 1981-----	76
Brickhouse Gully at Costa Rica Street, Houston, Tex.-----	78
Storm of Oct. 15-16, 1980-----	81
Storm of Aug. 30-Sept. 1, 1981-----	82
Lazybrook Street Storm Sewer drainage basin-----	85
Lazybrook Street Storm Sewer at Houston, Tex.-----	88
Storm of April 23, 1981-----	92
Storm of May 4, 1981-----	93
Storm of June 25, 1981-----	94
Storm of July 10, 1981-----	95
Whiteoak Bayou at Houston, Tex.-----	97
Storm of May 3-8, 1981-----	100
Storm of Aug. 30-Sept. 5, 1981-----	102

# CONTENTS--Continued

Page

Compilation of data--Continued	
San Jacinto River basin--Continued	
Little Whiteoak Bayou drainage basin-----	105
Little Whiteoak Bayou at Trimble Street at Houston, Tex.-----	108
Storm of May 3-5, 1981-----	111
Storm of Aug. 30-Sept. 1, 1981-----	115
Brays Bayou basin:	
Brays Bayou drainage basin-----	117
Brays Bayou at Alief, Tex.-----	120
Keegans Bayou drainage basin-----	121
Keegans Bayou at Keegan Road near Houston, Tex.-----	124
Storm of Aug. 19-20, 1981-----	125
Storm of Aug. 30-Sept. 4, 1981-----	126
Keegans Bayou at Roark Road near Houston, Tex.-----	129
Storm of Apr. 23-24, 1981-----	133
Storm of Aug. 30-Sept. 3, 1981-----	134
Brays Bayou at Gessner Drive, Houston Tex.-----	137
Storm of May 3-5, 1981-----	138
Storm of Aug. 30-Sept. 3, 1981-----	140
Rintliff Ditch drainage basin-----	143
Bintliff Ditch at Bissonnet Street, Houston, Tex.-----	145
Hummingbird Street Ditch drainage basin-----	146
Hummingbird Street Ditch at Houston, Tex.-----	149
Storm of May 3-4, 1981-----	150
Storm of Aug. 30-31, 1981-----	153
Brays Bayou at Houston, Tex.-----	156
Storm of May 3-6, 1981-----	159
Storm of Aug. 28-Sept. 3, 1981-----	162
Brays Bayou at Scott Street, Houston, Tex.-----	166
Sims Bayou:	
Sims Bayou drainage basin-----	167
Sims Bayou at Hiram Clarke Street, Houston, Tex.-----	170
Storm of Aug. 31-Sept. 3, 1981-----	173
Sims Bayou at Martin Luther King Boulevard, Houston, Tex.-----	176
Sims Bayou at Houston, Tex.-----	177
Storm of Aug. 30-Sept. 4, 1981-----	180
Berry Bayou drainage basin-----	183
Berry Bayou at Gilpin Street, Houston, Tex.-----	186
Storm of May 3-4, 1981-----	187
Storm of Aug. 31-Sept. 1, 1981-----	189
Berry Bayou at Forest Oaks Street, Houston, Tex.-----	191
Storm of May 3-4, 1981-----	193
Storm of June 4-6, 1981-----	195
Vince Bayou:	
Vince Bayou drainage basin-----	197
Vince Bayou at Pasadena, Tex.-----	200
Storm of May 3-6, 1981-----	201
Storm of Aug. 30-Sept. 1, 1981-----	203

# CONTENTS--Continued

	Page
Compilation of data--Continued	
San Jacinto River basin:--Continued	
Hunting Bayou:	
Hunting Bayou drainage basin-----	205
Hunting Bayou at Falls Street, Houston, Tex.-----	209
Storm of June 4-6, 1981-----	212
Storm of July 5-9, 1981-----	214
Storm of Aug. 30-Sept. 1, 1981-----	216
Hunting Bayou at Interstate Highway 610, Houston, Tex.-----	218
Storm of June 3-8, 1981-----	221
Storm of July 5-9, 1981-----	224
Storm of Aug. 30-Sept. 2, 1981-----	226
Greens Bayou:	
Greens Bayou drainage basin-----	228
Greens Bayou at Cutten Road near Houston, Tex.-----	233
Storm of Oct. 15-21, 1980-----	234
Storm of Aug. 31-Sept. 5, 1981-----	236
Greens Bayou at U.S. Highway 75 near Houston, Tex.-----	238
Storm of May 9-13, 1981-----	239
Storm of June 10-11, 1981-----	240
Storm of Aug. 30-Sept. 3, 1981-----	242
Greens Bayou near Houston, Tex.-----	244
Storm of May 3-8, 1981-----	248
Storm of June 1-9, 1981-----	251
Storm of Aug. 30-Sept. 6, 1981-----	254
Halls Bayou drainage basin-----	257
Halls Bayou at Deertrail Street near Houston, Tex.-----	260
Storm of April 23-24, 1981-----	261
Storm of May 9-10, 1981-----	262
Storm of Aug. 30-Sept. 3, 1981-----	263
Halls Bayou at Houston, Tex.-----	266
Storm of May 3-7, 1981-----	269
Storm of Aug. 30-Sept. 5, 1981-----	271
Greens Bayou at Ley Road, Houston, Tex.-----	273
Storm of June 2-9, 1981-----	275
Storm of June 10-15, 1981-----	277
Clear Creek basin:	
Clear Creek near Pearland, Tex.-----	279
Daily and monthly rainfall summary for gages north of	
Buffalo Bayou-----	285
Daily and monthly rainfall summary for gages south of	
Buffalo Bayou-----	291
Monthly rainfall-data summary in the Houston metropolitan	
area, National Weather Service Stations, 1981 water year-----	296

## ILLUSTRATIONS

	Page
Figure 1. Map showing locations of data-collection sites in the Houston urban study area-----	5
2. Graph showing rainfall at five drainage basins in the Houston metropolitan area, 1981 water year-----	6
3. Graph showing runoff from six drainage basins in the Houston metropolitan area, 1981 water year, and average runoff for the period 1953-70-----	15
4-20. Map showing locations of data-collection sites in and near the:	
4. Bettina Street Ditch drainage basin-----	33
5. Whiteoak Bayou drainage basin-----	51
6. Cole Creek drainage basin-----	53
7. Bingle Road Storm Sewer drainage basin-----	55
8. Brickhouse Gully drainage basin-----	72
9. Lazybrook Street Storm Sewer drainage basin-----	86
10. Little Whiteoak Bayou drainage basin-----	106
11. Brays Bayou drainage basin-----	118
12. Keegans Bayou drainage basin-----	122
13. Bintliff Ditch drainage basin-----	144
14. Hummingbird Street Ditch drainage basin-----	147
15. Sims Bayou drainage basin-----	168
16. Berry Bayou drainage basin-----	184
17. Vince Bayou drainage basin-----	198
18. Hunting Bayou drainage basin-----	206
19. Greens Bayou drainage basin-----	229
20. Halls Bayou drainage basin-----	258

# TABLES

	Page
Table 1. Percent increases in development in various drainage areas above stream-gaging stations in the Houston metropolitan area from 1969 to 1976-----	3
2. Weighted-mean precipitation factors for drainage basins above stations in the Houston metropolitan area-----	7
3-18. Storm rainfall-runoff data, 1981 water year,:	
3. Bettina Street Ditch-----	34
4. Bingle Road Storm Sewer-----	56
5. Cole Creek-----	64
6. Brickhouse Gully-----	73
7. Lazybrook Street Storm Sewer-----	87
8. Whiteoak Bayou-----	96
9. Little Whiteoak Bayou-----	107
10. Brays Bayou-----	119
11. Keegans Bayou-----	123
12. Hummingbird Street Ditch-----	148
13. Sims Bayou-----	169
14. Berry Bayou-----	185
15. Vince Bayou-----	199
16. Hunting Bayou-----	207
17. Greens Bayou-----	230
18. Halls Bayou-----	259
19. Recording and nonrecording rain gages in the Houston area at sites other than stream-gaging stations-----	280

## METRIC CONVERSIONS

For those readers interested in using the metric system, the inch-pound units of measurements used in this report may be converted to metric units by using the following conversion factors:

From		Multiply by	To obtain	
Unit	Abbrevia- tion		Unit	Abbrevia- tion
inch	in	25.4	millimeter	mm
foot	ft	0.3048	meter	m
mile	mi	1.609	kilometer	km
square mile	mi <sup>2</sup>	2.590	square kilometer	km <sup>2</sup>
cubic foot per second	ft <sup>3</sup> /s	0.02832	cubic meter per second	m <sup>3</sup> /s
foot per mile	ft/mi	0.189	meter per kilometer	m/km
acre-foot	--	1233	cubic meter	m <sup>3</sup>
		0.001233	cubic hectometer	hm <sup>3</sup>



HYDROLOGIC DATA FOR URBAN STUDIES IN THE  
HOUSTON, TEXAS, METROPOLITAN AREA

1981

By

Fred Liscum

INTRODUCTION

Hydrologic investigations of urban watersheds in Texas were begun by the U.S. Geological Survey in 1954. Studies are now in progress in Austin, and Houston. Studies have been completed in the Dallas-Fort Worth and San Antonio areas.

The U.S. Geological Survey, in cooperation with the city of Houston, began studies in the Houston metropolitan area in 1964. The program was expanded in 1968 to include collection of water-quality data. The objectives of the Houston urban-hydrology study are as follows:

1. To determine, on the basis of historical data and hydrologic analyses, the magnitude and frequency of flood peaks and flood volumes.
2. To determine the effect of urban development on flood peaks and volumes.
3. To ascertain the variation in water quality for different flow conditions and different seasons.

This report, the eighteenth in a series of reports to be published annually, is primarily applicable to objective 2. The report presents hydrologic data collected in the Houston urban area for the 1981 water year (October 1, 1980 to September 30, 1981).

A report by Johnson and Sayre (1973) utilized records collected from 1965 to 1969 to study the effects of urbanization on floods in the Houston area. The report also summarizes various basin parameters. A report by Waddell, Massey, and Jennings (1979) presents data on runoff from the Houston area and computed concentrations and loads of selected water-quality constituents discharged to Galveston Bay. The study utilized a variation of the "STORM" model developed by the Hydrologic Engineering Center of the U.S. Army Corps of Engineers. A report prepared by Liscum and Massey (1980) presents a technique for estimating the magnitude and frequency of floods in the Houston area from drainage areas, bank-full conveyance, and percentage of urban development.

A definition of terms related to streamflow, water quality, and other hydrologic data, as used in this report, are defined in " U.S. Geological Survey, Water-resources data for Texas, volume 2, 1981."

To facilitate the publication and distribution of this report some material has been included that does not conform to the formal publications standards of the U.S. Geological Survey.

#### LOCATION AND DESCRIPTION OF THE AREA

The Houston study area, which is located about 45 miles from the Gulf of Mexico, is on an almost level plain. The land surface in the area increases in altitude from 35 feet above the National Geodetic Vertical Datum of 1929 (NGVD) in the southeast to 135 feet in the northwest.

Records show that the entire Houston urban study area is being developed rapidly. Percent increases in development in various drainage-basin areas in the Houston metropolitan area from 1969 to 1976 are given in table 1.

Soils in the area are predominately clay, clay loams, and fine sandy loams of low permeability.

The major stream draining the area is Buffalo Bayou, a tributary of the San Jacinto River. Buffalo Bayou is regulated by the Barker and Addicks flood-detention reservoirs near the western limits of the area. From these reservoirs, Buffalo Bayou meanders east and is fed by five major tributaries: Whiteoak, Brays, Sims, Hunting, and Greens Bayous. The drainage area of Buffalo Bayou, excluding the area above the flood-detention reservoirs, is about 810 square miles.

The climate of the Houston area is characterized by short mild winters, long hot summers, high relative humidity, and prevailing southeasterly winds. The mean annual temperature (1941-70) is 68.9°F (20.5°C); the lowest temperature recorded was 5°F (-15°C) in 1930; and the maximum recorded was 108°F (42°C) in 1909.

The 30-year average (1941-70) annual rainfall for Houston is 48.19 inches, which is distributed uniformly throughout the year. The maximum annual rainfall was 72.86 inches in 1900; and the minimum was 17.66 inches in 1917.

Table 1.--Percent increases in development in various drainage areas above stream gaging stations in the Houston metropolitan area from 1969 to 1976

Station no.	Station name	1969 <u>a/</u>	1976 <u>b/</u>	Percent increase
08074150	Cole Creek at Diehl Road	34.3	54.0	19.7
08074200	Brickhouse Gully at Clarblak Street	34.6	54.7	20.1
08074250	Brickhouse Gully at Costa Rica Street	61.0	77.5	16.5
08074500	Whiteoak Bayou at Houston	45.2	57.7	12.5
08074780	Keegans Bayou at Keegan Road	21.0	44.9	23.9
08074800	Keegans Bayou at Roark Road	26.3	55.7	29.4
08075000	Brays Bayou at Houston	44.6	64.4	19.8
08075400	Sims Bayou at Hiram Clarke Street	40.4	69.3	28.9
08075500	Sims Bayou at Houston	50.2	73.7	23.5
08075550	Berry Bayou at Gilpin Street	58.0	71.8	13.8
08075650	Berry Bayou at Forest Oaks Street	72.9	85.3	12.4
08075760	Hunting Bayou at Falls Street	95.9	98.9	3.0
08075770	Hunting Bayou at Interstate Highway 610	83.3	95.0	11.7
08075780	Greens Bayou at Cutten Road	24.4	47.2	22.8
08076000	Greens Bayou near Houston	26.3	43.9	17.6
08076200	Halls Bayou at Deertrail Street	30.4	52.8	22.4
08076500	Halls Bayou at Houston	60.3	74.1	13.8

a/ Johnson and Sayre, 1973.

b/ Liscum and Massey, 1980.

## DATA-COLLECTION METHODS

The drainage basins and locations of hydrologic-instrument installations and water-quality sampling sites in the Houston urban study area are shown on figure 1. The locations of hydrologic instruments and data-collection sites in the individual basins are shown later on figures 4-20.

### Precipitation Data

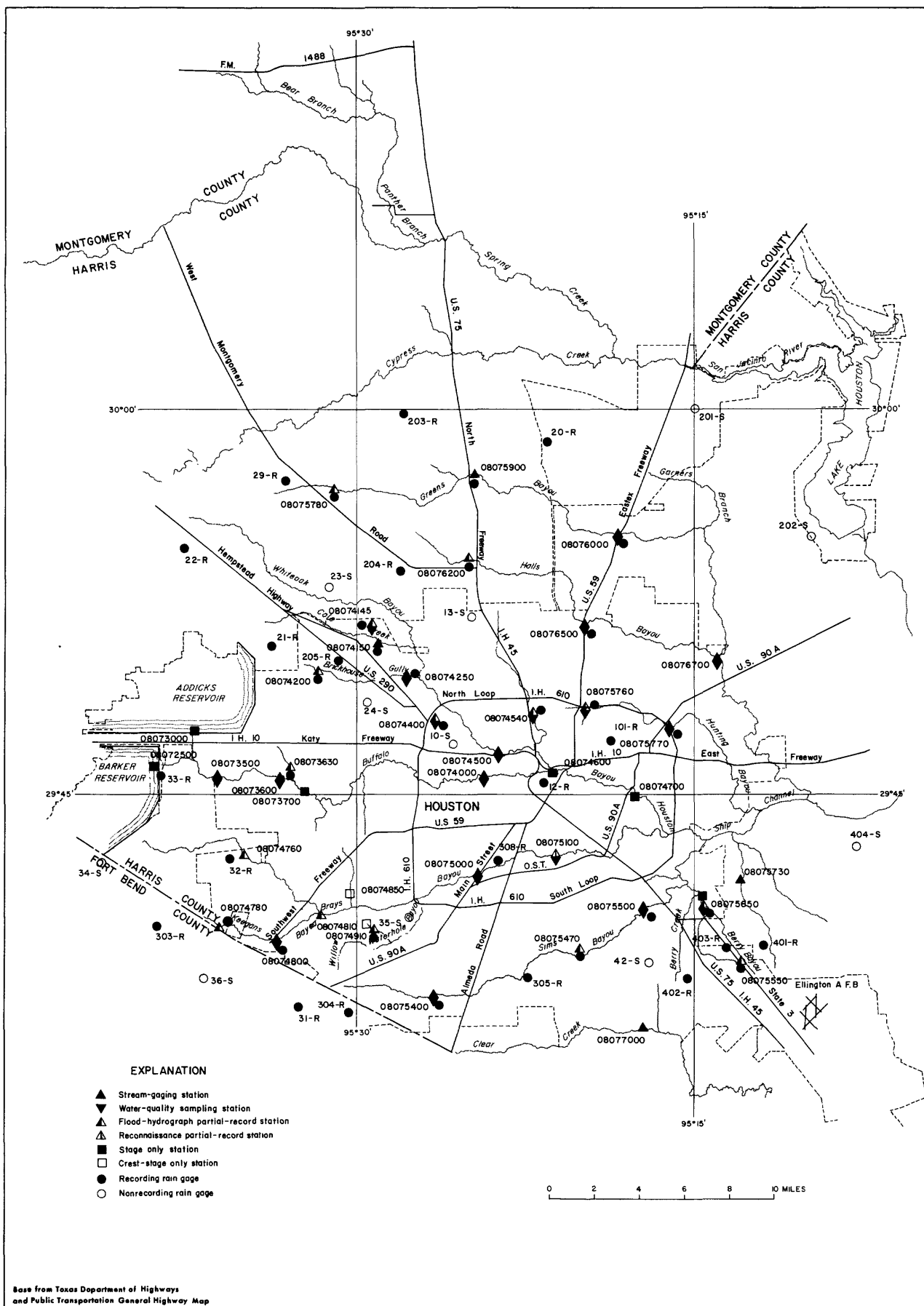
Precipitation data are based on 34 recording rain gages maintained by the U.S. Geological Survey in the Houston metropolitan area. The gages are distributed throughout the drainage basins to measure total precipitation and to define rainfall intensities.

Additional rainfall data are available from rain-gage networks operated by the National Weather Service and are given in the section "Compilation of Data". Locations of recording and nonrecording rain gages at sites other than stream-gaging stations are given later in table 19.

Precipitation at individual gages and weighted precipitation in each study basin is given in the section "Compilation of data." Daily and monthly rainfall amounts are also given in the section "Compilation of data."

Weighted-mean precipitation factors for drainage basins in the Houston area are given in table 2. Weighted-mean precipitation for a study area is determined by the Thiessen method as described by Linsley, Kohler, and Paulhus (1949). All of the rain gages, recording and nonrecording, are used to compute the monthly and annual rainfall amounts. Only the functioning recording gages are used to compute storm rainfall amounts. For example, the monthly and annual weighted-mean precipitation for the drainage basin upstream from the Cole Creek at the Deihl Road gaging station could be computed as follows: Multiply the recorded precipitation at the rain gage at station 08074150 by 0.25; to that value add the recorded precipitation at the rain gage at station 205R multiplied by 0.15; to that value add the recorded precipitation at the rain gage at station 23S multiplied by 0.15; and to that value add the recorded precipitation at the rain gage at station 21R multiplied by 0.45.

Rainfall for the current year was unevenly distributed over the area. Individual station totals ranged from 41.05 inches at the U.S. Geological Survey streamflow station Keegans Bayou at Roark Road (station 08074800) to 70.68 inches at the National Weather Service rain gage at Hobby Airport in southeast Houston (station 42S) and the streamflow station, Sims Bayou at Houston (station 08075500). Figure 2 shows the comparison of accumulated monthly rainfall for the 1981 water year over five widely separated drainage basins with the 30-year rainfall average (1941-70) of 48.19 inches for Houston. This figure illustrates the deficiency of rainfall for the first seven months on the 1981 water year. The thunderstorms that dominated rainfall of May, June, July, and August was sufficient to make the annual totals of rainfall for the metropolitan area nearly equal to or greater than the 30-year average. The values shown in figure 2 range from 45.04 inches in the Brays Bayou basin to 57.66 inches in the upper Greens Bayou basin.



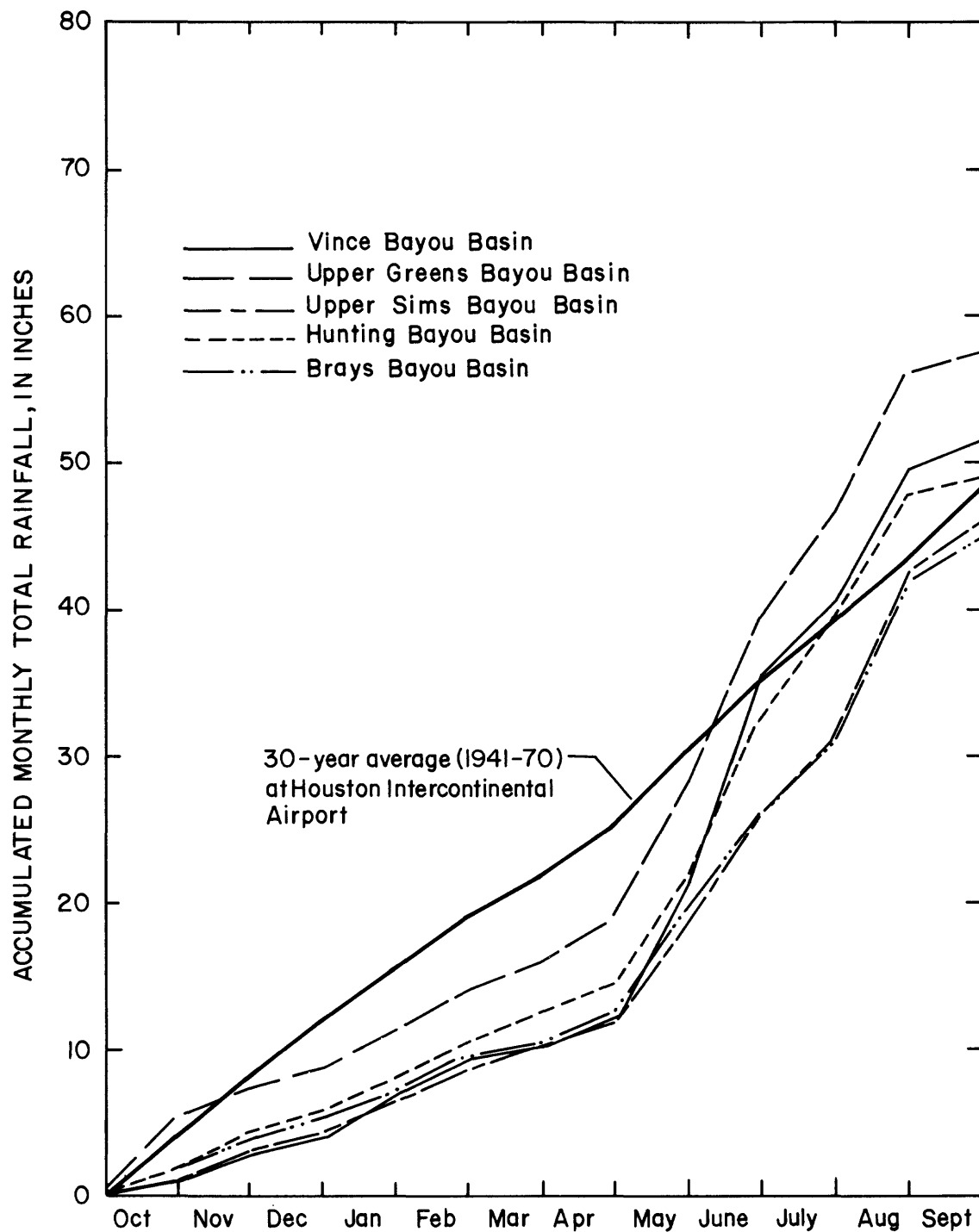


Figure 2.-Rainfall at five drainage basins in the Houston metropolitan area, 1981 water year

Table 2.--Weighted-mean precipitation factors for drainage basins  
above stations in the Houston metropolitan area

Station number and name	Monthly and yearly totals		Date of storm	Storm totals	
	Rain gage	Weighted-mean precipitation factors		Rain gage	Weighted-mean precipitation factors
	<u>1/</u>	<u>2/</u>		<u>1/</u>	<u>2/</u>
08073630	Not computed	--	Apr. 23, 1981	08073630	1.00
Bettina Street			May 3-5, 1981	08073630	1.00
Ditch at Houston			Aug. 30-31, 1981	08073630	1.00
08074145	Not computed	--	July 6-7, 1981	08074145	1.00
Bingle Road			Aug. 12, 1981	08074145	1.00
Storm Sewer at Houston					
08074150	08074150	.25	Apr. 23-25, 1981	08074150	.30
Cole Creek at	205R	.15		205R	.15
Deihl Road,	23S	.15		21R	.55
Houston	21R	.45	May 3-6, 1981	08074150	.35
				21R	.65
			Aug. 30-	08074150	.30
			Sept. 2, 1981	205R	.15
				21R	.55
08074200	Not computed	--	Apr. 23-24, 1981	205R	.20
Brickhouse				21R	.80
Gully at			Aug. 30-	08074200	.30
Clarblak			Sept. 3, 1981	21R	.70
Street, Houston					
08074250	08074250	.10	Oct. 15-16, 1980	08074150	.10
Brickhouse	08074200	.30		08074250	.15
Gully at	08074150	.10		205R	.75
Costa Rica	205R	.25	Aug. 30-	08074150	.05
Street,	24S	.10	Sept. 2, 1981	08074200	.30
Houston	21R	.15		08074250	.15
				205R	.30
				21R	.20

See footnotes at end of table.

Table 2.--Weighted-mean precipitation factors for drainage basins  
above stations in the Houston metropolitan area--Continued

Station number and name	Monthly and yearly totals		Date of storm	Storm totals	
	Rain gage	Weighted-mean precipitation factors		Rain gage	Weighted-mean precipitation factors
	<u>1/</u>	<u>2/</u>		<u>1/</u>	<u>2/</u>
08074400 Lazybrook Street Storm Sewer at Houston	Not computed	--	Apr. 23, 1981 May 4, 1981 June 25, 1981 July 20, 1981	08074400 08074400 08074400 08074400	1.00 1.00 1.00 1.00
08074500 Whiteoak Bayou at Houston	08074400 08074250 08074200 08074150 205R 204R 29R 24S 23S 22R 21R 13S 10S	0.05 .05 .05 .10 .05 .10 .05 .05 .20 .15 .05 .05 .05	May 3-8, 1981     Aug. 30-Sept. 5, 1981	08074150 08074400 22R 21R  08074150 08074200 08074250 205R 204R 22R 21R	0.40 .15 .25 .20  .10 .05 .20 .10 .20 .20 .15
08074540 Little Whiteoak Bayou at Houston	Not computed	--	May 3-5, 1981  Aug. 30-Sept. 1, 1981	08074400 08075760 08076200 08076500 08074250 08074540 08075760 204R	0.30 .20 .25 .25 .15 .65 .05 .15
08074760 Brays Bayou at Alief	Not computed	--	No storms published	--	--
08074780 Keegans Bayou at Keegan Road, Houston	Not computed	--	Aug. 19-20, 1981  Aug. 30-Sept. 4, 1981	08074780 303R 08074800 303R	.40 .60 .15 .85

See footnotes at end of table.



Table 2.--Weighted-mean precipitation factors for drainage basins  
above stations in the Houston metropolitan area--Continued

Station number and name	Monthly and yearly totals		Date of storm	Storm totals	
	Rain gage	Weighted-mean precipitation factors		Rain gage	Weighted-mean precipitation factors
	<u>1/</u>	<u>2/</u>		<u>1/</u>	<u>2/</u>
08074800	08074800	0.10	Apr. 23-14, 1981	08074780	1.00
Keegans Bayou	08074780	.45	Aug. 30-Sept. 3, 1981	08074800	.40
at Poark Road,	303R	.35		303R	.60
Houston	34S	.10			
08074810	Not computed	--	May 3-5, 1981	08074780	.15
Brays Bayou				08074800	.30
at Gessner				303R	.15
Drive,				33R	.05
Houston				32R	.35
			Aug. 30-Sept. 3, 1981	08074800	.30
				303R	.20
				32R	.50
08074850	Not computed	--	No storms published	--	--
Bintliff Ditch					
at Bissonnet					
Street,					
Houston					
08074910	Not computed	--	May 3-4, 1981	08074910	1.00
Hummingbird			Aug. 30-31, 1981	08074910	1.00
Street Ditch					
at Houston					
08075000	08074910	.15	May 3-6, 1981	08074780	.10
Brays Bayou at	08074800	.10		08074800	.15
Houston	08074780	.10		08074910	.25
	308R	.10		308R	.10
	303R	.05		303R	.10
	35S	.15		33R	.05
	34S	.05		32R	.25
	32R	.25	Aug. 28-Sept. 3, 1981	08074800	.20
	31R	.05		08074190	.25
				308R	.10
				303R	.10
				32R	.30
				31R	.05

See footnotes at end of table.

Table 2.--Weighted-mean precipitation factors for drainage basins  
above stations in the Houston metropolitan area--Continued

Station number and name	Monthly and yearly totals		Date of storm	Storm totals	
	Rain gage	Weighted-mean precipitation factors		Rain gage	Weighted-mean precipitation factors
	<u>1/</u>	<u>2/</u>		<u>1/</u>	<u>2/</u>
08075400 Sims Bayou at Hiram Clarke Street, Houston	08075400 31R	0.60 .40	Aug. 31-Sept. 3, 1981	08075400 31R	0.60 .40
08075470 Sims Bayou at Martin Luther King Blvd., Houston	Not computed	--	No storms published	--	--
08075500 Sims Bayou at Houston	08075500 08075400 08075470 305R 42S	.05 .45 .20 .25 .05	Aug. 30-Sept. 4, 1981	08075400 08075470 08075500 305R 304R 31R	.25 .20 .05 .25 .20 .05
08075550 Berry Bayou at Gilpin Street, Houston	Not computed	--	May 3-4, 1981 Aug. 31-Sept. 1, 1981	08075550 402R 08075550 402R	.95 .05 .95 .05
08075650 Berry Bayou at Forest Oaks Street, Houston	Not computed	--	May 3-4, 1981 June 4-6, 1981	08075550 403R 402R 401R 08075550 08075650 403R 402R	.30 .35 .15 .20 .35 .20 .30 .15
08075730 Vince Bayou at Pasadena	08075650 401R	.20 .80	May 3-6, 1981 Aug. 30-Sept. 1, 1981	401R 401R	1.00 1.00

See footnotes at end of table.

Table 2.--Weighted-mean precipitation factors for drainage basins  
above stations in the Houston metropolitan area--Continued

Station number and name	Monthly and yearly totals		Date of storm	Storm totals	
	Rain gage	Weighted-mean precipitation factors		Rain gage	Weighted-mean precipitation factors
	<u>1/</u>	<u>2/</u>		<u>1/</u>	<u>2/</u>
08075760 Hunting Bayou at Falls Street, Houston	Not computed	--	June 4-6, 1981 July 5-9, 1981 Aug. 30-Sept. 1, 1981	08075760 08075760 08075760	1.00 1.00 1.00
08075770 Hunting Bayou at Interstate Highway 610, Houston	08075770 08075760	.20 .80	June 3-8, 1981 July 5-9, 1981 Aug. 30-Sept. 2, 1981	08075760 08075770 08075760 08075770 08075760 08075770	.80 .20 .80 .20 .80 .20
08075780 Greens Bayou at Cutten Road near Houston	Not computed	--	Oct. 15-21, 1980 Aug. 31-Sept. 5, 1981	08075780 08075780	1.00 1.00
08075900 Greens Bayou at U.S. High- way 75, Houston	08075900 08075780 204R 203R 29R	0.20 .33 .02 .30 .15	May 9-13, 1981 June 10-11, 1981 Aug. 30-Sept. 3, 1981	08075780 204R 203R 08075780 08075900 203R 29R 08075780 08075900 204R	0.45 .05 .50 .35 .20 .30 .15 .55 .40 .05

See footnotes at end of table.

Table 2.--Weighted-mean precipitation factors for drainage basins  
above stations in the Houston metropolitan area--Continued

Station number and name	Monthly and yearly totals		Date of storm	Storm totals	
	Rain gage	Weighted-mean precipitation factors		Rain gage	Weighted-mean precipitation factors
	<u>1/</u>	<u>2/</u>		<u>1/</u>	<u>2/</u>
08076000 Greens Bayou near Houston	08076200	0.05	May 3-8, 1981	08075780	0.40
	08076000	.15		08076000	.10
	08075900	.30	June 1-9, 1981	08076200	.20
	08075780	.15		20R	.30
	203R	.15		08075780	.25
	29R	.10		08076000	.10
	20R	.10		08076200	.15
				203R	.30
				20R	.20
			Aug. 30-Sept. 6, 1981	08075780	.30
				08075900	.45
				08076000	.15
				20R	.10
08076200 Halls Bayou at Deertrail Street near Houston	Not computed	--	Apr. 23-24, 1981	08076200	.60
				204R	.40
			May 9-10, 1981	08076200	.60
				204R	.40
			Aug. 30-Sept. 3, 1981	08075900	.10
				204R	.90
08076500 Halls Bayou at Houston	08076500	.35	May 3-7, 1981	08076000	.05
	08076200	.35		08076200	.55
	08076000	.05	Aug. 30-Sept. 5, 1981	08076500	.40
	204R	.15		08076000	.50
	13S	.10		204R	.50

See footnotes at end of table.

Table 2.--Weighted-mean precipitation factors for drainage basins  
above stations in the Houston metropolitan area--Continued

Station number and name	Monthly and yearly totals		Date of storm	Storm totals	
	Rain gage	Weighted-mean precipitation factors		Rain gage	Weighted-mean precipitation factors
	<u>1/</u>	<u>2/</u>		<u>1/</u>	<u>2/</u>
08076700 Greens Bayou at Ley Road, Houston	Not computed	--	June 2-9, 1981	08075780	0.10
				08076000	.35
				08076200	.15
				08076500	.15
				203R	.10
				20R	.15
			June 10-15, 1981	08075780	.10
				08075900	.10
				08076000	.35
				08076200	.10
				08076500	.15
				203R	.05
				20R	.15

1/ See table 19 for locations of stations other than stream-gaging stations.

2/ See section on "Precipitation Data" for explanation of use of weighted-mean precipitation factors.

There were a total of 27 storms within the metropolitan area during the 1981 water year that produced rainfall totals in excess of 1.0 inch. Eleven of these ranged between 1.0 and 2.0 inches of total rainfall; the other sixteen storms produced in excess of 2.0 inches of rainfall, each. The majority of these storms occurred during the period, May-September, when twelve of the larger storms (rainfall greater than 2.0 inches) occurred and seven of the smaller ones.

In terms of total rainfall and areal coverage, the four major storms of the 1981 water year occurred on May 3-4, June 3-5, July 5-7, and August 30-31. The storm of May 3-4 produced rainfall amounts ranging from a low of 3.0 inches in the Keegans Bayou drainage basin to a high of 11.6 inches in far southeast Houston (lower part of the Sims Bayou and Berry Bayou drainage basins). The storm of June 3-5 produced rainfall ranging from a low of 1.0 inch in the upper part of the Brays Bayou basin to a high in excess of 9.0 inches in the Hunting, Sims, and Berry Bayou basins. The storm of July 5-7 produced rainfall ranging from a low of about 2.9 inches in the lower part of the Brays Bayou basin to a high in excess of 4.5 inches in the Whiteoak Bayou basin. The storm of August 30-31 produced rainfall ranging from a low near 5.0 inches in the upper Berry Bayou basin to a high in excess of 9.0 inches in the upper parts of the basins for Brays and Sims Bayous. Each of these four storms resulted from severe thunderstorms which raked the entire metropolitan area. The inherent variability of thunderstorm rainfall is reflected by variation of storm totals for these storms throughout the area.

The storm of August 30-31 was analyzed for all stations except those where rainfall distribution was suspect, where the quality of recorded data was poor, or where the stage-discharge relationship was poorly defined. The storms of May 3-4, June 3-5, and July 5-7 were analyzed for a selected number of stations based on the quality of the recorded data. Other storms were selected for analysis based on the peak discharge, distribution of rainfall, and availability of water-quality data.

#### Runoff Data

Runoff data are based on discharge measurements and stage records at 18 continuous-record stream-gaging stations, and 16 flood-hydrograph partial-record stations.

Annual records of either daily discharge or maximum gage height at continuous-record stream-gaging stations, and maximum discharge at flood-hydrograph partial-record stations are given in the section "Compilation of data." Tables of storm runoff data, including accumulated rainfall totals, are also given for selected storms in the section "Compilation of data."

Figure 3 shows the accumulated monthly runoff from six basins for the 1981 water year and the average runoff for the period 1953-70. The average annual rainfall for the 1953-70 period was 46 inches or approximately equal to the 30-year (1941-70) rainfall average of 48.19 inches at Houston. Figure 3 shows that runoff for the 1981 water year is appreciably greater than the average runoff for the period 1953-70.

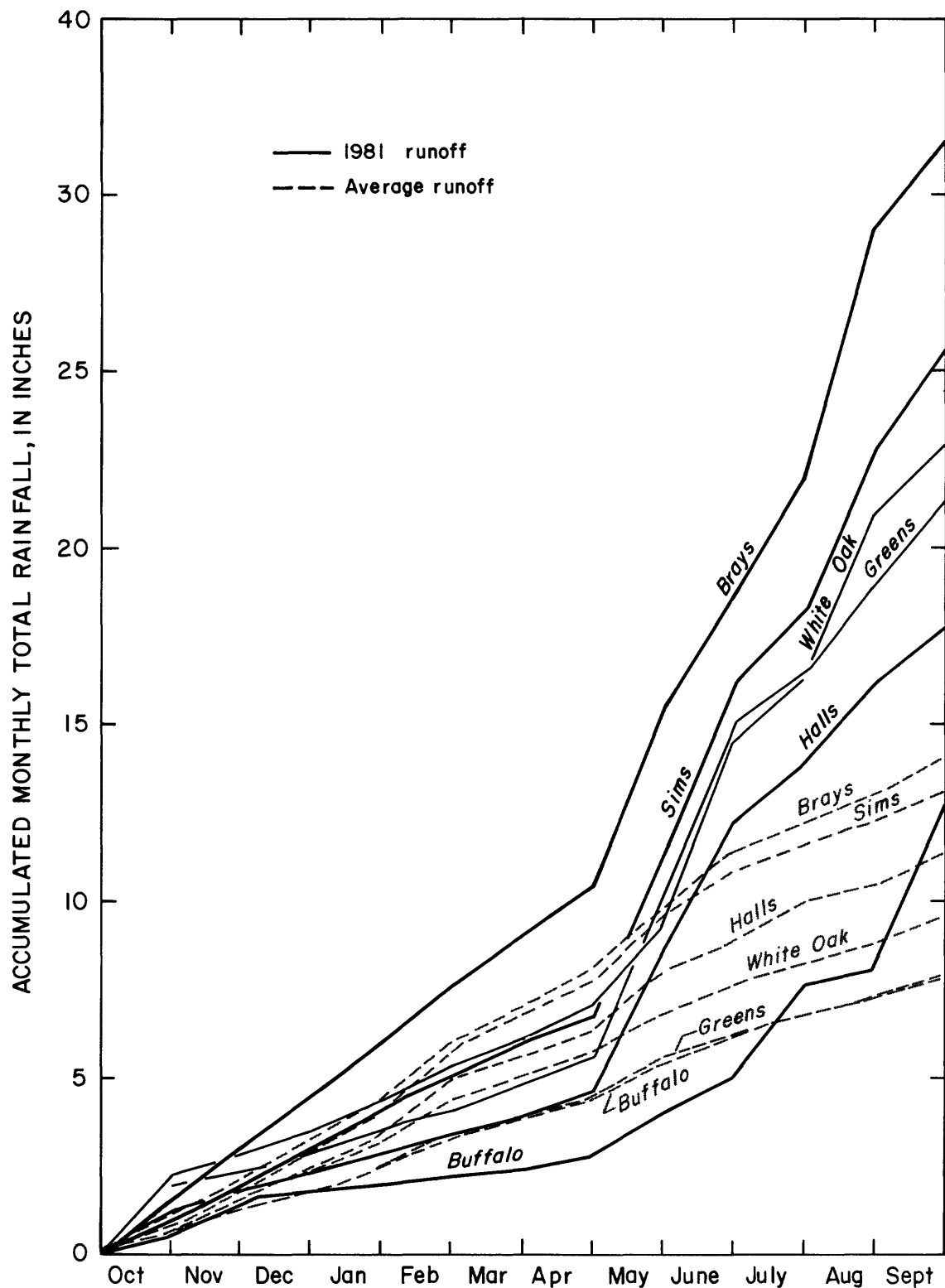


Figure 3.-Runoff from six drainage basins in the Houston metropolitan area, 1981 water year, and average runoff for the period 1953-70

Figure 3 also shows an interesting comparison for the six featured basins. Accumulated runoff for five of the six basins, Buffalo, Greens, Halls, Sims, and Whiteoak Bayous during the first seven months of the 1981 water year is less than for the comparative period, October through April, for the averaging period, 1953-70. However, the accumulated runoff for this period at Brays Bayou exceeds the value shown for the averaging period during these months. The five basins that show the October-April runoff for the 1981 water year to be less than the averaging period, reflect the extreme lack of rainfall experienced during this period of the 1981 water year. The comparison of similar values for Brays Bayou exhibits the extreme effect that urbanization has had on the Brays Bayou watershed. Once, the rainfall exceeded that of the averaging period, all six basins exhibited more accumulated runoff for the 1981 water year than for the averaging period. Of course, this is attributed not only to the increased rainfall for the period May through September, but also to the effects of urban development in each of the six basins.

The most significant storms of the 1981 water year were those of May 3-4, June 3-5, and August 30-31. Data published in the section "Compilation of data" show computed storm runoff for the storm of May 3-4 in the range of 2.7 to 7.4 inches. Of the 34 stream-flow stations presented in this report, the storm of May 3-4 produced eight of the annual peak discharges. The storm of June 3-5 produced one annual peak discharge. Computed runoff for this storm ranged from 1.8 to 4.8 inches. The most significant storm of 1981 was that of August 30-31. Computed storm runoff ranged from 3.1 to 7.1 inches. This storm produced the annual peak discharge at 24 of the 34 sites included in this report.

The ratio of runoff to rainfall was determined for all storms selected for analysis. The range of this ratio was 0.50 to 0.84 for the storm of May 3-4. Of the 13 sites at which this storm was analyzed, nine were in the 0.6 to 0.7 range. The storm of June 3-5 produced ratio values in the range of 0.37 to 0.84. Of the five sites analyzed, two had a ratio value greater than 0.8. The storm of August 30-31 resulted in runoff-to-rainfall ratio values ranging from 0.41 to 0.99. The ratios for the 22 sites analyzed for this storm were distributed as follows: Greater than 0.85, 2 sites; ranging from 0.70 to 0.85, 3 sites; ranging from 0.60 to 0.70, 5 sites; ranging 0.50 to 0.60, 5 sites; and ranging from 0.40 to 0.50, 7 sites. The ratio value of 0.99 was computed for a small basin with an efficient storm sewered drainage system. A high ratio of runoff to rainfall may result from saturated soil moisture conditions, high intensity rainfall, and long duration rainfall in conjunction with highly developed drainage basins which include a large portion of impervious land cover and efficient storm drainage systems. However, caution is urged in the use of these computed values as the accuracies of the ratios may be adversely effected by inadequate rain gage coverage, indeterminate drainage area boundaries, basin exchange, and indefinite stage-discharge relationships.



Values for total storm runoff, storm peak discharge, ratio of runoff to rainfall, and other pertinent data for all storms analyzed in the 1981 water year are given in tables 3-18. A total of 16 storms have been analyzed for the 1981 water year resulting in a total of 59 separate storm-data listings. The storm dates and the number of stream-gaging stations for which data are published in the section "Compilation of data" are:

No.	Storm rainfall Date	Number of stations for which data is published
1	October 15	2
2	April 23	6
3	May 3-4	13
4	May 9	2
5	June 1-5	2
6	June 3-5	1
7	June 4-5	2
8	June 10-11	1
9	June 10-13	1
10	June 25	1
11	July 5-8	2
12	July 6-7	1
13	July 10	1
14	August 12	1
15	August 19	1
16	August 30-31	22

### Water-Quality Data

Water-quality data were collected at 19 locations in the study area during the 1981 water year. The locations of the water-quality data collection sites are shown on figure 1. Water-quality data and streamflow data are presented in downstream order in the section "Compilation of data." Time and discharge values for water-quality data may vary slightly from those published in the Water Resources Data for Texas, 1981 report due to the correction of some previously published values.

Water-quality data are collected from a wide range of discharge representing various flow and seasonal conditions, and include determinations for physical, chemical, and biological parameters. Physical determinations include measurements of temperature, pH, turbidity, suspended and volatile solids, and color. Chemical analyses include specific conductance, dissolved oxygen, standard inorganic chemical (major ions), selected nutrient determinations of total organic carbon, nitrogen, and phosphorus. Chemical analyses of trace substances include minor elements, and pesticides. Biological analyses include measurements of BOD (biochemical oxygen demand) and bacteriological analyses for total coliform, fecal coliform, and fecal streptococci.

Water samples were also collected during selected storms to determine the quality of storm runoff in the Houston metropolitan area. Storm dates and stations where at least three water-quality samples were collected during the storms are:

Station no.	Station name	Date of storm
08074145	Bingle Road Storm Sewer at Houston, Tex.	July 6-7, 1981 Aug. 12, 1981
08074400	Lazybrook Street Storm Sewer at Houston, Tex.	April 23, 1981 May 4, 1981 June 25, 1981 July 10, 1981
08074800	Keegans Bayou at Roark Road near Houston, Tex.	April 23, 1981 Aug. 30-31, 1981
08075000	Brays Bayou at Houston, Tex.	Aug. 30-31, 1981
08075650	Berry Bayou at Forest Oaks Street Houston, Tex.	June 4-5, 1981
08075760	Hunting Bayou at Falls Street, Houston, Tex.	July 5-8, 1981
08075770	Hunting Bayou at Interstate Highway 610, Houston, Tex.	July 5-8, 1981
08076000	Greens Bayou near Houston, Tex.	Aug. 30-31, 1981
08076500	Halls Bayou at Houston, Tex.	Aug. 30-31, 1981

## SELECTED REFERENCES

- Johnson, S. L., and Sayre, D. M., 1973, Effects of urbanization on floods in the Houston, Texas, metropolitan area: U.S. Geological Survey Water-Resources Investigations 3-73, 50 p.
- Linsley, R. K., Kohler, M. A., and Paulhus, J. L. H., 1949, Applied hydrology: New York, McGraw-Hill Book Company, Inc., 689 p.
- Liscum, Fred, and Massey, B. C., 1980, Technique for estimating the magnitude and frequency of floods in the Houston, Texas, metropolitan area: U.S. Geological Survey Water-Resources Investigations 80-17, 40 p.
- U.S. Department of Commerce, Climatology of the United States No. 81 (by State), Monthly normals of temperature, precipitation, and heating and cooling degree days, 1941-70, Texas: National Oceanic and Atmospheric Administration Environmental Data Service, U.S. Department of Commerce publication.
- U.S. Geological Survey, 1982, Water resources data for Texas, volume 2: U.S. Geological Survey Water-Data Report, TX-61-2, 511 p.
- Waddell, Kidd M., Massey, Bernard C., and Jennings, Marshall E., 1979, Use of the STORM model for estimating the quantity and quality of runoff from the metropolitan area of Houston, Texas: U.S. Geological Survey Water Resources Investigations 79-74, 29 p.

C O M P I L A T I O N   O F   D A T A

# SAN JACINTO RIVER BASIN

08073500 BUFFALO BAYOU NEAR ADDICKS, TX

LOCATION.--Lat 29°45'42", long 95°36'20", Harris County, Hydrologic Unit 12040104, near right bank at bridge on Dairy-Ashford Road over rectified channel, 1.8 mi (2.9 km) downstream from South Mayde Creek, and 2.6 mi (4.2 km) southeast of Addicks.

DRAINAGE AREA.--293 mi<sup>2</sup> (759 km<sup>2</sup>), unadjusted for basin boundary changes.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1945 to current year.

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.40 ft (0.427 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; records unadjusted to land-surface subsidence. Prior to Feb. 2, 1948, water-stage recorder at bridge on natural channel 1,200 ft (370 m) to right at same datum. Feb. 2 to May 21, 1948, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair except those for period of no gage-height record, which are poor. Flood-flow regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) 3.2 and 3.0 mi (5.1 and 4.8 km) upstream, respectively, total capacity 315,900 acre-ft (390 hm<sup>3</sup>). Extreme low flow is sustained by drainage from irrigated lands.

AVERAGE DISCHARGE.--36 years, 210 ft<sup>3</sup>/s (5.947 m<sup>3</sup>/s), 152,100 acre-ft/yr (188 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s (317 m<sup>3</sup>/s) Aug. 29, 1945, gage height, 81.23 ft (24.759 m), former site; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 85.6 ft (26.09 m) in December 1935, adjusted to former site from floodmark 0.5 mi (0.8 km) downstream, on basis of slope of flood of Aug. 29, 1945, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,200 ft<sup>3</sup>/s (119 m<sup>3</sup>/s) Aug. 31 at 1230 hours, gage height, 73.12 ft (22.287 m); minimum daily, 11 ft<sup>3</sup>/s (0.31 m<sup>3</sup>/s) Dec. 27 and Feb. 24.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	33	25	12	27	23	16	27	140	579	64	1250
2	420	34	20	12	86	20	16	29	76	569	72	504
3	250	34	17	14	30	19	16	850	65	550	63	578
4	180	33	15	13	26	336	17	600	100	531	74	1010
5	120	31	13	14	49	450	14	335	321	590	55	1450
6	90	30	12	17	116	172	14	111	61	547	50	1400
7	80	28	12	19	100	36	14	35	42	890	60	1290
8	85	26	70	17	39	27	14	24	263	705	47	1300
9	90	24	288	15	25	25	14	42	162	1330	51	1580
10	90	22	314	14	178	21	14	63	46	1580	41	1700
11	90	20	224	15	493	16	14	27	64	1080	40	1690
12	85	18	96	15	50	17	14	642	160	900	42	1680
13	80	16	42	15	21	18	14	1580	457	412	57	1670
14	80	15	26	18	14	19	13	1580	502	822	57	1700
15	200	15	24	17	14	16	13	1240	481	1420	55	1680
16	426	20	21	16	13	29	17	611	411	1500	44	1630
17	438	70	20	14	13	18	14	529	290	1460	38	1610
18	630	40	18	15	13	16	14	315	330	1400	37	1590
19	782	20	17	207	13	15	14	264	279	1290	73	1570
20	810	15	16	474	14	14	25	94	172	914	48	1540
21	922	15	12	484	13	15	30	29	93	310	46	1350
22	1070	85	13	456	18	17	29	26	56	148	46	852
23	1020	50	12	390	14	16	341	25	86	103	49	817
24	902	30	12	239	11	15	510	28	308	103	58	794
25	522	90	13	184	54	17	582	32	229	96	56	774
26	164	250	12	55	38	15	566	33	434	97	50	744
27	85	130	11	24	92	16	492	33	573	121	45	699
28	66	70	12	23	82	14	324	30	614	160	46	597
29	48	40	12	21	---	17	174	55	604	124	73	405
30	41	30	12	19	---	29	33	51	590	100	103	115
31	36	---	12	15	---	19	---	122	---	79	2820	---
TOTAL	10352	1334	1423	2863	1656	1497	3382	9462	8009	20510	4460	35569
MEAN	334	44.5	45.9	92.4	59.1	48.3	113	305	267	662	144	1186
MAX	1070	250	314	484	493	450	582	1580	614	1580	2820	1700
MIN	36	15	11	12	11	14	13	24	42	79	37	115
AC-FT	20530	2650	2820	5680	3280	2970	6710	18770	15890	40680	8850	70550

CAL YR 1980 TOTAL 75721 MEAN 207 MAX 1770 MIN 11 AC-FT 150200  
WTR YR 1981 TOTAL 100517 MEAN 275 MAX 2820 MIN 11 AC-FT 199400

NOTE.--No gage-height record Nov. 8 to Dec. 8.

## SAN JACINTO RIVER BASIN

08073500 BUFFALO BAYOU NEAR ADDICKS, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: August 1970 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR												
03...	1135	20	700	7.6	16.0	40	66	7.2	73	11	65000	7700
23...	1020	16	786	7.9	14.5	10	16	6.5	62	5.4	38000	2800
MAY												
12...	1200	647	139	6.4	22.5	90	52	6.2	70	6.6	9000	680
13...	1040	1600	120	6.8	22.5	120	40	5.5	61	5.2	7700	140
15...	1045	1460	144	7.1	22.0	50	36	5.5	62	4.4	6700	550
JUL												
13...	1320	305	140	7.6	29.0	100	57	6.1	78	3.7	41000	3600
14...	1035	665	109	7.1	27.5	100	56	6.2	78	2.9	28000	2900
15...	1100	1400	110	7.4	29.0	100	35	5.5	71	2.7	5500	170
AUG												
12...	1215	42	680	7.6	27.5	20	32	3.8	48	4.5	60000	2600

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR												
03...	4000	160	13	51	8.6	75	2.6	6.6	150	53	89	.5
23...	330	--	--	--	--	--	--	--	--	--	--	--
MAY												
12...	820	42	0	13	2.3	9.4	.6	4.8	42	4.4	11	.1
13...	290	36	0	11	2.0	7.9	.6	4.5	38	5.9	8.6	.1
15...	270	40	0	12	2.4	8.3	.6	3.7	43	3.9	10	.2
JUL												
13...	2300	48	0	15	2.6	9.0	.6	2.7	49	2.9	11	.1
14...	2700	35	1	11	1.8	7.1	.5	2.6	34	3.4	9.6	.1
15...	1400	--	--	--	--	--	--	--	--	--	--	--
AUG												
12...	2100	150	0	48	7.7	84	3.1	6.3	160	41	88	.3

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR												
03...	15	389	71	10	3.2	.130	3.3	.740	1.5	2.2	4.100	10
23...	--	--	12	7	2.6	.360	3.0	.600	1.1	1.7	3.800	11
MAY												
12...	7.4	78	95	25	.01	.020	.03	.140	1.5	1.6	.630	15
13...	7.1	70	32	18	.00	.010	.00	.070	1.3	1.4	.460	16
15...	8.2	75	27	2	.02	.030	.05	.290	1.4	1.7	.530	14
JUL												
13...	12	84	64	11	.02	.070	.09	.280	1.1	1.4	.350	11
14...	9.2	65	58	12	.00	.060	.04	.270	.93	1.2	.360	8.8
15...	--	--	23	11	.00	.040	.02	.200	1.2	1.4	.280	7.7
AUG												
12...	19	391	38	0	1.7	.430	2.1	.550	1.4	1.9	3.000	6.0

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAR							
03...	1135	6	100	<1	10	<10	40
MAY							
12...	1200	4	70	<1	10	<10	210
15...	1045	4	80	<1	10	<10	270
JUL							
13...	1320	4	70	<1	10	<10	270
AUG							
12...	1215	15	150	<1	0	<10	16

SAN JACINTO RIVER BASIN

08073500 BUFFALO BAYOU NEAR ADDICKS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 03...	<10	90	.1	0	0	30
MAY 12...	<10	5	.1	0	0	6
MAY 15...	40	10	.0	0	0	20
JUL 13...	<10	20	.0	0	0	10
AUG 12...	<10	60	.1	0	0	<3

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
MAR 03...	1135	.00	.0	.00	.0	.00	.00	.00	.47
MAY 15...	1045	.00	.0	.00	.0	.00	.00	.00	.15
JUL 13...	1320	.00	.0	.00	.0	.00	.00	.00	.11
AUG 12...	1215	.00	.0	.00	.0	.00	.00	.00	.70

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
MAR 03...	.00	.00	.00	.00	.00	.00	.02	.01	.00
MAY 15...	.00	.00	.00	.00	.00	.00	.00	.01	.00
JUL 13...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 12...	.00	.00	.00	.00	.00	.00	.02	.21	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR 03...	.00	.00	.00	.00	0	.00	.12	.00	.00
MAY 15...	.00	.00	.00	.00	0	.00	.03	.02	.00
JUL 13...	.00	.00	.00	.00	0	.00	.03	.01	.00
AUG 12...	.00	.00	.00	.00	0	.00	.04	.02	.00



# SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX

LOCATION.--Lat 29°45'43", long 95°33'27", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on West Belt Drive in west Houston, 100 ft (30 m) downstream from Rummel Creek, 3.5 mi (5.6 km) downstream from station 08073500, and 3.7 mi (6.0 km) upstream from station 08073700.

DRAINAGE AREA.--307 mi<sup>2</sup> (795 km<sup>2</sup>), unadjusted for basin boundary changes.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1971 to current year.

GAGE.--Water-stage recorders and crest-stage gage. Datum of gage is 0.67 ft (0.204 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Water-discharge records good. Floodflow regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) 10.1 and 10.3 mi (16.3 and 16.6 km) upstream, respectively. Low flow is sustained by sewage effluent from Houston suburbs. Gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 322 ft<sup>3</sup>/s (9.119 m<sup>3</sup>/s), 233,300 acre-ft/yr (288 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,350 ft<sup>3</sup>/s (152 m<sup>3</sup>/s) Aug. 31, 1981, gage height, 64.58 ft (19.684 m); minimum daily, 25 ft<sup>3</sup>/s (0.71 m<sup>3</sup>/s) Nov. 21, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,350 ft<sup>3</sup>/s (152 m<sup>3</sup>/s) Aug. 31 at 1400 hours, gage height, 64.58 ft (19.684 m); minimum daily, 40 ft<sup>3</sup>/s (1.13 m<sup>3</sup>/s) Feb. 19, 24.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	478	60	63	46	63	53	50	66	150	598	80	2170
2	453	58	58	47	140	50	50	74	122	584	86	571
3	264	54	52	49	77	48	50	1630	99	571	78	562
4	205	51	49	49	82	334	51	1210	139	560	106	946
5	166	48	48	51	133	432	50	529	562	716	94	1500
6	126	48	46	67	174	217	50	152	110	600	72	1500
7	101	48	45	60	149	80	50	75	74	1120	78	1390
8	109	50	133	50	89	66	50	57	225	698	67	1340
9	113	52	448	50	65	59	50	88	209	1270	69	1620
10	113	52	362	49	183	54	50	107	77	1620	64	1790
11	120	50	274	47	520	50	50	68	200	1380	64	1810
12	115	48	166	49	133	51	50	468	245	1070	67	1800
13	108	48	102	49	58	52	50	1450	459	719	104	1780
14	101	48	79	48	44	51	49	1590	505	711	83	1760
15	232	47	73	46	42	50	51	1330	487	1360	76	1740
16	495	50	66	44	42	68	52	617	423	1480	69	1720
17	449	91	62	41	42	55	50	528	295	1460	65	1700
18	736	64	61	42	41	49	50	330	325	1420	65	1670
19	884	55	59	325	40	47	56	279	295	1320	145	1650
20	875	49	59	489	41	48	67	156	204	1050	76	1620
21	914	47	57	466	42	50	59	67	142	322	69	1510
22	1090	120	54	436	72	50	58	64	95	174	67	935
23	1060	88	50	383	44	49	457	63	139	116	71	858
24	965	65	50	247	40	48	455	64	366	111	94	837
25	608	99	48	207	164	49	506	80	293	103	80	809
26	206	326	47	111	107	48	508	84	427	114	72	774
27	130	252	47	68	96	49	452	76	598	143	68	733
28	107	159	46	61	124	49	304	70	626	173	82	651
29	87	104	46	56	---	50	196	170	622	138	91	446
30	67	77	46	50	---	65	72	130	614	115	132	139
31	65	---	48	45	---	53	---	155	---	94	3820	---
TOTAL	11542	2408	2844	3828	2847	2474	4093	11827	9127	21910	6254	38331
MEAN	372	80.3	91.7	123	102	79.8	136	382	304	707	202	1278
MAX	1090	326	448	489	520	432	508	1630	626	1620	3820	2170
MIN	65	47	45	41	40	47	49	57	74	94	64	139
AC-FT	22890	4780	5640	7590	5650	4910	8120	23460	18100	43460	12400	76030
CAL YR 1980	TOTAL	88278	MEAN 241	MAX 1740	MIN 36	AC-FT 175100						
WTR YR 1981	TOTAL	117485	MEAN 322	MAX 3820	MIN 40	AC-FT 233000						

SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: December 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1979 to current year.

WATER TEMPERATURES: June 1979 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the Geological Survey District office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 922 micromhos June 25, 1979; minimum daily, 78 micromhos Aug. 31, 1981.

WATER TEMPERATURES (1979-80): Maximum daily, 30.5°C July 1, 1978; minimum daily, 8.5°C Jan. 23, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 883 micromhos Apr. 15; minimum daily, 78 micromhos Aug. 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- IDITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DATE	TIME											
NOV 10...	1130	53	750	7.8	25.0	--	5.2	6.6	79	1.4	--	K4
JAN 05...	1255	54	830	7.7	20.0	13	10	8.2	89	7.8	--	56
MAR 04...	1350	378	390	7.7	19.5	--	270	7.1	77	20	--	19000
23...	1130	49	840	7.8	21.0	15	4.1	7.9	87	2.7	270	34
MAY 05...	0925	422	210	7.4	22.0	--	120	6.9	78	4.5	--	950
13...	1120	1480	137	7.0	23.0	90	46	5.7	66	5.2	3700	270
15...	1205	1420	156	6.8	22.0	60	36	5.8	65	4.8	3900	620
JUL 13...	1355	331	240	7.8	28.0	80	65	6.0	75	6.6	35000	5700
14...	1225	609	156	7.4	28.0	--	60	6.2	78	3.8	--	2000
15...	1200	1360	130	7.2	29.0	100	40	5.4	69	2.7	7000	950
AUG 24...	1245	66	740	7.7	29.0	5	4.9	5.7	73	7.2	k420	k6
SEP 01...	1205	2030	118	7.4	25.0	--	54	6.2	75	3.8	--	15000
		STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV 10...	K1	130	0	40	8.0	100	3.8	8.2	221	31	88	.3
JAN 05...	K12	140	0	43	7.7	110	4.1	6.3	250	31	82	.5
MAR 04...	4300	79	0	25	3.9	40	2.0	5.2	90	29	42	.3
23...	K10	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	520	71	10	22	3.9	11	.6	4.2	61	9.9	12	.2
13...	480	42	0	13	2.2	10	.7	4.6	43	5.8	10	.1
15...	550	49	3	15	2.7	12	.8	3.9	46	8.6	12	.2
JUL 13...	1900	75	0	24	3.6	17	.9	3.1	81	7.0	16	.2
14...	1600	44	0	14	2.2	12	.8	2.8	51	5.0	11	.1
15...	1400	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	40	130	0	40	7.1	93	3.7	6.5	200	13	78	.3
SEP 01...	16000	38	0	12	1.9	7.2	.5	3.0	40	5.0	7.9	.1

## SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE AT HOUSTON, TX--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
NOV 10...	23	437	423	--	--	--	--	2.2	2.3	2.90	2.90	1.5
JAN 05...	20	454	459	16	16	--	--	1.8	1.8	9.50	9.70	--
MAR 04...	11	218	212	--	--	1.1	.190	1.3	1.3	1.90	1.70	2.6
23...	--	--	--	5	5	1.1	.420	1.5	--	7.50	--	4.5
MAY 05...	9.9	158	112	--	--	1.6	.140	1.7	1.8	.530	.520	1.8
13...	7.4	--	79	54	21	.00	.020	.01	--	.310	--	1.3
15...	8.6	--	91	52	9	.01	.030	.04	--	.510	--	1.4
JUL 13...	16	--	136	103	18	.12	.210	.33	--	.910	--	1.1
14...	9.6	100	88	--	--	--	--	.12	.13	.520	.450	1.4
15...	--	--	--	34	0	.00	.060	.06	--	.420	--	.78
AUG 24...	23	--	381	16	21	.89	.610	1.5	--	7.00	--	.00
SEP 01...	6.0	82	67	--	--	--	--	.13	.13	.350	.380	.95

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 10...	1.0	4.40	3.9	4.10	3.30	--	14	1.3	9	1.3	90
JAN 05...	--	--	--	3.50	2.20	--	11	5.8	12	1.7	97
MAR 04...	1.4	4.50	3.1	2.90	1.40	21	--	--	531	542	97
23...	--	12.0	--	3.00	--	17	--	--	--	--	--
MAY 05...	1.5	2.30	2.0	.640	.540	--	12	--	197	224	94
13...	--	1.60	--	.520	--	16	--	--	--	--	--
15...	--	1.90	--	.540	--	60	--	--	--	--	--
JUL 13...	--	2.00	--	.420	--	11	--	--	--	--	--
14...	.85	1.90	1.3	.410	.260	--	7.9	.7	176	289	65
15...	--	1.20	--	.350	--	9.6	--	--	--	--	--
AUG 24...	--	6.90	--	2.70	--	5.4	--	--	--	--	--
SEP 01...	.82	1.30	1.2	.270	.270	8.3	--	--	71	389	67

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 10...	1130	7	2	5	200	0	200	0	0	1	0
JAN 05...	1255	5	1	4	200	100	100	1	0	1	0
MAY 05...	0925	4	0	4	0	0	80	0	--	<1	30
JUL 13...	1355	--	--	5	--	--	90	--	--	<1	--
14...	1225	3	0	4	100	30	70	0	--	<1	10
AUG 24...	1245	--	--	8	--	--	140	--	--	<1	--

## SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE AT HOUSTON, TX--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CHROMIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOVERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 10...	0	0	2	0	3	9	5	4	260	220	40
JAN 05...	0	10	0	--	<3	10	6	4	170	130	40
MAY 05...	30	0	1	--	<3	18	10	8	3200	3100	120
JUL 13...	--	0	--	--	--	--	--	<10	--	--	280
JUL 14...	10	0	13	--	<3	10	8	2	2400	2300	130
AUG 24...	--	0	--	--	--	--	--	<10	--	--	13

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUS-PENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)	MERCURY, SUS-PENDED RECOVERABLE (UG/L AS HG)	MERCURY, DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOVERABLE (UG/L AS NI)
NOV 10...	25	19	6	70	20	50	.2	.1	.1	7	1
JAN 05...	16	13	3	40	0	40	.1	.0	.1	1	0
MAY 05...	21	19	2	110	100	10	8.0	4.2	3.8	5	3
JUL 13...	--	--	<10	--	--	10	--	--	.1	--	--
JUL 14...	6	5	1	110	80	30	.3	.3	.0	6	5
AUG 24...	--	--	11	--	--	45	--	--	.1	--	--

DATE	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUS-PENDED (UG/L AS SE)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOVERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 10...	6	0	0	0	0	0	0	40	20	20
JAN 05...	2	0	0	0	0	0	0	60	30	30
MAY 05...	2	0	0	0	0	0	0	50	40	10
JUL 13...	--	--	--	0	--	--	0	--	--	20
JUL 14...	1	0	0	0	0	0	1	30	20	10
AUG 24...	--	--	--	0	--	--	1	--	--	11

DATE	TIME	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
JUL 13...	1355	.00	.00	.00	.10	.00	.00	.00	.29
AUG 24...	1245	.00	.00	.00	.10	.00	.00	.00	.92

DATE	DI-ELDRIN, TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE, TOTAL (UG/L)	LINDANE, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)
JUL 13...	.00	.00	.00	.00	.00	.01	.01	.02	.00
AUG 24...	.01	.00	.00	.00	.01	.01	.04	.04	.00

DATE	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRI-THION, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUL 13...	.00	.00	.00	.00	0	.00	.06	.01	.00
AUG 24...	.00	.00	.00	.00	0	.00	.05	.03	.00

## SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE AT HOUSTON, TX--Continued

## PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 10,80 1130		MAR 4,81 1350		MAY 5,81 0925		JUL 14,81 1225		SEP 1,81 1205	
TOTAL CELLS/ML	440		12000		12000		26000		15000	
DIVERSITY: DIVISION	0.7		1.1		0.7		0.3		0.1	
..CLASS	0.7		1.1		0.7		0.3		0.1	
...ORDER	0.7		2.1		1.1		0.4		0.2	
...FAMILY	0.7		2.3		1.1		0.4		0.2	
....GENUS	0.7		2.8		1.1		0.5		0.3	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	140	1	--	-	--	-
..BACILLARIALES										
...NITZSCHIA	13	3	1600	14	1300	10	150	1	*	0
...EPITHEMIALES										
....EPITHEMIA	--	-	*	0	--	-	--	-	--	-
..EUPODISCALES										
...COSCINODISCACEAE										
....CYCLOTETRA	--	-	*	0	80	1	*	0	*	0
..FRAGILARIALES										
...FRAGILARIA	--	-	*	0	--	-	--	-	*	0
...SYNEDRA										
....NAVICULACEAE	--	-	--	-	80	1	--	-	--	-
....GOMPHONEMACEAE	--	-	*	0	--	-	--	-	--	-
....GOMPHONEMA	--	-	--	-	*	0	--	-	--	-
....NAVICULACEAE	--	-	--	-	*	0	--	-	--	-
....NAVICULA	--	-	400	3	140	1	*	0	*	0
....PINNULARIA	--	-	*	0	--	-	--	-	*	0
..SURIPELLALES										
...SURIPELLACEAE	--	-	230	2	*	0	--	-	*	0
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...DICTYOSPHAERIA	--	-	--	-	--	-	--	-	*	0
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	*	0
...OOCYSTACEAE	--	-	--	-	--	-	--	-	--	-
....ANKISTRODESMUS	52	12	260	2	100	1	*	0	*	0
....CHODATELLA	--	-	--	-	*	0	--	-	--	-
...CLOSTERIOPSIS	--	-	--	-	--	-	*	0	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	290	2	--	-	--	-	--	-
...TETRASTRUM	--	-	120	1	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE	--	-	*	0	*	0	--	-	--	-
...CHLAMYDOMONAS	--	-	--	-	--	-	600	2	--	-
...VOLVOCAEAE	--	-	--	-	--	-	--	-	--	-
....PANDORINA	--	-	--	-	--	-	--	-	--	-
...ZYGNEMATALES										
...DESMIDIACEAE	--	-	--	-	--	-	--	-	*	0
...COSMARIUM	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE	--	-	--	-	400	3	170	1	--	-
...ANACYSTIS	--	-	--	-	--	-	--	-	--	-
...NOSTOCALES										
....HAMMATOIDEACEAE	--	-	580	5	--	-	--	-	--	-
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-	--	-
...NOSTOCACEAE	--	-	2600#	22	--	-	--	-	--	-
....ANABAENA	370#	85	1600	13	--	-	300	1	190	1
...OSCILLATORIALES	--	-	4000#	33	10000#	81	25000#	94	14000#	97
...OSCILLATORIA	--	-	--	-	--	-	*	0	--	-
...SPIRULINA	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENA	--	-	--	-	--	-	*	0	*	0
...LEPOTINCLIS	--	-	--	-	--	-	*	0	--	-
...PHACUS	--	-	--	-	--	-	*	0	--	-
...TRACHELOMONAS	--	-	86	1	*	0	*	0	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%  
 \* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE AT HOUSTON, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1980 TO SEPTEMBER 1981

MONTH	YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA,MG) (MG/L)
OCT.	1980	11542	234	131	4080	22	673	14	433	57
NOV.	1980	2408	531	295	1920	53	348	26	167	110
DEC.	1980	2844	492	273	2100	50	381	24	182	100
JAN.	1981	3828	390	217	2240	39	404	19	198	81
FEB.	1981	2847	453	252	1940	45	346	23	176	96
MAR.	1981	2474	551	305	2040	57	379	25	167	110
APR.	1981	4093	406	225	2490	41	451	20	218	83
MAY	1981	11827	209	117	3720	19	619	12	390	51
JUNE	1981	9127	261	146	3590	24	595	15	378	63
JULY	1981	21910	168	94	5570	15	893	11	622	43
AUG.	1981	6254	287	159	2690	29	482	14	241	60
SEPT	1981	38331	131	73	7570	11	1190	8.5	877	35
TOTAL		117485	**	**	40000	**	6760	**	4050	**
WTD. AVG.		322	226	126	**	21	**	13	**	53

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
EQUIVALENT MEAN

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224	540	645	758	645	704	748	630	461	172	570	96
2	286	544	673	750	257	726	782	593	510	182	595	165
3	372	601	711	775	397	742	826	121	532	200	630	183
4	410	602	734	795	399	723	792	141	429	210	602	133
5	412	643	742	812	391	239	800	215	209	184	601	126
6	479	652	758	823	392	341	803	410	450	202	656	126
7	550	678	767	735	463	570	816	589	593	146	643	131
8	490	734	439	771	540	630	802	679	334	192	650	133
9	477	730	235	787	635	667	805	543	352	137	660	95
10	477	696	262	783	372	698	817	491	600	103	687	93
11	462	663	302	800	226	666	820	620	355	130	729	104
12	472	679	391	820	439	727	810	229	320	150	730	99
13	488	695	503	825	599	732	801	128	242	177	715	110
14	506	738	574	790	776	755	816	122	221	166	591	118
15	329	735	598	774	794	726	883	134	225	126	585	117
16	223	700	630	817	735	766	828	199	254	133	615	123
17	234	534	650	810	755	658	818	216	291	128	634	120
18	182	640	656	820	764	754	815	214	219	129	728	143
19	165	692	667	277	780	784	820	223	214	134	419	142
20	149	734	667	224	783	816	811	269	262	192	564	140
21	142	750	679	200	750	809	770	573	424	270	708	125
22	151	463	698	171	601	810	722	624	464	326	703	161
23	162	543	726	183	746	812	232	665	511	454	700	168
24	173	512	726	217	780	803	233	670	260	459	600	170
25	240	636	742	349	400	793	220	570	272	449	509	173
26	249	318	750	526	490	809	220	622	217	450	647	177
27	422	316	750	526	579	813	234	634	177	492	688	182
28	382	400	758	565	455	810	287	605	153	454	713	194
29	419	498	758	684	---	812	359	386	198	398	533	235
30	441	581	758	682	---	720	602	458	165	474	440	429
31	508	---	742	682	---	602	---	405	---	535	78	---
MEAN	344	608	635	630	569	696	670	419	330	257	610	150

## SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE AT HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.5	---	---	---	---	9.5	---	---	24.0	---	---	---
2	15.5	---	---	---	---	10.0	---	---	25.5	---	---	---
3	16.0	---	---	---	---	12.5	---	---	24.0	---	---	---
4	15.0	---	---	---	---	8.0	---	---	19.0	---	---	---
5	16.0	---	---	---	---	7.5	---	---	23.5	---	---	21.0
6	18.0	---	---	---	---	8.0	---	18.0	20.0	---	---	---
7	17.0	---	---	---	---	6.5	---	20.5	21.0	27.0	---	---
8	17.0	11.5	8.0	---	---	5.0	---	17.0	23.5	21.0	19.5	---
9	16.5	---	2.5	---	---	7.0	---	13.5	22.0	---	18.5	---
10	16.5	---	9.5	---	---	7.5	---	10.0	26.0	---	20.5	---
11	16.5	---	5.0	---	---	10.0	---	---	26.0	---	21.5	---
12	16.0	---	4.0	---	---	9.5	---	---	22.0	21.0	---	---
13	---	---	5.0	---	---	8.5	---	---	---	26.5	---	---
14	---	---	---	---	---	9.0	---	---	---	22.0	---	---
15	---	6.5	---	---	---	6.5	9.0	---	---	23.0	---	---
16	---	---	---	---	---	9.5	12.5	---	---	22.5	---	---
17	---	---	---	---	---	9.0	17.0	---	---	23.5	---	---
18	14.5	---	---	---	---	---	16.0	---	---	23.0	---	---
19	---	2.5	---	---	---	---	16.5	---	---	---	---	---
20	---	3.5	---	---	---	---	17.0	---	---	---	---	---
21	---	6.0	---	---	---	---	17.0	---	---	---	---	---
22	---	8.5	---	---	---	---	23.0	---	---	---	---	---
23	---	---	---	---	---	---	16.0	---	---	---	---	---
24	---	---	---	---	---	---	17.5	---	---	---	---	---
25	9.0	---	---	---	---	---	14.0	15.0	---	---	---	---
26	---	---	---	---	---	---	---	24.0	---	---	---	---
27	---	1.0	---	---	---	---	---	26.0	---	---	---	---
28	---	2.0	---	---	11.0	---	---	---	---	---	---	---
29	---	4.5	---	---	---	---	19.0	19.0	---	---	---	---
30	---	7.0	---	---	---	---	20.5	16.0	---	---	---	---
31	11.0	---	7.5	7.0	---	---	---	18.0	---	---	---	---
MEAN	15.5	5.5	6.0	7.0	11.0	8.5	16.5	18.0	23.0	23.5	20.0	---

## BETTINA STREET DITCH DRAINAGE BASIN

The locations of data-collection sites in the Bettina Street Ditch drainage basin are shown in figure 4.

Weighted-mean rainfall for the 1981 water year was not determined.

The storms of April 23, May 3-5, and Aug. 30-31 were selected for analysis at station 08073630, Bettina Street Ditch at Houston.



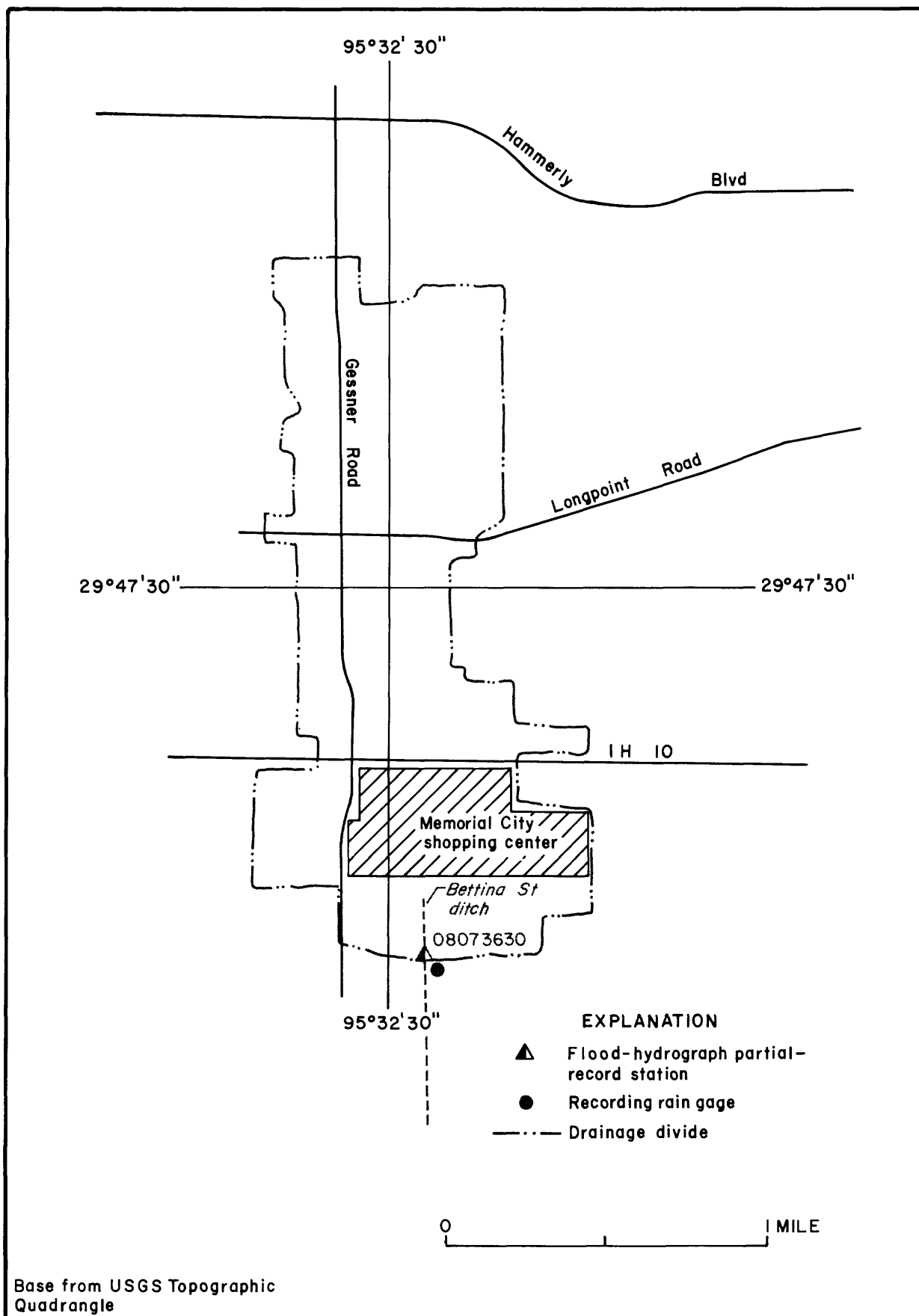


Figure 4.-Locations of data-collection sites in and near Bettina Street Ditch drainage basin

## Table 3.--Storm rainfall-runoff data, 1981 Water Year, Bettina Street Ditch

[illegible]

\*+ - Annual peak discharge for 1981 W.Y.  
+ - Peak discharge for period of record

08073630 BETTINA STREET DITCH AT HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°46'32", long 95°32'23", Harris County, Hydrologic Unit  
12040104, at downstream side of bridge at intersection of Bettina Street  
Ditch and Kimberly Street in west Houston.

DRAINAGE AREA.--1.37 mi<sup>2</sup>.

PERIOD OF RECORD.--Nov. 3, 1978 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage.  
Datum of gage is National Geodetic Vertical Datum of 1929, 1964 adjustment,  
unadjusted for land-surface subsidence.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 562 ft<sup>3</sup>/s, Aug. 31, 1981,  
(gage-height 81.69 ft.); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 300 ft<sup>3</sup>/s (revised)  
and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft.)
April 23	0945	427	80.53
May 3	1235	530	81.42
May 4	1945	415	80.42
July 10	1845	487	81.06
July 12	1750	342	79.71
Aug. 31	0230	*562	81.69
Aug. 31	1115	536	81.47

Minimum discharge not determined.

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF APR. 23, 1981				DISCHARGE! ACCUM.			
DATE & TIME		G A G E N U M B E R				WEIGHTED! RUNOFF			
						PRECIP. IN. CFS IN.			
APR. 23									
0000	0.0					0.0	0.3	0.0010	
0600	0.0					0.0	0.3	0.0024	
0825	0.0					0.0	0.3	0.0029	
0830	0.01					0.01	0.3	0.0029	
0835	0.04					0.04	0.3	0.0029	
0840	0.08					0.08	0.3	0.0030	
0845	0.12					0.12	0.3	0.0030	
0850	0.16					0.16	0.3	0.0030	
0855	0.20					0.20	1.0	0.0031	
0900	0.24					0.24	2.0	0.0033	
0905	0.52					0.52	5.0	0.0038	
0910	0.80					0.80	15.0	0.0052	
0915	1.08					1.08	23.0	0.0073	
0920	1.23					1.23	64.0	0.0134	
0925	1.38					1.38	141.0	0.0267	
0930	1.53					1.53	233.0	0.0486	
0935	1.53					1.53	346.0	0.0812	
0940	1.53					1.53	411.0	0.1200	
0945	1.54					1.54	427.0	0.1602	
0950	1.54					1.54	427.0	0.2005	
0955	1.54					1.54	419.0	0.2400	
1000	1.55					1.55	405.0	0.2781	
1005	1.55					1.55	393.0	0.3152	
1010	1.56					1.56	381.0	0.3511	
1015	1.57					1.57	365.0	0.4027	
1025	1.57					1.57	338.0	0.4505	
1030	1.58					1.58	325.0	0.5424	
1055	1.58					1.58	255.0	0.6145	
1100	1.59					1.59	242.0	0.6487	
1110	1.59					1.59	216.0	0.6793	
1115	1.60					1.60	203.0	0.7271	
1135	1.60					1.60	157.0	0.7641	
1140	1.61					1.61	146.0	0.7779	
1145	1.62					1.62	136.0	0.7907	
1150	1.63					1.63	127.0	0.8026	
1155	1.64					1.64	116.0	0.8136	
1200	1.65					1.65	106.0	0.8386	
1220	1.65					1.65	84.0	0.8623	
1230	1.65					1.65	80.0	0.8736	

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF APR. 23, 1981				DISCHARGE			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN			
						CFS			
						IN.			
						IN.			
APR. 23									
1235	1.67					1.67	78.0	0.8810	
1240	1.69					1.69	76.0	0.8881	
1245	1.71					1.71	74.0	0.8986	
1255	1.71					1.71	71.0	0.9086	
1300	1.72					1.72	69.0	0.9151	
1305	1.74					1.74	67.0	0.9215	
1310	1.76					1.76	66.0	0.9277	
1315	1.78					1.78	65.0	0.9338	
1320	1.79					1.79	63.0	0.9397	
1330	1.80					1.80	62.0	0.9456	
1340	1.81					1.81	61.0	0.9542	
1345	1.81					1.81	60.0	0.9627	
1415	1.82					1.82	59.0	0.9822	
1420	1.84					1.84	55.0	1.0003	
1425	1.86					1.86	54.0	1.0054	
1430	1.88					1.88	53.0	1.0104	
1440	1.88					1.88	52.0	1.0177	
1445	1.89					1.89	50.0	1.0248	
1450	1.89					1.89	50.0	1.0295	
1455	1.90					1.90	50.0	1.0342	
1500	1.91					1.90	49.0	1.0388	
1525	1.91					1.91	48.0	1.0524	
1530	1.92					1.91	38.0	1.0632	
1800	1.92					1.92	36.0	1.1158	
2400	1.92					1.92	5.9	1.1441	
						1.92	0.5	1.1458	

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF MAY 3 -5, 1981										DISCHARGE	ACCUM. RUNOFF
DATE & TIME	3630	G A G E N U M B E R										IN.	CFS
MAY 3													
0000	0.0											0.0	0.0
0245	0.01											0.01	0.0005
0400	0.02											0.02	0.0008
0600	0.02											0.02	0.0011
0610	0.02											0.02	0.0011
0615	0.03											0.03	0.0011
0625	0.03											0.03	0.0011
0630	0.04											0.04	0.0012
0635	0.06											0.06	0.0012
0640	0.08											0.08	0.0012
0645	0.11											0.11	0.0012
0650	0.16											0.16	0.0012
0655	0.21											0.21	0.0013
0700	0.26											0.26	0.0013
0705	0.31											0.31	0.0013
0710	0.37											0.37	0.0013
0715	0.43											0.43	0.0013
0720	0.48											0.48	0.0014
0725	0.53											0.53	0.0014
0730	0.58											0.58	0.0014
0735	0.60											0.60	0.0014
0740	0.63											0.63	0.0014
0745	0.66											0.66	0.0015
0750	0.68											0.68	0.0015
0755	0.70											0.70	0.0015
0800	0.72											0.72	0.0015
0805	0.75											0.75	0.0015
0810	0.79											0.79	0.0015
0815	0.83											0.83	0.0016
0820	0.89											0.89	0.0016
0825	0.96											0.96	0.0016
0830	1.03											1.03	0.0016
0835	1.15											1.15	0.0017
0840	1.27											1.27	0.0022
0845	1.39											1.39	0.0033
0850	1.47											1.47	0.0049
0855	1.56											1.56	0.0087
0900	1.65											1.65	0.0138
0905	1.77											1.77	0.0200

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF MAY 3 -5, 1981				DISCHARGE! ACCUM.			
DATE & TIME		G A G E N U M B E R				PRECIP. IN			
		3630				CFS			
MAY 3									
0910	1.89					1.89	76.0	0.0272	
0915	2.02					2.02	81.0	0.0348	
0920	2.19					2.19	89.0	0.0432	
0925	2.36					2.36	100.0	0.0526	
0930	2.53					2.53	107.0	0.0627	
0935	2.54					2.54	115.0	0.0735	
0940	2.55					2.55	119.0	0.0848	
0945	2.57					2.57	120.0	0.0961	
0950	2.67					2.67	121.0	0.1075	
0955	2.77					2.77	122.0	0.1190	
1000	2.88					2.88	124.0	0.1307	
1005	2.94					2.94	126.0	0.1425	
1010	3.00					3.00	128.0	0.1546	
1015	3.06					3.06	132.0	0.1670	
1020	3.24					3.24	138.0	0.1800	
1025	3.43					3.43	152.0	0.1944	
1030	3.62					3.62	170.0	0.2104	
1035	3.72					3.72	189.0	0.2282	
1040	3.82					3.82	229.0	0.2498	
1045	3.92					3.92	275.0	0.2757	
1050	3.99					3.99	299.0	0.3039	
1055	4.07					4.07	324.0	0.3344	
1100	4.15					4.15	351.0	0.3675	
1105	4.20					4.20	385.0	0.4038	
1110	4.26					4.26	430.0	0.4443	
1115	4.32					4.32	462.0	0.4879	
1120	4.32					4.32	478.0	0.5329	
1125	4.33					4.33	492.0	0.5793	
1130	4.34					4.34	488.0	0.6713	
1145	4.34					4.34	467.0	0.7594	
1150	4.36					4.36	481.0	0.8047	
1155	4.38					4.38	483.0	0.8502	
1200	4.40					4.40	478.0	0.8953	
1205	4.51					4.51	477.0	0.9402	
1210	4.62					4.62	493.0	0.9867	
1215	4.73					4.73	512.0	1.0350	
1220	4.73					4.73	522.0	1.0842	
1225	4.74					4.74	527.0	1.1338	
1230	4.75					4.75	528.0	1.1836	

STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
STA. NO. 08073630							
BETTINA STREET DITCH AT HOUSTON, TEX.							
STORM OF MAY 3 -5, 1981							
DATE & TIME	3630	G A G E	N U M B E R	ACCUM.	DISCHARGE	ACCUM.	
				WEIGHTED PRECIP. IN.	IN CFS	RUNOFF IN.	
MAY 3							
1235	4.76			4.76	530.0	1.2336	
1240	4.77			4.77	528.0	1.2833	
1245	4.79			4.79	528.0	1.3331	
1250	4.79			4.79	528.0	1.3829	
1255	4.80			4.80	529.0	1.4327	
1300	4.81			4.81	527.0	1.4824	
1305	4.85			4.85	526.0	1.5320	
1310	4.89			4.89	521.0	1.5811	
1315	4.93			4.93	511.0	1.6292	
1320	4.98			4.98	505.0	1.6768	
1325	5.03			5.03	497.0	1.7237	
1330	5.09			5.09	488.0	1.7697	
1335	5.11			5.11	480.0	1.8149	
1340	5.13			5.13	469.0	1.8591	
1345	5.15			5.15	460.0	1.9242	
1355	5.15			5.15	450.0	1.9878	
1400	5.16			5.16	469.0	2.0541	
1410	5.16			5.16	480.0	2.1220	
1415	5.17			5.17	477.0	2.1669	
1420	5.19			5.19	467.0	2.2109	
1425	5.21			5.21	457.0	2.2540	
1430	5.24			5.24	447.0	2.2962	
1435	5.26			5.26	439.0	2.3375	
1440	5.29			5.29	424.0	2.3775	
1445	5.32			5.32	409.0	2.5124	
1515	5.32			5.32	382.0	2.6565	
1525	5.32			5.32	388.0	2.7113	
1530	5.33			5.33	386.0	2.9296	
1625	5.33			5.33	278.0	3.2178	
1720	5.33			5.33	203.0	3.3996	
1800	5.33			5.33	146.0	3.5166	
1845	5.33			5.33	93.0	3.5692	
1900	5.47			5.47	79.0	3.6027	
1930	5.78			5.78	61.0	3.6372	
2000	5.86			5.86	49.0	3.6649	
2030	5.90			5.90	41.0	3.6804	
2040	5.90			5.90	39.0	3.6859	
2045	5.91			5.91	39.0	3.6895	
2050	5.92			5.92	39.0	3.6932	



STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF MAY 3 -5, 1981										DISCHARGE! ACCUM.	
DATE & TIME		G A G E N U M B E R										WEIGHTED PRECIP. IN.	
		3630										CFS IN.	
MAY 3													
2055	5.93											48.0	3.6977
2100	5.94											78.0	3.7051
2105	5.94											118.0	3.7218
2115	5.94											153.0	3.7939
2155	5.94											160.0	3.8618
2200	5.95											155.0	3.9567
2300	5.95											98.0	4.0676
2400	5.97											59.0	4.2678
MAY 4													
0000	5.97											59.0	4.2678
0500	6.00											2.6	4.2795
0800	6.08											1.0	4.2814
0815	6.09											1.0	4.2818
0845	6.09											1.0	4.2822
0900	6.10											1.0	4.2840
1200	6.10											1.0	4.2886
1700	6.10											1.0	4.2915
1715	6.48											1.0	4.2918
1730	7.44											1.0	4.2921
1745	7.79											1.0	4.2924
1800	7.84											1.0	4.2927
1815	7.88											1.0	4.2930
1830	8.01											1.0	4.2932
1845	8.03											1.0	4.2935
1900	8.03											1.0	4.2938
1915	8.03											93.0	4.3201
1930	8.03											330.0	4.4134
1945	8.03											415.0	4.5308
2000	8.04											389.0	4.7508
2045	8.04											290.0	4.9558
2115	8.04											214.0	5.0768
2145	8.04											154.0	5.1639
2215	8.04											108.0	5.2250
2245	8.04											87.0	5.2865
2330	8.04											68.0	5.3345
2400	8.04											58.0	5.5477
MAY 5													
0000	8.04											58.0	5.5477
0600	8.04											4.0	5.5749
1200	8.04											0.5	5.5800
2400	8.05											0.2	5.5813

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR		
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF AUG. 30-31, 1981					ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME	3630	G A G E N U M B E R					IN.	CFS	IN.
AUG. 30									
0000	0.0						0.0	0.0	0.0
0415	0.0						0.0	0.3	0.0008
0430	0.05						0.05	0.3	0.0009
0515	0.05						0.05	0.3	0.0011
0530	0.06						0.06	0.3	0.0019
0945	0.06						0.06	0.3	0.0026
1000	0.07						0.07	0.3	0.0030
1200	0.07						0.07	0.3	0.0048
2030	0.07						0.07	0.3	0.0063
2045	0.17						0.17	0.3	0.0064
2100	0.18						0.18	0.3	0.0066
2215	0.18						0.18	0.3	0.0069
2230	0.46						0.46	17.0	0.0117
2245	0.61						0.61	67.0	0.0306
2300	0.65						0.65	92.0	0.0566
2315	0.65						0.65	91.0	0.0824
2330	0.66						0.66	77.0	0.1041
2345	0.80						0.80	68.0	0.1234
2400	0.92						0.92	83.0	0.1390
AUG. 31									
0000	0.92						0.92	83.0	0.1390
0005	0.97						0.97	91.0	0.1476
0010	1.02						1.02	102.0	0.1572
0015	1.08						1.08	121.0	0.1686
0020	1.24						1.24	150.0	0.1828
0025	1.41						1.41	190.0	0.2007
0030	1.58						1.58	254.0	0.2246
0035	1.61						1.61	346.0	0.2572
0040	1.64						1.64	409.0	0.2958
0045	1.68						1.68	429.0	0.3362
0050	1.78						1.78	432.0	0.3769
0055	1.89						1.89	434.0	0.4178
0100	2.00						2.00	465.0	0.4617
0105	2.01						2.01	475.0	0.5064
0110	2.02						2.02	475.0	0.5512
0115	2.03						2.03	465.0	0.5950
0120	2.03						2.03	449.0	0.6374
0125	2.04						2.04	434.0	0.6783
0130	2.05						2.05	417.0	0.7176
0135	2.09						2.09	398.0	0.7551

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR					
BETTINA STREET DITCH AT HOUSTON, TEX.																	
DATE & TIME		3630		G A G E		N U M B E R		STORM OF AUG. 30-31, 1981		ACCUM. WEIGHTED PRECIP.		DISCHARGE: IN		ACCUM. RUNOFF IN.			
												CFS		IN.			
AUG. 31																	
0140		2.13									2.13		387.0		0.7916		
0145		2.17									2.17		377.0		0.8271		
0150		2.24									2.24		365.0		0.8615		
0155		2.31									2.31		354.0		0.8949		
0200		2.39									2.39		347.0		0.9439		
0210		2.39									2.39		426.0		1.0042		
0215		2.39									2.39		496.0		1.0509		
0220		2.48									2.48		541.0		1.1019		
0225		2.57									2.57		558.0		1.1545		
0230		2.67									2.67		562.0		1.2075		
0235		2.67									2.67		562.0		1.2604		
0240		2.68									2.68		560.0		1.3132		
0245		2.69									2.69		549.0		1.3650		
0250		2.69									2.69		542.0		1.4161		
0255		2.70									2.70		536.0		1.4666		
0300		2.71									2.71		529.0		1.5164		
0305		2.72									2.72		521.0		1.5655		
0310		2.73									2.73		512.0		1.6138		
0315		2.75									2.75		506.0		1.6615		
0320		2.79									2.79		500.0		1.7086		
0325		2.83									2.83		496.0		1.7534		
0330		2.88									2.88		490.0		1.8016		
0335		2.90									2.90		485.0		1.8473		
0340		2.92									2.92		483.0		1.8928		
0345		2.94									2.94		477.0		1.9378		
0350		2.95									2.95		467.0		1.9818		
0355		2.96									2.96		456.0		2.0248		
0400		2.97									2.97		446.0		2.0668		
0405		2.97									2.97		436.0		2.1079		
0410		2.98									2.98		421.0		2.1476		
0415		2.99									2.99		406.0		2.1858		
0420		3.09									3.09		392.0		2.2228		
0425		3.19									3.19		376.0		2.2582		
0430		3.29									3.29		361.0		2.2923		
0435		3.31									3.31		345.0		2.3248		
0440		3.33									3.33		339.0		2.3567		
0445		3.35									3.35		374.0		2.3920		
0450		3.36									3.36		390.0		2.4287		
0455		3.37									3.37		395.0		2.4660		

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF AUG. 30-31, 1981				DISCHARGE: ACCUM.			
DATE & TIME		G A G E N U M B E R				WEIGHTED IN RUNOFF			
						PRECIP. IN. CFS IN.			
AUG. 31									
0500	3.38					3.38	392.0	2.5029	
0505	3.41					3.41	382.0	2.5389	
0510	3.44					3.44	372.0	2.5740	
0515	3.48					3.48	361.0	2.6080	
0520	3.50					3.50	346.0	2.6406	
0525	3.52					3.52	337.0	2.6724	
0530	3.54					3.54	331.0	2.7036	
0535	3.62					3.62	330.0	2.7347	
0540	3.70					3.70	327.0	2.7655	
0545	3.78					3.78	321.0	2.7958	
0550	3.81					3.81	314.0	2.8254	
0555	3.84					3.84	319.0	2.8554	
0600	3.88					3.88	346.0	2.8881	
0605	3.94					3.94	363.0	2.9223	
0610	4.00					4.00	368.0	2.9570	
0615	4.06					4.06	371.0	2.9919	
0620	4.14					4.14	370.0	3.0268	
0625	4.22					4.22	379.0	3.0625	
0630	4.31					4.31	385.0	3.0988	
0635	4.32					4.32	403.0	3.1368	
0640	4.33					4.33	421.0	3.1765	
0645	4.35					4.35	439.0	3.2179	
0650	4.36					4.36	450.0	3.2603	
0655	4.38					4.38	451.0	3.3028	
0700	4.40					4.40	444.0	3.3865	
0715	4.48					4.48	410.0	3.5024	
0730	4.54					4.54	373.0	3.6079	
0745	4.60					4.60	360.0	3.7097	
0800	4.65					4.65	337.0	3.8050	
0815	4.69					4.69	311.0	3.8929	
0830	4.73					4.73	288.0	3.9744	
0845	4.79					4.79	264.0	4.0241	
0850	4.81					4.81	255.0	4.0482	
0855	4.84					4.84	248.0	4.0715	
0900	4.87					4.87	243.0	4.0944	
0905	4.89					4.89	239.0	4.1170	
0910	4.91					4.91	235.0	4.1391	
0915	4.93					4.93	234.0	4.1612	
0920	4.95					4.95	233.0	4.1831	

STA. NO. 08073630		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BETTINA STREET DITCH AT HOUSTON, TEX.		STORM OF AUG. 30-31, 1981				ACCUM. DISCHARGE			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP.		IN	
						IN.		CFS	
AUG. 31									
0925	4.98					4.98		233.0	4.2051
0930	5.01					5.01		232.0	4.2270
0935	5.14					5.14		230.0	4.2486
0940	5.28					5.28		227.0	4.2700
0945	5.42					5.42		224.0	4.2911
0950	5.51					5.51		224.0	4.3123
0955	5.60					5.60		255.0	4.3363
1000	5.70					5.70		331.0	4.3675
1005	5.78					5.78		374.0	4.4027
1010	5.86					5.86		399.0	4.4404
1015	5.94					5.94		420.0	4.4799
1020	6.03					6.03		455.0	4.5228
1025	6.12					6.12		485.0	4.5685
1030	6.22					6.22		496.0	4.6153
1035	6.30					6.30		493.0	4.6618
1040	6.38					6.38		487.0	4.7077
1045	6.47					6.47		496.0	4.7544
1050	6.51					6.51		511.0	4.8026
1055	6.55					6.55		524.0	4.8520
1100	6.59					6.59		527.0	4.9016
1105	6.61					6.61		529.0	4.9515
1110	6.63					6.63		534.0	5.0018
1115	6.65					6.65		536.0	5.0524
1120	6.66					6.66		536.0	5.1029
1125	6.68					6.68		533.0	5.1531
1130	6.70					6.70		530.0	5.3280
1200	6.74					6.74		499.0	5.6102
1230	6.79					6.79		450.0	5.8647
1300	6.81					6.81		397.0	6.2576
1415	6.83					6.83		250.0	6.6700
1555	6.83					6.83		102.0	6.8094
1640	6.83					6.83		65.0	6.8768
1745	6.83					6.83		41.0	6.9038
1750	6.93					6.93		40.0	6.9076
1755	7.03					7.03		39.0	6.9112
1800	7.13					7.13		39.0	6.9241
1830	7.23					7.23		41.0	6.9396
1840	7.23					7.23		61.0	7.1293
2400	7.23					7.23		0.5	7.1308

SAN JACINTO RIVER BASIN

08073700 BUFFALO BAYOU AT PINEY POINT, TX

LOCATION.--Lat 29°44'48", long 95°31'24", Harris County, Hydrologic Unit 12040104, on downstream side of bridge on Piney Point Road, village of Piney Point, 3.7 mi (6.0 km) downstream from Rummel Creek, 7.2 mi (11.6 km) downstream from gage near Addicks (station 08073500), and 12.5 mi (20.1 km) upstream from gage at Houston (station 08074000).

DRAINAGE AREA.--317 mi<sup>2</sup> (821 km<sup>2</sup>).

PERIOD OF RECORD.--October 1963 to September 1976, October 1976 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 1.35 ft (0.412 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Station is operated for the purpose of gate regulations at Barker and Addicks Reservoirs (stations 08072500 and 08073000), located 14.0 and 13.8 mi (22.5 and 22.2 km) upstream, respectively. Low flow is partly sustained by sewage effluent from Houston suburbs. Gage-height telemeter at station.

AVERAGE DISCHARGE.--13 years (water years 1963-76), 265 ft<sup>3</sup>/s (7.505 m<sup>3</sup>/s), 192,000 acre-ft/yr (237 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated 5,700 ft<sup>3</sup>/s (161 m<sup>3</sup>/s) Aug. 31, 1981 gage height, 57.20 ft (17.435 m), from floodmark; minimum daily, 6.0 ft<sup>3</sup>/s (0.17 m<sup>3</sup>/s) Dec. 6, 7, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge estimated, 5,700 ft<sup>3</sup>/s (161 m<sup>3</sup>/s) Aug. 31, gage height, 57.20 ft (17.435 m) Aug. 31 at about 1600 hours, from floodmark; minimum, 32.49 ft (9.903 m) Mar. 19.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.82	33.40	33.60	33.08	33.82	33.52	32.93	34.42	35.15	39.37	33.85	---
2	37.82	33.40	33.39	33.08	34.53	33.52	32.88	34.62	34.57	39.08	34.05	39.29
3	36.80	33.40	33.32	33.13	34.05	33.08	32.89	52.32	34.10	39.47	---	40.30
4	35.40	33.28	33.27	33.13	34.64	37.81	33.01	50.78	35.30	39.45	---	43.15
5	35.03	33.24	33.26	33.13	36.17	37.60	32.97	46.05	43.01	42.78	---	44.33
6	34.59	33.25	33.20	33.65	35.95	37.20	32.95	36.14	36.44	41.77	---	44.33
7	33.98	33.22	33.21	33.38	34.87	33.95	32.92	34.30	37.71	44.67	---	44.05
8	34.13	33.30	40.39	33.18	34.16	33.50	32.86	33.57	37.90	42.23	---	43.87
9	34.20	33.30	40.41	33.10	33.61	33.34	32.90	35.76	37.90	43.50	---	45.10
10	34.00	33.27	36.80	33.12	37.90	33.13	32.86	35.70	34.25	47.05	---	45.48
11	33.88	33.24	36.28	33.13	38.45	33.00	32.87	34.00	38.20	47.03	---	45.48
12	33.80	33.22	35.47	33.13	37.54	33.00	32.87	41.92	38.25	45.47	---	45.48
13	33.70	33.25	33.93	33.06	33.52	33.17	32.85	44.07	38.46	45.57	---	45.48
14	33.51	33.15	33.73	33.41	33.12	32.99	32.85	45.28	38.51	42.10	---	46.29
15	39.30	33.16	33.66	33.09	33.07	32.98	32.93	44.19	38.46	43.60	---	46.28
16	39.18	33.18	33.54	33.05	33.04	34.15	32.94	41.95	38.20	43.95	---	45.42
17	38.27	34.66	33.31	33.07	33.00	34.29	32.90	39.09	37.30	43.93	---	45.16
18	42.50	33.50	33.30	33.15	32.96	32.92	32.88	38.38	37.02	43.92	---	45.03
19	42.45	33.24	33.25	39.73	32.94	32.90	33.12	36.74	37.02	43.54	---	44.90
20	40.70	33.17	33.32	39.64	32.92	33.03	33.35	36.20	35.82	42.98	---	44.79
21	41.73	33.10	33.32	37.89	33.18	33.05	33.27	33.60	35.25	40.00	---	44.67
22	42.04	36.20	33.23	37.75	35.09	33.05	33.15	33.43	34.14	36.42	---	43.45
23	42.00	34.40	33.14	37.46	33.12	32.96	41.91	33.39	36.73	34.43	---	41.15
24	41.71	33.70	33.10	36.70	32.95	32.89	38.97	33.41	40.32	34.38	---	40.95
25	40.97	36.90	33.10	35.57	37.70	32.91	38.57	34.08	38.63	34.34	---	40.80
26	36.85	37.68	33.08	35.15	35.25	32.87	38.57	33.90	39.87	35.05	---	40.63
27	35.91	35.83	33.08	33.69	35.39	32.89	38.30	33.66	39.87	35.38	---	40.41
28	34.20	34.98	33.08	33.45	35.55	32.92	37.67	33.64	39.51	35.38	---	40.14
29	33.89	34.24	33.08	33.37	---	32.92	36.24	37.90	39.45	34.96	---	39.14
30	33.67	33.75	33.06	33.19	---	33.40	34.22	37.42	39.53	34.54	---	37.50
31	33.52	---	33.06	33.10	---	33.12	---	37.06	---	34.21	57.20	---
MEAN	37.02	33.92	34.03	34.31	34.59	33.61	34.32	37.97	37.56	40.34	---	---
MAX	42.50	37.68	40.41	39.73	38.45	37.81	41.91	52.32	43.01	47.05	---	---
MIN	33.51	33.10	33.06	33.05	32.92	32.87	32.85	33.39	34.10	34.21	---	---

# SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°45'36", long 95°24'30", Harris County, Hydrologic Unit 12040104, at bridge on Shepherd Drive in Houston and 0.8 mi (1.3 km) upstream from Waugh Drive.

DRAINAGE AREA.--358 mi<sup>2</sup> (927 km<sup>2</sup>), unadjusted for basin boundary changes.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to September 1957, October 1957 to December 1961 (high-water records and discharge measurements), January 1962 to September 1975, October 1975 to current year (high-water records and discharge measurements).

REVISED RECORDS.--WSP 1732: Drainage area (former site).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1.36 ft (0.414 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; records unadjusted for land-surface subsidence. Prior to June 19, 1936, nonrecording gage, and June 19, 1936, to Jan. 16, 1962, water-stage recorder at site 0.8 mi (1.3 km) downstream at 4.08-foot (1.244 m) lower datum. Jan. 17, 1962, to Sept. 30, 1973, auxiliary water-stage recorder 0.8 mi (1.3 km) downstream. Water-stage recorder at Main Street (station 08074600) used as auxiliary gage after Sept. 30, 1973.

REMARKS.--Water-discharge records fair. Although floodflows are regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000) located 26.3 and 26.8 mi (42.3 and 42.6 km) upstream, respectively, flood peaks from the urbanized areas below these reservoirs are often independent of the regulation. Discharge is computed using a stage-fall-discharge relationship for all storms which produce peak discharges above 1,500 ft<sup>3</sup>/s (42.5 m<sup>3</sup>/s). Discharges below 1,000 ft<sup>3</sup>/s are computed or estimated following designated storm periods only. Low flow is mostly sustained by sewage effluent from Houston suburbs. Gage heights are affected by tides, backwater from Whiteoak Bayou, and other streams. Gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years (water years 1936-44) unregulated, 272 ft<sup>3</sup>/s (7.703 m<sup>3</sup>/s), 197,100 acre-ft/yr (243 hm<sup>3</sup>/yr); 26 years (water years 1944-57, 1962-75) regulated, 274 ft<sup>3</sup>/s (7.760 m<sup>3</sup>/s), 198,500 acre-ft/yr (245 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft<sup>3</sup>/s (309 m<sup>3</sup>/s) Aug. 30, 1945, gage height, 28.82 ft (8.784 m), at site 0.8 mi (1.3 km) downstream at present datum; minimum daily, 1.3 ft<sup>3</sup>/s (0.037 m<sup>3</sup>/s) May 24, 1939, Nov. 5, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--All flood data at site 0.8 mi (1.3 km) downstream at present datum. Maximum gage height since at least 1835, 49.0 ft (14.94 m) Dec. 9, 1935, discharge 40,000 ft<sup>3</sup>/s (1,130 m<sup>3</sup>/s); furnished by engineer for Harris County. Flood of May 31, 1929, reached a gage height of 43.5 ft (13.26 m), discharge 19,000 ft<sup>3</sup>/s (538 m<sup>3</sup>/s), at bridge on Capitol Avenue affected by bridge; furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,830 ft<sup>3</sup>/s (250 m<sup>3</sup>/s) Aug. 31 at 1600 hours, gage height, 26.40 ft (8.047 m); minimum discharge not determined (affected by tides).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---						---	---	---	---	---	5120
2	---						---	---	---	---	---	1520
3	---						---	3220	---	---	---	753
4	---						---	4650	---	---	---	935
5	---						---	2200	1500	1840	---	1460
6	---						---	---	---	1250	---	1690
7	---						---	---	---	2170	---	1590
8	---						---	---	---	1180	---	1450
9	---						---	---	---	1260	---	1610
10	---						---	---	---	1960	---	1920
11	---						---	---	---	2440	---	2030
12	---						---	---	---	1220	---	2010
13	---						---	1320	---	1630	---	1990
14	---						---	1990	---	689	---	2100
15	500						---	1740	---	1370	---	2170
16	1500						---	1060	---	1650	---	1970
17	500						---	---	---	1690	---	1870
18	1090						---	---	---	1680	---	1860
19	1370						---	---	---	1570	---	1820
20	---						---	---	---	1410	---	1790
21	---						---	---	---	657	---	1750
22	---						---	---	---	---	---	1340
23	---						1040	---	---	---	---	1020
24	---						801	---	---	---	---	968
25	---						---	---	937	---	---	956
26	---						---	---	718	---	---	950
27	---						---	---	---	---	---	908
28	---						---	---	---	---	---	870
29	---						---	---	---	---	---	690
30	---						---	---	---	---	---	---
31	---						---	---	---	---	6270	---
TOTAL	---						---	---	---	---	---	---
MEAN	---						---	---	---	---	---	---
MAX	---						---	---	---	---	---	---
MIN	---						---	---	---	---	---	---
AC-FT	---						---	---	---	---	---	---

## SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to September 1981 (discontinued).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR 23...	1230	37	800	7.7	17.5	10	6.6	5.2	53	11	400000	75000
MAY 13...	1255	1440	173	7.3	23.0	150	74	5.6	64	10	58000	10000
15...	1350	1710	169	7.4	23.0	70	76	6.1	70	6.1	28000	3000
JUL 13...	1450	1520	150	7.7	27.5	80	80	--	--	6.1	800000	51000
14...	1405	650	220	7.3	28.5	100	68	6.0	76	5.2	75000	26000
15...	1320	1480	150	7.5	29.0	120	65	6.0	77	3.6	29000	6700

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR 23...	3700	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	3400	52	0	18	1.7	12	.7	4.7	58	13	11	.1
15...	2000	55	3	18	2.5	12	.7	4.0	52	12	13	.2
JUL 13...	30000	48	0	16	1.9	9.0	.6	2.6	48	7.0	8.6	.1
14...	4000	--	--	--	--	--	--	--	--	--	--	--
15...	5000	--	--	--	--	--	--	--	--	--	--	--

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 23...	--	--	7	0	1.2	.450	1.6	5.500	8.5	14	5.000	12
MAY 13...	8.0	104	330	64	.04	.050	.09	.460	2.3	2.8	.730	24
15...	8.5	101	144	21	.05	.070	.12	.560	1.5	2.1	.650	12
JUL 13...	7.0	81	76	12	.49	.150	.64	.390	1.2	1.6	.500	8.3
14...	--	--	92	16	.23	.220	.45	.500	1.1	1.6	.660	10
15...	--	--	200	11	--	--	.25	.510	.99	1.5	.790	12

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUL 13...	1450	4	60	<1	10	<10	130

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL 13...	<10	6	.1	0	1	10



SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUL 13...	1450	.00	.0	.00	.0	.00	.00	.00	.70
DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUL 13...	.00	.00	.00	.00	.00	.00	.00	.14	.00
DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUL 13...	.00	.00	.00	.00	0	.00	.06	.01	.00

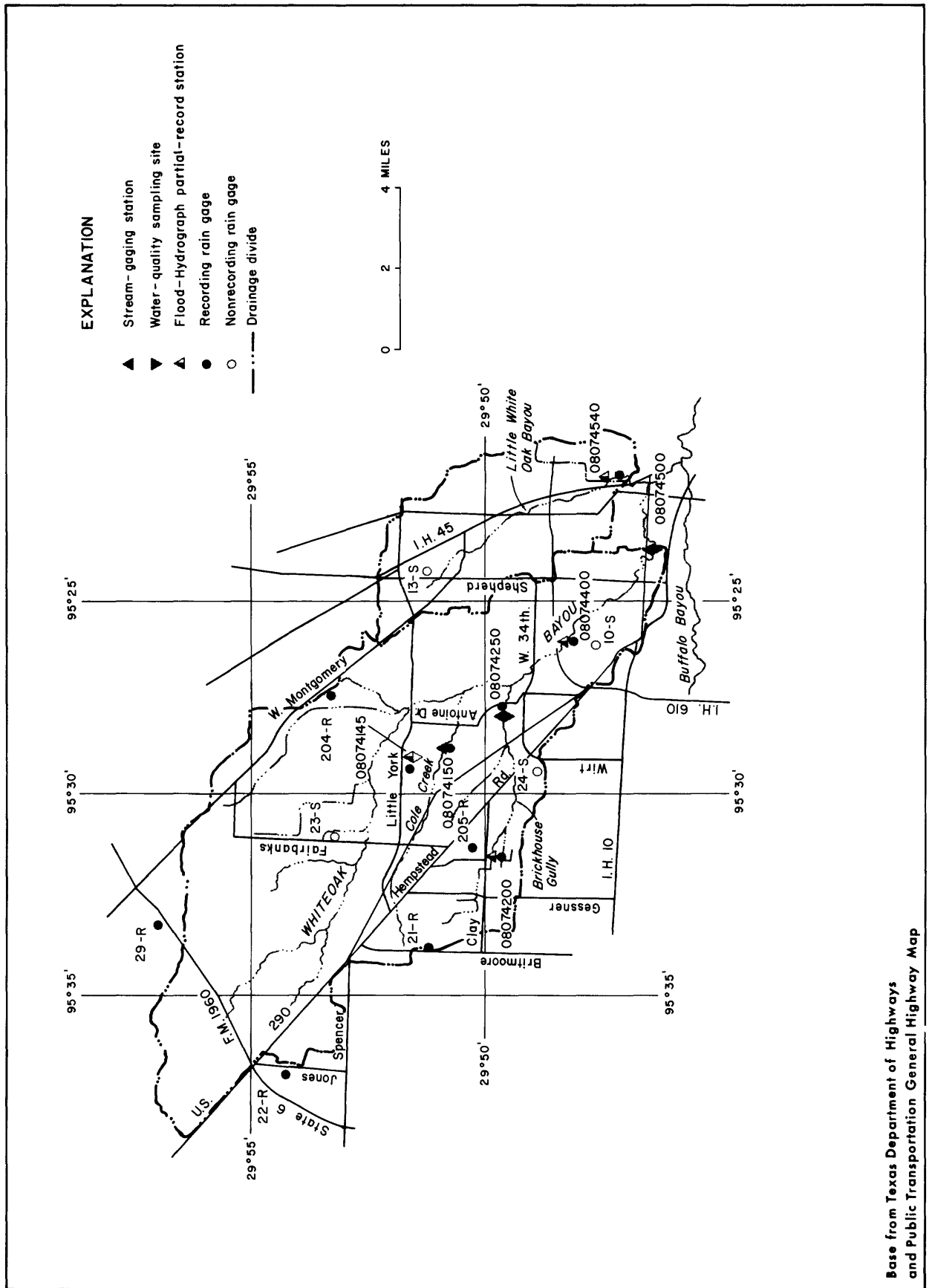
## WHITEOAK BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Whiteoak Bayou drainage basin are shown in figure 5.

Cole Creek (including Bingle Road Storm Sewer), Brickhouse Gully, Lazybrook Street Storm Sewer, and Little Whiteoak Bayou are shown as separate drainage basins within the Whiteoak Bayou section.

Weighted-mean rainfall in the drainage basin, based on thirteen rain gages, for the 1981 water year was 49.70 inches or 1.51 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of May 3-8 and Aug. 30-Sept. 5 were selected for analysis at the Whiteoak Bayou at Houston (08074500) gaging station.



Base from Texas Department of Highways  
and Public Transportation General Highway Map

Figure 5. - Locations of data-collection sites in and near the Whiteoak Bayou drainage basin

## COLE CREEK DRAINAGE BASIN

The locations of data-collection sites in and near the Cole Creek drainage basin are shown in figure 6.

Bingle Road Storm Sewer is shown as a separate drainage basin within the Cole Creek section.

Weighted-mean rainfall in the drainage basin, based on four rain gages, for the 1981 water year was 48.91 inches, or 0.72 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of April 23-25, May 3-6, and Aug. 30-Sept. 1 were selected for analysis at station 08074150, Cole Creek at Deihl Road.

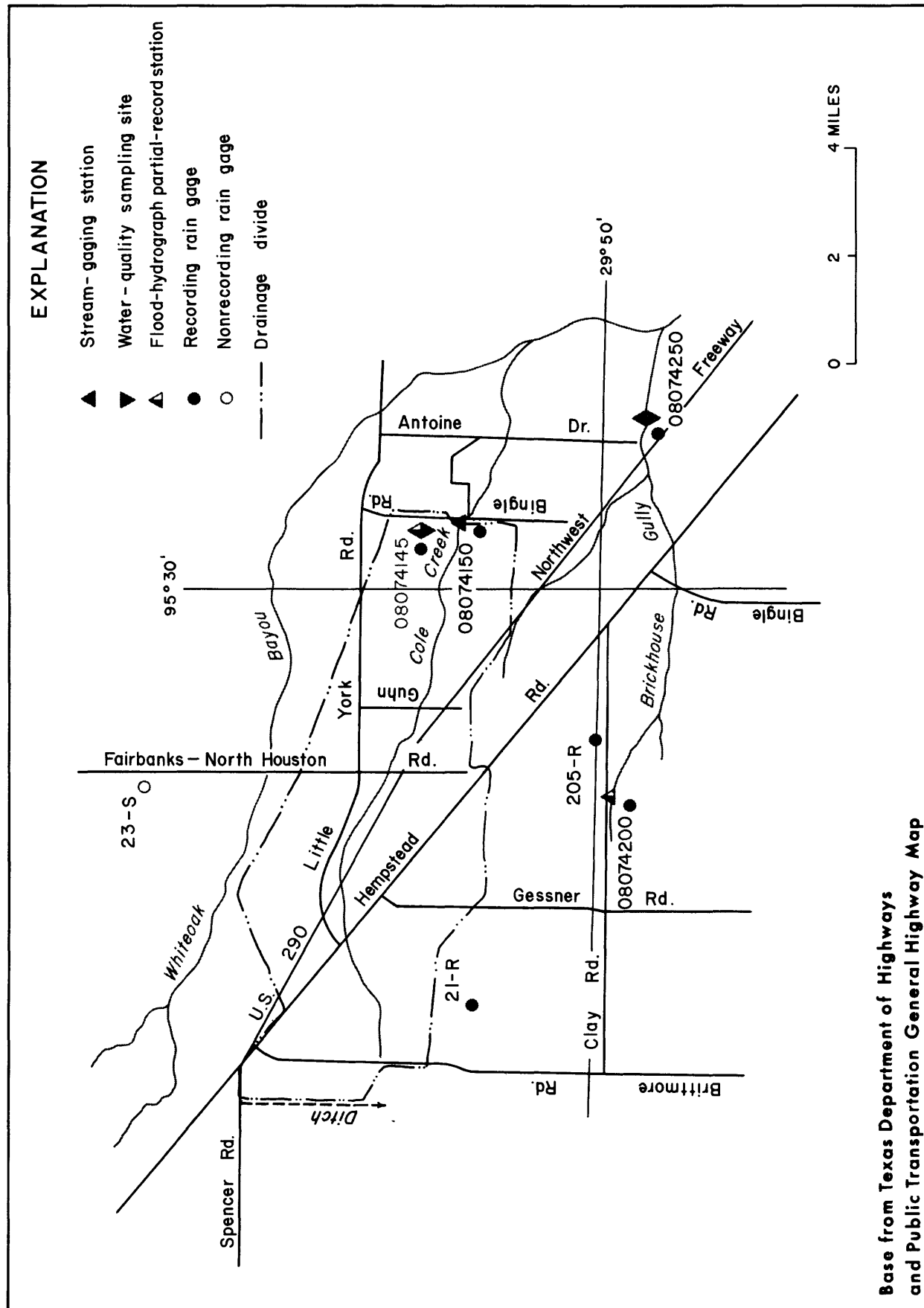


Figure 6. - Locations of data - collection sites in and near the Cole Creek drainage basin

## BINGLE ROAD STORM SEWER DRAINAGE BASIN

The location of data-collection sites in and near the Bingle Road Storm Sewer drainage basin are shown in figure 7.

Weighted-mean rainfall for the 1981 water year was not determined.

The storms of July 6-7, and Aug. 12 were selected for analysis at station 08074145, Bingle Road Storm Sewer at Houston, Tex.

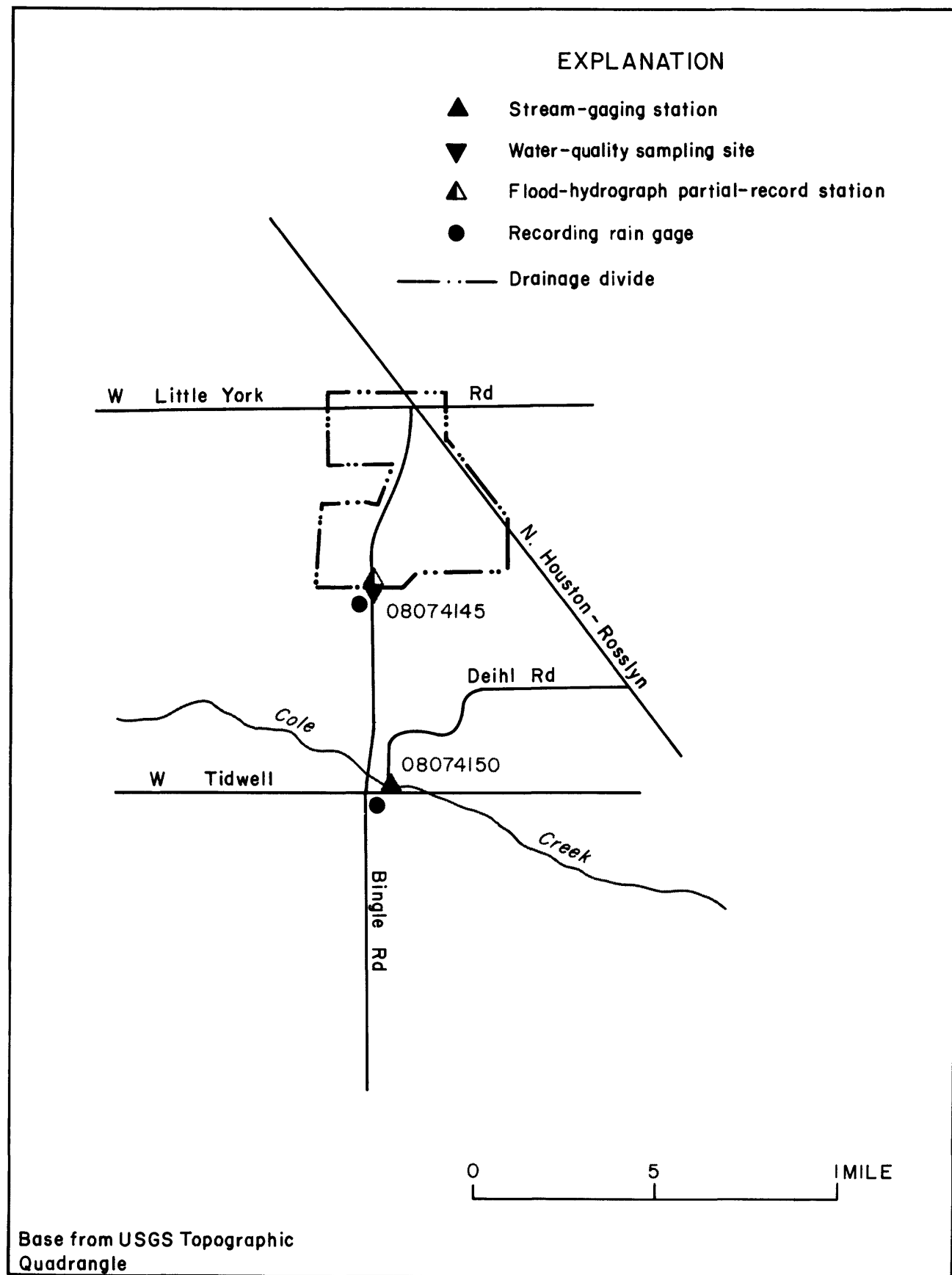


Figure 7.—Locations of data-collection sites in and near the Bingle Road storm sewer drainage basin

Table 4. --Storm rainfall-runoff data, 1981 Water Year, Bingle Road Storm Sewer

[illegible]



SAN JACINTO RIVER BASIN

08074145 BINGLE ROAD STORM SEWER AT HOUSTON, TX  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°51'31", long 95°29'09", Harris County, Hydrologic Unit 12040104, over a 60-inch (152 mm) storm sewer in the center median at Bingle Road and 3,000 ft (914 m) north of station Cole Creek at Bingle Road, Houston (08074150).

DRAINAGE AREA.--0.21 mi<sup>2</sup> (0.54 km<sup>2</sup>).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1980 to current year.

GAGE.--Flood-hydrograph and rainfall recorder and crest-stage gage. Datum of gage is arbitrary.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1980".

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, rating definition pending; maximum gage height, 13.97 ft (4.258 m) Aug. 31, 1981, is a recorded pressure head in the access pipe and exceeds gage height for full pipe flow.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base gage-height of 11.00 ft (3.353 m) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 15	1835	(a)	-	June 11	0115	(a)	-
Apr. 23	c0950	(a)	-	Aug. 31	0235	(a)	-
May 3	1050	(a)	-	Aug. 31	1120	(a)	-
May 9	1835	(a)	-				

a Discharge not determined; rating definition pending.

b Recorded pressure head; gage height for full pipe flow exceeded.

c About.

Minimum discharge, no flow.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: May 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUT COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, IMMED. (COLS. UM-MF PER 100 ML)
FEB												
25...	1000	3.4	102	--	--	120	85	--	--	16	--	--
25...	1015	5.1	84	--	--	100	60	--	--	--	--	--
25...	1030	5.4	78	--	--	70	60	--	--	11	--	--
25...	1045	5.7	73	--	--	60	65	--	--	7.1	--	--
25...	1100	4.6	68	--	--	80	80	--	--	--	--	--
25...	1115	4.6	69	--	--	90	70	--	--	--	--	--
25...	1130	4.6	74	--	--	90	75	--	--	9.0	--	--
25...	1145	4.6	86	--	--	90	55	--	--	--	--	--
APR												
23...	1021	94	72	--	--	90	260	--	--	10	36000	2000
23...	1037	23	90	--	--	120	280	--	--	11	62000	29000
23...	1447	6.2	115	--	--	120	140	--	--	13	40000	3000
JUL												
06...	2325	2.4	193	--	--	15	25	--	--	--	--	--
06...	2340	3.3	404	--	--	20	20	--	--	--	--	--
06...	2355	1.9	194	--	--	15	41	--	--	--	--	--
07...	0010	2.0	155	--	--	20	40	--	--	--	--	--
07...	0025	4.3	121	--	--	15	20	--	--	--	--	--
07...	0040	6.0	121	--	--	10	25	--	--	--	--	--
07...	0055	8.7	102	--	--	15	30	--	--	--	--	--
07...	0110	5.3	117	--	--	20	65	--	--	--	--	--
AUG												
12...	1227	2.5	144	--	--	--	90	--	--	--	--	--
12...	1234	37	195	--	--	--	140	--	--	--	540000	14000
12...	1241	66	87	--	--	--	160	--	--	--	--	--
12...	1249	73	86	--	--	--	160	--	--	--	52000	9000
12...	1257	48	73	--	--	--	95	--	--	--	--	--
12...	1304	29	80	--	--	--	110	--	--	--	--	--
12...	1312	18	83	--	--	--	100	--	--	--	--	--
12...	1319	12	92	--	--	--	100	--	--	--	--	--
12...	1422	1.5	145	--	--	60	110	--	--	16	41000	25000
30...	1333	20	156	--	--	--	--	--	--	--	--	--
30...	1348	6.2	179	--	--	--	--	--	--	--	--	--
30...	1403	3.0	219	--	--	--	--	--	--	--	--	--
30...	1418	1.9	222	--	--	--	--	--	--	--	--	--
30...	1433	1.4	223	--	--	--	--	--	--	--	--	--
30...	1448	1.2	211	--	--	--	--	--	--	--	--	--
30...	1503	1.0	206	--	--	--	--	--	--	--	--	--
31...	1100	136	--	8.3	24.5	--	--	--	--	--	--	--
31...	1120	--	390	7.6	24.0	--	--	8.3	98	--	29000	8700

SAN JACINTO RIVER BASIN

08074145 BINGLE ROAD STORM SEWER AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB												
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
23...	6200	--	--	--	--	--	--	--	--	--	--	--
23...	7000	--	--	--	--	--	--	--	--	--	--	--
23...	6600	--	--	--	--	--	--	--	--	--	--	--
JUL												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	7400	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	6500	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	8100	52	0	19	1.2	8.4	.5	2.9	54	12	5.4	.2
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	41000	--	--	--	--	--	--	--	--	--	--	--

SAN JACINTO RIVER BASIN

08074145 BINGLE ROAD STORM SEWER AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLATILE, TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB												
25...	--	--	--	--	.79	.070	.86	.250	.63	.88	.210	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	.48	.050	.53	.210	.59	.80	.150	--
25...	--	--	--	--	.44	.040	.48	.190	1.3	1.5	.170	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	.32	.030	.35	.160	.57	.73	.150	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
23...	--	--	660	28	.26	.030	.29	.160	1.4	1.6	.240	27
23...	--	--	644	30	.37	.000	.37	.270	1.4	1.7	.250	24
23...	--	--	298	23	.52	.000	.52	.250	1.3	1.5	.280	29
JUL												
06...	--	--	28	10	.62	.090	.71	.450	.95	1.4	.130	13
06...	--	--	51	37	.18	.040	.22	.280	1.2	1.5	.140	9.8
06...	--	--	67	19	.33	.070	.40	.220	.98	1.2	.090	18
07...	--	--	28	7	.45	.060	.51	.230	1.1	1.3	.100	14
07...	--	--	22	8	.37	.070	.44	.290	.63	.92	.060	14
07...	--	--	38	17	.29	.060	.35	.260	.94	1.2	.060	9.4
07...	--	--	40	6	.29	.050	.34	.300	.35	.65	.070	14
07...	--	--	74	17	.30	.040	.34	.270	.39	.66	.160	15
AUG												
12...	--	--	162	30	1.2	.050	1.2	.660	2.2	2.9	.250	40
12...	--	--	372	122	.87	.070	.94	.950	.15	1.1	1.100	83
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	270	20	.58	.040	.62	.290	1.5	1.8	.240	36
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	4.7	86	60	4	.58	.070	.65	.240	1.4	1.6	.240	28
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
AUG							
30...	1330	1	0	0	0	0	70
30...	1400	3	0	0	0	0	70
30...	1445	3	0	0	0	0	80
31...	1100	0	0	0	0	1	70
31...	1120	0	0	0	0	1	40

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
AUG						
30...	0	0	.0	0	0	40
30...	0	0	.0	0	0	30
30...	0	0	.0	0	0	50
31...	2	0	.0	0	0	10
31...	1	0	.0	0	0	10

SAN JACINTO RIVER BASIN

08074145 BINGLE ROAD STORM SEWER AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
AUG									
31...	1100	.00	.0	.00	.0	.00	.00	.00	.02
31...	1120	.00	.0	.00	.0	.00	.00	.00	.01

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
AUG									
31...	.00	.00	.00	.00	.00	.00	.00	.00	.00
31...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG									
31...	.00	.00	.00	.00	0	.00	.01	.00	.00
31...	.00	.00	.00	.00	0	.00	.01	.00	.00



STA. NO. 08074145		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BINGLE ROAD STORM SEWER AT HOUSTON, TEX.									
		STORM OF JULY 6 -7, 1981							
DATE & TIME	4145	G A G E	N U M B E R	ACCUM. WEIGHTED		DISCHARGE		ACCUM.	
				PRECIP.	IN.	IN	CFS	IN.	RUNOFF
JULY7									
0400	0.41				0.41	10.0		0.2104	
0410	0.41				0.41	6.2		0.2161	
0415	0.42				0.42	5.2		0.2273	
0445	0.42				0.42	2.6		0.2329	
0450	0.46				0.46	2.4		0.2343	
0455	0.50				0.50	17.0		0.2448	
0500	0.55				0.55	30.0		0.2632	
0505	0.55				0.55	25.0		0.2786	
0510	0.55				0.55	18.0		0.2897	
0515	0.56				0.56	14.0		0.2983	
0520	0.57				0.57	12.0		0.3057	
0525	0.58				0.58	11.0		0.3124	
0530	0.60				0.60	9.2		0.3238	
0545	0.61				0.61	7.6		0.3378	
0600	0.62				0.62	5.3		0.3443	
0605	0.64				0.64	4.9		0.3473	
0610	0.66				0.66	4.6		0.3501	
0615	0.69				0.69	8.5		0.3554	
0620	0.69				0.69	14.0		0.3640	
0625	0.70				0.70	16.0		0.3738	
0630	0.71				0.71	14.0		0.3867	
0640	0.71				0.71	9.3		0.3953	
0645	0.72				0.72	7.9		0.4050	
0700	0.73				0.73	6.5		0.4230	
0730	0.75				0.75	3.8		0.4370	
0800	0.77				0.77	2.4		0.4422	
0805	0.88				0.88	5.7		0.4457	
0810	0.99				0.99	26.0		0.4617	
0815	1.11				1.11	77.0		0.5090	
0820	1.19				1.19	93.0		0.5948	
0830	1.35				1.35	68.0		0.6993	
0845	1.37				1.37	33.0		0.7602	
0900	1.42				1.42	19.0		0.8478	
1000	1.49				1.49	8.0		0.9364	
1200	1.49				1.49	2.5		1.0102	
1800	1.49				1.49	0.6		1.0367	
2400	1.49				1.49	0.3		1.0434	

STA. NO. 08074145		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BINGLE ROAD STORM SEWER AT HOUSTON, TEX.		STORM OF AUG. 12, 1981				DISCHARGE			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP. IN.		IN	
								CFS	
AUG. 12									
0000	0.0					0.0	0.0	0.0	0.0
0600	0.0					0.0	0.2	0.0089	0.0089
1200	0.0					0.0	0.2	0.0137	0.0137
1230	0.0					0.0	13.0	0.0416	0.0416
1235	0.16					0.16	45.0	0.0693	0.0693
1240	0.33					0.33	61.0	0.1068	0.1068
1245	0.50					0.50	87.0	0.1603	0.1603
1250	0.64					0.64	70.0	0.2034	0.2034
1255	0.78					0.78	55.0	0.2372	0.2372
1300	0.93					0.93	38.0	0.2605	0.2605
1305	0.94					0.94	27.0	0.2771	0.2771
1310	0.95					0.95	20.0	0.2894	0.2894
1315	0.96					0.96	16.0	0.2993	0.2993
1320	0.96					0.96	12.0	0.3067	0.3067
1325	0.96					0.96	8.4	0.3118	0.3118
1330	0.97					0.97	5.9	0.3173	0.3173
1340	0.97					0.97	3.9	0.3209	0.3209
1345	0.98					0.98	3.3	0.3493	0.3493
1600	0.98					0.98	0.7	0.3553	0.3553
1605	1.04					1.04	0.7	0.3557	0.3557
1610	1.11					1.11	1.7	0.3568	0.3568
1615	1.18					1.18	23.0	0.3709	0.3709
1620	1.28					1.28	36.0	0.3931	0.3931
1625	1.38					1.38	60.0	0.4299	0.4299
1630	1.48					1.48	52.0	0.4619	0.4619
1635	1.48					1.48	37.0	0.4847	0.4847
1640	1.49					1.49	26.0	0.5007	0.5007
1645	1.50					1.50	19.0	0.5123	0.5123
1650	1.51					1.51	15.0	0.5216	0.5216
1655	1.52					1.52	12.0	0.5289	0.5289
1700	1.53					1.53	9.6	0.5673	0.5673
1800	1.53					1.53	2.0	0.6190	0.6190
2400	1.53					1.53	0.3	0.6256	0.6256

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 5.---Storm rainfall-runoff data, 1981 Water Year, Cole Creek

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Cole Creek at Deihl Road, Houston, TX. (Drainage area -- 7.50 mi <sup>2</sup> )								
April 23-25, 1981	3.5	2.66	0.87	1.74	2.37	0.58	0.22	487
May 3, 1981	6.5	4.35	0.40	0.80	1.60	3.54	0.62	1,220
May 3-6, 1981	23.5	1.38	.26	.51	.58			933
Aug. 30-Sept. 1, 1981	13.0	8.49	0.61	1.23	1.89	4.66	0.55	1,400 *

\* - Annual peak discharge for 1981 Water Year.



SAN JACINTO RIVER BASIN

08074150 COLE CREEK AT DEIHL ROAD, HOUSTON, TX

LOCATION.--Lat 29°51'04", long 95°29'16", Harris County, Hydrologic Unit 12040104, on downstream side of bridge at Deihl Road in northwest Houston and 1.8 mi (2.9 km) upstream from mouth.

DRAINAGE AREA.--7.50 mi<sup>2</sup> (19.42 km<sup>2</sup>). Prior to Oct. 1, 1976, 8.05 mi<sup>2</sup> (20.85 km<sup>2</sup>). Prior to Oct. 1, 1979, 7.33 mi<sup>2</sup> (18.98 km<sup>2</sup>). Drainage area changes are the result of drainage ditch relocations and extensions.

PERIOD OF RECORD.--April 1964 to current year. Gage at temporary location 1.0 mi (1.6 km) downstream at Antoine Drive May 18, 1965, to Sept. 1, 1966, due to bridge construction and channel rectification.

REVISED RECORDS.--WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records fair except those for January, which are poor. No diversion above station. Low flow is partly sustained by sewage effluent from Houston suburbs. Recording rain gage at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 7.76 ft<sup>3</sup>/s (0.220 m<sup>3</sup>/s), 5,620 acre-ft/yr (6.93 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,020 ft<sup>3</sup>/s (57.2 m<sup>3</sup>/s) Mar. 20, 1972, elevation, 78.60 ft (23.957 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft<sup>3</sup>/s (11.3 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
Oct. 15	a1930	1,040 29.5	77.23 23.540	May 9	1900	487 13.8	74.59 22.735
Apr. 23	1100	487 13.8	74.59 22.735	June 11	0100	584 16.5	75.43 22.991
May 3	1230	1,220 34.6	76.90 23.439	Aug. 31	1200	*1,400 39.6	78.50 23.927

a About.

Minimum daily discharge, 0.08 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) Oct. 7, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.21	.38	.25	1.7	1.7	.55	.74	2.2	.97	.42	300
2	.47	.20	.29	.28	1.4	1.0	.46	.59	4.2	.86	.58	100
3	.20	.20	.30	.35	.92	.95	.35	470	2.5	.82	.72	40
4	.11	.20	.30	.51	5.0	37	.37	210	5.8	1.5	.63	10
5	.10	.20	.34	.65	13	4.8	.37	25	91	12	.67	5.0
6	.10	.19	.27	3.0	12	1.7	.30	7.6	14	4.5	.87	3.5
7	.08	.19	.25	1.5	3.1	1.0	.35	3.2	5.1	47	.82	2.5
8	.14	.19	7.9	.80	1.8	.81	.28	2.6	3.0	19	.72	2.0
9	.42	.17	10	.50	1.2	.75	.29	83	1.5	20	.63	1.8
10	.52	.16	1.2	.35	1.7	.78	.24	51	7.0	13	.67	1.3
11	.52	.67	.83	.30	1.7	.74	.20	9.3	175	8.5	3.1	1.1
12	.24	.39	.66	.25	1.6	.98	.21	5.8	19	1.5	12	.93
13	.21	.17	.37	1.0	1.4	1.2	.46	2.2	2.0	1.7	11	.93
14	.08	.20	.32	.50	1.4	.74	.30	4.1	.90	1.7	9.3	6.6
15	223	.19	.52	.30	1.7	.65	.38	2.0	.97	.85	1.2	4.7
16	182	.34	.69	.25	1.5	.69	.35	2.1	.86	.66	.56	1.4
17	6.3	2.1	.66	.22	1.4	.66	.46	1.2	.82	.89	.46	1.1
18	69	.36	.38	.20	1.4	.51	.50	1.1	.87	1.4	7.1	1.3
19	45	.19	.24	50	1.5	.53	.67	.96	.91	.64	1.7	1.2
20	4.2	.21	.22	10	8.0	.56	.38	.99	1.0	.65	.63	1.0
21	1.4	.34	.23	5.0	2.3	.64	.31	1.0	1.0	.66	.48	.93
22	.78	4.1	.28	2.0	1.5	.57	.38	1.0	.91	.57	.60	1.2
23	.71	1.3	.33	1.0	1.6	.54	100	.92	.86	1.2	.56	1.4
24	.40	.46	.21	.70	1.4	.52	13	1.0	.97	.62	.43	1.5
25	.26	4.7	.26	.50	12	.53	3.2	2.2	2.3	.87	.44	2.0
26	.26	11	.26	.40	38	.41	1.8	1.1	5.9	3.2	.48	3.2
27	.74	1.1	.24	1.3	5.8	.76	1.2	.86	4.6	4.6	.44	3.3
28	.38	.59	.25	.93	2.3	.51	.90	.91	.91	.98	.25	3.3
29	.25	.50	.26	.92	---	.54	.78	1.9	.76	.67	.25	3.1
30	.22	.41	.27	.57	---	1.1	.69	2.2	1.0	.63	4.4	2.4
31	.21	---	.27	.62	---	1.0	---	1.0	---	.58	641	---
TOTAL	539.40	31.23	28.98	85.15	128.32	64.87	129.73	897.57	357.84	152.72	703.11	508.69
MEAN	17.4	1.04	.93	2.75	4.58	2.09	4.32	29.0	11.9	4.93	22.7	17.0
MAX	223	11	10	50	38	37	100	470	175	47	641	300
MIN	.08	.16	.21	.20	.92	.41	.20	.59	.76	.57	.25	.93
AC-FT	1070	62	57	169	255	129	257	1780	710	303	1390	1010
(††)	6.88	1.93	1.08	2.30	2.22	1.31	2.78	8.03	6.50	4.43	9.64	1.81

CAL YR 1980 TOTAL 2612.47 MEAN 7.14 MAX 340 MIN .08 AC-FT 5180 †† 40.42  
WTR YR 1981 TOTAL 3627.61 MEAN 9.94 MAX 641 MIN .08 AC-FT 7200 †† 48.91

†† Weighted-mean rainfall, in inches, based on four rain gages.

STA. NO. 08074150		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR		
COLE CREEK AT DEIHL ROAD, HOUSTON, TEX.		STORM OF APR. 23-25, 1981					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME	4150	205R	21R	G A G E		N U M B E R	WEIGHTED PRECIP.	IN	RUNOFF
							IN.	CFS	IN.
APR. 23									
0000	0.0	0.0	0.0				0.0	0.5	0.0003
0500	0.0	0.0	0.0				0.0	0.5	0.0005
0530	0.0	0.0	0.05				0.03	0.5	0.0006
0600	0.0	0.0	0.05				0.03	0.5	0.0007
0830	0.0	0.0	0.05				0.03	0.5	0.0009
0900	0.0	0.11	0.07				0.05	0.6	0.0010
0930	0.0	0.72	1.81				1.10	26.0	0.0037
1000	1.71	1.30	2.44				2.05	51.0	0.0089
1030	1.74	1.70	2.45				2.12	269.0	0.0367
1100	1.74	1.93	2.48				2.18	487.0	0.0870
1130	1.78	1.96	2.50				2.20	416.0	0.1300
1200	1.78	1.99	2.56				2.24	344.0	0.1655
1230	1.80	2.00	2.59				2.26	321.0	0.1987
1300	1.80	2.04	2.73				2.35	298.0	0.2295
1330	1.85	2.08	2.75				2.38	277.0	0.2581
1400	1.91	2.10	2.78				2.42	255.0	0.2844
1430	1.93	2.14	2.88				2.48	231.0	0.3083
1500	2.00	2.17	2.98				2.56	206.0	0.3296
1530	2.06	2.20	3.00				2.60	194.0	0.3496
1600	2.07	2.22	3.00				2.60	181.0	0.3683
1630	2.07	2.24	3.00				2.61	160.0	0.3848
1700	2.07	2.26	3.00				2.61	138.0	0.4062
1800	2.07	2.26	3.00				2.61	107.0	0.4283
1900	2.07	2.26	3.00				2.61	81.0	0.4451
2000	2.07	2.26	3.00				2.61	64.0	0.4616
2130	2.07	2.26	3.00				2.61	49.0	0.4819
2400	2.07	2.26	3.00				2.61	34.0	0.5117
APR. 24									
0000	2.07	2.26	3.00				2.61	34.0	0.5117
0600	2.07	2.26	3.00				2.61	17.0	0.5328
1200	2.07	2.26	3.00				2.61	12.0	0.5477
1800	2.07	2.26	3.00				2.61	8.6	0.5583
2400	2.07	2.26	3.00				2.61	5.0	0.5645
APR. 25									
0000	2.07	2.26	3.00				2.61	5.0	0.5645
0600	2.07	2.26	3.00				2.61	2.9	0.5678
1100	2.07	2.26	3.00				2.61	2.8	0.5695
1200	2.07	2.26	3.05				2.64	2.8	0.5710
1600	2.07	2.29	3.05				2.64	2.8	0.5724
1700	2.11	2.31	3.05				2.66	2.8	0.5748
2400	2.11	2.31	3.05				2.66	2.7	0.5767

STA. NO. 08074150		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR					
COLE CREEK AT DEIHL ROAD, HOUSTON, TEX.		STORM OF MAY 3 -6, 1981										DISCHARGE: ACCUM.					
DATE & TIME		4150		21R		G A G E		N U M B E R		WEIGHTED PRECIP.		IN		CFS		IN.	
MAY 3																	
0000		0.0		0.0						0.0				0.5		0.0003	
0500		0.0		0.0						0.0				0.5		0.0005	
0530		0.0		0.01						0.01				0.5		0.0006	
0600		0.0		0.01						0.01				0.5		0.0007	
0700		0.0		0.01						0.01				0.5		0.0007	
0730		0.22		0.14						0.17				0.6		0.0008	
0800		0.41		0.38						0.39				3.0		0.0011	
0830		0.50		0.68						0.62				31.0		0.0043	
0900		0.59		0.80						0.73				34.0		0.0078	
0930		0.80		0.94						0.89				36.0		0.0116	
1000		1.60		1.13						1.29				38.0		0.0155	
1030		2.40		1.57						1.86				90.0		0.0248	
1100		2.73		1.86						2.16				529.0		0.0794	
1130		3.12		2.38						2.64				866.0		0.1689	
1200		3.18		2.72						2.88				1160.0		0.2887	
1230		3.22		2.76						2.92				1220.0		0.4148	
1300		3.26		3.02						3.10				1080.0		0.5263	
1330		3.31		3.33						3.32				1030.0		0.6327	
1400		3.41		3.36						3.38				942.0		0.7300	
1430		3.42		3.96						3.77				921.0		0.8252	
1500		3.60		4.54						4.21				917.0		0.9199	
1530		3.65		4.67						4.31				900.0		1.0129	
1600		3.66		4.68						4.32				967.0		1.1128	
1630		3.66		4.69						4.33				945.0		1.2104	
1700		3.67		4.71						4.35				876.0		1.3009	
1730		3.68		4.71						4.35				815.0		1.3851	
1800		3.68		4.71						4.35				754.0		1.5019	
1900		3.68		4.71						4.35				692.0		1.6092	
1930		4.19		4.71						4.53				625.0		1.6737	
2000		4.26		4.97						4.72				684.0		1.7444	
2030		4.43		5.10						4.87				770.0		1.8239	
2100		4.78		5.15						5.02				733.0		1.8997	
2130		4.78		5.15						5.02				933.0		1.9961	
2200		4.79		5.15						5.02				883.0		2.1329	
2300		4.79		5.15						5.02				695.0		2.2406	
2330		4.91		5.15						5.07				639.0		2.3066	
2400		5.02		5.15						5.10				578.0		2.3663	
MAY 4																	
0000		5.02		5.15						5.10				578.0		2.3663	
0030		5.02		5.17						5.12				568.0		2.4837	

STA. NO. 08074150			STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
COLE CREEK AT DEIHL ROAD, HOUSTON, TEX.			STORM OF MAY 3 - 6, 1981							
DATE & TIME	4150	21R	G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	ACCUM. RUNOFF	
								CFS		IN.
MAY 4										
0200	5.02	5.17					5.12	483.0	2.5834	2.5834
0230	5.02	5.18					5.12	455.0	2.6775	2.6775
0400	5.02	5.18					5.12	362.0	2.8083	2.8083
0600	5.02	5.18					5.12	274.0	2.9074	2.9074
0730	5.02	5.18					5.12	226.0	2.9541	2.9541
0800	5.17	5.18					5.18	212.0	2.9760	2.9760
0830	5.29	5.23					5.25	224.0	2.9991	2.9991
0900	5.29	5.30					5.30	230.0	3.0348	3.0348
1000	5.29	5.30					5.30	240.0	3.0844	3.0844
1100	5.29	5.30					5.30	202.0	3.1261	3.1261
1200	5.29	5.30					5.30	173.0	3.1708	3.1708
1330	5.29	5.30					5.30	138.0	3.2207	3.2207
1530	5.29	5.30					5.30	108.0	3.2542	3.2542
1630	5.29	5.30					5.30	92.0	3.2684	3.2684
1700	5.32	5.30					5.31	86.0	3.2773	3.2773
1730	5.33	5.31					5.32	80.0	3.2856	3.2856
1800	5.44	5.31					5.36	75.0	3.2933	3.2933
1830	5.63	5.31					5.42	80.0	3.3016	3.3016
1900	5.67	5.68					5.68	88.0	3.3107	3.3107
1930	5.67	5.71					5.70	91.0	3.3201	3.3201
2000	5.69	5.75					5.73	94.0	3.3298	3.3298
2030	5.69	5.75					5.73	86.0	3.3387	3.3387
2100	5.70	5.75					5.73	78.0	3.3588	3.3588
2300	5.70	5.75					5.73	59.0	3.3771	3.3771
2400	5.70	5.75					5.73	53.0	3.3935	3.3935
MAY 5										
0000	5.70	5.75					5.73	53.0	3.3935	3.3935
0200	5.70	5.75					5.73	43.0	3.4157	3.4157
0500	5.70	5.75					5.73	34.0	3.4298	3.4298
0600	5.70	5.75					5.73	31.0	3.4522	3.4522
1200	5.70	5.75					5.73	22.0	3.4795	3.4795
1800	5.70	5.75					5.73	17.0	3.4970	3.4970
2200	5.70	5.75					5.73	13.0	3.5051	3.5051
2400	5.70	5.75					5.73	11.0	3.5142	3.5142
MAY 6										
0000	5.70	5.75					5.73	11.0	3.5142	3.5142
0600	5.70	5.75					5.73	7.8	3.5238	3.5238
1200	5.70	5.75					5.73	6.5	3.5359	3.5359
2400	5.70	5.75					5.73	4.8	3.5419	3.5419

STA. NO. 08074150		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
COLE CREEK AT DEIHL ROAD, HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981										DISCHARGE: ACCUM.	
DATE & TIME		G A G E N U M B E R										IN	
		4150	205R	21R								CFS	IN.
AUG. 30													
0000		0.0	0.0	0.0								0.0	0.0
0600		0.0	0.0	0.0								0.3	0.0004
1200		0.0	0.0	0.0								0.5	0.0007
1300		0.0	0.0	0.0								0.5	0.0008
1330		0.0	0.20	0.0								6.0	0.0014
1400		0.0	0.20	0.0								22.0	0.0037
1430		0.0	0.20	0.05								9.0	0.0046
1500		0.0	0.20	0.09								6.1	0.0068
1800		0.0	0.20	0.09								4.1	0.0092
2030		0.0	0.20	0.09								2.6	0.0100
2100		0.0	0.23	0.19								2.3	0.0102
2130		0.02	0.23	0.19								6.9	0.0109
2200		0.18	0.23	0.19								7.9	0.0117
2230		0.18	0.45	0.23								4.5	0.0122
2300		0.19	0.57	0.36								25.0	0.0148
2330		0.43	0.58	0.36								49.0	0.0199
2400		0.60	0.86	0.36								34.0	0.0234
AUG. 31													
0000		0.60	0.86	0.36								34.0	0.0234
0030		0.60	1.36	0.51								97.0	0.0334
0100		0.93	1.64	1.15								199.0	0.0939
0130		1.54	1.78	1.60								214.0	0.0760
0200		1.75	2.11	1.66								214.0	0.0982
0230		1.91	3.30	2.18								446.0	0.1442
0300		2.62	3.34	2.52								695.0	0.2160
0330		3.50	3.48	2.60								661.0	0.2843
0400		3.52	3.57	2.91								596.0	0.3459
0430		3.62	3.64	3.01								515.0	0.3991
0500		3.69	3.92	3.04								512.0	0.4520
0530		3.81	4.07	3.24								539.0	0.5077
0600		3.99	4.35	3.46								527.0	0.5621
0630		4.16	4.51	3.97								529.0	0.6168
0700		4.29	4.80	4.70								561.0	0.6747
0730		4.46	4.84	5.04								615.0	0.7382
0800		4.68	4.94	5.15								610.0	0.8013
0830		4.72	5.06	5.25								594.0	0.8626
0900		4.80	5.11	5.32								568.0	0.9213
0930		4.88	5.20	5.45								546.0	0.9777
1000		4.94	5.56	5.64								546.0	1.0341
1030		5.02	5.96	5.81								675.0	1.1038

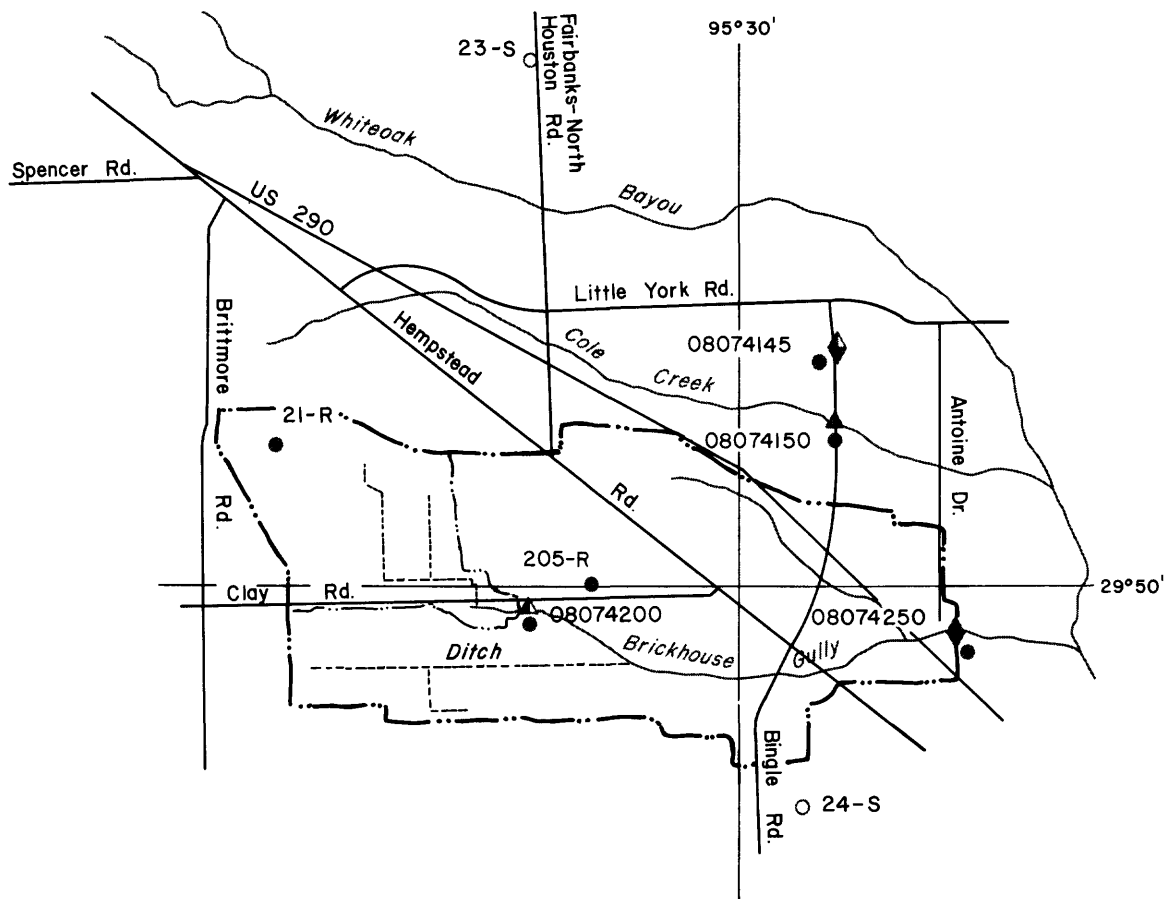
STA. NO.	08074150	STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
		COLE CREEK AT DEIHL ROAD, HOUSTON, TEX.										DISCHARGE:	ACCUM.
DATE & TIME		STORM OF AUG. 30 TO SEP. 1, 1981										IN	RUNOFF
		G A G E N U M B E R										CFS	IN.
		4150	205R	21R									
AUG. 31													
1100		5.46	6.51	7.04								817.0	1.1882
1130		5.73	7.31	7.70								963.0	1.2877
1200		6.93	7.41	7.87								1400.0	1.4323
1230		7.10	7.43	7.91								1250.0	1.5615
1300		7.14	7.49	7.97								1080.0	1.6730
1330		7.19	7.52	8.02								960.0	1.7722
1400		7.22	7.54	8.04								873.0	1.8624
1430		7.23	7.57	8.10								776.0	1.9438
1500		7.24	7.60	8.13								764.0	2.0227
1530		7.27	7.62	8.13								745.0	2.0997
1600		7.32	7.62	8.14								707.0	2.1727
1630		7.32	7.62	8.15								681.0	2.2431
1700		7.32	7.62	8.15								661.0	2.3114
1730		7.35	7.62	8.15								639.0	2.3774
1800		7.35	7.64	8.15								615.0	2.4409
1830		7.35	7.84	8.38								620.0	2.5050
1900		7.46	7.84	8.92								692.0	2.5765
1930		7.58	7.84	8.92								692.0	2.6479
2000		7.58	7.84	8.98								661.0	2.8869
2300		7.58	7.84	8.98								529.0	3.1035
2400		7.58	7.84	8.98								496.0	3.2593
SEP. 1													
0000		7.58	7.84	8.98								496.0	3.2593
0200		7.58	7.84	8.98								452.0	3.3993
0300		7.58	7.94	9.03								433.0	3.4888
0400		7.58	7.94	9.04								427.0	3.5770
0500		7.58	7.94	9.06								406.0	3.6609
0600		7.58	7.94	9.06								392.0	3.7824
0800		7.58	7.94	9.12								368.0	3.8964
0900		7.58	7.94	9.12								356.0	4.0435
1200		7.58	7.94	9.12								319.0	4.1754
1300		7.60	7.94	9.12								306.0	4.3018
1600		7.60	7.94	9.12								248.0	4.4299
1800		7.60	7.94	9.12								199.0	4.5327
2100		7.60	7.94	9.12								149.0	4.6097
2300		7.60	7.94	9.12								116.0	4.6456
2400		7.60	7.94	9.12								99.0	4.6558

## BRICKHOUSE GULLY DRAINAGE BASIN

The location of data-collection sites in and near the Brickhouse Gully drainage basin are shown in figure 8.

Weighted-mean rainfall in the drainage basin based on six rain gages for the 1981 water year was 46.39 inches or 1.80 inches less than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of April 23-24 and Aug. 30-Sept. 3 were selected for analysis at station 08074200, Brickhouse Gully at Clarblak Street. The storms of Oct. 15-16 and Aug.30-Sept. 1 were selected for analysis at station 08074250, Brickhouse Gully at Costa Rica Street.



#### EXPLANATION

- ▲ Stream-gaging station
- ▼ Water-quality sampling site
- ▲ Flood-hydrograph partial-record station
- Recording rain gage
- Nonrecording rain gage
- · — · — Drainage divide
- · — · — Drainage subdivide

0 2 MILES

Base from Texas Department of Highways  
a. 1 Public Transportation General Highway Map

Figure 8.—Locations of data-collection sites in and near the Brickhouse Gully drainage basin



UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 6.--Storm rainfall-runoff data, 1981 Water Year, Brickhouse Gully

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Brickhouse Gully at Clarblak St., Houston, TX. (Drainage area -- 2.56 mi <sup>2</sup> )								
April 23-24, 1981	3.5	2.85	1.61	2.21	2.37	0.78	0.27	298
Aug. 30-31, 1981	6.5	4.94	0.84	1.20	1.44	5.05	0.56	301
Aug. 31-Sept. 3, 1981	10.5	4.11	.67	1.23	1.89			408
Brickhouse Gully at Costa Rica St., Houston, TX. (Drainage area -- 11.4 mi <sup>2</sup> )								
Oct. 15-16, 1981	1.5	2.55	1.05	1.62	2.39	0.90	0.35	1,720
Aug. 30-31, 1981	6.8	4.76	1.05	1.47	1.60	4.88	0.61	3,150
Aug. 31-Sept. 1, 1981	6.5	3.23	.80	1.23	1.89			3,880 *

\* - Annual peak discharge for 1981 Water Year.

08074200 Brickhouse Gully at Clarblak Street, Houston, Tex.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°49'53", long 95°31'42", Harris County, Hydrologic Unit 12040104 at bridge on Clarblak Street, in northwest Houston, and 4.0 miles upstream from station at Costa Rica Street.

DRAINAGE AREA.--2.56 mi<sup>2</sup>. Drainage area, effective for period, April 1964 to current year. The boundary of the basin is poorly defined due to flat ground slopes.

PERIOD OF RECORD.--April 1964 to July 6, 1976, Jan. 26, 1977 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Prior to April 7, 1978, a flood-hydrograph rainfall recorder (type SR) and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 409 ft<sup>3</sup>/s, Oct. 15, 1980 (elevation 89.57 ft) after concrete lining of channel. Maximum elevation 94.28 ft March 20, 1972 prior to concrete lining of channel. Minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft<sup>3</sup>/s and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
Oct. 15	about 1830	*409	89.57
Apr. 23	1045	298	88.39
May 3	about 1100	338	88.88
Jun. 5	0645	266	88.06
Aug. 31	0245	301	88.43
Aug. 31	1130	408	89.56

Minimum discharge not determined.

STA. NO. 08074200		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
BRICKHOUSE GULLY AT CLARBLAK ST., HOUSTON, TEX.		STORM OF APR. 23-24, 1981										DISCHARGE	
DATE & TIME		G A G E N U M B E R										IN	
		205R	21R									CFS	IN.
APR. 23													
0000		0.0	0.0									1.0	0.0015
0500		0.0	0.0									1.0	0.0031
0515		0.0	0.03									1.0	0.0034
0600		0.0	0.05									1.0	0.0044
0830		0.0	0.05									1.0	0.0052
0845		0.06	0.07									1.0	0.0054
0900		0.11	0.07									1.0	0.0055
0915		0.37	0.20									1.0	0.0057
0930		0.72	1.81									2.0	0.0060
0945		1.04	2.41									36.0	0.0114
1000		1.30	2.44									107.0	0.0276
1015		1.54	2.44									204.0	0.0585
1030		1.70	2.45									290.0	0.1024
1045		1.85	2.48									298.0	0.1475
1100		1.93	2.48									289.0	0.1912
1115		1.95	2.48									272.0	0.2324
1130		1.96	2.50									241.0	0.2688
1145		1.98	2.54									206.0	0.3000
1200		1.99	2.56									178.0	0.3269
1215		2.00	2.58									148.0	0.3493
1230		2.00	2.59									129.0	0.3689
1245		2.02	2.70									59.0	0.3778
1300		2.04	2.73									99.0	0.3928
1315		2.06	2.74									92.0	0.4067
1330		2.08	2.75									87.0	0.4199
1345		2.09	2.75									82.0	0.4323
1400		2.10	2.78									78.0	0.4441
1415		2.12	2.78									74.0	0.4553
1430		2.14	2.88									72.0	0.4662
1445		2.15	2.92									68.0	0.4765
1500		2.17	2.98									65.0	0.5010
1600		2.22	3.00									62.0	0.5386
1700		2.26	3.00									60.0	0.5749
1800		2.26	3.00									45.0	0.6021
1900		2.26	3.00									35.0	0.6657
2400		2.26	3.00									12.0	0.7274
APR. 24													
0000		2.26	3.00									12.0	0.7274
1200		2.26	3.00									6.0	0.7710
2400		2.26	3.00									2.0	0.7783

STA. NO. 08074200		STORM RAINFALL AND RUNOFF RECORD									
BRICKHOUSE GULLY AT CLARBLAK ST., HOUSTON, TEX.		1981 WATER YEAR									
		STORM OF AUG. 30 TO SEP. 3, 1981									
DATE & TIME		G A G E N U M B E R									
		4200		21R				PRECIP.		DISCHARGE!	
								IN.		IN	
										CFS	
AUG 30											
0000		0.0		0.0					0.0	1.0	0.0039
1300		0.0		0.0					0.0	1.0	0.0080
1330		0.12		0.0					0.04	1.0	0.0095
1800		0.12		0.09					0.10	1.0	0.0121
2200		0.12		0.19					0.17	1.0	0.0135
2230		0.24		0.23					0.23	4.0	0.0147
2300		0.48		0.36					0.40	20.0	0.0238
2400		0.72		0.36					0.47	43.0	0.0400
AUG 31											
0000		0.72		0.36					0.47	43.0	0.0400
0015		0.84		0.38					0.52	49.0	0.0474
0030		1.20		0.51					0.72	66.0	0.0574
0045		1.44		0.69					0.91	98.0	0.0723
0100		1.68		1.15					1.31	113.0	0.0894
0115		1.80		1.35					1.48	131.0	0.1092
0130		1.80		1.60					1.66	160.0	0.1334
0145		1.92		1.62					1.71	170.0	0.1591
0200		2.04		1.66					1.77	171.0	0.1850
0215		2.40		1.95					2.08	179.0	0.2121
0230		3.24		2.18					2.50	272.0	0.2532
0245		3.36		2.50					2.76	301.0	0.2988
0300		3.36		2.52					2.77	296.0	0.3660
0330		3.36		2.60					2.83	250.0	0.4227
0345		3.48		2.69					2.93	228.0	0.4572
0400		3.60		2.91					3.12	211.0	0.4892
0415		3.60		2.97					3.16	197.0	0.5190
0430		3.60		3.01					3.19	184.0	0.5468
0445		3.72		3.02					3.23	177.0	0.5736
0500		3.96		3.04					3.32	184.0	0.6014
0515		3.96		3.20					3.43	186.0	0.6296
0530		3.96		3.24					3.46	179.0	0.6567
0545		4.08		3.27					3.51	181.0	0.6841
0600		4.32		3.46					3.72	189.0	0.7127
0615		4.44		3.55					3.82	213.0	0.7449
0630		4.56		3.97					4.15	228.0	0.7794
0645		4.80		4.42					4.53	254.0	0.8178
0700		4.92		4.70					4.77	280.0	0.8602
0715		4.92		4.95					4.94	286.0	0.9035
0730		4.92		5.04					5.00	278.0	0.9456
0745		5.04		5.09					5.07	266.0	0.9858



# SAN JACINTO RIVER BASIN

08074250 BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TX

LOCATION.--29°49'40", long 95°28'09", Harris County, Hydrologic Unit 12040104, at downstream side of bridge at Costa Rica Street in northwest Houston and 1.0 mi (1.6 km) upstream from Whiteoak Bayou.

DRAINAGE AREA.--11.4 mi<sup>2</sup> (29.5 km<sup>2</sup>). Prior to Oct. 1, 1973, 11.6 mi<sup>2</sup> (30.0 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1964 to current year.

REVISED RECORDS.--WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Low-water concrete control since Dec. 9, 1970. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Low flow is partially sustained by sewage effluent. No know diversion above station. Recording rain gage at station.

AVERAGE DISCHARGE.--17 years, 14.0 ft<sup>3</sup>/s (0.396 m<sup>3</sup>/s), 10,140 acre-ft/yr (12.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft<sup>3</sup>/s (164 m<sup>3</sup>/s) Mar. 20, 1972, elevation, 69.20 ft (21.092 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s (42.5 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
Oct. 15	1845	1,720 48.7	61.82 18.843	June 11	0115	1,870 53.0	62.20 18.959
Apr. 23	1130	2,400 68.0	63.45 19.340	Aug. 31	1200	*3,880 110	66.37 20.230
May 3	1130	3,790 107	66.20 20.178				

Minimum daily discharge, 0.77 ft<sup>3</sup>/s (0.022 m<sup>3</sup>/s) Nov. 11-13.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	.88	4.0	3.7	10	2.0	3.0	2.2	6.3	7.4	7.0	91
2	3.7	.86	3.7	3.6	3.3	2.5	6.4	3.7	12	4.9	4.0	60
3	1.9	.84	3.0	2.4	1.8	2.0	4.1	866	13	6.6	1.5	20
4	2.0	.82	4.6	1.7	17	50	4.9	201	28	19	8.4	12
5	2.0	.80	4.7	1.7	47	15	4.9	46	175	99	4.1	8.6
6	2.4	.80	4.1	6.1	19	7.0	4.5	18	8.6	14	2.0	6.4
7	1.9	.80	3.2	1.9	5.5	4.0	4.9	11	6.4	179	1.5	5.4
8	2.8	.78	62	3.1	3.2	3.8	3.0	8.0	3.3	45	1.4	4.5
9	2.1	.78	33	1.8	2.7	4.1	4.9	71	4.5	20	1.3	4.0
10	2.8	.78	2.4	1.4	8.6	4.1	4.1	24	18	66	1.4	3.7
11	1.9	.77	1.6	1.4	4.9	4.5	4.1	12	215	21	2.5	3.4
12	1.5	.77	1.6	1.8	2.2	6.4	4.9	9.8	61	40	30	3.2
13	3.1	.77	1.2	2.7	2.2	3.7	5.4	7.4	23	20	28	3.0
14	2.8	.78	1.2	1.8	2.7	2.0	4.1	21	10	9.8	34	20
15	248	.78	4.2	2.5	2.2	1.6	3.7	5.8	7.4	5.8	4.5	10
16	34	2.0	2.6	2.5	2.5	1.8	8.6	6.4	7.4	4.9	2.5	6.0
17	5.5	6.0	1.6	2.7	2.5	2.2	2.7	3.7	6.9	25	1.5	5.0
18	123	3.0	1.6	2.7	2.0	2.5	2.7	2.5	4.9	5.4	3.4	4.5
19	22	1.5	1.4	103	2.0	2.7	3.0	2.7	4.1	2.2	18	4.0
20	3.0	1.0	1.6	29	2.5	2.7	2.5	2.7	3.3	3.3	3.0	3.7
21	1.5	2.0	2.3	4.3	5.8	3.3	4.9	3.3	3.0	2.7	1.8	3.5
22	1.2	10	2.9	2.5	15	2.5	6.9	3.0	3.0	2.5	1.4	3.3
23	1.2	5.0	3.2	3.0	5.0	2.5	239	2.9	7.3	2.5	2.0	3.2
24	1.0	2.0	2.7	3.7	2.0	5.4	9.8	2.4	6.9	3.3	10	3.1
25	.92	12	1.5	5.8	20	8.0	2.2	11	23	4.5	3.3	3.0
26	.92	30	4.8	3.3	10	4.5	1.8	3.4	39	9.8	3.1	3.0
27	11	10	6.5	5.5	5.0	2.0	1.2	4.0	20	20	3.6	3.0
28	1.8	6.0	5.2	2.7	3.0	2.2	2.5	3.2	6.4	4.9	2.8	3.3
29	1.4	4.5	5.5	1.7	---	5.4	1.8	12	5.4	2.2	2.9	3.7
30	1.0	4.0	13	3.0	---	6.4	1.0	12	17	2.0	22	4.5
31	.94	---	3.7	1.7	---	5.8	---	5.1	---	2.2	1380	---
TOTAL	495.28	111.01	194.6	214.7	209.6	172.6	357.5	1387.2	749.1	654.9	1592.9	312.0
MEAN	16.0	3.70	6.28	6.93	7.49	5.57	11.9	44.7	25.0	21.1	51.4	10.4
MAX	248	30	62	103	47	50	239	866	215	179	1380	91
MIN	.92	.77	1.2	1.4	1.8	1.6	1.0	2.2	3.0	2.0	1.3	3.0
AC-FT	982	220	386	426	416	342	709	2750	1490	1300	3160	619
CAL YR 1980	TOTAL	4843.19	MEAN	13.2	MAX	332	MIN	.77	AC-FT	9610		
WTR YR 1981	TOTAL	6451.39	MEAN	17.7	MAX	1380	MIN	.77	AC-FT	12800		

## SAN JACINTO RIVER BASIN

08074250 BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1970 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM 5 DAY UNINHIB (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB												
03...	1015	2.0	700	7.6	8.0	5	4.3	17.0	139	3.0	820000	210000
JUN												
03...	0955	17	420	8.5	25.0	20	14	9.2	110	6.9	520000	110000
AUG												
24...	1145	9.8	660	9.0	30.5	0	4.6	17.9	236	2.5	29000	2500
29...	1735	3.0	680	9.2	28.0	5	1.7	15.5	196	2.9	--	--

DATE	TIME	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB													
03...	13000	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
03...	2300	110	0	35	5.7	37	1.5	4.6	130	12	39	.2	.2
AUG													
24...	3000	160	0	49	10	81	2.9	2.4	220	1.0	77	.3	.3
29...	--	180	0	53	12	80	2.7	2.7	220	6.0	87	.3	.3

DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE (MG/L AS N)	NITRO- GEN, NITRITE (MG/L AS N)	NITRO- GEN, NO2+NO3 (MG/L AS N)	NITRO- GEN, AMMONIA (MG/L AS N)	NITRO- GEN, ORGANIC (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB													
03...	--	--	--	2	4	.53	.020	.55	.390	2.1	2.5	.650	--
JUN													
03...	13	224	53	25	.11	.020	.13	.040	.96	1.0	.540	13	13
AUG													
24...	23	376	32	8	.12	.040	.16	.260	.36	.62	.440	2.3	2.3
29...	19	393	22	8	.01	.000	.01	.060	1.1	1.2	.310	5.1	5.1

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN							
03...	0955	25	400	<1	0	<10	20
AUG							
24...	1145	5	370	<1	0	<10	<10
29...	1735	27	350	<1	0	2	16

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN						
03...	<10	9	.1	0	0	10
AUG						
24...	<10	2	.1	0	1	<3
29...	2	<1	.0	0	1	<3

SAN JACINTO RIVER BASIN

08074250 BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN 03...	0955	.00	.0	.00	.2	.00	.00	.00	.80
AUG 24...	1145	.00	.0	.00	.0	.00	.00	.00	.05
DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN 03...	.00	.00	.00	.00	.00	.03	.01	.08	.00
AUG 24...	.00	.00	.00	.00	.00	.00	.00	.00	.00
DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 03...	.09	.00	.00	.00	0	.00	.04	.01	.00
AUG 24...	.00	.00	.00	.00	0	.00	.00	.00	.00



STA. NO. 08074250		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR			
BRICKHOUSE GULLY AT COSTA RICA ST., HOUSTON, TEX.		STORM OF OCT. 15-16, 1980					DISCHARGE			
DATE & TIME		G A G E					ACCUM. WEIGHTED PRECIP.		IN	
		4150	4250	205R			IN.	CFS	IN.	IN.
OCT. 15										
0000		0.0	0.0	0.0			0.0	2.7	0.0011	
0600		0.0	0.0	0.0			0.0	2.0	0.0027	
1200		0.0	0.0	0.0			0.0	3.3	0.0050	
1615		0.0	0.0	0.0			0.0	2.2	0.0057	
1630		0.40	0.0	0.0			0.04	2.2	0.0058	
1645		1.45	0.0	0.04			0.17	2.2	0.0059	
1700		1.92	0.0	0.10			0.27	2.2	0.0059	
1715		2.39	0.0	0.95			0.95	2.2	0.0060	
1730		2.68	0.0	1.05			1.06	109.0	0.0097	
1745		2.94	0.0	1.40			1.34	631.0	0.0311	
1800		2.98	0.0	1.80			1.65	1520.0	0.0828	
1815		3.00	0.40	2.30			2.08	1540.0	0.1351	
1830		3.00	1.39	2.53			2.41	1580.0	0.1888	
1845		3.00	2.02	2.54			2.51	1720.0	0.2473	
1900		3.00	2.09	2.55			2.53	1650.0	0.3033	
1915		3.00	2.13	2.56			2.54	1590.0	0.3574	
1930		3.00	2.19	2.56			2.55	1520.0	0.4090	
1945		3.00	2.22	2.56			2.55	1460.0	0.5083	
2030		3.00	2.22	2.56			2.55	1120.0	0.6034	
2100		3.00	2.22	2.56			2.55	830.0	0.6598	
2130		3.00	2.22	2.56			2.55	600.0	0.7006	
2200		3.00	2.22	2.56			2.55	400.0	0.7278	
2230		3.00	2.22	2.56			2.55	290.0	0.7475	
2300		3.00	2.22	2.56			2.55	220.0	0.7699	
2400		3.00	2.22	2.56			2.55	150.0	0.7903	
OCT. 16										
0000		3.00	2.22	2.56			2.55	150.0	0.7903	
0100		3.00	2.22	2.56			2.55	110.0	0.8090	
0230		3.00	2.22	2.56			2.55	81.0	0.8255	
0400		3.00	2.22	2.56			2.55	63.0	0.8384	
0530		3.00	2.22	2.56			2.55	50.0	0.8452	
0600		3.00	2.22	2.56			2.55	46.0	0.8530	
0800		3.00	2.22	2.56			2.55	37.0	0.8630	
1000		3.00	2.22	2.56			2.55	29.0	0.8709	
1200		3.00	2.22	2.56			2.55	23.0	0.8780	
1430		3.00	2.22	2.56			2.55	18.0	0.8853	
1800		3.00	2.22	2.56			2.55	12.0	0.8930	
2400		3.00	2.22	2.56			2.55	6.4	0.8956	

STA. NO. 08074250		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR	
BRICKHOUSE GULLY AT COSTA RICA ST., HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981					DISCHARGE!	ACCUM.
DATE & TIME	4150	4200	4250	G A G E	N U M B E R	21R	IN	IN.
AUG. 30								
0000	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0015
0600	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0045
1200	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0063
1300	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0067
1330	0.0	0.12	0.0	0.20	0.20	0.0	3.7	0.0069
1400	0.0	0.12	0.0	0.20	0.20	0.0	8.6	0.0075
1430	0.0	0.12	0.0	0.20	0.20	0.05	99.0	0.0142
1500	0.0	0.12	0.0	0.20	0.20	0.09	65.0	0.0186
1530	0.0	0.12	0.0	0.20	0.20	0.09	46.0	0.0233
1630	0.0	0.12	0.0	0.20	0.20	0.09	29.0	0.0283
1800	0.0	0.12	0.0	0.20	0.20	0.09	17.0	0.0329
2030	0.0	0.12	0.0	0.20	0.20	0.09	12.0	0.0353
2100	0.0	0.12	0.0	0.23	0.23	0.19	12.0	0.0361
2130	0.02	0.12	0.23	0.23	0.23	0.19	57.0	0.0400
2200	0.18	0.12	0.23	0.23	0.23	0.19	37.0	0.0425
2230	0.18	0.24	0.23	0.45	0.23	0.23	26.0	0.0443
2300	0.19	0.48	0.24	0.57	0.36	0.36	48.0	0.0476
2330	0.43	0.48	0.53	0.58	0.36	0.36	233.0	0.0634
2400	0.60	0.72	0.64	0.86	0.36	0.36	216.0	0.0744
AUG. 31								
0000	0.60	0.72	0.64	0.86	0.36	0.36	216.0	0.0744
0015	0.60	0.84	0.64	1.09	0.38	0.38	230.0	0.0822
0030	0.60	1.20	0.66	1.36	0.51	0.51	416.0	0.0964
0045	0.71	1.44	0.77	1.51	0.69	0.69	800.0	0.1235
0100	0.93	1.68	1.33	1.64	1.15	1.15	1130.0	0.1619
0115	1.45	1.80	1.66	1.72	1.35	1.35	1180.0	0.2020
0130	1.54	1.80	1.74	1.78	1.60	1.60	1200.0	0.2428
0145	1.67	1.92	1.85	1.87	1.62	1.62	1120.0	0.2809
0200	1.75	2.04	1.92	2.11	1.66	1.66	1130.0	0.3193
0215	1.80	2.40	1.94	3.16	1.95	1.95	1080.0	0.3560
0230	1.91	3.24	2.04	3.30	2.18	2.18	1790.0	0.4168
0245	1.93	3.36	2.37	3.33	2.50	2.50	2650.0	0.5069
0300	2.62	3.36	3.05	3.34	2.52	2.52	3090.0	0.6119
0315	3.40	3.36	3.27	3.37	2.58	2.58	3150.0	0.7189
0330	3.50	3.36	3.31	3.48	2.60	2.60	3040.0	0.8222
0345	3.51	3.48	3.33	3.52	2.69	2.69	2580.0	0.9099
0400	3.52	3.60	3.36	3.57	2.91	2.91	2370.0	0.9904
0415	3.59	3.60	3.42	3.59	2.97	2.97	2050.0	1.0601
0430	3.62	3.60	3.45	3.64	3.01	3.01	1790.0	1.1209
0445	3.65	3.72	3.49	3.86	3.02	3.02	1570.0	1.1743

STA. NO. 08074250		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
BRICKHOUSE GULLY AT COSTA RICA ST., HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981										DISCHARGE	
DATE & TIME		G A G E										ACCUM. WEIGHTED PRECIP. IN.	IN.
		4150	4200	4250	205R	21R	21R	21R	21R	21R	21R		
AUG. 31													
0500		3.69	3.96	3.51	3.92	3.04						1480.0	1.2246
0515		3.69	3.96	3.57	3.95	3.20						1470.0	1.2745
0530		3.81	3.96	3.73	4.07	3.24						1430.0	1.3231
0545		3.95	4.08	3.77	4.14	3.27						1370.0	1.3697
0600		3.99	4.32	3.86	4.35	3.46						1370.0	1.4162
0615		4.10	4.44	3.95	4.41	3.55						1440.0	1.4652
0630		4.16	4.56	4.03	4.51	3.97						1440.0	1.5141
0645		4.23	4.80	4.05	4.73	4.42						1370.0	1.5607
0700		4.29	4.92	4.08	4.80	4.70						1370.0	1.6072
0715		4.32	4.92	4.24	4.82	4.95						1730.0	1.6660
0730		4.46	4.92	4.37	4.84	5.04						1790.0	1.7268
0745		4.63	5.04	4.44	4.90	5.09						1870.0	1.7904
0800		4.68	5.04	4.47	4.94	5.15						1790.0	1.8512
0815		4.70	5.04	4.54	4.98	5.20						1730.0	1.9100
0830		4.72	5.16	4.55	5.06	5.25						1630.0	1.9654
0845		4.79	5.16	4.56	5.08	5.27						1510.0	2.0167
0900		4.80	5.16	4.63	5.11	5.32						1410.0	2.0646
0915		4.83	5.28	4.67	5.14	5.33						1290.0	2.1084
0930		4.88	5.28	4.69	5.20	5.45						1180.0	2.1485
0945		4.91	5.40	4.72	5.22	5.57						1100.0	2.1859
1000		4.94	5.76	4.80	5.56	5.64						1070.0	2.2223
1015		5.00	5.88	4.82	5.66	5.68						1360.0	2.2685
1030		5.02	6.24	5.11	5.96	5.81						1450.0	2.3178
1045		5.31	6.36	5.12	6.08	6.48						1790.0	2.3786
1100		5.46	6.72	5.53	6.51	7.04						2200.0	2.4534
1115		5.72	7.32	5.54	7.11	7.23						2650.0	2.5434
1130		5.73	7.56	5.72	7.31	7.70						3290.0	2.6538
1145		6.53	7.68	6.03	7.36	7.82						3620.0	2.7769
1200		6.93	7.68	6.07	7.41	7.87						3880.0	2.9087
1215		7.09	7.68	6.14	7.42	7.90						3820.0	3.0385
1230		7.10	7.68	6.17	7.43	7.91						3630.0	3.1619
1245		7.12	7.68	6.21	7.44	7.93						3350.0	3.2757
1300		7.14	7.68	6.25	7.49	7.97						3120.0	3.3817
1315		7.17	7.80	6.25	7.50	7.99						2770.0	3.4759
1330		7.19	7.80	6.26	7.52	8.02						2530.0	3.5618
1345		7.21	7.80	6.26	7.53	8.03						2260.0	3.6386
1400		7.22	7.80	6.29	7.54	8.04						2070.0	3.7090
1415		7.22	7.80	6.30	7.55	8.10						1870.0	3.7725
1430		7.23	7.80	6.32	7.57	8.10						1700.0	3.8303

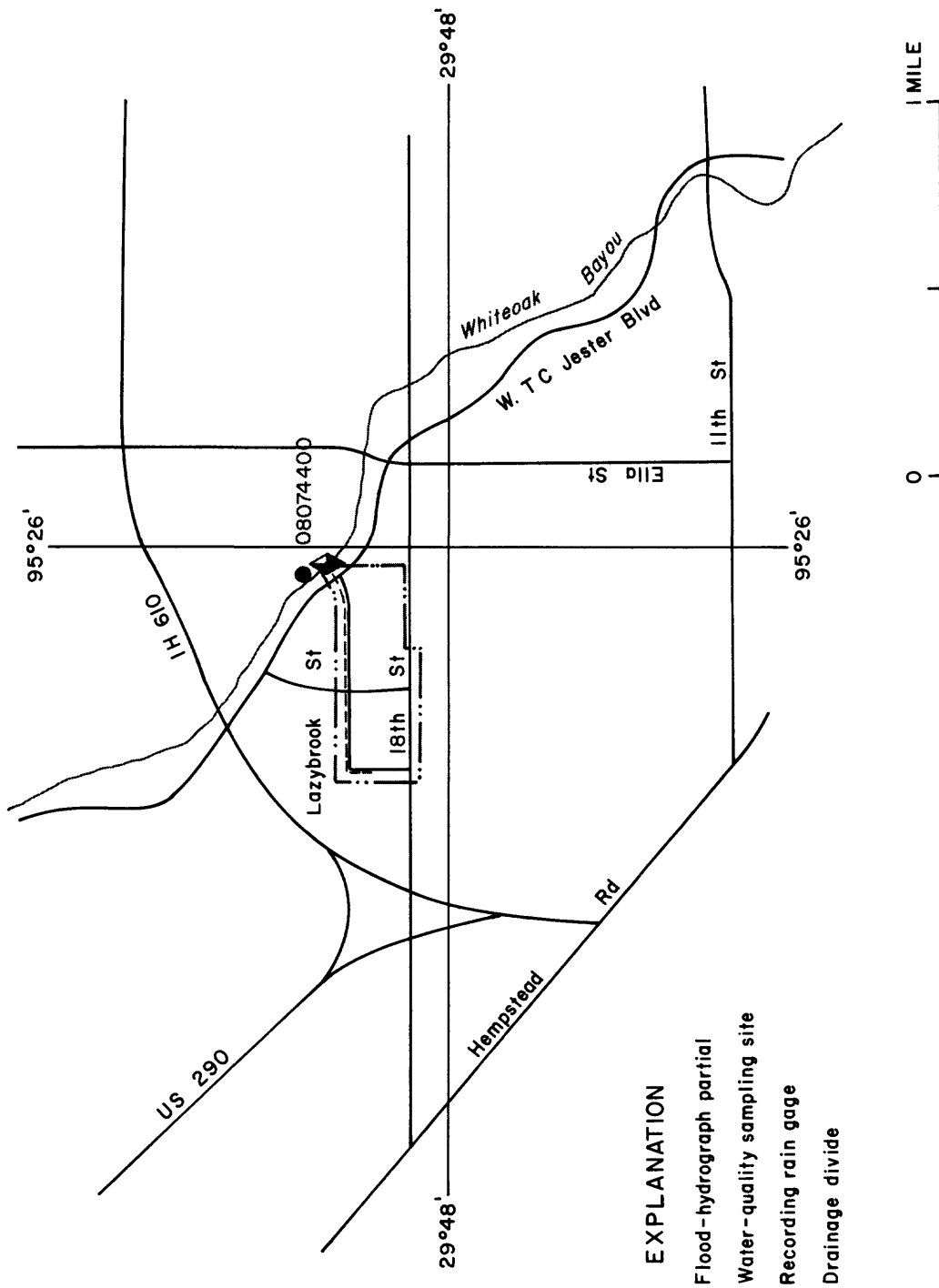
STA. NO. 08074250		STORM RAINFALL AND RUNOFF RECORD												
BRICKHOUSE GULLY AT COSTA RICA ST., HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981					ACCUM. WEIGHTED PRECIP.		DISCHARGE IN		1981 WATER YEAR			
DATE & TIME		G A G E					N U M B E R		IN.		CFS		IN.	
		4150	4200	4250	205R	21R								
AUG. 31														
1445		7.23	7.80	6.32	7.59	8.12			7.55	1620.0		3.8854		
1500		7.24	7.80	6.34	7.60	8.13			7.56	1430.0		3.9340		
1515		7.25	7.80	6.34	7.61	8.13			7.56	1340.0		3.9795		
1530		7.27	7.80	6.34	7.62	8.13			7.57	1200.0		4.0203		
1545		7.31	7.80	6.34	7.62	8.13			7.57	1080.0		4.0570		
1600		7.32	7.80	6.35	7.62	8.14			7.57	991.0		4.0906		
1615		7.32	7.80	6.35	7.62	8.15			7.57	902.0		4.1519		
1700		7.32	7.80	6.35	7.62	8.15			7.57	692.0		4.1990		
1715		7.35	7.80	6.35	7.62	8.15			7.58	640.0		4.2316		
1745		7.35	7.80	6.35	7.62	8.15			7.58	509.0		4.2575		
1800		7.35	7.80	6.35	7.64	8.15			7.58	471.0		4.2735		
1815		7.35	7.92	6.35	7.72	8.16			7.64	443.0		4.2886		
1830		7.35	8.04	6.35	7.84	8.38			7.76	416.0		4.3027		
1845		7.37	8.04	6.37	7.84	8.66			7.82	394.0		4.3161		
1900		7.46	8.04	6.40	7.84	8.92			7.88	438.0		4.3310		
1915		7.57	8.04	6.40	7.84	8.92			7.89	480.0		4.3473		
1930		7.58	8.04	6.40	7.84	8.92			7.89	518.0		4.3649		
1945		7.58	8.04	6.40	7.84	8.98			7.90	548.0		4.3835		
2000		7.58	8.04	6.40	7.84	8.98			7.90	561.0		4.4217		
2045		7.58	8.04	6.40	7.84	8.98			7.90	462.0		4.5473		
2400		7.58	8.04	6.40	7.84	8.98			7.90	197.0		4.6176		
SEP. 1														
0000		7.58	8.04	6.40	7.84	8.98			7.90	197.0		4.6176		
0200		7.58	8.04	6.40	7.84	8.98			7.90	149.0		4.6479		
0300		7.58	8.16	6.40	7.94	9.03			7.97	134.0		4.6662		
0400		7.58	8.16	6.40	7.94	9.04			7.98	134.0		4.6844		
0500		7.58	8.16	6.40	7.94	9.06			7.98	127.0		4.7016		
0600		7.58	8.16	6.40	7.94	9.06			7.98	115.0		4.7251		
0800		7.58	8.16	6.40	7.94	9.06			7.98	99.0		4.7453		
0900		7.58	8.16	6.40	7.94	9.12			7.99	90.0		4.7575		
1000		7.58	8.16	6.40	7.94	9.12			7.99	91.0		4.7699		
1100		7.58	8.16	6.40	7.94	9.12			7.99	81.0		4.7809		
1200		7.58	8.16	6.40	7.94	9.12			7.99	75.0		4.7911		
1300		7.60	8.16	6.40	7.94	9.12			7.99	70.0		4.8196		
1800		7.60	8.16	6.40	7.94	9.12			7.99	56.0		4.8615		
2400		7.60	8.16	6.40	7.94	9.12			7.99	48.0		4.8811		

## LAZYBROOK STREET STORM SEWER DRAINAGE BASIN

The locations of data-collection sites in the Lazybrook Street Storm Sewer drainage basin are shown in figure 9.

Weighted-mean rainfall for the 1981 water year was not determined.

The storms of April 23, May 4, June 25, and July 10 were selected for analysis at station 08074400, Lazybrook Street Storm Sewer at Houston.



Base from USGS Topographic  
Quadrangle

Figure 9.-Locations of data-collection sites in and near the Lazybrook Street Storm Sewer drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 7 -- Storm rainfall-runoff data, 1981 Water Year, Lazybrook Street Storm Sewer

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Lazybrook Street Storm Sewer at Houston, TX. (Drainage area -- 0.13 mi <sup>2</sup> )								
April 23, 1981	1.1	1.73	0.68	1.33	1.45	0.78	0.45	119 **,++
May 4, 1981	9.9	1.50	0.95	1.08	1.09	0.95	0.63	119 **,++
June 25, 1981	0.7	1.81	0.64	1.17	1.63	0.67	0.37	89
July 10, 1981	0.2	0.64	0.56	0.63	0.63	0.35	0.55	50

\* - Annual peak discharge for 1981 Water Year.

++ - Peak discharge for period of record.

# SAN JACINTO RIVER BASIN

08074400 LAZYBROOK STREET STORM SEWER AT HOUSTON, TX  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°48'15", long 95°26'04", Harris County, Hydrologic Unit 12040104, over a 54-inch (1,372 mm) storm sewer 30 ft (9 m) north of the intersection of Lazybrook Street and West T. C. Jester Boulevard, Houston.

DRAINAGE AREA.--0.13 mi<sup>2</sup> (0.34 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Flood-hydrograph and rainfall recorder. Datum of gage is -0.10 ft (0.030 m) National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1980".

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 119 ft<sup>3</sup>/s (3.37 m<sup>3</sup>/s) represents full storm sewer discharge and usually occurs many times annually, gage height, 58.09 ft (17.706 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 85 ft<sup>3</sup>/s (2.41 m<sup>3</sup>/s), revised, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Apr. 23	0940	*119 3.37	58.09 17.706	June 25	1125	89 2.52	57.58 17.550
May 3	1010	*119 3.37	58.09 17.706	June 26	1800	114 3.23	58.00 17.678
May 4	1800	*119 3.37	58.09 17.706	Aug. 31	1050	112 3.17	57.97 17.669

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: March 1980 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
MAR												
04...	0305	.55	436	--	--	--	20	--	--	--	--	--
04...	0320	1.4	221	--	--	--	40	--	--	--	--	--
04...	0335	1.3	263	--	--	--	20	--	--	--	--	--
04...	0350	.96	313	--	--	--	15	--	--	--	--	--
04...	0405	1.1	200	--	--	--	15	--	--	--	--	--
04...	0420	1.0	156	--	--	--	20	--	--	--	--	--
04...	0435	.75	123	--	--	--	35	--	--	--	--	--
04...	0450	.55	132	--	--	--	25	--	--	--	--	--
APR												
23...	0909	.71	725	--	--	--	20	--	--	--	--	--
23...	0915	2.6	355	8.3	22.5	60	75	43	150000	30000	100000	90
23...	0924	4.5	329	--	--	50	25	--	--	--	--	--
23...	0939	119	205	--	--	30	39	--	--	--	--	--
23...	0949	99	91	6.9	20.0	50	33	18	200000	35000	94000	22
23...	0954	78	203	--	--	40	24	--	--	--	--	--
23...	1009	17	282	--	--	--	25	--	--	--	--	--
23...	1016	10	135	6.9	19.0	40	32	--	460000	180000	99000	--
23...	1024	6.2	194	--	--	60	20	--	--	--	--	--
23...	1039	3.2	198	--	--	--	15	--	--	--	--	--
23...	1054	1.7	197	--	--	--	15	--	--	--	--	--
MAY												
03...	0710	.55	848	--	--	--	--	--	--	--	--	--
03...	0725	2.6	310	--	--	--	--	--	--	--	--	--
03...	0740	2.4	325	--	--	--	--	--	--	--	--	--
03...	0755	4.0	203	--	--	--	--	--	--	--	--	--
03...	0810	9.4	200	--	--	--	--	--	--	--	--	--
03...	0825	5.6	206	--	--	--	--	--	--	--	--	--
03...	0840	4.4	168	--	--	--	--	--	--	--	--	--
03...	0855	4.7	170	--	--	--	--	--	--	--	--	--
04...	1743	.55	244	--	--	120	--	--	--	--	--	--
04...	1758	119	55	--	--	30	--	--	--	--	--	--
04...	1813	68	64	--	--	--	--	--	--	--	--	--
04...	1828	21	78	--	--	50	--	--	--	--	--	--
04...	1843	10	72	--	--	--	--	--	--	--	--	--
04...	1858	6.4	78	--	--	--	--	--	--	--	--	--
04...	1913	4.9	79	--	--	70	--	--	--	--	--	--
04...	1928	5.2	80	--	--	--	--	--	--	--	--	--
JUN												
25...	1050	1.5	398	--	--	60	16	--	1200000	440000	62000	--
25...	1105	27	120	--	--	--	20	--	--	--	--	--



## SAN JACINTO RIVER BASIN

08074400 LAZYBROOK STREET STORM SEWER AT HOUSTON, TX--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
APR											
23...	--	--	--	--	--	--	--	--	--	--	--
23...	6	31	2.9	38	1.8	7.0	84	20	35	.3	8.2
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	7	7.5	.8	5.5	.5	6.6	15	14	5.6	.2	1.0
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	1.8
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
APR											
23...	--	--	--	--	--	--	--	--	--	--	--
23...	197	304	5	1.1	.000	1.1	.050	6.5	6.5	3.700	42
23...	--	306	64	2.3	.120	2.4	.650	6.3	6.9	1.900	83
23...	--	358	75	1.9	.060	2.0	.810	3.9	4.7	1.500	42
23...	50	102	26	.90	.000	.90	2.200	1.5	3.7	1.500	21
23...	--	105	34	1.6	.020	1.6	1.100	1.8	2.9	1.300	29
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	770	28	1.4	.030	1.4	2.400	2.4	4.8	2.000	--
23...	--	84	14	.09	.000	.09	.010	3.2	3.2	1.600	25
23...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	101	20	--	--	--	--	--	--	--	--
04...	--	36	3	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	14	1	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	6	2	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	--	35	27	.06	.010	.07	.680	2.7	3.4	1.000	29
25...	--	--	--	--	--	--	--	--	--	--	--

## SAN JACINTO RIVER BASIN

08074400 LAZYBROOK STREET STORM SEWER AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCT KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
JUN											
25...	1120	68	179	30	21	200000	110000	12000	--	--	--
25...	1135	53	151	30	8.0	160000	120000	10000	--	--	--
25...	1150	22	69	--	15	--	--	--	--	--	--
25...	1205	9.2	95	--	15	--	--	--	--	--	--
25...	1220	5.7	127	--	10	--	--	--	--	--	--
25...	1235	4.0	129	40	8.0	140000	36000	7000	--	--	--
JUL											
07...	0020	.55	255	30	5.0	--	--	--	--	--	--
07...	0035	2.2	242	20	20	--	--	--	--	--	--
07...	0050	4.5	59	30	15	--	--	--	--	--	--
07...	0105	2.2	101	--	10	--	--	--	--	--	--
07...	0120	1.1	93	50	10	--	--	--	--	--	--
07...	0135	.67	97	--	5.0	--	--	--	--	--	--
07...	0230	.55	99	--	5.0	--	--	--	--	--	--
07...	0245	1.4	100	--	5.0	--	--	--	--	--	--
10...	1753	1.0	564	50	10	--	--	--	--	--	--
10...	1808	47	168	50	20	--	--	--	--	--	--
10...	1822	23	55	40	10	--	--	--	13	1	4.5
10...	1823	23	150	--	10	--	--	--	--	--	--
10...	1838	11	107	40	5.0	--	--	--	--	--	--
10...	1853	5.4	125	--	5.0	--	--	--	--	--	--
10...	1908	3.1	106	--	5.0	--	--	--	--	--	--
10...	1920	2.1	90	70	5.0	--	--	--	25	4	8.2
10...	1923	1.9	104	--	5.0	--	--	--	--	--	--
10...	1938	1.2	109	--	5.0	--	--	--	--	--	--

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUN										
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	.5	3.2	.4	2.6	13	4.1	4.1	.0	2.6	30
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	1.0	5.3	.5	3.7	21	5.0	6.2	.0	4.7	43
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--

## SAN JACINTO RIVER BASIN

08074400 LAZYBROOK STREET STORM SEWER AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
JUN										
25...	47	20	.94	.160	1.1	1.000	1.9	2.9	.920	18
25...	18	1	1.4	.100	1.5	.970	1.6	2.6	.820	16
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	13	1	.87	.080	.95	.810	1.2	2.0	.710	11
JUL										
07...	0	13	.54	.130	.67	2.000	.20	2.2	.900	11
07...	4	4	.55	.120	.67	1.100	.70	1.8	.620	11
07...	20	6	.33	.030	.36	.420	.68	1.1	.230	8.2
07...	--	--	--	--	--	--	--	--	--	--
07...	7	4	.54	.030	.57	.590	.71	1.3	.500	.8
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--
10...	21	7	.47	.050	.52	3.400	.20	3.6	2.900	13
10...	33	11	.61	.030	.64	1.100	1.0	2.1	.750	13
10...	18	2	.58	.020	.60	.400	1.2	1.6	.580	10
10...	--	--	--	--	--	--	--	--	--	--
10...	11	3	.81	.030	.84	.620	.98	1.6	.700	9.4
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
10...	5	4	.79	.040	.83	.370	1.2	1.6	.810	13
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
APR							
23...	0915	1	200	8	0	0	170
23...	0949	1	400	0	0	0	50
23...	1016	2	20	1	0	<10	70

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR							
23...		100	70	.1	1	0	60
23...		0	10	.1	1	0	40
23...		11	30	.1	0	0	50

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
APR									
23...	0915	<5.0	<5.0	<.50	68	<.50	<.50	<.50	.95
23...	0949	.00	.0	.00	.5	.00	.01	.02	.71

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR- EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
APR									
23...	<.50	<.50	<.50	.00	2.4	<.50	.14	.00	<.50
23...	.07	.00	.00	.00	.01	.04	.03	3.0	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
APR									
23...	.00	.00	<.50	.00	<5	.00	.00	.00	.00
23...	.00	.00	.00	.00	0	.00	.15	.12	.02

STA. NO. 08074400		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
LAZYBROOK STREET STORM SEWER AT HOUSTON, TEX.		STORM OF APR. 23, 1981				DISCHARGE! ACCUM. RUNOFF			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN			
		4400				CFS IN			
APR. 23									
0000	0.0					0.0	0.1	0.0036	0.0036
0600	0.0					0.0	0.1	0.0088	0.0088
0845	0.0					0.0	0.1	0.0105	0.0105
0850	0.02					0.02	0.1	0.0106	0.0106
0855	0.04					0.04	0.1	0.0107	0.0107
0900	0.06					0.06	0.1	0.0108	0.0108
0905	0.08					0.08	0.3	0.0111	0.0111
0910	0.10					0.10	0.8	0.0119	0.0119
0915	0.12					0.12	2.6	0.0145	0.0145
0920	0.34					0.34	3.9	0.0183	0.0183
0925	0.57					0.57	4.6	0.0229	0.0229
0930	0.80					0.80	12.0	0.0348	0.0348
0935	1.01					1.01	44.0	0.0785	0.0785
0940	1.23					1.23	119.0	0.1967	0.1967
0945	1.45					1.45	109.0	0.3050	0.3050
0950	1.47					1.47	96.0	0.4004	0.4004
0955	1.49					1.49	73.0	0.4729	0.4729
1000	1.51					1.51	41.0	0.5136	0.5136
1005	1.51					1.51	25.0	0.5384	0.5384
1010	1.51					1.51	16.0	0.5943	0.5943
1015	1.52					1.52	11.0	0.5707	0.5707
1025	1.52					1.52	6.0	0.5797	0.5797
1030	1.53					1.53	4.8	0.5844	0.5844
1035	1.54					1.54	3.9	0.5883	0.5883
1040	1.55					1.55	3.1	0.5914	0.5914
1045	1.56					1.56	2.5	0.6075	0.6075
1145	1.56					1.56	0.7	0.6120	0.6120
1150	1.59					1.59	0.6	0.6126	0.6126
1155	1.62					1.62	0.6	0.6132	0.6132
1200	1.66					1.66	1.0	0.6202	0.6202
1305	1.66					1.66	0.6	0.6244	0.6244
1310	1.67					1.67	0.5	0.6249	0.6249
1315	1.68					1.68	0.5	0.6256	0.6256
1325	1.68					1.68	0.4	0.6262	0.6262
1330	1.69					1.69	0.4	0.6268	0.6268
1340	1.69					1.69	2.2	0.6301	0.6301
1345	1.70					1.70	2.8	0.6356	0.6356
1400	1.70					1.70	2.2	0.7700	0.7700
2400	1.73					1.73	0.1	0.7760	0.7760

STA. NO. 08074400		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
LAZYBROOK STREET STORM SEWER AT HOUSTON, TEX.		STORM OF MAY 4, 1981				DISCHARGE!			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN.		IN	
		4400						CFS	
MAY 4									
0000		0				0		0	0
0015		0				0		0	0
0025		0				0		0	0
0030		0				0		0	0
0045		0				0		0	0
0050		0				0		0	0
0055		0				0		0	0
0600		0				0		0	0
0610		0				0		0	0
0615		0				0		0	0
0625		0				0		0	0
0815		0				0		0	0
0820		0				0		0	0
0825		0				0		0	0
0830		0				0		0	0
0835		0				0		0	0
0840		0				0		0	0
0845		0				0		0	0
0850		0				0		0	0
0855		0				0		0	0
0900		0				0		0	0
0910		0				0		0	0
0915		0				0		0	0
1200		0				0		0	0
1745		0				0		0	0
1750		0				0		0	0
1755		0				0		0	0
1800		0				0		0	0
1805		0				0		0	0
1810		0				0		0	0
1815		0				0		0	0
1820		0				0		0	0
1825		0				0		0	0
1830		0				0		0	0
1835		0				0		0	0
1840		0				0		0	0
1845		0				0		0	0
1900		0				0		0	0
2400		0				0		0	0

STA. NO. 08074400		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
LAZYBROOK STREET STORM SEWER AT HOUSTON, TEX.		STORM OF JUNE 25, 1981				DISCHARGE: ACCUM.			
DATE & TIME		G A G E N U M B E R				PRECIP. IN.			
		4400				CFS			
JUNE 25									
0000	0.0					0.0	0.0	0.0	0.0
0600	0.0					0.0	0.1	0.0063	0.0
1030	0.0					0.0	0.1	0.0090	0.0090
1035	0.01					0.01	0.1	0.0091	0.0091
1040	0.03					0.03	0.1	0.0092	0.0092
1045	0.05					0.05	0.2	0.0094	0.0094
1050	0.22					0.22	1.5	0.0109	0.0109
1055	0.40					0.40	20.0	0.0307	0.0307
1100	0.58					0.58	32.0	0.0625	0.0625
1105	0.79					0.79	27.0	0.0893	0.0893
1110	1.00					1.00	25.0	0.1142	0.1142
1115	1.22					1.22	41.0	0.1549	0.1549
1120	1.35					1.35	68.0	0.2225	0.2225
1125	1.49					1.49	89.0	0.3109	0.3109
1130	1.63					1.63	73.0	0.3834	0.3834
1135	1.64					1.64	53.0	0.4360	0.4360
1140	1.65					1.65	40.0	0.4758	0.4758
1145	1.67					1.67	30.0	0.5056	0.5056
1150	1.68					1.68	22.0	0.5274	0.5274
1155	1.69					1.69	16.0	0.5433	0.5433
1200	1.70					1.70	12.0	0.5552	0.5552
1205	1.71					1.71	9.2	0.5644	0.5644
1210	1.72					1.72	7.3	0.5716	0.5716
1215	1.73					1.73	6.4	0.5843	0.5843
1230	1.73					1.73	4.5	0.5933	0.5933
1235	1.74					1.74	3.9	0.5971	0.5971
1240	1.75					1.75	3.5	0.6006	0.6006
1245	1.76					1.76	3.1	0.6083	0.6083
1305	1.76					1.76	1.9	0.6130	0.6130
1310	1.77					1.77	1.6	0.6146	0.6146
1315	1.78					1.78	1.6	0.6162	0.6162
1320	1.79					1.79	1.5	0.6177	0.6177
1325	1.80					1.80	1.5	0.6192	0.6192
1330	1.81					1.81	1.5	0.6602	0.6602
1800	1.81					1.81	0.1	0.6664	0.6664
2400	1.81					1.81	0.1	0.6700	0.6700

STA. NO. 08074400		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
LAZYBROOK STREET STORM SEWER AT HOUSTON, TEX.		STORM OF JULY 10, 1981				DISCHARGE: ACCUM.			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP.		IN RUNOFF	
4400						IN.		CFS IN.	
JULY 10									
0000	0.0					0.0		0.0	0.0
0600	0.0					0.0		0.1	0.0072
1200	0.0					0.0		0.1	0.0142
1745	0.0					0.0		0.1	0.0176
1750	0.18					0.18		0.1	0.0177
1755	0.37					0.37		5.2	0.0229
1800	0.56					0.56		44.0	0.0666
1805	0.58					0.58		50.0	0.1163
1810	0.60					0.60		40.0	0.1560
1815	0.63					0.63		34.0	0.2067
1825	0.63					0.63		22.0	0.2394
1830	0.63					0.63		17.0	0.2648
1840	0.63					0.63		10.0	0.2797
1845	0.63					0.63		7.9	0.2875
1850	0.63					0.63		6.3	0.3032
1910	0.63					0.63		3.0	0.3106
1915	0.64					0.64		2.5	0.3230
2000	0.64					0.64		0.8	0.3457
2400	0.64					0.64		0.2	0.3504

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 8.--Storm rainfall-runoff data, 1981 Water Year, Whiteoak Bayou

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Whiteoak Bayou at Houston, TX. (Drainage area -- 86.3 mi <sup>2</sup> )								
May 3-4, 1981	12.0	4.77	0.41	0.82	1.60	2.91	0.54	7,530
May 4-8, 1981	11.0	0.65	0.48	0.95	1.08			2,970
Aug. 30-Sept. 5, 1981	17.0	8.12	0.62	1.23	1.89	4.68	0.58	12,700 *
				</				

\* - Annual peak discharge for 1981 Water Year.



## SAN JACINTO RIVER BASIN

08074500 WHITEOAK BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°46'30", long 95°23'49", Harris County, Hydrologic Unit 12040104, at downstream side of downstream bridge on Heights Boulevard in Houston, 560 ft (171 m) downstream from Texas and New Orleans Railroad Co. bridge, 2.4 mi (3.9 km) upstream from Little Whiteoak Bayou, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--86.3 mi<sup>2</sup> (223.5 km<sup>2</sup>). Prior to Oct. 1, 1976, 84.7 mi<sup>2</sup> (219.4 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year (October 1965 to September 1966, monthly discharge only).

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 7.35 ft (2.240 m) below National Geodetic Vertical Datum of 1929; unadjusted for land-surface subsidence. Prior to June 17, 1936, nonrecording gage, and June 17, 1936, to Apr. 28, 1965, water-stage recorder at site 480 ft (146 m) upstream at same datum.

REMARKS.--Water-discharge records fair. Low flow is partly sustained by industrial waste. No diversion above station.

AVERAGE DISCHARGE.--45 years, 80.7 ft<sup>3</sup>/s (2.285 m<sup>3</sup>/s), 58,470 acre-ft/yr (72.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft<sup>3</sup>/s (490 m<sup>3</sup>/s) Mar. 20, 1972, gage height, 43.50 ft (13.259 m); maximum gage height, 43.60 ft (13.289 m) Nov. 13, 1961; no flow for many days during 1965 water year (result of construction dams).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1919, 51.5 ft (15.70 m) Dec. 9, 1935, prior to channel rectification, present site and datum, discharge 14,750 ft<sup>3</sup>/s (418 m<sup>3</sup>/s), furnished by the engineer for Harris County. The flood of May 31, 1929, reached a stage of 47.0 + 0.5 ft (14.33 + 0.15 m), prior to channel rectification, present site and datum, discharge 9,360 ft<sup>3</sup>/s (265 m<sup>3</sup>/s), computed on basis of current-meter measurement at stage 1.0 ft (0.30 m) below crest, furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft<sup>3</sup>/s (113 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 15	2100	5,720 162	29.31 8.939	June 5	0930	4,090 116	26.74 8.150
Apr. 23	1115	4,360 123	27.18 8.284	Aug. 31	1330	*12,700 360	38.21 11.646
May 3	2130	7,530 213	31.86 9.711				

Minimum daily discharge, 21 ft<sup>3</sup>/s (0.59 m<sup>3</sup>/s) for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	21	22	25	149	39	36	42	32	70	41	1940
2	36	21	22	25	84	34	33	39	179	29	42	747
3	26	22	22	25	33	32	33	3760	269	27	33	315
4	25	21	22	24	116	549	40	2030	176	47	33	165
5	24	21	22	25	308	128	33	538	1470	642	32	92
6	26	21	22	54	257	44	32	205	285	166	30	58
7	25	21	25	30	69	32	30	117	190	1050	29	45
8	23	22	240	27	41	30	36	66	69	367	28	40
9	24	21	437	26	36	30	30	640	37	301	28	42
10	24	23	61	24	78	31	29	1390	186	70	30	36
11	28	22	32	24	41	33	30	349	1450	50	50	36
12	22	23	27	25	32	41	29	172	716	80	100	35
13	24	22	24	26	33	50	27	96	487	100	180	37
14	25	22	24	28	32	39	27	174	152	70	200	178
15	1090	23	32	25	30	35	27	71	62	57	100	131
16	1210	26	30	27	31	36	30	56	51	41	40	45
17	162	92	28	28	30	38	28	43	49	63	30	34
18	937	26	26	26	30	36	27	37	35	82	50	33
19	863	25	25	579	30	35	27	35	31	36	73	41
20	185	25	25	455	30	34	27	31	29	41	50	35
21	71	25	28	99	35	48	30	31	29	36	35	35
22	41	174	28	42	102	47	30	29	29	32	30	37
23	32	60	27	32	34	33	1020	28	50	31	35	38
24	27	33	26	29	30	33	302	28	97	34	50	39
25	27	124	25	29	252	34	63	74	284	45	35	41
26	25	365	30	29	96	32	34	39	255	163	30	43
27	151	59	30	45	39	33	27	32	177	105	30	49
28	29	30	27	30	33	33	28	30	60	72	30	47
29	23	25	25	27	---	40	30	54	30	35	35	42
30	22	22	40	28	---	43	27	98	124	39	200	42
31	22	---	26	26	---	37	---	54	---	41	9000	---
TOTAL	5381	1437	1480	1944	2111	1739	2202	10388	7090	4022	10709	4498
MEAN	174	47.9	47.7	62.7	75.4	56.1	73.4	335	236	130	345	150
MAX	1210	365	437	579	308	549	1020	3760	1470	1050	9000	1940
MIN	22	21	22	24	30	30	27	28	29	27	28	33
AC-FT	10670	2850	2940	3860	4190	3450	4370	20600	14060	7980	21240	8920
(††)	6.30	1.96	1.21	2.43	2.49	1.35	2.50	8.22	7.75	4.95	8.09	2.45

CAL YR 1980 TOTAL 37528 MEAN 103 MAX 1910 MIN 21 AC-FT 74440 †† 40.71  
WTR YR 1981 TOTAL 53001 MEAN 145 MAX 9000 MIN 21 AC-FT 105100 †† 49.70

†† Weighted-mean rainfall, in inches, based on thirteen rain gages.

## SAN JACINTO RIVER BASIN

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DATE	TIME											
FEB												
03...	1110	31	680	7.1	11.0	100	19	10.4	91	12	2300	66
MAY												
03...	1640	5660	110	7.9	22.0	120	200	8.1	91	7.8	160000	45000
04...	1320	1220	154	7.5	23.0	120	80	7.4	86	8.7	800000	170000
JUN												
03...	1100	216	400	7.8	27.0	80	150	6.7	83	14	620000	120000
JUL												
07...	1435	1380	174	7.5	25.0	60	140	6.7	80	--	1800000	320000
AUG												
19...	1345	38	600	7.9	30.0	40	14	8.2	108	12	26000	2300
19...	1640	136	339	7.8	29.5	30	15	4.9	64	12	400000	210000
19...	1725	312	280	7.8	30.5	30	72	4.8	63	16	980000	180000
19...	2100	84	460	7.6	29.0	30	18	4.2	54	12	700000	180000
	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DATE												
FEB												
03...	40	--	--	--	--	--	--	--	--	--	--	--
MAY												
03...	48000	39	0	13	1.6	8.2	.6	3.2	39	8.5	5.2	.1
04...	50000	50	3	16	2.4	9.0	.6	3.5	52	7.8	8.2	.1
JUN												
03...	7300	95	0	30	4.7	38	1.7	4.3	110	1.7	45	.2
JUL												
07...	>1000000	--	--	--	--	--	--	--	--	--	--	--
AUG												
19...	6700	130	0	40	7.5	62	2.5	5.6	170	3.0	64	.3
19...	45000	--	--	--	--	--	--	--	--	--	--	--
19...	49000	76	0	24	3.8	28	1.5	3.2	94	2.0	27	.2
19...	25000	--	--	--	--	--	--	--	--	--	--	--
	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DATE												
FEB												
03...	--	--	18	6	1.8	.420	2.2	2.900	4.8	7.7	3.800	25
MAY												
03...	5.7	69	496	8	.36	.060	.42	.370	1.6	2.0	.700	24
04...	6.8	89	194	17	.15	.020	.17	.310	1.7	2.0	.610	17
JUN												
03...	12	202	410	62	.71	.140	.85	1.400	1.7	3.1	2.600	12
JUL												
07...	--	--	308	52	.14	.120	.26	.600	1.4	2.0	.700	13
AUG												
19...	15	300	21	10	.86	.240	1.1	2.600	1.8	4.4	2.900	15
19...	--	--	27	10	.63	.110	.74	1.600	2.0	3.6	1.600	19
19...	8.3	153	104	23	.53	.070	.60	.690	2.6	3.3	.780	22
19...	--	--	34	14	.73	.190	.92	2.800	1.8	4.6	2.300	17

## SAN JACINTO RIVER BASIN

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAY							
03...	1640	5	50	<1	10	<10	190
JUN							
03...	1100	11	300	<1	0	<10	40
JUL							
07...	1435	9	60	<1	10	<10	110
AUG							
19...	1345	23	170	<1	0	<10	42
19...	1640	9	200	0	0	50	90
19...	1725	28	110	<1	10	<10	48
19...	2100	18	200	0	10	50	30

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY						
03...	<10	<1	.1	0	0	5
JUN						
03...	<10	6	.0	0	0	30
JUL						
07...	<10	3	.1	0	0	20
AUG						
19...	<10	32	.1	0	0	18
19...	0	30	.1	0	0	30
19...	<10	3	.1	0	0	17
19...	0	30	.1	1	0	20

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN									
03...	1100	.00	.00	.00	.10	.00	.00	.00	.70
AUG									
19...	1345	.00	.00	.00	.10	.00	.00	.00	1.1
19...	1640	.10	.00	.00	.30	.00	.02	.00	.77
19...	1725	.00	.00	.00	.20	.00	.01	.00	.37
19...	2100	.00	.00	.00	.10	.00	.00	.00	.64

DATE	DI- ELDRIN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN									
03...	.01	.00	.00	.00	.00	.01	.03	.13	.00
AUG									
19...	.00	.00	.00	.00	.00	.01	.03	.34	.00
19...	.03	.00	.00	.00	.01	.03	.04	6.0	.00
19...	.01	.00	.00	.00	.02	.02	.03	4.2	.00
19...	.00	.00	.00	.00	.00	.01	.03	1.6	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN									
03...	.00	.00	.00	.00	0	.00	.15	.05	.00
AUG									
19...	.00	.00	.00	.00	0	.00	1.4	.02	.00
19...	.00	.00	.00	.00	1	.00	15	.49	.00
19...	.00	.00	.00	.00	0	.00	6.3	.29	.00
19...	.00	.00	.00	.00	0	.00	22	.17	.00

STA. NO. 08074500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
WHITEOAK BAYOU AT HOUSTON, TEX.												1981 WATER YEAR	
DATE & TIME	STORM OF MAY 3 - 8, 1981										ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
	4150	4400	22R	22R	21R	21R	21R	21R	21R	21R			
MAY 3													
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.0	0.0015	0.0015
0600	0.0	0.0	0.0	0.0	0.01	0.01	0.01	0.01	0.01	0.00	27.0	0.0032	0.0032
0700	0.0	0.02	0.13	0.13	0.01	0.01	0.01	0.01	0.01	0.04	56.0	0.0039	0.0039
0730	0.22	0.08	0.19	0.19	0.14	0.14	0.14	0.14	0.14	0.18	125.0	0.0050	0.0050
0800	0.41	0.26	0.30	0.30	0.38	0.38	0.38	0.38	0.38	0.35	165.0	0.0065	0.0065
0830	0.50	0.40	0.66	0.66	0.68	0.68	0.68	0.68	0.68	0.56	786.0	0.0136	0.0136
0900	0.59	0.48	1.07	1.07	0.80	0.80	0.80	0.80	0.80	0.74	1550.0	0.0275	0.0275
0930	0.80	0.84	1.31	1.31	0.94	0.94	0.94	0.94	0.94	0.96	2380.0	0.0488	0.0488
1000	1.60	1.30	1.59	1.59	1.13	1.13	1.13	1.13	1.13	1.46	3360.0	0.0790	0.0790
1030	2.40	2.12	1.88	1.88	1.57	1.57	1.57	1.57	1.57	2.06	4530.0	0.1197	0.1197
1100	2.73	2.30	2.18	2.18	1.86	1.86	1.86	1.86	1.86	2.35	5740.0	0.1712	0.1712
1130	3.12	2.92	2.45	2.45	2.38	2.38	2.38	2.38	2.38	2.77	6480.0	0.2294	0.2294
1200	3.18	3.00	2.75	2.75	2.72	2.72	2.72	2.72	2.72	2.95	6950.0	0.2918	0.2918
1230	3.22	3.03	2.84	2.84	2.76	2.76	2.76	2.76	2.76	3.00	7010.0	0.3547	0.3547
1300	3.26	3.14	2.96	2.96	3.02	3.02	3.02	3.02	3.02	3.12	7070.0	0.4182	0.4182
1330	3.31	3.24	3.08	3.08	3.33	3.33	3.33	3.33	3.33	3.25	7140.0	0.4823	0.4823
1400	3.41	3.26	3.25	3.25	3.36	3.36	3.36	3.36	3.36	3.34	6570.0	0.5413	0.5413
1430	3.42	3.38	3.34	3.34	3.96	3.96	3.96	3.96	3.96	3.50	6280.0	0.5977	0.5977
1500	3.60	3.46	3.46	3.46	4.54	4.54	4.54	4.54	4.54	3.73	6170.0	0.6531	0.6531
1530	3.65	3.61	3.48	3.48	4.67	4.67	4.67	4.67	4.67	3.81	6100.0	0.7078	0.7078
1600	3.66	3.71	3.54	3.54	4.68	4.68	4.68	4.68	4.68	3.84	6060.0	0.7622	0.7622
1630	3.66	3.71	3.54	3.54	4.69	4.69	4.69	4.69	4.69	3.84	5850.0	0.8148	0.8148
1700	3.67	3.71	3.55	3.55	4.71	4.71	4.71	4.71	4.71	3.85	5580.0	0.8649	0.8649
1730	3.68	3.71	3.57	3.57	4.71	4.71	4.71	4.71	4.71	3.86	5270.0	0.9122	0.9122
1800	3.68	3.71	3.57	3.57	4.71	4.71	4.71	4.71	4.71	3.86	4990.0	0.9570	0.9570
1830	3.68	3.71	3.57	3.57	4.71	4.71	4.71	4.71	4.71	3.86	4710.0	0.9992	0.9992
1900	3.68	3.75	3.58	3.58	4.71	4.71	4.71	4.71	4.71	3.87	4680.0	1.0413	1.0413
1930	4.19	3.80	3.58	3.58	4.71	4.71	4.71	4.71	4.71	4.08	5660.0	1.0921	1.0921
2000	4.26	4.31	3.59	3.59	4.97	4.97	4.97	4.97	4.97	4.24	6540.0	1.1508	1.1508
2030	4.43	4.87	3.59	3.59	5.10	5.10	5.10	5.10	5.10	4.42	6960.0	1.2133	1.2133
2100	4.78	5.03	3.62	3.62	5.15	5.15	5.15	5.15	5.15	4.60	7380.0	1.2795	1.2795
2130	4.78	5.25	3.62	3.62	5.15	5.15	5.15	5.15	5.15	4.63	7530.0	1.3471	1.3471
2200	4.79	5.25	3.64	3.64	5.15	5.15	5.15	5.15	5.15	4.64	7440.0	1.4473	1.4473
2300	4.79	5.25	3.64	3.64	5.15	5.15	5.15	5.15	5.15	4.64	6690.0	1.5374	1.5374
2330	4.91	5.27	3.64	3.64	5.15	5.15	5.15	5.15	5.15	4.69	6230.0	1.5934	1.5934
2400	5.02	5.38	3.64	3.64	5.15	5.15	5.15	5.15	5.15	4.75	5780.0	1.6712	1.6712
MAY 4													
0000	5.02	5.38	3.64	3.64	5.15	5.15	5.15	5.15	5.15	4.75	5780.0	1.6712	1.6712
0100	5.02	5.41	3.64	3.64	5.17	5.17	5.17	5.17	5.17	4.76	4860.0	1.7585	1.7585
0200	5.02	5.41	3.65	3.65	5.17	5.17	5.17	5.17	5.17	4.77	3950.0	1.8294	1.8294

STA. NO. 08074500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
WHITEDAK BAYOU AT HOUSTON, TEX.		STORM OF MAY 3 -8, 1981										ACCUM. DISCHARGE	
DATE & TIME		G A G E N U M B E R										WEIGHTED PRECIP.	
		4150	4400	22R	21R						IN.	CFS	IN.
MAY 4													
0300		5.02	5.41	3.66	5.18						4.77	3190.0	1.8867
0400		5.02	5.41	3.67	5.18						4.77	2520.0	1.9319
0500		5.02	5.41	3.67	5.18						4.77	2030.0	1.9684
0600		5.02	5.44	3.67	5.18						4.78	1750.0	1.9998
0700		5.02	5.45	3.68	5.18						4.78	1610.0	2.0287
0800		5.17	5.45	3.72	5.18						4.85	1530.0	2.0493
0830		5.29	5.50	3.72	5.23						4.92	1530.0	2.0630
0900		5.29	5.64	3.77	5.30						4.96	1550.0	2.0839
1000		5.29	5.65	3.78	5.30						4.97	1550.0	2.1257
1200		5.29	5.65	3.78	5.30						4.97	1380.0	2.1938
1530		5.29	5.65	3.78	5.30						4.97	1080.0	2.2374
1630		5.29	5.65	3.78	5.30						4.97	994.0	2.2508
1700		5.32	5.65	3.78	5.30						4.98	967.0	2.2595
1730		5.33	5.65	3.78	5.31						4.99	1390.0	2.2720
1800		5.44	6.60	3.83	5.31						5.19	2100.0	2.2908
1830		5.63	6.73	3.83	5.31						5.28	2420.0	2.3126
1900		5.67	6.76	3.86	5.68						5.38	2840.0	2.3380
1930		5.67	6.86	3.86	5.71						5.40	2970.0	2.3647
2000		5.69	6.88	3.86	5.75						5.42	2720.0	2.4013
2100		5.70	6.88	3.86	5.75						5.43	2100.0	2.4390
2200		5.70	6.88	3.86	5.75						5.43	1540.0	2.4667
2300		5.70	6.88	3.86	5.75						5.43	1200.0	2.4882
2400		5.70	6.88	3.86	5.75						5.43	1020.0	2.5523
MAY 5													
0000		5.70	6.88	3.86	5.75						5.43	1020.0	2.5523
0600		5.70	6.88	3.86	5.75						5.43	636.0	2.6209
1200		5.70	6.88	3.86	5.75						5.43	494.0	2.6741
1800		5.70	6.88	3.86	5.75						5.43	391.0	2.7162
2400		5.70	6.88	3.86	5.75						5.43	326.0	2.7689
MAY 6													
0000		5.70	6.88	3.86	5.75						5.43	326.0	2.7689
1200		5.70	6.88	3.86	5.75						5.43	206.0	2.8133
2400		5.70	6.88	3.86	5.75						5.43	160.0	2.8478
MAY 7													
0000		5.70	6.88	3.86	5.75						5.43	160.0	2.8478
1200		5.70	6.88	3.86	5.75						5.43	121.0	2.8738
2400		5.70	6.88	3.86	5.75						5.43	87.0	2.8926
MAY 8													
0000		5.70	6.88	3.86	5.75						5.43	87.0	2.8926
1200		5.70	6.88	3.86	5.75						5.43	62.0	2.9059
2400		5.70	6.88	3.86	5.75						5.43	62.0	2.9126

STA. NO. 08074500		STORM RAINFALL AND RUNOFF RECORD									
		1981 WATER YEAR									
WHITEOAK BAYOU AT HOUSTON, TEX.		DISCHARGE! ACCUM.									
		IN RUNOFF									
DATE & TIME		STORM OF AUG. 30 TO SEP. 5, 1981									
		WEIGHTED PRECIP.									
		IN.									
		CFS									
		IN.									
AUG. 30											
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0032
1200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0066
1230	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.01	0.01	30.0	0.0069
1300	0.0	0.0	0.0	0.0	0.18	0.16	0.0	0.07	0.07	30.0	0.0071
1330	0.0	0.12	0.0	0.20	0.24	0.16	0.0	0.11	0.11	30.0	0.0074
1400	0.0	0.12	0.0	0.20	0.24	0.17	0.0	0.11	0.11	30.0	0.0077
1430	0.0	0.12	0.0	0.20	0.24	0.17	0.05	0.12	0.12	30.0	0.0079
1500	0.0	0.12	0.0	0.20	0.24	0.17	0.09	0.12	0.12	30.0	0.0093
1930	0.0	0.12	0.0	0.20	0.24	0.17	0.09	0.12	0.12	30.0	0.0106
2000	0.0	0.12	0.0	0.20	0.29	0.18	0.09	0.13	0.13	30.0	0.0109
2030	0.0	0.12	0.0	0.20	0.33	0.22	0.09	0.15	0.15	30.0	0.0112
2100	0.0	0.12	0.0	0.23	0.44	0.28	0.19	0.20	0.20	30.0	0.0114
2130	0.02	0.12	0.23	0.23	0.44	0.34	0.19	0.26	0.26	45.0	0.0119
2200	0.18	0.12	0.23	0.23	0.44	0.43	0.19	0.30	0.30	65.0	0.0124
2230	0.18	0.24	0.23	0.45	0.68	0.50	0.23	0.39	0.39	150.0	0.0138
2300	0.19	0.48	0.24	0.57	0.90	0.62	0.36	0.51	0.51	250.0	0.0160
2330	0.43	0.48	0.53	0.58	0.92	0.63	0.36	0.59	0.59	400.0	0.0196
2400	0.60	0.72	0.64	0.86	1.34	0.69	0.36	0.77	0.77	500.0	0.0241
AUG. 31											
0000	0.60	0.72	0.64	0.86	1.34	0.69	0.36	0.77	0.77	500.0	0.0241
0030	0.60	1.20	0.66	1.36	1.68	0.71	0.51	0.94	0.94	1000.0	0.0331
0100	0.93	1.68	1.33	1.64	1.84	0.77	1.15	1.30	1.30	1600.0	0.0474
0130	1.54	1.80	1.74	1.78	1.98	0.83	1.60	1.57	1.57	2300.0	0.0681
0200	1.75	2.04	1.92	2.11	2.23	0.89	1.66	1.74	1.74	3000.0	0.0950
0230	1.91	3.24	2.04	3.30	3.46	1.13	2.18	2.34	2.34	3400.0	0.1256
0300	2.62	3.36	3.05	3.34	3.59	1.39	2.52	2.75	2.75	3700.0	0.1588
0330	3.50	3.36	3.31	3.48	3.68	1.57	2.60	2.97	2.97	4000.0	0.1947
0400	3.52	3.60	3.36	3.57	3.76	1.80	2.91	3.11	3.11	4200.0	0.2324
0430	3.62	3.60	3.45	3.64	3.86	1.98	3.01	3.22	3.22	4500.0	0.2728
0500	3.69	3.96	3.51	3.92	4.12	2.16	3.04	3.37	3.37	4800.0	0.3159
0530	3.81	3.96	3.73	4.07	4.28	2.46	3.24	3.57	3.57	5200.0	0.3626
0600	3.99	4.32	3.86	4.35	4.46	2.77	3.46	3.79	3.79	5500.0	0.4120
0630	4.16	4.56	4.03	4.51	4.59	2.91	3.97	4.00	4.00	5800.0	0.4640
0700	4.29	4.92	4.08	4.80	4.96	3.09	4.70	4.29	4.29	6200.0	0.5197
0730	4.46	4.92	4.37	4.84	5.06	3.55	5.04	4.53	4.53	6500.0	0.5780
0800	4.68	5.04	4.47	4.94	5.13	4.03	5.15	4.71	4.71	6900.0	0.6400
0830	4.72	5.16	4.55	5.06	5.16	4.15	5.25	4.80	4.80	7200.0	0.7046
0900	4.80	5.16	4.63	5.11	5.21	4.31	5.32	4.88	4.88	7600.0	0.7729
0930	4.88	5.28	4.69	5.20	5.30	4.91	5.45	5.07	5.07	8400.0	0.8483
1000	4.94	5.76	4.80	5.56	5.62	5.57	5.64	5.38	5.38	9000.0	0.9291

STORM RAINFALL AND RUNOFF RECORD									
1981 WATER YEAR									
STATION NO. 08074500									
WHITEOAK BAYOU AT HOUSTON, TEX.									
STORM OF AUG. 30 TO SEP. 5, 1981									
DATE & TIME	G A G E					WEIGHTED PRECIP.		DISCHARGE	
	4150	4200	4250	205R	204R	22R	21R	IN	IN.
AUG. 31									
1030	5.02	6.24	5.11	5.96	5.86	5.69	5.81	9500.0	1.0144
1100	5.46	6.72	5.53	6.51	6.84	5.85	7.04	10100.0	1.1050
1130	5.73	7.56	5.72	7.31	7.36	5.89	7.70	10700.0	1.2011
1200	6.93	7.68	6.07	7.41	7.44	5.95	7.87	11200.0	1.3017
1230	7.10	7.68	6.17	7.43	7.46	5.96	7.91	11700.0	1.4067
1300	7.14	7.68	6.25	7.49	7.58	6.02	7.97	12300.0	1.5171
1330	7.19	7.80	6.26	7.52	7.65	6.02	8.02	12700.0	1.6311
1400	7.22	7.80	6.29	7.54	7.67	6.08	8.04	12700.0	1.7452
1430	7.23	7.80	6.32	7.57	7.72	6.08	8.10	12500.0	1.8574
1500	7.24	7.80	6.34	7.60	7.74	6.08	8.13	12100.0	1.9660
1530	7.27	7.80	6.34	7.62	7.82	6.08	8.13	11700.0	2.0711
1600	7.32	7.80	6.35	7.62	7.84	6.09	8.14	11200.0	2.1716
1630	7.32	7.80	6.35	7.62	7.84	6.21	8.15	10800.0	2.2686
1700	7.32	7.80	6.35	7.62	7.84	6.38	8.15	10300.0	2.3610
1730	7.35	7.80	6.35	7.62	7.84	6.68	8.15	9880.0	2.4497
1800	7.35	7.80	6.35	7.64	7.84	7.04	8.15	9470.0	2.5348
1830	7.35	8.04	6.35	7.84	8.02	7.06	8.38	9000.0	2.6156
1900	7.46	8.04	6.40	7.84	8.19	7.12	8.92	8630.0	2.6930
1930	7.58	8.04	6.40	7.84	8.19	7.12	8.92	8200.0	2.7667
2000	7.58	8.04	6.40	7.84	8.19	7.13	8.98	7870.0	2.8373
2030	7.58	8.04	6.40	7.84	8.19	7.13	8.98	7530.0	2.9049
2100	7.58	8.04	6.40	7.84	8.19	7.15	8.98	7200.0	2.9696
2130	7.58	8.04	6.40	7.84	8.19	7.15	8.98	6860.0	3.0312
2200	7.58	8.04	6.40	7.84	8.19	7.16	8.98	6470.0	3.0892
2230	7.58	8.04	6.40	7.84	8.19	7.16	8.98	6100.0	3.1440
2300	7.58	8.04	6.40	7.84	8.19	7.21	8.98	5770.0	3.1958
2330	7.58	8.04	6.40	7.84	8.19	7.21	8.98	5410.0	3.2444
2400	7.58	8.04	6.40	7.84	8.19	7.22	8.98	5060.0	3.3352
SEP. 1									
0000	7.58	8.04	6.40	7.84	8.19	7.22	8.98	5060.0	3.3352
0130	7.58	8.04	6.40	7.84	8.19	7.22	8.98	4140.0	3.4096
0200	7.58	8.04	6.40	7.84	8.19	7.26	8.98	3860.0	3.4442
0230	7.58	8.04	6.40	7.92	8.19	7.38	8.98	3610.0	3.4766
0300	7.58	8.16	6.40	7.94	8.19	7.51	9.03	3340.0	3.5066
0330	7.58	8.16	6.40	7.94	8.19	7.51	9.04	3070.0	3.5342
0400	7.58	8.16	6.40	7.94	8.19	7.53	9.04	2860.0	3.5599
0430	7.58	8.16	6.40	7.94	8.19	7.53	9.04	2660.0	3.5837
0500	7.58	8.16	6.40	7.94	8.19	7.54	9.06	2520.0	3.6064
0530	7.58	8.16	6.40	7.94	8.19	7.54	9.06	2410.0	3.6280
0600	7.58	8.16	6.40	7.94	8.19	7.56	9.06	2300.0	3.6796

STA. NO. 08074500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR		
WHITEOAK BAYOU AT HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 5, 1981										DISCHARGE!	ACCUM.	
DATE & TIME		4150	4200	4250	G A G E	205R	N U M B E R	204R	22R	21R	WEIGHTED PRECIP. IN.	IN	CFS	IN.
SEP. 1														
0800	7.58	8.16	6.40	7.94	8.19	7.56	9.06	7.75	1950.0	3.7672				
1100	7.58	8.16	6.40	7.94	8.19	7.56	9.12	7.76	1640.0	3.8187				
1130	7.58	8.16	6.40	7.94	8.19	7.56	9.12	7.76	1640.0	3.8334				
1200	7.58	8.16	6.40	7.94	8.19	7.56	9.12	7.76	1590.0	3.8691				
1400	7.60	8.16	6.40	7.94	8.19	7.56	9.12	7.76	1450.0	3.9016				
1430	7.60	8.16	6.40	7.94	8.19	7.56	9.12	7.76	1450.0	3.9537				
1800	7.60	8.16	6.40	7.94	8.19	7.56	9.12	7.76	1220.0	4.0578				
2400	7.60	8.16	6.40	7.94	8.19	7.56	9.12	7.76	895.0	4.1542				
SEP. 2														
0000	7.60	8.16	6.40	7.94	8.19	7.56	9.12	7.76	895.0	4.1542				
0600	7.60	8.16	6.40	7.94	8.19	7.56	9.12	7.76	687.0	4.2159				
1000	7.60	8.16	6.40	7.94	8.19	7.56	9.19	7.77	587.0	4.2422				
1100	7.60	8.28	6.50	8.45	8.19	7.59	9.22	7.86	564.0	4.2498				
1130	7.60	8.64	6.75	8.47	8.19	7.59	9.22	7.93	564.0	4.2549				
1200	8.62	8.64	6.80	8.47	8.19	7.59	9.22	8.04	727.0	4.2614				
1230	8.62	8.64	6.80	8.47	8.19	7.59	9.22	8.04	888.0	4.2694				
1300	8.62	8.64	6.80	8.47	8.19	7.60	9.22	8.04	839.0	4.2769				
1330	8.63	8.64	6.80	8.47	8.19	7.75	9.22	8.07	1440.0	4.2898				
1400	8.63	8.64	6.80	8.47	8.19	7.93	9.22	8.11	1440.0	4.3028				
1430	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	1330.0	4.3505				
1800	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	709.0	4.4110				
2400	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	457.0	4.4397				
SEP. 3														
0000	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	457.0	4.4397				
0100	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	460.0	4.4645				
0600	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	368.0	4.4876				
0800	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	331.0	4.4965				
0900	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	364.0	4.5292				
1800	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	213.0	4.5483				
1900	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	262.0	4.5530				
2000	8.66	8.64	6.80	8.47	8.19	7.93	9.22	8.11	231.0	4.5572				
2100	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	226.0	4.5653				
2400	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	213.0	4.5940				
SEP. 4														
0000	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	213.0	4.5940				
1200	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	151.0	4.6265				
2400	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	123.0	4.6530				
SEP. 5														
0000	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	123.0	4.6530				
1200	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	86.0	4.6716				
2400	8.79	8.64	6.80	8.47	8.19	7.93	9.22	8.12	71.0	4.6792				



## LITTLE WHITEOAK BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Little Whiteoak Bayou drainage basin are shown in figure 10.

Weighted-mean rainfall for the 1981 water year was not determined.

The storms of May 3-5 and Aug. 30-Sept. 1 were selected for analysis at station 08074540, Little Whiteoak Bayou at Houston.

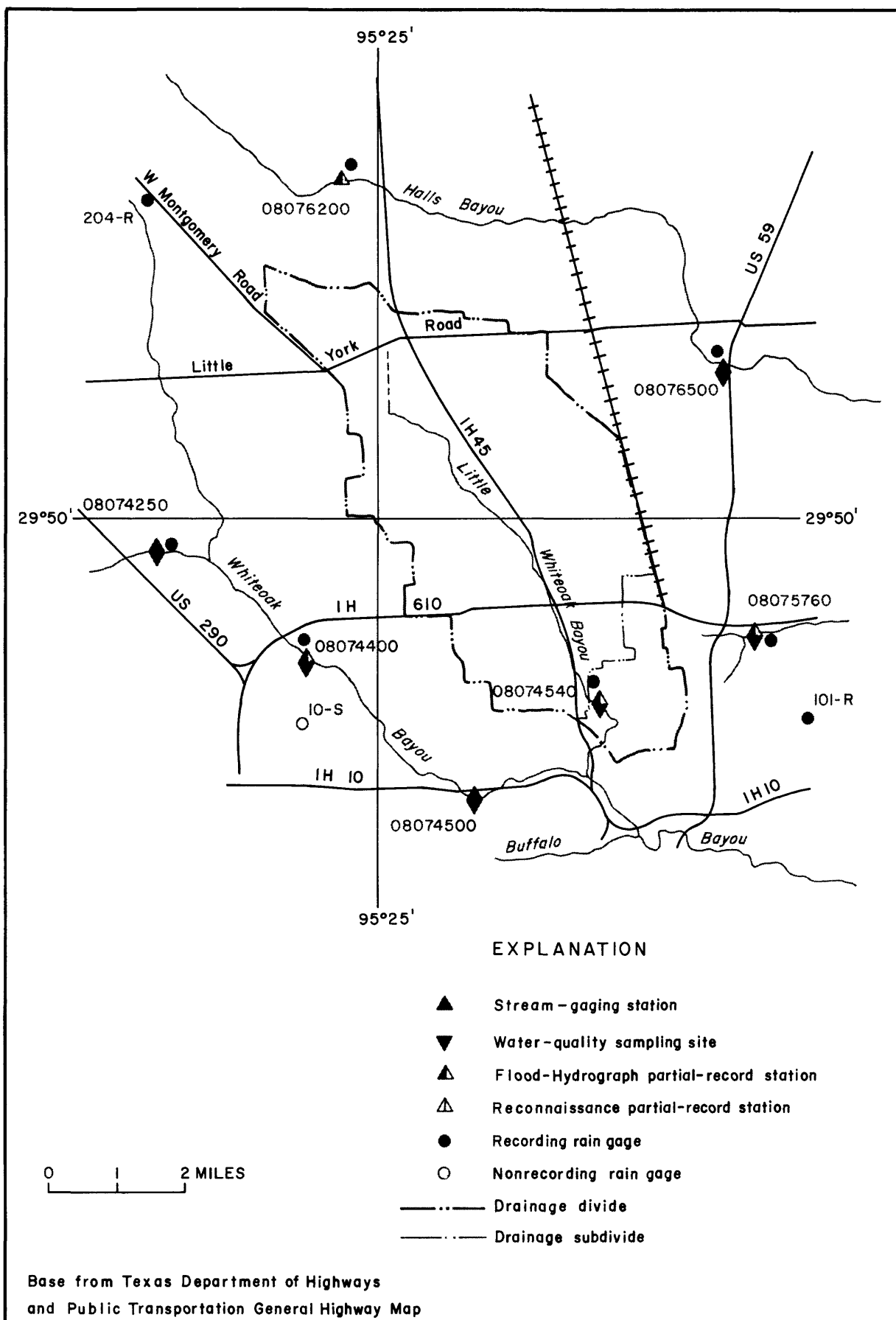


Figure 10.-Locations of data-collection sites in and near the Little Whiteoak Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 9. ---Storm rainfall-runoff data, 1981 Water Year, Little Whiteoak Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Little Whiteoak Bayou at Houston, TX. (Drainage area -- 18.0 mi <sup>2</sup> )								
May 3, 1981	5.0	2.83	0.65	1.00	1.30	4.09	0.71	2,370
May 3-4, 1981	6.3	2.04	.60	.84	1.20			2,410
May 4-5, 1981	10.3	0.92	.95	1.08	1.09			2,430
Aug. 30-31, 1981	8.0	5.21	0.62	1.24	1.68	3.52	0.41	2,410
Aug. 31-Sept. 1, 1981	3.0	3.34	.88	1.75	2.70			4,070 **,++


\* - Annual peak discharge for 1981 Water Year.  
++ - Peak discharge for period of record.

# SAN JACINTO RIVER BASIN

08074540 LITTLE WHITEOAK BAYOU AT TRIMBLE STREET AT HOUSTON, TX  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°47'33", long 95°22'06", Harris County, Hydrologic Unit 12040104, at downstream side of bridge at Trimble Street, Houston.

DRAINAGE AREA.--18.0 mi<sup>2</sup> (46.6 km<sup>2</sup>).

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1979 to current year. June to September 1979 published as Little Whiteoak Bayou at Houston (08074550).

GAGE.--Flood-hydrograph and rainfall recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment. Prior to June 1979 occasional discharge measurements to arbitrary datum and water-quality samples were obtained at site 6,200 ft (1,890 m) downstream at North Main Street bridge (station 08074550, Little Whiteoak Bayou at Houston).

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1980". The record for June to September 1979 was published in the 1979 edition of this publication as station Little Whiteoak Bayou at Houston (08074550).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft<sup>3</sup>/s (135 m<sup>3</sup>/s) Sept. 19, 1979; maximum elevation, 38.59 ft (11.771 m) Aug. 31, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft<sup>3</sup>/s (39.6 m<sup>3</sup>/s), revised, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Discharge (m <sup>3</sup> /s)	Elevation (ft)	Elevation (m)	Date	Time	Discharge (ft <sup>3</sup> /s)	Discharge (m <sup>3</sup> /s)	Gage height (ft)	Gage height (m)
Apr. 23	unknown	1,620	45.9	30.42	9.272	July 5	1445	2,670	75.6	35.14	10.711
May 3	2300	2,410	68.3	33.02	10.064	Aug. 31	0300	2,410	68.2	34.29	10.452
May 4	2030	2,430	68.8	33.08	10.083	Aug. 31	1230	4,070	115	38.59	11.762
June 5	0800	2,370	67.1	33.40	10.180						

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: June 1979 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
FEB 03...	1205	4.6	480	6.9	--	5	68	6.1	54	4.5
MAY 03...	1645	1240	132	7.8	22.5	90	84	7.9	89	7.5
04...	1310	204	230	7.5	23.0	90	41	11.4	133	10
JUN 03...	1135	19	236	7.7	25.0	50	58	4.6	55	10
JUL 07...	1147	713	160	7.3	23.5	50	64	6.3	72	6.9
AUG 13...	1500	90	180	7.4	28.5	60	68	5.5	70	12
28...	1550	2.8	758	7.6	28.0	20	2.0	3.6	46	9.0
31...	1335	3270	103	8.0	24.0	50	110	7.0	82	3.4
SEP 01...	1030	52	285	7.4	25.5	50	5.0	4.5	55	7.1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
FEB 03...	1300000	240000	6200	--	--	--	--	--	--
MAY 03...	250000	150000	42000	51	4	17	2.0	6.4	.4
04...	2200000	580000	300000	79	2	26	3.4	13	.6
JUN 03...	1100000	300000	58000	69	0	23	2.8	17	.9
JUL 07...	1200000	>600000	120000	64	0	22	2.3	7.3	.4
AUG 13...	--	--	--	--	--	--	--	--	--
28...	--	--	--	160	0	47	10	95	3.5
31...	520000	150000	240000	45	3	16	1.2	3.4	.2
SEP 01...	1600000	440000	140000	98	1	32	4.3	18	.8

## SAN JACINTO RIVER BASIN

08074540 LITTLE WHITEOAK BAYOU AT TRIMBLE STREET AT HOUSTON, TX--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)
FEB 03...	--	--	--	--	--	--	--	78	22
MAY 03...	3.2	47	3.1	5.0	.1	4.7	70	280	18
04...	3.9	82	2.7	10	.2	7.6	118	112	7
JUN 03...	2.8	85	3.8	12	.1	6.4	120	135	29
JUL 07...	2.5	67	2.5	6.6	.1	7.8	92	186	29
AUG 13...	--	--	--	--	--	--	--	123	11
28...	4.9	240	25	73	.5	16	415	360	14
31...	2.3	42	5.0	4.8	.1	3.4	61	137	27
SEP 01...	4.3	97	8.0	16	.2	9.3	150	79	6

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
FEB 03...	.32	.070	.39	1.500	1.2	2.7	.970	15	--
MAY 03...	.54	.060	.60	.430	1.3	1.7	.600	15	--
04...	.41	.090	.50	.710	1.7	2.4	.740	--	19
JUN 03...	.43	.050	.48	.910	.99	1.9	.500	9.2	--
JUL 07...	.17	.070	.24	.450	1.4	1.8	.510	14	--
AUG 13...	.45	.050	.50	.440	1.6	2.0	.390	23	--
28...	.03	.010	.04	.720	2.1	2.8	1.100	19	--
31...	.22	.020	.24	.230	1.4	1.6	.430	15	--
SEP 01...	.19	.040	.23	.830	2.0	2.8	.680	15	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN 03...	1135	11	300	<1	0	<10	120
JUL 07...	1147	6	60	<1	10	<10	70
AUG 13...	1500	4	0	0	0	50	70
28...	1550	8	160	<1	0	2	36

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN 03...		<10	50	.0	0	0	10
JUL 07...		<10	3	.2	0	1	20
AUG 13...		0	10	.0	0	0	20
28...		2	100	.1	1	0	13

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN 03...	1135	.00	.0	.00	.1	.00	.00	.00	.40
AUG 13...	1500	.00	.0	.00	.4	.00	.01	.05	.44

SAN JACINTO RIVER BASIN

08074540 LITTLE WHITEOAK BAYOU AT TRIMBLE STREET AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN 03...	.01	.00	.00	.00	.00	.01	.00	.31	.00
AUG 13...	.01	.00	.00	.00	.01	.02	.02	.47	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 03...	.00	.00	.00	.00	0	.00	.35	.03	.00
AUG 13...	.00	.00	.00	.00	0	.00	.08	.10	.00

STA. NO. 08074540		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR			
LITTLE WHITEOAK BAYOU AT TRIMBLE ST, HOUSTON, TEX.		STORM OF MAY 3 -5, 1981					DISCHARGE			
DATE & TIME	G A G E				N U M B E R	ACCUM. WEIGHTED PRECIP.		IN		ACCUM. RUNOFF IN.
	4400	5760	6200	6500		IN.	CFS			
MAY 3										
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0023	0.0023
0600	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0048	0.0048
0630	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0051	0.0051
0645	0.0	0.0	0.0	0.12	0.12	0.03	0.03	9.0	0.0053	0.0053
0700	0.02	0.05	0.0	0.24	0.24	0.08	0.08	9.0	0.0055	0.0055
0715	0.06	0.10	0.0	0.24	0.24	0.10	0.10	9.0	0.0057	0.0057
0730	0.08	0.15	0.12	0.24	0.24	0.14	0.14	9.0	0.0059	0.0059
0745	0.14	0.20	0.12	0.36	0.36	0.20	0.20	9.0	0.0061	0.0061
0800	0.26	0.25	0.24	0.36	0.36	0.28	0.28	9.0	0.0063	0.0063
0815	0.32	0.30	0.36	0.36	0.36	0.34	0.34	9.0	0.0065	0.0065
0830	0.40	0.35	0.36	0.48	0.48	0.40	0.40	9.0	0.0067	0.0067
0845	0.44	0.40	0.48	0.60	0.60	0.48	0.48	32.0	0.0074	0.0074
0900	0.48	0.40	0.60	0.72	0.72	0.55	0.55	56.0	0.0086	0.0086
0915	0.60	0.50	0.60	0.84	0.84	0.64	0.64	131.0	0.0114	0.0114
0930	0.84	0.55	0.60	0.84	0.84	0.72	0.72	206.0	0.0158	0.0158
0945	0.98	0.60	0.72	0.96	0.96	0.83	0.83	458.0	0.0257	0.0257
1000	1.30	0.70	0.96	0.96	0.96	1.01	1.01	711.0	0.0410	0.0410
1015	1.90	0.75	1.08	1.08	1.08	1.26	1.26	935.0	0.0611	0.0611
1030	2.12	0.80	1.44	1.20	1.20	1.46	1.46	1160.0	0.0861	0.0861
1045	2.20	0.90	1.44	1.20	1.20	1.50	1.50	1300.0	0.1141	0.1141
1100	2.30	0.95	1.68	1.32	1.32	1.63	1.63	1440.0	0.1450	0.1450
1115	2.76	1.05	1.80	1.32	1.32	1.82	1.82	1510.0	0.1775	0.1775
1130	2.92	1.10	1.92	1.44	1.44	1.94	1.94	1580.0	0.2116	0.2116
1145	2.98	1.20	2.16	1.92	1.92	2.15	2.15	1600.0	0.2460	0.2460
1200	3.00	1.25	2.28	2.04	2.04	2.23	2.23	1630.0	0.2811	0.2811
1215	3.02	1.30	2.40	2.16	2.16	2.31	2.31	1630.0	0.3161	0.3161
1230	3.03	1.65	2.52	2.16	2.16	2.41	2.41	1640.0	0.3514	0.3514
1245	3.09	2.30	2.52	2.28	2.28	2.59	2.59	1830.0	0.3908	0.3908
1300	3.14	2.35	2.52	2.28	2.28	2.61	2.61	2030.0	0.4345	0.4345
1315	3.22	2.40	2.64	2.28	2.28	2.68	2.68	2180.0	0.4814	0.4814
1330	3.24	2.55	2.76	2.28	2.28	2.74	2.74	2330.0	0.5316	0.5316
1345	3.26	2.60	2.76	2.40	2.40	2.79	2.79	2350.0	0.5822	0.5822
1400	3.26	2.65	2.76	2.40	2.40	2.80	2.80	2370.0	0.6332	0.6332
1415	3.37	2.65	2.76	2.40	2.40	2.83	2.83	2300.0	0.6827	0.6827
1430	3.38	2.65	2.76	2.40	2.40	2.83	2.83	2230.0	0.7307	0.7307
1445	3.38	2.65	2.88	2.40	2.40	2.86	2.86	2110.0	0.7761	0.7761
1500	3.46	2.65	2.88	2.40	2.40	2.89	2.89	1990.0	0.8189	0.8189
1515	3.57	2.70	2.88	2.40	2.40	2.93	2.93	1860.0	0.8589	0.8589
1530	3.61	2.70	3.00	2.40	2.40	2.97	2.97	1740.0	0.8964	0.8964

STA. NO. 08074540		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
LITTLE WHITEOAK BAYOU AT TRIMBLE ST. HOUSTON, TEX.		STORM OF MAY 3 - 5, 1981				DISCHARGE IN			
DATE & TIME		G A E N U M B E R				ACCUM. WEIGHTED PRECIP. IN. CFS IN.			
		4400	5760	6200	6500				
MAY 3									
1545	3.70	2.70	3.12	2.40		3.03	1620.0	0.9312	
1600	3.71	2.70	3.12	2.40		3.03	1500.0	0.9635	
1615	3.71	2.70	3.24	2.40		3.06	1410.0	1.0242	
1700	3.71	2.70	3.24	2.40		3.06	1160.0	1.0742	
1715	3.71	2.75	3.24	2.40		3.07	1080.0	1.0974	
1730	3.71	2.85	3.24	2.40		3.09	1010.0	1.1191	
1745	3.71	2.85	3.24	2.52		3.12	932.0	1.1392	
1800	3.71	2.90	3.24	2.88		3.22	855.0	1.1576	
1815	3.71	2.95	3.24	3.00		3.26	791.0	1.1746	
1830	3.71	2.95	3.24	3.12		3.29	726.0	1.1902	
1845	3.71	3.15	3.24	3.24		3.36	678.0	1.2048	
1900	3.75	3.55	3.24	3.24		3.45	630.0	1.2184	
1915	3.79	3.65	3.24	3.48		3.55	650.0	1.2324	
1930	3.80	3.85	3.24	3.60		3.62	669.0	1.2468	
1945	4.04	3.85	3.24	3.72		3.72	795.0	1.2639	
2000	4.31	3.90	3.24	3.72		3.81	922.0	1.2837	
2015	4.75	4.10	3.36	3.72		4.01	1230.0	1.3102	
2030	4.87	4.20	3.60	3.72		4.13	1540.0	1.3433	
2045	4.89	4.30	4.20	3.72		4.31	1780.0	1.3817	
2100	5.03	4.30	4.44	3.72		4.41	2020.0	1.4251	
2115	5.23	4.35	4.44	3.84		4.51	2130.0	1.4710	
2130	5.25	4.35	4.44	3.96		4.54	2250.0	1.5194	
2145	5.25	4.35	4.56	3.96		4.57	2240.0	1.5676	
2200	5.25	4.35	4.56	4.08		4.60	2230.0	1.6156	
2215	5.25	4.65	4.68	4.08		4.69	2280.0	1.6647	
2230	5.25	4.80	4.68	4.08		4.72	2330.0	1.7148	
2245	5.25	4.85	4.68	4.08		4.73	2370.0	1.7658	
2300	5.25	4.85	4.68	4.08		4.73	2410.0	1.8177	
2315	5.27	4.85	4.80	4.08		4.77	2370.0	1.8687	
2330	5.27	4.85	4.80	4.08		4.77	2340.0	1.9190	
2345	5.31	4.90	4.80	4.08		4.79	2270.0	1.9679	
2400	5.38	4.95	4.80	4.08		4.82	2210.0	2.0155	
MAY 4									
0000	5.38	4.95	4.80	4.08		4.82	2210.0	2.0155	
0015	5.39	4.95	4.92	4.08		4.86	2130.0	2.0613	
0030	5.40	4.95	4.92	4.08		4.86	2050.0	2.1054	
0045	5.41	4.95	4.92	4.08		4.86	1950.0	2.1474	
0100	5.41	4.95	4.92	4.08		4.86	1850.0	2.1872	
0115	5.41	5.00	4.92	4.08		4.87	1740.0	2.2808	
0215	5.41	5.00	4.92	4.08		4.87	1360.0	2.3833	



STA. NO. 08074540		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR			
LITTLE WHITEOAK BAYOU AT TRIMBLE ST, HOUSTON, TEX.		STORM OF MAY 3 -5, 1981					DISCHARGE			
DATE & TIME	G A G E					N U M B E R	ACCUM. WEIGHTED PRECIP. IN.	IN	CFS	IN.
	4400	5760	6200	6500						
MAY 4										
0300	5.41	5.00	4.92	4.08			4.87	1090.0		2.4537
0345	5.41	5.00	4.92	4.08			4.87	861.0		2.5092
0430	5.41	5.00	4.92	4.08			4.87	687.0		2.5610
0530	5.41	5.00	4.92	4.08			4.87	526.0		2.5893
0545	5.41	5.00	4.92	4.08			4.87	495.0		2.5999
0600	5.44	5.00	4.92	4.08			4.88	464.0		2.6099
0615	5.45	5.00	4.92	4.08			4.88	442.0		2.6290
0700	5.45	5.00	4.92	4.08			4.88	379.0		2.6453
0715	5.45	5.00	4.92	4.20			4.91	362.0		2.6570
0745	5.45	5.00	4.92	4.20			4.91	329.0		2.6676
0800	5.45	5.05	4.92	4.56			5.01	312.0		2.6743
0815	5.45	5.05	5.04	4.56			5.04	298.0		2.6807
0830	5.50	5.05	5.04	4.56			5.06	284.0		2.6868
0845	5.58	5.10	5.04	4.56			5.09	278.0		2.6928
0900	5.64	5.15	5.04	4.56			5.12	272.0		2.6987
0915	5.65	5.15	5.04	4.56			5.12	293.0		2.7050
0930	5.65	5.15	5.16	4.56			5.15	314.0		2.7219
1030	5.65	5.15	5.16	4.56			5.15	360.0		2.7451
1100	5.65	5.15	5.16	4.56			5.15	334.0		2.7667
1200	5.65	5.15	5.16	4.56			5.15	263.0		2.8063
1430	5.65	5.15	5.16	4.56			5.15	171.0		2.8265
1445	5.65	5.25	5.16	4.56			5.17	167.0		2.8301
1500	5.65	5.75	5.16	4.56			5.27	164.0		2.8336
1515	5.65	5.80	5.16	4.56			5.28	161.0		2.8371
1530	5.65	5.80	5.16	4.56			5.28	158.0		2.8405
1545	5.65	5.80	5.16	4.68			5.31	181.0		2.8444
1600	5.65	5.80	5.28	4.68			5.34	204.0		2.8488
1615	5.65	5.80	5.28	4.68			5.34	254.0		2.8543
1630	5.65	5.80	5.28	4.80			5.37	303.0		2.8640
1700	5.65	5.80	5.28	4.80			5.37	333.0		2.8748
1715	5.65	5.80	5.28	4.80			5.37	332.0		2.8819
1730	5.65	5.85	5.28	4.80			5.38	331.0		2.8891
1745	5.65	5.85	5.28	4.80			5.38	345.0		2.8965
1800	6.60	5.85	5.28	4.80			5.67	360.0		2.9042
1815	6.73	5.85	5.28	4.80			5.71	507.0		2.9151
1830	6.73	5.85	5.28	4.80			5.71	654.0		2.9292
1845	6.74	5.85	5.40	4.80			5.74	774.0		2.9459
1900	6.76	5.90	5.40	4.80			5.76	894.0		2.9651
1915	6.78	5.90	5.40	4.80			5.76	1260.0		2.9922

STA. NO. 08074540		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR		
LITTLE WHITEOAK BAYOU AT TRIMBLE ST, HOUSTON, TEX.		STORM OF MAY 3 -5, 1981										ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME	4400	5760	6200	G A G E	N U M B E R	6500							CFS	IN.
MAY 4														
1930	6.86	5.90	5.40		4.80							5.79	1630.0	3.0273
1945	6.88	5.90	5.40		4.80							5.79	1950.0	3.1113
2030	6.88	5.90	5.40		4.80							5.79	2430.0	3.2158
2045	6.88	5.90	5.40		4.80							5.79	2350.0	3.3423
2145	6.88	5.90	5.40		4.80							5.79	1900.0	3.4854
2230	6.88	5.90	5.40		4.80							5.79	1520.0	3.5836
2315	6.88	5.90	5.40		4.80							5.79	1230.0	3.6630
2400	6.88	5.90	5.40		4.80							5.79	983.0	3.7370
MAY 5														
0000	6.88	5.90	5.40		4.80							5.79	983.0	3.7370
0100	6.88	5.90	5.40		4.80							5.79	732.0	3.8000
0200	6.88	5.90	5.40		4.80							5.79	563.0	3.8485
0300	6.88	5.90	5.40		4.80							5.79	441.0	3.9054
0500	6.88	5.90	5.40		4.80							5.79	303.0	3.9446
0600	6.88	5.90	5.40		4.80							5.79	243.0	3.9759
0800	6.88	5.90	5.40		4.80							5.79	174.0	4.0059
1000	6.88	5.90	5.40		4.80							5.79	127.0	4.0278
1200	6.88	5.90	5.40		4.80							5.79	97.0	4.0612
1800	6.88	5.90	5.40		4.80							5.79	44.0	4.0839
2400	6.88	5.90	5.40		4.80							5.79	20.0	4.0891

STA. NO. 08074540		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR		
LITTLE WHITEOAK BAYOU AT TRIMBLE ST, HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981					DISCHARGE!		
DATE & TIME		G A G E		N U M B E R		ACCUM. WEIGHTED		PRECIP. IN.	
		4250	4540	5760	204R			CFS	IN.
AUG. 30									
0000		0.0	0.0	0.0	0.0	0.0	8.0	0.0021	0.0021
0600		0.0	0.0	0.0	0.0	0.0	8.0	0.0062	0.0062
1200		0.0	0.0	0.0	0.0	0.0	8.0	0.0084	0.0084
1230		0.0	0.0	0.05	0.0	0.00	8.0	0.0088	0.0088
1300		0.0	0.0	0.05	0.18	0.03	8.0	0.0091	0.0091
1330		0.0	0.30	0.05	0.24	0.23	8.0	0.0108	0.0108
1800		0.0	0.30	0.05	0.24	0.23	8.0	0.0129	0.0129
1930		0.0	0.30	0.05	0.24	0.23	8.0	0.0136	0.0136
2000		0.0	0.32	0.10	0.29	0.26	8.0	0.0139	0.0139
2030		0.0	0.71	0.25	0.33	0.52	42.0	0.0158	0.0158
2100		0.0	0.74	0.25	0.44	0.56	115.0	0.0207	0.0207
2130		0.23	0.74	0.25	0.44	0.59	116.0	0.0257	0.0257
2200		0.23	0.75	0.25	0.44	0.60	113.0	0.0306	0.0306
2230		0.23	0.81	0.40	0.68	0.68	106.0	0.0351	0.0351
2300		0.24	0.89	0.45	0.90	0.77	124.0	0.0405	0.0405
2330		0.53	0.96	0.65	0.92	0.87	156.0	0.0472	0.0472
2400		0.64	1.00	0.70	1.34	0.98	193.0	0.0555	0.0555
AUG. 31									
0000		0.64	1.00	0.70	1.34	0.98	193.0	0.0555	0.0555
0030		0.66	1.23	0.95	1.68	1.20	239.0	0.0658	0.0658
0100		1.33	2.47	1.90	1.84	2.18	662.0	0.0943	0.0943
0130		1.74	2.91	2.45	1.98	2.57	1190.0	0.1455	0.1455
0200		1.92	3.53	2.60	2.23	3.05	1770.0	0.2217	0.2217
0230		2.04	4.13	3.00	3.46	3.66	2110.0	0.3125	0.3125
0300		3.05	4.19	3.00	3.59	3.87	2410.0	0.4162	0.4162
0330		3.31	4.29	3.15	3.68	3.99	2370.0	0.5183	0.5183
0400		3.36	4.55	3.40	3.76	4.20	2270.0	0.6160	0.6160
0430		3.45	4.63	3.65	3.86	4.29	2140.0	0.7081	0.7081
0500		3.51	5.10	4.00	4.12	4.66	2110.0	0.7989	0.7989
0530		3.73	5.21	4.15	4.28	4.80	2090.0	0.8889	0.8889
0600		3.86	5.29	4.20	4.46	4.90	1970.0	0.9737	0.9737
0630		4.03	5.36	4.30	4.59	4.99	1820.0	1.0520	1.0520
0700		4.08	5.41	4.40	4.96	5.09	1660.0	1.1234	1.1234
0730		4.37	5.50	4.45	5.06	5.21	1500.0	1.1880	1.1880
0800		4.47	5.57	4.50	5.13	5.29	1370.0	1.2470	1.2470
0830		4.55	5.65	4.55	5.16	5.36	1260.0	1.3012	1.3012
0900		4.63	5.74	4.65	5.21	5.44	1170.0	1.3516	1.3516
0930		4.69	5.83	4.70	5.30	5.52	1100.0	1.3989	1.3989
1000		4.80	6.04	4.85	5.62	5.73	1060.0	1.4446	1.4446
1030		5.11	6.12	5.00	5.86	5.87	1140.0	1.4936	1.4936

STA. NO. 08074540		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
LITTLE WHITEDAK BAYOU AT TRIMBLE ST, HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981										DISCHARGE! ACCUM.	
DATE & TIME		G A G E N U M B E R										WEIGHTED PRECIP. IN.	
		4250	4540	5760	204R							CFS	IN.
AUG. 31													
1100		5.53	7.87	6.35	6.84							1790.0	1.5707
1130		5.72	8.82	7.50	7.36							3160.0	1.7067
1200		6.07	8.99	7.60	7.44							3900.0	1.8746
1230		6.17	9.08	7.70	7.46							4070.0	2.0498
1300		6.25	9.10	7.70	7.58							3850.0	2.2155
1330		6.26	9.11	7.70	7.65							3460.0	2.3644
1400		6.29	9.12	7.70	7.67							3010.0	2.4940
1430		6.32	9.13	7.75	7.72							2600.0	2.6059
1500		6.34	9.16	7.75	7.74							2300.0	2.7049
1530		6.34	9.16	7.75	7.82							2040.0	2.7927
1600		6.35	9.16	7.75	7.84							1790.0	2.9083
1700		6.35	9.16	7.75	7.84							1380.0	3.0271
1800		6.35	9.16	7.75	7.84							1050.0	3.0949
1830		6.35	9.16	7.75	8.02							923.0	3.1346
1900		6.40	9.18	7.75	8.19							800.0	3.1862
2000		6.40	9.18	7.75	8.19							618.0	3.2394
2100		6.40	9.18	7.75	8.19							502.0	3.3259
2400		6.40	9.18	7.75	8.19							288.0	3.3879
SEP. 1													
0000		6.40	9.18	7.75	8.19							288.0	3.3879
0200		6.40	9.18	7.75	8.19							198.0	3.4219
0400		6.40	9.18	7.75	8.19							138.0	3.4457
0600		6.40	9.18	7.75	8.19							97.0	3.4624
0800		6.40	9.18	7.75	8.19							71.0	3.4746
1000		6.40	9.18	7.75	8.19							56.0	3.4819
1100		6.40	9.18	7.75	8.19							50.0	3.4862
1200		6.40	9.18	7.80	8.19							47.0	3.4922
1400		6.40	9.18	7.80	8.19							37.0	3.4970
1500		6.40	9.18	7.80	8.19							34.0	3.4999
1600		6.40	9.19	7.80	8.19							31.0	3.5039
1800		6.40	9.19	7.80	8.19							25.0	3.5125
2400		6.40	9.19	7.80	8.19							15.0	3.5164

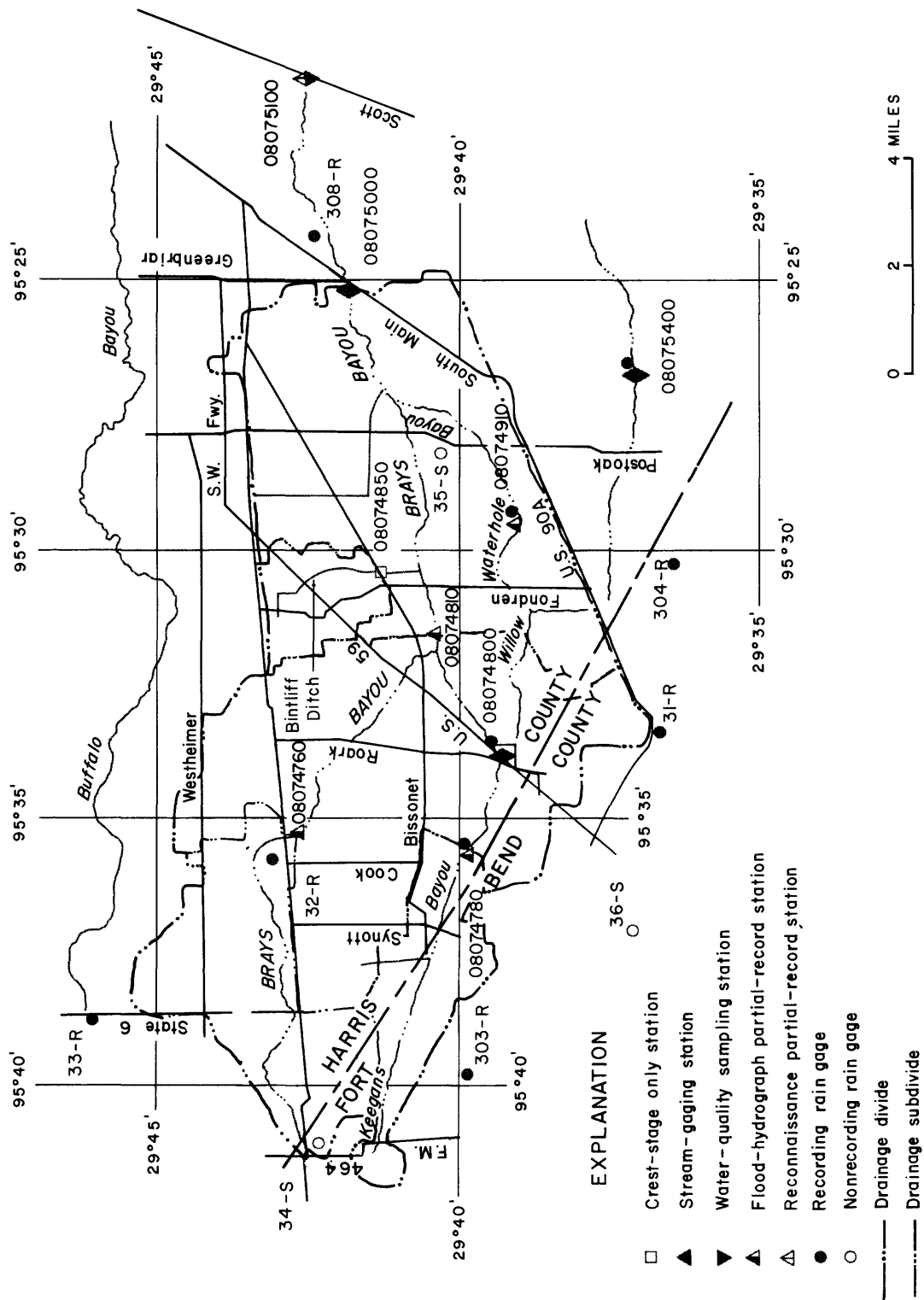
## BRAYS BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Brays Bayou drainage basin are shown in figure 11.

Keegans Bayou, Bintliff Ditch, and Hummingbird Street Ditch are shown on separate drainage basins within the Brays Bayou section.

Weighted-mean rainfall in the drainage basin for the 1981 water year based on nine rain gages was 45.53 inches or 2.66 inches less than the 30-year (1941-70) average of 48.19 inches for Houston.

No storms were analyzed for the 1981 water year, at station 08074760, Brays Bayou at Alief, Tex. The storms of May 3-5 and Aug. 30-Sept. 3 were selected for analysis at station 08074810, Brays Bayou at Gessner Drive, Houston, Tex., and the storms of May 3-6 and Aug. 28-Sept. 3 were selected for analysis at station 08075000, Brays Bayou at Houston.



Base from Texas Department of Highways  
and Public Transportation General Highway Map

Figure II. - Locations of data-collection sites in and near the Brays Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 10. -- Storm rainfall-runoff data, 1981 Water Year, Brays Bayou

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Brays Bayou at Gessner Drive, Houston, TX. (Drainage area -- 53.2 mi <sup>2</sup> )								
May 3-4, 1981	7.0	4.74	0.53	0.88	1.53	3.16	0.59	9,910
May 4-5, 1981	9.0	0.65	.09	.18	.35			1,140
Aug. 30-Sept. 3, 1981	12.3	9.99	0.86	1.40	2.05	5.95	0.60	13,000 *,†,‡
Brays Bayou at Houston, TX. (Drainage area -- 94.9 mi <sup>2</sup> )								
May 3-4, 1981	7.8	5.50	1.13	1.92	3.29	3.97	0.66	19,400
May 4-6, 1981	2.5	0.53	.43	.86	1.06			3,920
Aug. 28-30, 1981	24.5	0.60	0.70	1.40	1.80	6.33	0.64	1,220
Aug. 30-Sept. 3, 1981	13.3	9.34	1.17	1.66	2.55			25,400 *

\* - Annual peak discharge for 1981 Water Year.

† - Peak discharge for period of record.

‡ - Peak discharge value has been revised from that published in USGS Water Resources Data for Texas, Volume 2, 1981.

08074760 BRAYS BAYOU AT ALIEF, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°42'39", long 95°35'13", Harris County, Hydrologic unit 12040104, near center of channel on downstream side of bridge on High Star Street in Alief, Tex.

DRAINAGE AREA.--14.1 mi<sup>2</sup>. Prior to Jan. 1, 1978, 12.9 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 3, 1977 to present.

GAGE.--Dinital flood-hydrograph recorder and crest-stage gage. Datum of gage is 55.88 ft National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,580 ft<sup>3</sup>/s, Aug. 31, 1981. (Gage-height 19.59 ft). Minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 300 ft<sup>3</sup>/s or maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
May 3	1230	1520	12.37
Jul. 7	1100	1020	12.45
Aug. 31	unknown	*4580	19.59

Minimum discharge not determined.



## KEEGANS BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Keegans Bayou drainage basin are shown in figure 12.

Weighted-mean rainfall in the drainage basin, based on four rain gages for the 1981 water year was 42.76 inches or 5.43 inches less than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of Aug. 19-20 and Aug. 30-Sept. 4 were analyzed for station 08074780, Keegans Bayou at Keegan Road near Houston. The storms of April 23-24 and Aug. 30-Sept. 3 were selected for analysis at station 08074800, Keegans Bayou at Roark Road near Houston.

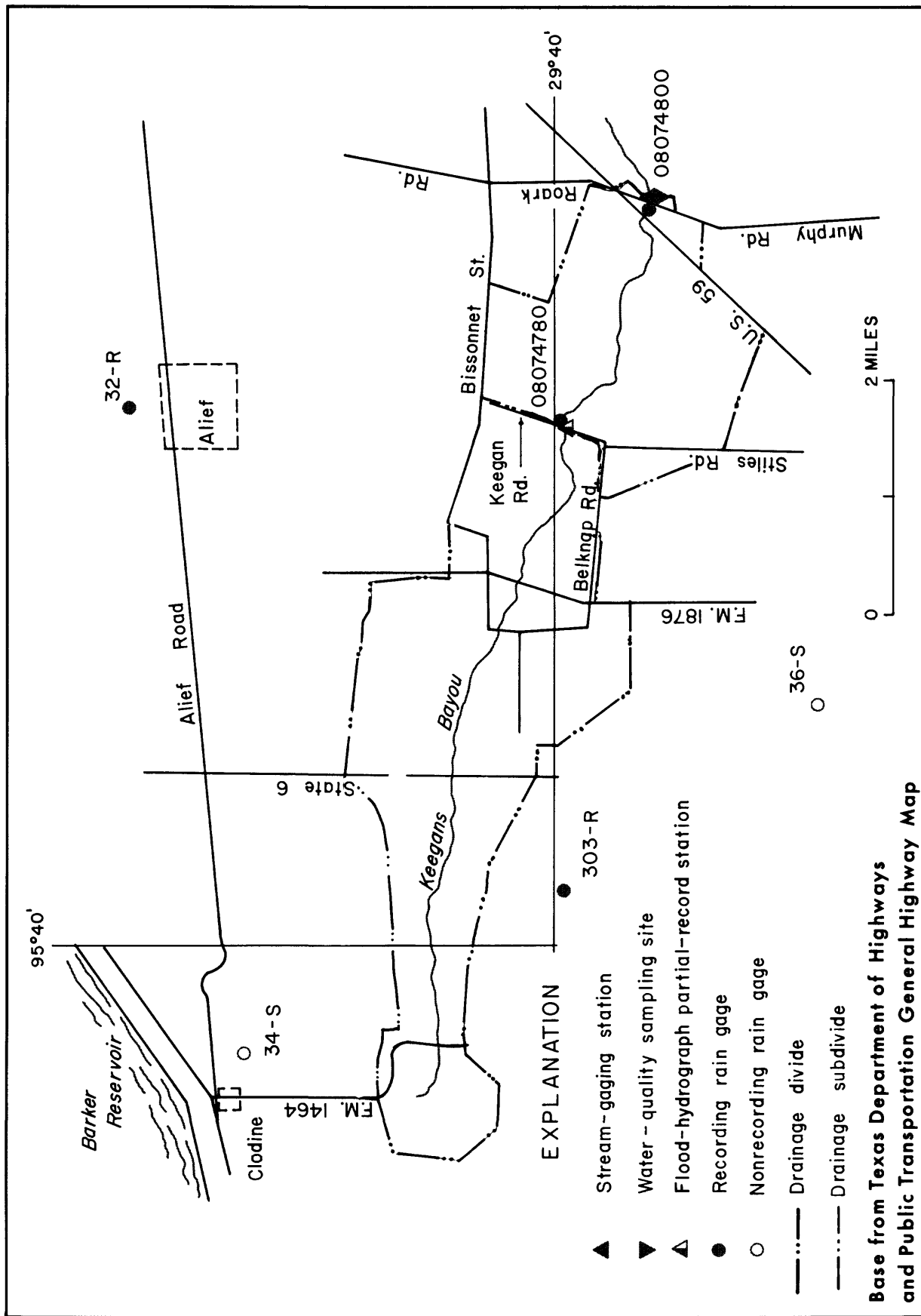


Figure 12.- Locations of data-collection sites in and near the Keegans Bayou drainage basin

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 11.--Storm rainfall-runoff data, 1981 Water Year, Keegans Bayou

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin						
			15-minute	30-minute	60-minute				
Keegans Bayou at Keegans Road near Houston, TX. (Drainage area -- 7.47 mi <sup>2</sup> )									
Aug. 19-20, 1981	1.0	1.84	1.34	2.31	2.77	0.54	0.29	461	
Aug. 30-Sept. 4, 1981	11.0	9.71	0.86	1.40	2.00	5.90	0.61	1,370 *, ++	
Keegans Bayou at Roark Road near Houston, TX. (Drainage area -- 11.5 mi <sup>2</sup> )									
April 23-24, 1981	3.0	1.28	0.46	0.82	0.97	0.24	0.18	210	
Aug. 30-Sept. 3, 1981	11.8	9.28	0.86	1.40	2.00	6.00	0.65	2,270 *, ++	

\* - Annual peak discharge for 1981 Water Year.

++ - Peak discharge for period of record.

08074780 KEEGANS BAYOU AT KEEGAN ROAD NEAR HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°39'55", long 95°35'42", Harris County, Hydrologic Unit 12040104 on downstream side of bridge on Keegan Road, 2.35 miles upstream from station, Keegans Bayou at Roark Road, and about 16 miles southwest of Houston.

DRAINAGE AREA.--7.47 mi<sup>2</sup>. Prior to Jan. 1, 1978, 7.87 mi<sup>2</sup>.  
Prior to Oct. 1, 1973, 6.93 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1964 to September 1971, August 5, 1974 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Prior to April 25, 1978 a flood-hydrograph and rainfall recorder (type SR) and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1370 ft<sup>3</sup>/s, Aug. 31, 1981. (Gage height 79.41 ft).  
Maximum elevation 83.55 ft April 14, 1966, (prior to channel improvement).  
Minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 250 ft<sup>3</sup>/s, and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
May 3	1345	563	75.57
July 7	0945	258	74.36
Aug. 19	1445	461	74.90
Aug. 31	1145	*1,370	79.41

Minimum discharge not determined.

STA. NO. 08074780		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
KEEGANS BAYOU AT KEEGAN ROAD NEAR HOUSTON, TEX.													
STORM OF AUG. 19-20, 1981													
DATE & TIME	G A G E		N U M B E R									ACCUM.	DISCHARGE!
	4780	303R										WEIGHTED PRECIP. IN.	IN CFS
AUG. 19													
0000	0.0	0.0										0.0	0.0
0600	0.0	0.0										0.0	0.0025
1200	0.0	0.0										0.0	0.0039
1300	0.0	0.0										0.0	0.0042
1315	0.0	0.70										0.42	0.0043
1330	0.01	1.05										0.63	0.0044
1345	0.17	1.10										0.73	0.0049
1400	1.51	1.15										1.29	0.0076
1415	2.48	1.15										1.68	0.0230
1430	2.78	1.15										1.80	0.0448
1445	2.85	1.15										1.83	0.0687
1500	2.86	1.15										1.83	0.0917
1515	2.86	1.15										1.83	0.1126
1530	2.87	1.15										1.84	0.1506
1615	2.87	1.15										1.84	0.1947
1700	2.87	1.15										1.84	0.2363
1800	2.87	1.15										1.84	0.2734
1900	2.87	1.15										1.84	0.3073
2015	2.87	1.15										1.84	0.3409
2145	2.87	1.15										1.84	0.3708
2315	2.87	1.15										1.84	0.3890
2400	2.87	1.15										1.84	0.4170
AUG. 20													
0000	2.87	1.15										1.84	0.4170
0300	2.87	1.15										1.84	0.4500
0600	2.87	1.15										1.84	0.4873
1200	2.87	1.15										1.84	0.5172
1800	2.87	1.15										1.84	0.5346
2400	2.87	1.15										1.84	0.5396

STA. NO. 08074780		STORM RAINFALL AND RUNOFF RECORD					
KEEGANS BAYOU AT KEEGAN ROAD NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 4, 1981			1981 WATER YEAR		
DATE & TIME	4800	303R	G A G E	N U M B E R	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
AUG. 30							
0000	0.0	0.0			0.0	2.0	0.0012
0600	0.0	0.0			0.0	2.0	0.0037
1200	0.0	0.0			0.0	2.0	0.0051
1245	0.0	0.0			0.0	2.0	0.0053
1300	0.05	0.0			0.01	2.0	0.0054
1315	0.22	0.15			0.16	2.0	0.0055
1330	0.23	0.30			0.29	2.0	0.0059
1500	0.23	0.30			0.29	2.0	0.0063
1515	0.26	0.30			0.29	2.0	0.0069
1800	0.26	0.30			0.29	2.0	0.0079
2015	0.26	0.30			0.29	2.0	0.0085
2030	0.40	0.30			0.31	2.0	0.0086
2045	0.47	0.30			0.33	2.0	0.0087
2100	0.48	0.30			0.33	2.0	0.0088
2115	0.49	0.30			0.33	2.0	0.0090
2215	0.49	0.30			0.33	50.0	0.0155
2230	1.02	0.34			0.44	65.0	0.0189
2245	1.10	0.48			0.57	103.0	0.0242
2300	1.12	0.50			0.59	115.0	0.0302
2315	1.17	0.51			0.61	117.0	0.0363
2330	1.32	0.52			0.64	122.0	0.0426
2345	1.72	0.53			0.71	152.0	0.0505
2400	2.58	0.95			1.19	206.0	0.0611
AUG. 31							
0000	2.58	0.95			1.19	206.0	0.0611
0015	3.12	1.00			1.32	265.0	0.0749
0030	3.26	1.20			1.51	302.0	0.0905
0045	3.26	1.50			1.76	311.0	0.1067
0100	3.29	1.60			1.85	309.0	0.1227
0115	3.30	1.64			1.89	301.0	0.1383
0130	3.31	1.72			1.96	300.0	0.1539
0145	3.38	2.21			2.39	357.0	0.1724
0200	3.53	3.05			3.12	502.0	0.1984
0215	3.68	3.15			3.23	549.0	0.2269
0230	3.70	3.20			3.27	552.0	0.2555
0245	3.70	3.23			3.30	532.0	0.2831
0300	3.73	3.25			3.32	510.0	0.3096
0315	3.80	3.30			3.37	513.0	0.3362
0330	3.99	3.63			3.68	552.0	0.3648
0345	4.00	3.78			3.81	555.0	0.3936

STA. NO. 08074780		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR				
KEEGANS BAYOU AT KEEGAN ROAD NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 4, 1981					DISCHARGE		ACCUM.		
DATE & TIME		G A G E		N U M B E R		PRECIP.		IN		RUNOFF	
		4800	303R			IN.		CFS		IN	
AUG 31											
0400	4.04	3.83				3.86		555.0		0.4223	
0415	4.06	3.85				3.88		537.0		0.4502	
0430	4.08	3.85				3.88		529.0		0.4776	
0445	4.23	4.05				4.08		523.0		0.5048	
0500	4.28	4.11				4.14		523.0		0.5319	
0515	4.53	4.15				4.21		540.0		0.5599	
0530	4.63	4.29				4.34		549.0		0.5884	
0545	4.76	4.33				4.39		585.0		0.6187	
0600	4.90	4.70				4.73		717.0		0.6559	
0615	4.98	5.10				5.08		781.0		0.6964	
0630	5.08	5.55				5.48		905.0		0.7433	
0645	5.20	6.33				6.16		966.0		0.7934	
0700	5.26	6.63				6.42		985.0		0.8445	
0715	5.28	6.71				6.50		985.0		0.8956	
0730	5.30	6.77				6.55		970.0		0.9459	
0745	5.38	6.85				6.63		959.0		0.9956	
0800	5.40	6.91				6.68		945.0		1.0446	
0815	5.44	6.95				6.72		930.0		1.0929	
0830	5.53	7.01				6.79		913.0		1.1402	
0845	5.58	7.07				6.85		901.0		1.1869	
0900	5.60	7.13				6.90		891.0		1.2331	
0915	5.64	7.18				6.95		862.0		1.2778	
0930	5.70	7.33				7.09		860.0		1.3224	
0945	6.08	7.53				7.31		968.0		1.3726	
1000	6.23	8.16				7.87		1100.0		1.4297	
1015	6.98	8.63				8.38		1240.0		1.4940	
1030	7.00	8.84				8.56		1290.0		1.5609	
1045	7.28	9.00				8.74		1310.0		1.6288	
1100	7.40	9.40				9.10		1320.0		1.6973	
1115	7.43	9.45				9.15		1320.0		1.7657	
1130	7.68	9.50				9.23		1360.0		1.8363	
1145	7.86	9.52				9.27		1370.0		1.9073	
1200	7.90	9.53				9.29		1350.0		1.9773	
1215	7.93	9.54				9.30		1300.0		2.0447	
1230	7.96	9.55				9.31		1260.0		2.1101	
1245	7.96	9.56				9.32		1220.0		2.1734	
1300	7.96	9.57				9.33		1170.0		2.2340	
1315	7.96	9.58				9.34		1120.0		2.2921	
1330	7.96	9.59				9.35		1080.0		2.3481	

STA. NO. 08074780		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
KEEGANS BAYOU AT KEEGAN ROAD NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 4, 1981										DISCHARGE: ACCUM.	
DATE & TIME		G A G E N U M B E R										PRECIP. IN.	
		4800	303R									CFS	IN.
AUG. 31													
1345		7.96	9.60									1030.0	2.4015
1400		7.96	9.61									1000.0	2.5830
1530		7.96	9.61									799.0	2.8524
1715		7.96	9.61									640.0	3.0183
1800		7.96	9.61									592.0	3.0797
1815		7.98	9.61									577.0	3.1994
2000		7.98	9.61									501.0	3.3034
2015		8.04	9.61									495.0	3.4959
2345		8.04	9.61									403.0	3.6526
2400		8.04	9.61									400.0	3.8082
SEP. 1													
0000		8.04	9.61									400.0	3.8082
0330		8.04	9.61									337.0	3.9480
0400		8.04	9.85									329.0	3.9822
0430		8.09	9.88									324.0	4.0158
0500		8.09	9.89									318.0	4.0652
0600		8.09	9.89									307.0	4.2881
1200		8.09	9.89									251.0	4.6005
1800		8.09	9.89									214.0	4.7559
1900		8.09	9.89									204.0	4.7876
1930		8.09	9.97									200.0	4.8914
2400		8.09	9.97									168.0	5.0743
SEP. 2													
0000		8.09	9.97									168.0	5.0743
0600		8.09	9.97									138.0	5.2461
1200		8.09	9.97									115.0	5.3534
1500		8.09	9.97									106.0	5.3974
1600		8.14	9.97									102.0	5.4292
1800		8.14	9.97									96.0	5.5088
2400		8.14	9.97									80.0	5.6084
SEP. 3													
0000		8.14	9.97									80.0	5.6084
0600		8.14	9.97									64.0	5.6615
0800		8.20	9.97									59.0	5.6860
1000		8.21	9.97									55.0	5.7031
1100		8.25	9.97									52.0	5.7462
1800		8.25	9.97									40.0	5.8002
2400		8.25	9.97									25.0	5.8468
SEP. 4													
0000		8.25	9.97									25.0	5.8468
1200		8.25	9.97									15.0	5.8842
2400		8.25	9.97									10.0	5.8966



SAN JACINTO RIVER BASIN

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX

LOCATION.--Lat 29°39'23", long 95°33'43", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge on Roark Road in southwest Houston.

DRAINAGE AREA.--11.5 mi<sup>2</sup> (29.8 km<sup>2</sup>). Oct. 1, 1976, to Dec. 31, 1977, 12.0 mi<sup>2</sup> (31.1 km<sup>2</sup>); August 1964 to Sept. 30, 1976, 11.6 mi<sup>2</sup> (30.0 km<sup>2</sup>). Drainage area changes were the result of ditch relocations or extensions.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1964 to current year.

REVISED RECORDS.--WRD TX-74-1: Drainage area. WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Channel in process of rectification during latter part of 1981 water year. Recording rain gage at station.

AVERAGE DISCHARGE.--17 years, 12.3 ft<sup>3</sup>/s (0.348 m<sup>3</sup>/s), 8,910 acre-ft/yr (11.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,270 ft<sup>3</sup>/s (64.3 m<sup>3</sup>/s) Aug. 31, 1981, elevation, 73.27 ft (22.333 m); maximum gage height, 74.54 ft (22.720 m) Sept. 19, 1979, occurred prior to channel rectification in 1981; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft<sup>3</sup>/s (11.3 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
May 3	1115	958 27.1	71.32 21.738	Aug. 19	1545	955 27.0	69.27 21.113
July 5	1630	423 12.0	67.75 20.650	Aug. 31	1200	*2,270 64.3	73.27 22.333
July 7	1000	482 13.7	68.05 20.742				

Minimum daily discharge, 3.1 ft<sup>3</sup>/s (0.088 m<sup>3</sup>/s) Mar. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	4.5	4.6	5.1	13	5.4	3.2	3.6	4.1	14	5.2	309
2	12	4.9	4.3	5.1	5.8	5.1	3.3	3.7	12	4.8	5.0	88
3	8.4	5.0	4.4	4.8	3.9	4.7	3.8	419	17	3.6	4.8	41
4	6.7	5.6	4.3	5.6	8.0	113	3.9	133	5.8	3.5	5.0	17
5	6.7	5.4	4.4	5.2	34	11	3.7	44	95	123	5.2	10
6	6.6	5.8	4.5	6.5	19	6.8	3.2	29	14	52	5.2	7.2
7	6.2	5.7	5.0	4.6	7.3	5.3	3.7	16	5.4	218	5.0	6.9
8	6.1	5.5	18	4.4	5.3	5.2	3.7	8.9	4.2	71	4.8	6.5
9	6.1	5.7	35	4.3	4.8	5.0	3.5	14	4.2	27	4.8	6.1
10	6.0	5.7	9.8	4.2	8.2	3.7	3.8	11	9.3	23	5.0	6.3
11	5.9	5.6	5.6	4.2	5.4	4.6	3.9	6.3	48	23	6.4	5.1
12	7.1	5.7	4.2	4.4	4.8	4.7	4.5	4.9	59	12	5.6	5.3
13	7.2	5.4	3.9	4.0	4.5	4.2	4.4	4.7	23	9.4	5.3	5.1
14	7.2	5.9	4.2	8.0	4.4	3.5	3.7	26	9.1	8.4	5.1	19
15	7.4	6.2	7.6	4.4	4.3	4.2	4.4	7.6	6.0	7.0	5.0	15
16	7.3	6.3	5.1	4.1	4.5	4.0	4.8	6.5	4.9	6.3	4.8	11
17	9.1	11	4.9	4.2	3.9	3.6	4.6	6.3	4.4	10	4.6	9.6
18	37	5.8	4.7	4.3	4.5	3.2	4.6	5.6	4.5	6.5	4.6	9.3
19	20	5.0	4.2	66	4.1	3.3	4.7	5.2	4.0	5.3	181	9.6
20	8.8	4.6	4.1	42	4.1	3.3	4.7	5.2	4.0	4.8	33	10
21	7.2	4.7	4.3	9.6	5.1	3.9	4.4	5.1	4.4	4.5	10	11
22	5.2	18	4.4	5.4	9.5	4.0	4.5	5.0	4.3	4.3	8.5	9.7
23	5.6	9.4	4.2	4.2	6.1	3.9	60	4.4	5.3	4.2	7.1	9.8
24	5.5	6.5	4.2	3.8	3.8	3.2	15	4.7	5.1	4.1	6.5	9.5
25	5.5	18	4.2	4.1	32	3.1	10	6.0	21	4.0	6.2	11
26	6.0	44	4.3	4.1	12	3.2	5.7	5.7	10	8.1	6.0	9.3
27	9.4	8.5	4.8	4.4	7.6	3.2	4.0	5.3	8.3	24	6.0	9.4
28	7.0	5.3	4.8	3.9	4.9	3.4	3.6	5.2	4.5	23	81	9.4
29	5.8	4.9	5.0	4.1	---	4.1	3.5	5.4	4.1	8.2	21	8.1
30	5.0	4.4	5.1	4.0	---	3.8	3.7	5.8	35	6.3	62	8.7
31	4.6	---	5.1	3.9	---	3.3	---	4.9	---	5.5	1350	---
TOTAL	271.6	239.0	193.2	246.9	234.8	242.9	194.5	818.0	439.9	728.8	1869.7	692.9
MEAN	8.76	7.97	6.23	7.96	8.39	7.84	6.48	26.4	14.7	23.5	60.3	23.1
MAX	37	44	35	66	34	113	60	419	95	218	1350	309
MIN	4.6	4.4	3.9	3.8	3.8	3.1	3.2	3.6	4.0	3.5	4.6	5.1
AC-FT	539	474	383	490	466	482	386	1620	873	1450	3710	1370
(††)	1.60	2.36	1.41	2.19	2.32	1.23	1.54	5.98	5.24	5.89	11.76	1.24
CAL YR 1980 TOTAL	4400.4											
WTR YR 1981 TOTAL	6172.2											
MEAN	12.0											
MAX	403											
MIN	3.3											
AC-FT	8730											
(††)	33.95											
WTR YR 1981	12240											
(††)	42.76											

†† Weighted-mean rainfall, in inches, based on four rain gages.

## SAN JACINTO RIVER BASIN

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year. Sediment analyses: October 1970 to September 1971.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
MAR										
23...	0920	4.4	837	7.7	15.0	20	8.7	7.5	73	14
APR										
23...	1035	197	119	8.6	20.0	70	130	7.8	85	21
23...	1210	160	258	7.7	20.0	50	--	5.5	60	16
24...	1205	9.3	470	7.7	21.0	50	30	3.6	40	4.3
JUL										
08...	0930	73	200	7.7	26.0	100	58	4.4	53	4.3
AUG										
17...	1445	4.6	780	7.7	33.5	5	4.5	6.7	93	8.1
29...	1740	19	575	7.4	27.5	30	45	3.6	45	5.2
30...	1530	71	300	7.4	27.0	40	35	5.9	73	7.2
30...	1750	75	258	7.6	27.0	50	320	4.9	60	4.3
30...	2050	102	221	7.5	27.0	100	190	6.1	75	5.2
31...	0900	1670	107	7.8	24.5	65	160	6.8	81	1.5
31...	1120	2200	90	8.5	24.0	80	230	7.4	87	3.0
31...	1440	1610	98	8.4	24.0	60	140	7.0	82	2.2
31...	1940	866	92	7.7	25.0	65	84	5.8	70	2.8
SEP										
01...	0830	359	112	7.2	25.0	60	44	5.0	60	2.6
02...	1350	78	178	7.2	29.0	100	41	4.4	57	1.9

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. - PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAR									
23...	130	K2	K6	--	--	--	--	--	--
APR									
23...	81000	20000	10000	--	--	--	--	--	--
23...	71000	16000	13000	--	--	--	--	--	--
24...	3300	60	40	--	--	--	--	--	--
JUL									
08...	59000	15000	17000	66	0	20	3.9	11	.6
AUG									
17...	--	--	--	180	0	54	11	84	2.9
29...	--	--	--	140	3	43	8.6	52	2.0
30...	--	--	--	75	1	23	4.2	23	1.2
30...	--	--	--	72	1	22	4.2	22	1.2
30...	--	--	--	61	4	19	3.4	17	1.0
31...	49000	19000	18000	35	0	11	1.9	5.5	.4
31...	120000	32000	28000	32	0	9.9	1.8	4.4	.4
31...	120000	35000	24000	38	0	12	1.9	4.7	.3
31...	60000	14000	26000	31	0	9.3	1.9	4.2	.3
SEP									
01...	50000	15000	19000	39	0	12	2.3	5.0	.4
02...	58000	5700	6100	67	0	20	4.1	9.9	.6

SAN JACINTO RIVER BASIN

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)
MAR									
23...	--	--	--	--	--	--	--	8	4
APR									
23...	--	--	--	--	--	--	--	194	26
23...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	32	6
JUL									
08...	4.4	72	8.0	10	.1	14	114	88	24
AUG									
17...	8.7	200	37	96	.0	28	439	21	9
29...	7.4	140	23	61	.3	21	300	156	21
30...	5.4	74	15	31	.1	11	157	306	27
30...	5.0	71	15	28	.2	11	150	360	25
30...	4.3	57	12	24	.2	9.1	123	480	10
31...	3.1	38	5.0	5.6	.1	4.9	60	490	14
31...	2.5	34	5.0	4.6	.1	4.3	53	278	35
31...	3.0	41	5.0	5.0	.1	4.5	61	170	32
31...	3.1	36	5.0	4.0	.1	5.0	55	105	14
SEP									
01...	4.0	41	6.0	5.3	.1	6.7	66	112	10
02...	5.3	67	9.0	11	.1	12	111	168	2

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
MAR									
23...	3.6	.730	4.3	6.900	3.1	10	.060	20	--
APR									
23...	.51	.040	.55	.490	1.1	1.6	.660	22	--
23...	.82	.120	.94	1.300	1.6	2.9	2.200	20	--
24...	1.3	.410	1.7	1.600	.90	2.5	3.900	9.9	--
JUL									
08...	.33	.110	.44	.430	1.2	1.6	.760	12	--
AUG									
17...	1.4	.200	1.6	3.200	1.8	5.0	8.200	8.3	--
29...	4.5	.220	4.7	.800	2.0	2.8	4.100	12	--
30...	2.3	.110	2.4	.550	2.6	3.1	2.300	17	1.7
30...	1.5	.110	1.6	.410	2.8	3.2	1.700	24	--
30...	1.3	.090	1.4	.330	2.4	2.7	1.500	28	--
31...	--	--	--	--	--	--	--	12	--
31...	.19	.020	.21	.120	1.7	1.8	.370	15	--
31...	.20	.020	.22	.160	1.5	1.7	.430	13	--
31...	.26	.020	.28	.110	1.4	1.5	.390	12	--
SEP									
01...	.18	.020	.20	.190	1.3	1.5	.460	13	--
02...	.36	.040	.40	.240	1.3	1.5	.620	13	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUL							
08...	0930	8	50	<1	10	<10	120
AUG							
17...	1445	8	90	<1	0	<10	10
30...	1530	9	53	<1	10	3	43
31...	1940	2	27	<1	10	3	63
SEP							
01...	0830	4	32	<1	0	2	61

SAN JACINTO RIVER BASIN

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL 08...	<10	7	.2	0	0	9
AUG 17...	<10	47	.0	2	0	22
30...	1	13	.2	1	1	17
31...	2	<1	.1	0	1	<3
SEP 01...	2	6	.1	0	0	13

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUL 08...	0930	.00	.0	.00	.0	.00	.00	.00	.19
AUG 17...	1445	.00	.0	.00	.1	.00	.00	.00	.75
30...	1530	.00	.0	.00	.1	.00	.00	.00	.50

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUL 08...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 17...	.00	.00	.00	.00	.00	.00	.02	.03	.00
30...	.00	.00	.00	.00	.00	.01	.01	.23	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUL 08...	.00	.00	.00	.00	0	.00	.03	.00	.00
AUG 17...	.00	.00	.00	.00	0	.00	<.01	.01	.00
30...	.00	.00	.00	.00	0	.00	--	--	--

STA. NO. 08074800		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TEX.		STORM OF APR. 23-24, 1981				DISCHARGE: ACCUM. RUNOFF			
DATE & TIME		G A G E		N U M B E R		WEIGHTED PRECIP. IN.		CFS IN.	
APR. 23		4780							
0000	0.0					0.0	4.0	0.0016	
0600	0.0					0.0	4.0	0.0039	
0830	0.0					0.0	4.0	0.0046	
0845	0.14					0.14	4.0	0.0048	
0900	0.15					0.15	4.0	0.0049	
0915	0.51					0.51	39.0	0.0062	
0930	0.97					0.97	75.0	0.0088	
0945	0.99					0.99	137.0	0.0134	
1000	1.05					1.05	199.0	0.0201	
1015	1.06					1.06	210.0	0.0272	
1030	1.06					1.06	199.0	0.0339	
1045	1.07					1.07	188.0	0.0402	
1100	1.07					1.07	177.0	0.0462	
1115	1.08					1.08	171.0	0.0519	
1130	1.08					1.08	165.0	0.0575	
1145	1.11					1.11	161.0	0.0629	
1200	1.14					1.14	156.0	0.0681	
1215	1.15					1.15	158.0	0.0788	
1300	1.15					1.15	162.0	0.0897	
1315	1.17					1.17	161.0	0.0951	
1330	1.18					1.18	160.0	0.1059	
1415	1.18					1.18	151.0	0.1161	
1430	1.19					1.19	145.0	0.1210	
1445	1.19					1.19	136.0	0.1255	
1500	1.20					1.20	128.0	0.1363	
1600	1.20					1.20	104.0	0.1503	
1700	1.20					1.20	81.0	0.1613	
1800	1.20					1.20	63.0	0.1697	
1900	1.20					1.20	51.0	0.1775	
2015	1.20					1.20	41.0	0.1837	
2115	1.20					1.20	33.0	0.1887	
2230	1.20					1.20	26.0	0.1931	
2345	1.20					1.20	21.0	0.1952	
2400	1.20					1.20	20.0	0.2117	
APR. 24									
0000	1.20					1.20	20.0	0.2117	
1200	1.20					1.20	9.3	0.2267	
2400	1.28					1.28	12.0	0.2364	



STA. NO. 08074800		STORM RAINFALL AND RUNOFF RECORD						
KEEGANS BAYOU AT ROAD ROAD NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981			1981 WATER YEAR			
DATE & TIME	4800	303R	G A G E	N U M B E R	ACCUM.	DISCHARGE	ACCUM.	
					WEIGHTED PRECIP.	I N	RUNOFF	
					I N.	CFS	I N.	
AUG. 31								
0245	3.70	3.23			3.42	1290.0	0.6362	
0300	3.73	3.25			3.44	1310.0	0.6804	
0315	3.80	3.30			3.50	1300.0	0.7241	
0330	3.99	3.63			3.77	1300.0	0.7679	
0345	4.00	3.78			3.87	1310.0	0.8121	
0400	4.04	3.83			3.91	1320.0	0.8565	
0415	4.06	3.85			3.93	1300.0	0.9003	
0430	4.08	3.85			3.94	1280.0	0.9434	
0445	4.23	4.05			4.12	1270.0	0.9862	
0500	4.28	4.11			4.18	1260.0	1.0287	
0515	4.53	4.15			4.30	1280.0	1.0718	
0530	4.63	4.29			4.43	1300.0	1.1156	
0545	4.76	4.33			4.50	1310.0	1.1597	
0600	4.90	4.70			4.78	1330.0	1.2045	
0615	4.98	5.10			5.05	1410.0	1.2520	
0630	5.08	5.55			5.36	1500.0	1.3025	
0645	5.20	6.33			5.88	1600.0	1.3564	
0700	5.26	6.63			6.08	1710.0	1.4140	
0715	5.28	6.71			6.14	1740.0	1.4727	
0730	5.30	6.77			6.18	1780.0	1.5326	
0745	5.38	6.85			6.26	1770.0	1.5922	
0800	5.40	6.91			6.31	1770.0	1.6519	
0815	5.44	6.95			6.35	1740.0	1.7105	
0830	5.53	7.01			6.42	1710.0	1.7681	
0845	5.58	7.07			6.47	1690.0	1.8250	
0900	5.60	7.13			6.52	1680.0	1.8816	
0915	5.64	7.18			6.56	1640.0	1.9369	
0930	5.70	7.33			6.68	1610.0	1.9911	
0945	6.08	7.53			6.95	1650.0	2.0467	
1000	6.23	8.16			7.39	1690.0	2.1036	
1015	6.98	8.63			7.97	1890.0	2.1673	
1030	7.00	8.84			8.10	2100.0	2.2380	
1045	7.28	9.00			8.31	2130.0	2.3098	
1100	7.40	9.40			8.60	2170.0	2.3829	
1115	7.43	9.45			8.64	2190.0	2.4566	
1130	7.68	9.50			8.77	2220.0	2.5314	
1145	7.86	9.52			8.86	2240.0	2.6069	
1200	7.90	9.53			8.88	2270.0	2.6833	
1215	7.93	9.54			8.90	2220.0	2.7581	

STORM RAINFALL AND RUNOFF RECORD									
STA. NO. 08074800		1981 WATER YEAR							
KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TEX.									
STORM OF AUG. 30 TO SEP. 3, 1981									
DATE & TIME		G A G E		N U M B E R		ACCUM. WEIGHED PRECIP.		DISCHARGE IN	
		4800	303R			IN.		CFS	IN.
AUG. 31									
1230		7.96	9.55				8.91	2170.0	2.8312
1245		7.96	9.56				8.92	2120.0	2.9026
1300		7.96	9.57				8.93	2070.0	2.9724
1315		7.96	9.58				8.93	2010.0	3.0401
1330		7.96	9.59				8.94	1950.0	3.1058
1345		7.96	9.60				8.94	1860.0	3.1684
1400		7.96	9.61				8.95	1780.0	3.3783
1530		7.96	9.61				8.95	1420.0	3.6653
1700		7.96	9.61				8.95	1150.0	3.8590
1800		7.96	9.61				8.95	1020.0	3.9449
1815		7.98	9.61				8.96	995.0	4.0790
2000		7.98	9.61				8.96	836.0	4.1916
2015		8.04	9.61				8.98	823.0	4.3580
2300		8.04	9.61				8.98	666.0	4.5262
2400		8.04	9.61				8.98	609.0	4.6904
SEP. 1									
0000		8.04	9.61				8.98	609.0	4.6904
0300		8.04	9.61				8.98	483.0	4.8043
0330		8.04	9.61				8.98	468.0	4.8358
0400		8.04	9.85				9.13	454.0	4.8664
0430		8.09	9.88				9.16	440.0	4.8960
0500		8.09	9.89				9.17	423.0	4.9388
0600		8.09	9.89				9.17	400.0	5.0735
1000		8.09	9.89				9.17	326.0	5.2053
1200		8.09	9.89				9.17	278.0	5.3083
1530		8.09	9.89				9.17	225.0	5.3993
1800		8.09	9.89				9.17	194.0	5.4450
1900		8.09	9.89				9.17	185.0	5.4637
1930		8.09	9.97				9.22	181.0	5.5186
2330		8.09	9.97				9.22	148.0	5.5634
2400		8.09	9.97				9.22	144.0	5.6265
SEP. 2									
0000		8.09	9.97				9.22	144.0	5.6265
0600		8.09	9.97				9.22	104.0	5.7106
1200		8.09	9.97				9.22	84.0	5.7615
1500		8.09	9.97				9.22	76.0	5.7922
1800		8.14	9.97				9.24	68.0	5.8335
2400		8.14	9.97				9.24	60.0	5.9062
SEP. 3									
0000		8.14	9.97				9.24	60.0	5.9062
1200		8.25	9.97				9.28	46.0	5.9806
2400		8.25	9.97				9.28	22.0	5.9984



08074810 BRAYS BAYOU AT GESSNER DRIVE, HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°40'21", long 95°31'41", Harris County, Hydrologic unit 12040104 on right bank on downstream side of bridge at Gessner Drive in southwest Houston.

DRAINAGE AREA.--53.2 mi<sup>2</sup>. Prior to Jan. 1, 1978, 51.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 1, 1977 to current year.

GAGE.--Digital flood-hydrograph recorder and crest-stage gage. Datum of gages is National Geodetic Vertical Datum of 1929, 1964 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 13,000 ft<sup>3</sup>/s (revised) Aug. 31, 1981 (elevation 62.47 ft); minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,200 ft<sup>3</sup>/s and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
May 3	1145	9,910	59.84
Aug. 31	1200	*13,000 <u>a/</u>	62.47

Minimum discharge not determined.

a/ Peak discharge value has been revised from that published in U.S. Geological Survey Water Resources Data for Texas, Volume 2, 1981.

STA. NO. 08074810		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR		
BRAYS BAYOU AT GESSNER DRIVE HOUSTON, TEX.												DISCHARGE: IN		ACCUM. RUNOFF
DATE & TIME		G A G E			N U M B E R			S T O R M O F M A Y 3 - 5 , 1981			ACCUM. WEIGHTED PRECIP. IN.	CFS	IN.	
		4780	4800	303R	33R	32R								
MAY 3														
0000	0.0	0.0	0.0	0.0	0.0	0.0				0.0	25.0	0.0006	0.0006	
0145	0.0	0.0	0.0	0.0	0.0	0.0				0.0	26.0	0.0014	0.0014	
0200	0.0	0.0	0.0	0.01	0.0	0.0				0.00	26.0	0.0016	0.0016	
0215	0.0	0.0	0.0	0.01	0.0	0.0				0.00	26.0	0.0018	0.0018	
0230	0.01	0.0	0.0	0.01	0.0	0.0				0.00	26.0	0.0020	0.0020	
0245	0.02	0.0	0.0	0.01	0.0	0.0				0.00	26.0	0.0022	0.0022	
0300	0.02	0.0	0.0	0.02	0.03	0.03				0.02	26.0	0.0025	0.0025	
0345	0.02	0.0	0.0	0.02	0.03	0.03				0.02	26.0	0.0029	0.0029	
0400	0.02	0.0	0.0	0.02	0.03	0.04				0.02	26.0	0.0032	0.0032	
0430	0.02	0.0	0.0	0.02	0.03	0.04				0.02	25.0	0.0035	0.0035	
0445	0.02	0.0	0.0	0.02	0.05	0.04				0.02	25.0	0.0036	0.0036	
0500	0.03	0.0	0.0	0.02	0.08	0.04				0.03	25.0	0.0038	0.0038	
0515	0.03	0.0	0.0	0.03	0.08	0.07				0.04	25.0	0.0040	0.0040	
0530	0.03	0.0	0.0	0.04	0.08	0.10				0.05	24.0	0.0042	0.0042	
0545	0.03	0.0	0.0	0.05	0.08	0.13				0.06	24.0	0.0044	0.0044	
0600	0.04	0.20	0.42	0.06	0.11	0.16				0.14	23.0	0.0045	0.0045	
0615	0.10	0.42	0.56	0.06	0.20	0.34				0.28	23.0	0.0047	0.0047	
0630	0.31	0.56	0.60	0.06	0.29	0.52				0.42	23.0	0.0049	0.0049	
0645	0.44	0.60	0.60	0.10	0.41	0.71				0.53	28.0	0.0051	0.0051	
0700	0.47	0.72	0.82	0.45	0.53	0.92				0.70	51.0	0.0054	0.0054	
0715	0.65	0.82	0.82	0.51	0.67	1.11				0.84	98.0	0.0062	0.0062	
0730	1.02	1.24	1.24	0.53	0.82	1.32				1.11	163.0	0.0073	0.0073	
0745	1.29	1.70	1.70	0.62	0.97	1.53				1.38	258.0	0.0092	0.0092	
0800	1.42	2.10	2.10	0.95	1.12	1.74				1.65	377.0	0.0120	0.0120	
0815	1.51	2.35	2.35	1.30	1.18	1.92				1.86	551.0	0.0160	0.0160	
0830	1.63	2.62	2.62	1.32	1.24	2.10				2.03	837.0	0.0221	0.0221	
0845	1.94	3.15	3.15	1.35	1.30	2.29				2.30	1190.0	0.0307	0.0307	
0900	2.08	3.15	3.15	1.39	1.36	2.50				2.41	1910.0	0.0446	0.0446	
0915	2.29	3.18	3.18	1.45	1.42	2.65				2.51	3030.0	0.0667	0.0667	
0930	2.33	3.35	3.35	1.52	1.48	2.83				2.65	4450.0	0.0991	0.0991	
0945	2.37	3.75	3.75	1.56	1.55	3.01				2.85	5660.0	0.1403	0.1403	
1000	2.55	4.08	4.08	1.62	1.64	3.19				3.05	6560.0	0.1881	0.1881	
1015	2.83	4.45	4.45	1.70	1.70	3.31				3.26	7240.0	0.2408	0.2408	
1030	3.03	4.46	4.46	1.95	1.76	3.43				3.37	7910.0	0.2984	0.2984	
1045	3.22	4.48	4.48	2.04	1.82	3.56				3.47	8460.0	0.3600	0.3600	
1100	3.26	4.49	4.49	2.08	1.91	3.71				3.54	9150.0	0.4267	0.4267	
1115	3.28	4.55	4.55	2.20	1.93	3.74				3.59	9650.0	0.4969	0.4969	
1130	3.29	4.58	4.58	2.23	1.96	3.77				3.62	9900.0	0.5690	0.5690	
1145	3.33	4.58	4.58	2.26	1.99	3.80				3.64	9910.0	0.6412	0.6412	

STA. NO. 08074810		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR			
BRAYS BAYOU AT GESSNER DRIVE HOUSTON, TEX.		STORM OF MAY 3 - 5, 1981										DISCHARGE		ACCUM.	
DATE & TIME		4780		4800		G A G E		N U M B E R		ACCUM. WEIGHTED PRECIP.		IN		IN.	
						303R		33R		32R		CFS		IN.	
MAY 3															
1200		3.36	4.58	2.28	2.02	3.84		2.02		3.84		9730.0	3.66	0.7120	
1215		3.37	4.58	2.29	2.02	3.99		2.02		3.99		9520.0	3.72	0.7814	
1230		3.38	4.75	2.32	2.05	4.14		2.05		4.14		9290.0	3.83	0.8490	
1245		3.39	4.95	2.34	2.08	4.31		2.08		4.31		8900.0	3.96	0.9138	
1300		3.71	5.08	2.36	2.11	4.49		2.11		4.49		8540.0	4.11	0.9760	
1315		3.79	5.08	2.36	2.17	4.64		2.17		4.64		8150.0	4.18	1.0353	
1330		3.91	5.08	2.36	2.23	4.81		2.23		4.81		7760.0	4.26	1.0919	
1345		4.13	5.25	2.42	2.29	4.99		2.29		4.99		7450.0	4.42	1.1461	
1400		4.16	5.28	2.65	2.37	5.17		2.37		5.17		7200.0	4.53	1.1985	
1415		4.21	5.30	2.72	2.37	5.17		2.37		5.17		6990.0	4.56	1.2494	
1430		4.21	5.30	2.74	2.37	5.17		2.37		5.17		6790.0	4.56	1.2989	
1445		4.22	5.30	2.75	2.37	5.17		2.37		5.17		6720.0	4.56	1.3478	
1500		4.22	5.30	2.75	2.39	5.20		2.39		5.20		6760.0	4.57	1.4709	
1600		4.22	5.30	2.75	2.41	5.20		2.41		5.20		6050.0	4.58	1.6471	
1700		4.22	5.30	2.75	2.41	5.20		2.41		5.20		4780.0	4.58	1.7863	
1800		4.22	5.30	2.75	2.41	5.20		2.41		5.20		3590.0	4.58	1.8909	
1900		4.25	5.58	2.75	2.41	5.24		2.41		5.24		2770.0	4.68	1.9716	
2000		4.30	5.58	2.75	2.41	5.26		2.41		5.26		2920.0	4.69	2.0566	
2100		4.31	5.62	2.75	2.41	5.26		2.41		5.26		2810.0	4.71	2.1385	
2200		4.31	5.62	2.75	2.41	5.27		2.41		5.27		2390.0	4.71	2.2081	
2300		4.31	5.62	2.75	2.41	5.29		2.41		5.29		1920.0	4.72	2.2640	
2400		4.34	5.68	2.75	2.41	5.29		2.41		5.29		1600.0	4.74	2.3572	
MAY 4															
0000		4.34	5.68	2.75	2.41	5.29		2.41		5.29		1600.0	4.74	2.3572	
0300		4.34	5.68	2.79	2.42	5.31		2.42		5.31		1030.0	4.75	2.4472	
0600		4.36	5.70	2.81	2.46	5.36		2.46		5.36		762.0	4.78	2.5138	
0900		4.39	5.77	2.84	2.54	5.39		2.54		5.39		634.0	4.83	2.5507	
1000		4.39	5.77	2.87	2.54	5.39		2.54		5.39		610.0	4.83	2.5774	
1200		4.39	5.77	2.87	2.54	5.39		2.54		5.39		540.0	4.83	2.6167	
1500		4.39	5.77	2.87	2.54	5.39		2.54		5.39		455.0	4.83	2.6565	
1800		4.45	5.78	3.93	3.33	6.24		3.33		6.24		362.0	5.34	2.6776	
1900		4.52	5.79	3.97	3.34	6.27		3.34		6.27		399.0	5.37	2.6990	
2100		4.52	5.79	3.97	3.34	6.27		3.34		6.27		1010.0	5.37	2.7538	
2300		4.52	5.79	3.97	3.34	6.27		3.34		6.27		1140.0	5.37	2.8036	
2400		4.52	5.79	3.97	3.34	6.27		3.34		6.27		1130.0	5.37	2.9188	
MAY 5															
0000		4.52	5.79	3.97	3.34	6.27		3.34		6.27		1130.0	5.37	2.9188	
0600		4.53	5.79	3.97	3.34	6.27		3.34		6.27		618.0	5.37	3.0268	
1200		4.53	5.79	4.02	3.34	6.27		3.34		6.27		399.0	5.38	3.0966	
1800		4.54	5.79	4.03	3.34	6.27		3.34		6.27		278.0	5.38	3.1452	
2400		4.54	5.79	4.09	3.34	6.27		3.34		6.27		194.0	5.39	3.1621	

STA. NO. 08074810		STORM RAINFALL AND RUNOFF RECORD									
BRAYS BAYOU AT GESSNER DRIVE HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981									
DATE & TIME	4800	303R	32R	G A G E	N U M B E R	ACCUM. WEIGHTED PRECIP.		DISCHARGE IN		1981 WATER YEAR	
						IN.		CFS	IN.	ACCUM. RUNOFF	
AUG. 30											
0000	0.0	0.0	0.0			0.0		37.0	0.0032		0.0032
0600	0.0	0.0	0.0			0.0		32.0	0.0084		0.0084
1100	0.0	0.0	0.0			0.0		30.0	0.0107		0.0107
1115	0.0	0.0	0.12			0.06		29.0	0.0109		0.0109
1130	0.0	0.0	0.24			0.12		29.0	0.0111		0.0111
1145	0.0	0.0	0.36			0.18		29.0	0.0113		0.0113
1200	0.0	0.0	0.49			0.25		29.0	0.0117		0.0117
1245	0.0	0.0	0.49			0.25		29.0	0.0121		0.0121
1300	0.05	0.0	0.52			0.27		29.0	0.0123		0.0123
1315	0.22	0.15	0.52			0.36		29.0	0.0126		0.0126
1330	0.23	0.30	0.52			0.39		29.0	0.0133		0.0133
1500	0.23	0.30	0.52			0.39		83.0	0.0154		0.0154
1515	0.26	0.30	0.52			0.40		105.0	0.0200		0.0200
1800	0.26	0.30	0.52			0.40		192.0	0.0305		0.0305
1900	0.26	0.30	0.53			0.40		170.0	0.0354		0.0354
2000	0.26	0.30	0.57			0.42		143.0	0.0396		0.0396
2100	0.48	0.30	0.61			0.51		163.0	0.0443		0.0443
2200	0.49	0.30	1.62			1.02		233.0	0.0486		0.0486
2215	0.49	0.30	1.80			1.11		275.0	0.0506		0.0506
2230	1.02	0.34	1.99			1.37		418.0	0.0536		0.0536
2245	1.10	0.48	2.20			1.53		581.0	0.0579		0.0579
2300	1.12	0.50	2.41			1.64		712.0	0.0631		0.0631
2315	1.17	0.51	2.50			1.70		828.0	0.0691		0.0691
2330	1.32	0.52	2.61			1.80		931.0	0.0759		0.0759
2345	1.72	0.53	2.73			1.99		1160.0	0.0843		0.0843
2400	2.58	0.95	2.85			2.39		1560.0	0.0957		0.0957
AUG. 31											
0000	2.58	0.95	2.85			2.39		1560.0	0.0957		0.0957
0015	3.12	1.00	3.36			2.82		2210.0	0.1118		0.1118
0030	3.26	1.20	3.87			3.15		3080.0	0.1342		0.1342
0045	3.26	1.50	4.38			3.47		3760.0	0.1616		0.1616
0100	3.29	1.60	4.90			3.76		4400.0	0.1936		0.1936
0115	3.30	1.64	4.93			3.78		4820.0	0.2287		0.2287
0130	3.31	1.72	4.96			3.82		5520.0	0.2689		0.2689
0145	3.38	2.21	4.99			3.95		5400.0	0.3082		0.3082
0200	3.53	3.05	5.03			4.18		5250.0	0.3465		0.3465
0215	3.68	3.15	5.12			4.29		5440.0	0.3861		0.3861
0230	3.70	3.20	5.23			4.36		5780.0	0.4282		0.4282
0245	3.70	3.23	5.35			4.43		5990.0	0.4718		0.4718
0300	3.73	3.25	5.47			4.50		6080.0	0.5160		0.5160

STA. NO. 08074810		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR		
BRAYS BAYOU AT GESSNER DRIVE HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981										DISCHARGE: ACCUM.		
DATE & TIME		G A G E N U M B E R										ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE: IN	ACCUM. RUNOFF IN.
		4800	303R	32R										
AUG. 31														
0315		3.80	3.30	5.53							4.56		6090.0	0.5604
0330		3.99	3.63	5.59							4.72		6070.0	0.6046
0345		4.00	3.78	5.65							4.78		6050.0	0.6487
0400		4.04	3.83	5.73							4.84		5970.0	0.6921
0415		4.06	3.85	6.00							4.99		5860.0	0.7348
0430		4.08	3.85	6.28							5.13		5760.0	0.7767
0445		4.23	4.05	6.58							5.37		5680.0	0.8181
0500		4.28	4.11	6.88							5.55		5640.0	0.8592
0515		4.53	4.15	7.09							5.73		5680.0	0.9005
0530		4.63	4.29	7.33							5.91		5780.0	0.9426
0545		4.76	4.33	7.57							6.08		5900.0	0.9856
0600		4.90	4.70	7.81							6.31		5990.0	1.0292
0615		4.98	5.10	7.84							6.43		6050.0	1.0733
0630		5.08	5.55	7.90							6.58		6120.0	1.1178
0645		5.20	6.33	7.96							6.81		6210.0	1.1630
0700		5.26	6.63	8.02							6.91		6440.0	1.2099
0715		5.28	6.71	8.05							6.95		6690.0	1.2587
0730		5.30	6.77	8.11							7.00		6870.0	1.3087
0745		5.38	6.85	8.17							7.07		7100.0	1.3604
0800		5.40	6.91	8.23							7.12		7250.0	1.4132
0815		5.44	6.95	8.50							7.27		7420.0	1.4672
0830		5.53	7.01	8.77							7.45		7500.0	1.5218
0845		5.58	7.07	9.05							7.61		7560.0	1.5769
0900		5.60	7.13	9.35							7.78		7600.0	1.6322
0915		5.64	7.18	9.61							7.93		7640.0	1.6878
0930		5.70	7.33	9.88							8.12		7660.0	1.7436
0945		6.08	7.53	10.15							8.40		7680.0	1.7995
1000		6.23	8.16	10.42							8.71		7830.0	1.8566
1015		6.98	8.63	10.44							9.04		8480.0	1.9183
1030		7.00	8.84	10.47							9.10		9340.0	1.9863
1045		7.28	9.00	10.50							9.23		10300.0	2.0613
1100		7.40	9.40	10.53							9.36		11100.0	2.1422
1115		7.43	9.45	10.53							9.38		11700.0	2.2274
1130		7.68	9.50	10.53							9.47		12200.0	2.3162
1145		7.86	9.52	10.54							9.53		12700.0	2.4087
1200		7.90	9.53	10.57							9.56		13000.0	2.5033
1215		7.93	9.54	10.57							9.57		12900.0	2.5973
1230		7.96	9.55	10.57							9.58		12800.0	2.6905
1245		7.96	9.56	10.59							9.59		12800.0	2.7837

STA. NO. 08074810		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
BRAYS BAYOU AT GESSNER DRIVE HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981										DISCHARGE	ACCUM.
DATE & TIME		4800	303R		32R							IN	IN
AUG. 31													
1300		7.96	9.57		10.62							12600.0	2.8754
1315		7.96	9.58		10.62							12300.0	2.9650
1330		7.96	9.59		10.62							12000.0	3.0524
1345		7.96	9.60		10.62							11700.0	3.1376
1400		7.96	9.61		10.62							11400.0	3.4281
1530		7.96	9.61		10.62							9220.0	3.8310
1700		7.96	9.61		10.62							7250.0	4.0949
1800		7.96	9.61		10.62							6170.0	4.2073
1815		7.98	9.61		10.62							5860.0	4.3353
1930		7.98	9.61		10.62							4760.0	4.4566
2000		7.98	9.61		10.62							4330.0	4.5039
2015		8.04	9.61		10.62							4160.0	4.5948
2130		8.04	9.61		10.62							3370.0	4.6807
2200		8.04	9.61		10.62							2740.0	4.7106
2215		8.04	9.61		10.62							3040.0	4.7327
2230		8.04	9.61		10.62							2950.0	4.8079
2400		8.04	9.61		10.62							2420.0	4.9841
SEP. 1													
0000		8.04	9.61		10.62							2420.0	4.9841
0330		8.04	9.61		10.62							1680.0	5.0820
0400		8.04	9.85		10.62							1600.0	5.1169
0500		8.09	9.89		10.62							1460.0	5.1595
0600		8.09	9.89		10.62							1360.0	5.2585
1000		8.09	9.89		10.67							1060.0	5.3511
1200		8.09	9.89		10.67							940.0	5.4606
1800		8.09	9.89		10.67							701.0	5.5321
1900		8.09	9.89		10.67							672.0	5.5908
2400		8.09	9.97		10.67							537.0	5.6769
SEP. 2													
0000		8.09	9.97		10.67							537.0	5.6769
0600		8.09	9.97		10.67							392.0	5.7454
1200		8.09	9.97		10.67							287.0	5.7955
1800		8.14	9.97		10.71							219.0	5.8338
2400		8.14	9.97		10.71							184.0	5.8660
SEP. 3													
0000		8.14	9.97		10.71							184.0	5.8660
0600		8.14	9.97		10.80							127.0	5.8826
0900		8.20	9.97		11.04							228.0	5.9025
1200		8.25	9.97		11.04							157.0	5.9231
1800		8.25	9.97		11.04							97.0	5.9401
2400		8.25	9.97		11.04							73.0	5.9464

## BINTLIFF DITCH DRAINAGE BASIN

The location of data-collection sites in and near the Bintliff Ditch drainage basin are shown in figure 13. The crest stage gage was installed April 9, 1981.

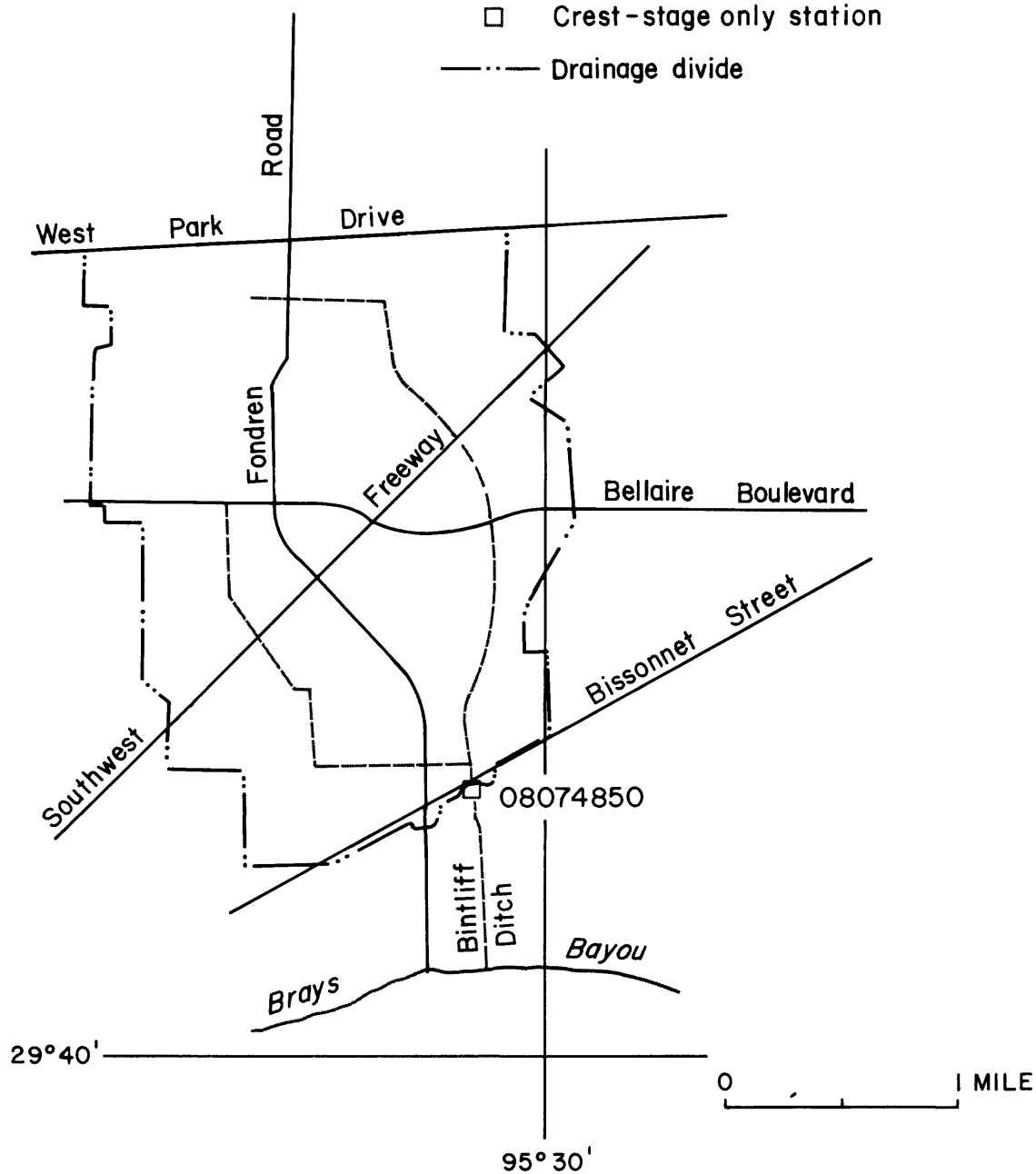
Weighted-mean rainfall for the 1981 water year was not determined.

No storms were analyzed for the 1981 water year at station 08074850, Bintliff Ditch at Bissonnet Street, Houston, Tex.

# EXPLANATION

□ Crest-stage only station

— · — · — Drainage divide



Base from Enco Street map of Houston

Figure 13 . -Locations of data-collection sites in and near the Bintliff Ditch drainage basin



08074850 Bintliff Ditch at Bissonnet Street, Houston, Tex.  
(Crest-stage gage partial-record station)

LOCATION.--Lat 29°41'16", long 95°30'20", Harris County, Hydrologic Unit 12040104, downstream side of bridge on Bissonnet Street, in southwest Houston, Tex.

DRAINAGE AREA.--4.38 mi<sup>2</sup>. Prior to October 1, 1973, 4.29 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1968 to January 30, 1980; April 9, 1981 to present.

GAGE.--Crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1964 adjustment, unadjusted for land-surface subsidence. Prior to Mar. 29, 1978 flood-hydrograph and rainfall recorder (type SR) and crest-stage gage. Mar. 29, 1978 to Jan. 30, 1980 digital flood-hydrograph and rainfall recorders and crest-stage gage.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1,350 ft<sup>3</sup>/s, May 3, 1981 (elevation 63.69 ft). Minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 900 ft<sup>3</sup>/s (revised) and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
May 3	unknown	*1,350	63.69
Jul. 7	unknown	1,030	61.49
Aug. 31	unknown	1,240	62.96

Minimum discharge not determined.

## HUMMINGBIRD STREET DITCH DRAINAGE BASIN

The location of data-collection sites in the Hummingbird Street Ditch drainage basin are shown in figure 14.

Weighted-mean rainfall for the 1981 water year was not determined.

The storms of May 3-4 and Aug. 30-31 were selected for analysis at station 08074910, Hummingbird Street Ditch at Houston, Tex.

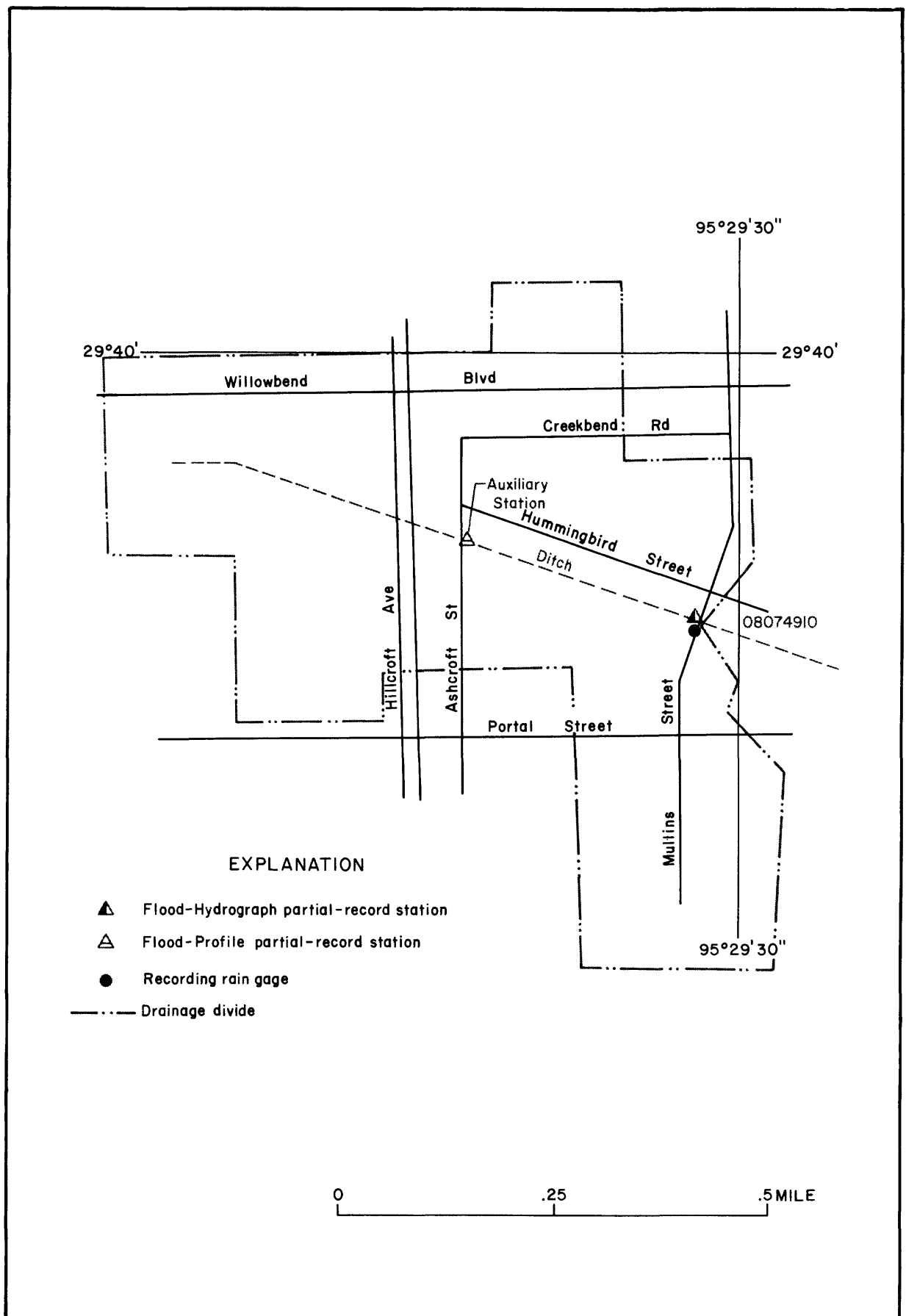


Figure 14.-Locations of data-collection sites in and near the Hummingbird Street Ditch drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 12--Storm rainfall-runoff data, 1981 Water Year, Hummingbird Street Ditch

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Hummingbird Street Ditch at Houston, TX. (Drainage area -- 0.32 mi <sup>2</sup> )								
May 3, 1981	2.4	6.63	1.13	1.92	3.29	6.69	0.78	227 *, ++
May 3-4, 1981	28.0	1.95	.28	.46	.52			97
Aug. 30-31, 1981	3.0	3.13	1.03	1.47	1.81			153
Aug. 31, 1981	1.5	1.29	.76	.92	.95	6.43	0.75	131
Aug. 31, 1981	6.3	4.21	1.05	1.47	1.89			184

\* - Annual peak discharge for 1981 Water Year.

++ - Peak discharge for period of record.

08074910 HUMMINGBIRD STREET DITCH AT HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°39'44", long 95°29'11", Harris County, Hydrologic Unit 12040104, at downstream side of bridge at intersection of Hummingbird Street Ditch and Mullins Street in southwest Houston.

DRAINAGE AREA.--0.32 mi<sup>2</sup>.

PERIOD OF RECORD.--Nov. 3, 1978 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1924, 1973 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records fair. Heavy vegetal growth makes a stage-discharge relationship difficult to define.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 227 ft<sup>3</sup>/s, May 3, 1981, (gage-height, 59.46 ft); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 75 ft<sup>3</sup>/s and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
May 3	1005	*227	59.46
May 3	2110	97	57.25
Jul. 7	0815	84	56.96
Aug. 19	1445	115	57.64
Aug. 31	0045	153	58.34
Aug. 31	0235	131	57.95
Aug. 31	1110	184	58.83

No flow for many days.

STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
STA. NO.	08074910	HUMMINGBIRD STREET DITCH AT HOUSTON, TEX.		STORM OF MAY 3 -4 ,1981		DISCHARGE	
DATE & TIME		G A G E		PRECIP.		IN	
		4910		IN.		CFS	
MAY 3							
0000		0 0		0 0		0 0	0 0
0600		0 0		0 0		0 0	0 0
0700		0 11		0 11		0 0	0 0
0730		0 27		0 27		2 4	0 0058
0800		0 33		0 33		3 6	0 0123
0815		0 41		0 41		4 1	0 0157
0820		0 53		0 53		5 0	0 0177
0825		0 66		0 66		5 5	0 0199
0830		0 79		0 79		7 7	0 0230
0835		0 97		0 97		17 0	0 0299
0840		1 15		1 15		32 0	0 0428
0845		1 34		1 34		43 0	0 0601
0850		1 61		1 61		61 0	0 0847
0855		1 88		1 88		89 0	0 1207
0900		2 16		2 16		114 0	0 1667
0905		2 42		2 42		130 0	0 2191
0910		2 68		2 68		148 0	0 2788
0915		2 95		2 95		159 0	0 3430
0920		3 32		3 32		171 0	0 4120
0925		3 70		3 70		182 0	0 4855
0930		4 08		4 08		192 0	0 5629
0935		4 25		4 25		202 0	0 6444
0940		4 43		4 43		211 0	0 7296
0945		4 61		4 61		216 0	0 8168
0950		4 73		4 73		221 0	0 9059
0955		4 85		4 85		223 0	0 9959
1000		4 98		4 98		226 0	1 0871
1005		5 02		5 02		227 0	1 1787
1010		5 06		5 06		227 0	1 2703
1015		5 10		5 10		226 0	1 3615
1020		5 22		5 22		222 0	1 4511
1025		5 34		5 34		221 0	1 5403
1030		5 46		5 46		219 0	1 6287
1035		5 67		5 67		218 0	1 7166
1040		5 89		5 89		218 0	1 8046
1045		6 11		6 11		218 0	1 8926
1050		6 15		6 15		221 0	1 9818
1055		6 19		6 19		223 0	2 0718
1100		6 24		6 24		223 0	2 1617

STA. NO. 08074910		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUMMINGBIRD STREET DITCH AT HOUSTON, TEX.		STORM OF MAY 3 -4, 1981				DISCHARGE! ACCUM.			
DATE & TIME		G A G E N U M B E R				PRECIP. IN. CFS IN.			
		4910							
MAY 3									
1105	6.24					6.24	221.0	2.2509	
1110	6.25					6.25	218.0	2.3389	
1115	6.26					6.26	213.0	2.4249	
1120	6.34					6.34	211.0	2.5100	
1125	6.42					6.42	209.0	2.5943	
1130	6.50					6.50	206.0	2.6775	
1135	6.51					6.51	203.0	2.7594	
1140	6.52					6.52	200.0	2.8401	
1145	6.53					6.53	197.0	2.9593	
1155	6.53					6.53	188.0	3.0731	
1200	6.54					6.54	182.0	3.1466	
1205	6.54					6.54	175.0	3.2172	
1210	6.55					6.55	169.0	3.2854	
1215	6.56					6.56	161.0	3.3828	
1225	6.56					6.56	146.0	3.4712	
1230	6.57					6.57	138.0	3.5269	
1235	6.59					6.59	132.0	3.5802	
1240	6.61					6.61	126.0	3.6310	
1245	6.63					6.63	122.0	3.7787	
1310	6.63					6.63	99.0	3.9385	
1325	6.63					6.63	84.0	4.0063	
1330	6.64					6.64	80.0	4.1193	
1400	6.67					6.67	54.0	4.2500	
1430	6.70					6.70	39.0	4.3051	
1435	6.79					6.79	37.0	4.3201	
1440	6.88					6.88	36.0	4.3346	
1445	6.98					6.98	37.0	4.3495	
1450	7.00					7.00	48.0	4.3689	
1455	7.02					7.02	53.0	4.3903	
1500	7.04					7.04	54.0	4.4665	
1530	7.12					7.12	59.0	4.7522	
1700	7.13					7.13	25.0	4.9036	
1800	7.13					7.13	17.0	4.9653	
1830	7.15					7.15	15.0	5.0016	
1900	7.18					7.18	14.0	5.0271	
1915	7.25					7.25	14.0	5.0384	
1920	7.33					7.33	14.0	5.0440	
1925	7.41					7.41	14.0	5.0496	
1930	7.49					7.49	19.0	5.0573	

STA. NO. 08074910		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
HUMMINGBIRD STREET DITCH AT HOUSTON, TEX.		STORM OF MAY 3 -4, 1981										DISCHARGE! ACCUM.	
DATE & TIME		G A G E N U M B E R										IN	
		4910										CFS	
MAY 3												IN	
1935		7.49										29.0	5.0690
1940		7.50										35.0	5.0831
1945		7.51										38.0	5.0985
1950		7.54										41.0	5.1150
1955		7.57										42.0	5.1320
2000		7.60										45.0	5.1501
2005		7.61										47.0	5.1691
2010		7.62										49.0	5.1889
2015		7.63										49.0	5.2086
2020		7.64										49.0	5.2284
2025		7.65										49.0	5.2482
2030		7.66										49.0	5.2680
2035		7.74										49.0	5.2877
2040		7.82										49.0	5.3075
2045		7.90										48.0	5.3269
2050		7.97										57.0	5.3499
2055		8.04										72.0	5.3789
2100		8.12										90.0	5.4152
2105		8.13										96.0	5.4540
2110		8.14										97.0	5.4931
2115		8.15										97.0	5.5910
2135		8.15										79.0	5.7185
2155		8.15										62.0	5.7810
2200		8.16										58.0	5.8396
2220		8.16										46.0	5.9138
2240		8.16										37.0	5.9735
2300		8.16										30.0	6.0704
2400		8.20										20.0	6.2157
MAY 4													
0000		8.20										20.0	6.2157
0200		8.21										12.0	6.3900
0600		8.24										4.5	6.4989
1200		8.28										2.1	6.5600
1800		8.30										0.8	6.5735
1900		8.56										5.1	6.6476
2400		8.58										3.1	6.6851



STA. NO. 08074910		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUMMINGBIRD STREET DITCH AT HOUSTON, TEX.		STORM OF AUG. 30-31, 1981				DISCHARGE: ACCUM.			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP. IN. CFS IN.			
AUG. 30									
0000		0.0				0.0		0.0	0.0
0600		0.0				0.0		3.3	0.0959
1200		0.01				0.01		3.3	0.1918
1800		0.01				0.01		3.3	0.2557
2000		0.21				0.21		3.3	0.2757
2030		0.42				0.42		3.3	0.2916
2200		0.43				0.43		3.3	0.3056
2215		0.74				0.74		3.3	0.3096
2230		0.81				0.81		10.0	0.3217
2245		0.88				0.88		14.0	0.3387
2300		0.93				0.93		16.0	0.3580
2315		0.97				0.97		16.0	0.3774
2330		1.11				1.11		16.0	0.3903
2335		1.17				1.17		16.0	0.3968
2340		1.24				1.24		18.0	0.4040
2345		1.31				1.31		20.0	0.4121
2350		1.45				1.45		25.0	0.4222
2355		1.60				1.60		30.0	0.4343
2400		1.75				1.75		34.0	0.4480
AUG. 31									
0000		1.75				1.75		34.0	0.4480
0005		2.09				2.09		40.0	0.4642
0010		2.43				2.43		57.0	0.4872
0015		2.78				2.78		91.0	0.5239
0020		2.82				2.82		117.0	0.5711
0025		2.87				2.87		136.0	0.6260
0030		2.92				2.92		145.0	0.6845
0035		2.96				2.96		151.0	0.7454
0040		3.00				3.00		152.0	0.8068
0045		3.04				3.04		153.0	0.8685
0050		3.05				3.05		153.0	0.9303
0055		3.06				3.06		153.0	0.9920
0100		3.07				3.07		151.0	1.0529
0105		3.08				3.08		148.0	1.1127
0110		3.09				3.09		141.0	1.1696
0115		3.10				3.10		133.0	1.2501
0125		3.10				3.10		115.0	1.3197
0130		3.11				3.11		107.0	1.3844
0140		3.12				3.12		93.0	1.4407
0145		3.13				3.13		84.0	1.4746

STA. NO. 08074910		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUMMINGBIRD STREET DITCH AT HOUSTON, TEX.		STORM OF AUG. 30-31, 1981				DISCHARGE!			
DATE & TIME		G A G E		N U M B E R		WEIGHTED PRECIP.		IN	
4910						IN.		CFS	
AUG. 31									
0150	3.18					3.18	77.0	1.5057	
0155	3.23					3.23	71.0	1.5343	
0200	3.29					3.29	65.0	1.5606	
0205	3.54					3.54	59.0	1.5844	
0210	3.79					3.79	57.0	1.6074	
0215	4.05					4.05	81.0	1.6401	
0220	4.05					4.05	109.0	1.7280	
0235	4.05					4.05	131.0	1.8866	
0250	4.05					4.05	124.0	2.0117	
0300	4.05					4.05	107.0	2.0765	
0305	4.10					4.10	99.0	2.1164	
0310	4.15					4.15	90.0	2.1528	
0315	4.21					4.21	84.0	2.1867	
0320	4.25					4.25	79.0	2.2185	
0325	4.29					4.29	76.0	2.2492	
0330	4.33					4.33	76.0	2.3105	
0345	4.42					4.42	76.0	2.4026	
0400	4.48					4.48	73.0	2.5351	
0430	4.56					4.56	55.0	2.6350	
0445	4.71					4.71	51.0	2.6967	
0500	4.84					4.84	59.0	2.7682	
0515	4.94					4.94	63.0	2.8444	
0530	5.03					5.03	63.0	2.9207	
0545	5.08					5.08	65.0	2.9994	
0600	5.11					5.11	62.0	3.1120	
0630	5.14					5.14	46.0	3.2233	
0700	5.23					5.23	33.0	3.3032	
0730	5.30					5.30	29.0	3.3735	
0800	5.37					5.37	27.0	3.4388	
0830	5.41					5.41	24.0	3.4969	
0900	5.74					5.74	24.0	3.5550	
0930	5.80					5.80	26.0	3.6023	
0945	6.04					6.04	26.0	3.6232	
0950	6.05					6.05	27.0	3.6341	
0955	6.06					6.06	36.0	3.6487	
1000	6.08					6.08	45.0	3.6668	
1005	6.22					6.22	49.0	3.6866	
1010	6.36					6.36	51.0	3.7072	
1015	6.50					6.50	53.0	3.7286	

STA. NO. 08074910		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUMMINGBIRD STREET DITCH AT HOUSTON, TEX.		STORM OF AUG. 30-31, 1981				DISCHARGE!			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN.		IN CFS	
AUG. 31									
1020	6.85					6.85		62.0	3.7536
1025	7.20					7.20		86.0	3.7883
1030	7.55					7.55		115.0	3.8347
1035	7.62					7.62		139.0	3.8908
1040	7.69					7.69		152.0	3.9521
1045	7.77					7.77		165.0	4.0187
1050	7.83					7.83		172.0	4.0881
1055	7.90					7.90		180.0	4.1608
1100	7.97					7.97		182.0	4.2342
1105	8.06					8.06		183.0	4.3080
1110	8.15					8.15		184.0	4.3823
1115	8.24					8.24		184.0	4.4565
1120	8.30					8.30		182.0	4.5300
1125	8.37					8.37		180.0	4.6026
1130	8.44					8.44		180.0	4.6753
1135	8.46					8.46		180.0	4.7479
1140	8.48					8.48		180.0	4.8205
1145	8.51					8.51		180.0	4.8932
1150	8.52					8.52		178.0	4.9650
1155	8.53					8.53		174.0	5.0352
1200	8.54					8.54		171.0	5.1042
1205	8.55					8.55		168.0	5.1720
1210	8.56					8.56		163.0	5.2378
1215	8.57					8.57		156.0	5.3322
1225	8.57					8.57		142.0	5.4182
1230	8.58					8.58		135.0	5.4999
1240	8.58					8.58		122.0	5.5737
1245	8.59					8.59		119.0	5.6897
1305	8.59					8.59		86.0	5.7765
1310	8.59					8.59		81.0	5.8092
1315	8.60					8.60		75.0	5.8697
1330	8.60					8.60		61.0	5.9436
1345	8.60					8.60		49.0	6.0029
1400	8.60					8.60		39.0	6.0501
1415	8.60					8.60		31.0	6.0876
1430	8.60					8.60		24.0	6.3055
1800	8.60					8.60		3.3	6.3814
2400	8.63					8.63		3.3	6.4294

## SAN JACINTO RIVER BASIN

08075000 BRAYS BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°41'49", long 95°24'43", Harris County, Hydrologic Unit 12040104, near right bank at downstream side of pile bend of Main Street Bridge in southwest Houston, 1.6 mi (2.6 km) upstream from Harris Gully, and 11.6 mi (18.7 km) upstream from Buffalo Bayou.

DRAINAGE AREA.--94.9 mi<sup>2</sup> (245.8 km<sup>2</sup>). Prior to October 1976, 88.4 mi<sup>2</sup> (229.0 km<sup>2</sup>). Changes due to drainage ditch relocations.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.16 ft (2.182 m) National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence. Prior to June 20, 1936, nonrecording gage, and June 20, 1936, to Nov. 25, 1959, water-stage recorder at site 0.8 mi (1.3 km) downstream at same datum.

REMARKS.--Water-discharge records good. No diversion above station. Low flow is mostly sewage effluent from Houston suburbs.

AVERAGE DISCHARGE.--45 years, 119 ft<sup>3</sup>/s (3.370 m<sup>3</sup>/s), 86,220 acre-ft/yr (106 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft<sup>3</sup>/s (821 m<sup>3</sup>/s) June 15, 1976, gage height, 52.13 ft (15.889 m); minimum daily, 0.1 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Oct. 11, 12, 1937, Mar. 14, Apr. 1, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1911, 56.0 ft (17.07 m) in June 1919 before channel rectification, former site, from information by engineer for city of Houston.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft<sup>3</sup>/s (170 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 3	1230	19,400 549	46.70 14.234
Aug. 31	1230	*25,400 719	50.32 25.338

Minimum daily discharge, 80 ft<sup>3</sup>/s (2.27 m<sup>3</sup>/s) Apr. 6, 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	89	97	87	249	101	82	81	120	160	100	1560
2	110	91	97	89	114	104	82	84	111	103	100	427
3	98	91	92	88	93	92	83	7340	245	122	104	271
4	94	90	89	91	162	929	89	1790	292	126	101	163
5	93	90	86	94	471	165	81	699	1380	1270	104	129
6	93	96	87	141	290	100	80	218	215	399	103	120
7	89	99	89	109	125	93	81	137	116	2070	106	119
8	88	96	203	90	102	97	80	115	103	438	106	118
9	89	93	660	92	101	89	80	157	93	187	104	111
10	90	95	155	93	147	88	84	181	162	401	113	110
11	90	96	100	90	102	88	89	105	686	322	200	107
12	89	94	92	90	95	102	83	91	619	141	168	109
13	88	91	99	87	89	105	85	91	358	127	176	115
14	90	97	101	168	91	91	81	434	151	112	149	797
15	92	109	149	97	88	88	81	124	112	108	104	340
16	99	106	112	88	90	85	82	104	101	105	101	160
17	102	180	92	88	89	86	83	99	102	105	109	120
18	606	104	93	86	88	84	81	97	95	105	108	110
19	385	94	87	815	86	85	83	91	95	103	1010	105
20	114	94	90	542	84	82	85	85	104	108	297	100
21	96	97	90	146	86	93	87	88	93	104	116	100
22	91	326	92	102	163	86	86	85	99	102	102	100
23	91	180	93	94	102	88	584	84	119	103	99	100
24	87	113	94	93	87	81	292	81	603	104	101	100
25	88	199	82	93	409	82	253	122	516	104	102	100
26	92	523	87	89	186	81	110	96	295	339	107	95
27	145	141	90	106	105	84	85	89	285	369	101	95
28	132	101	90	92	92	84	94	85	205	256	337	95
29	89	97	91	87	---	97	86	91	128	126	165	95
30	86	97	88	85	---	88	82	105	240	106	306	95
31	85	---	90	84	---	83	---	128	---	102	13100	---
TOTAL	3882	3869	3657	4196	3986	3701	3414	13177	7843	8427	18099	6166
MEAN	125	129	118	135	142	119	114	425	261	272	584	206
MAX	606	523	660	815	471	929	584	7340	1380	2070	13100	1560
MIN	85	89	82	84	84	81	80	81	93	102	99	95
AC-FT	7700	7670	7250	8320	7910	7340	6770	26140	15560	16710	35900	12230
(††)	1.63	1.84	1.31	2.15	2.20	1.13	1.61	7.89	6.63	5.16	11.72	2.26

CAL YR 1980 TOTAL 63789 MEAN 174 MAX 4880 MIN 78 AC-FT 126500 †† 34.28  
WTR YR 1981 TOTAL 80417 MEAN 220 MAX 13100 MIN 80 AC-FT 159500 †† 45.53

†† Weighted-mean rainfall, in inches, based on nine rain gages.

SAN JACINTO RIVER BASIN

08075000 BRAYS BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 BID-MF (COLS./ 100 ML)
DATE	TIME											
MAR												
11...	1010	76	780	8.0	19.0	5	18	11.0	116	.2	270	K14
JUL												
08...	1030	398	340	7.8	27.5	70	71	6.6	82	7.7	>800000	>600000
AUG												
18...	1215	111	730	8.2	31.0	5	5.9	15.2	200	6.1	130	K18
29...	1615	152	677	7.8	28.0	20	13	7.9	100	23	--	--
29...	1905	161	685	7.7	28.0	30	30	5.2	66	24	--	--
30...	2120	1430	239	7.8	26.0	15	38	7.8	95	18	--	--
31...	1310	24900	80	8.5	24.0	60	160	7.4	87	1.9	150000	40000
31...	1550	18400	104	8.3	24.0	70	130	7.0	82	2.8	220000	48000
SEP												
01...	1040	1420	198	7.8	25.5	60	54	--	--	13	380000	74000
02...	1250	433	360	7.6	29.0	60	60	6.3	82	3.8	1000	20
DATE	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR												
11...	K4	--	--	--	--	--	--	--	--	--	--	--
JUL												
08...	9100	99	0	30	5.8	29	1.3	4.4	110	4.0	24	.2
AUG												
18...	K16	130	0	38	7.3	110	4.5	5.6	230	40	73	.5
29...	--	130	0	40	7.4	94	3.8	6.1	200	33	77	.5
29...	--	120	0	36	7.3	84	3.5	6.9	190	30	68	.5
30...	--	51	0	16	2.7	25	1.6	3.0	72	5.0	20	.1
31...	36000	33	2	10	1.9	4.4	.4	2.2	31	5.0	3.5	.1
31...	20000	40	0	13	1.9	5.1	.4	2.7	40	5.0	7.8	.1
SEP												
01...	29000	65	0	20	3.7	14	.8	4.2	67	10	16	.1
02...	330	96	0	29	5.7	34	1.5	5.1	110	12	36	.3
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR												
11...	--	--	18	3	2.8	.950	3.7	4.400	.00	.80	3.700	12
JUL												
08...	15	179	130	23	.43	.250	.68	.840	1.2	2.0	.780	8.4
AUG												
18...	24	437	27	12	1.0	.280	1.3	4.300	1.8	6.1	2.900	8.2
29...	21	399	102	4	1.0	.380	1.4	4.000	2.7	6.7	1.400	8.8
29...	20	367	102	25	.90	.300	1.2	4.400	8.6	13	4.600	34
30...	7.4	122	54	34	.53	.080	.61	1.200	3.3	4.5	1.800	24
31...	4.2	50	434	15	.18	.020	.20	.120	1.1	1.2	.360	10
31...	4.4	64	310	8	.18	.030	.21	.210	1.1	1.3	.370	10
SEP												
01...	9.6	118	392	6	.18	.070	.25	.670	1.8	2.5	.660	14
02...	15	203	292	10	.41	.220	.63	1.200	1.4	2.6	.760	17

SAN JACINTO RIVER BASIN

08075000 BRAYS BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUL 08...	1030	27	80	<1	10	<10	60
AUG 18...	1215	8	130	<1	0	<10	10
29...	1905	16	110	<1	0	3	24
30...	2120	11	44	<1	0	4	37

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL 08...		<10	5	.2	0	0	20
AUG 18...		<10	17	.1	1	0	16
29...		2	15	.2	1	1	22
30...		3	<1	.1	0	0	13

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUL 08...	1030	.00	.0	.00	.1	.00	.00	.00	.58
AUG 18...	1215	.00	.0	.00	.1	.00	.00	.00	1.0
29...	1905	.00	.0	.00	.2	.00	.00	.00	.86
30...	2120	.00	.0	.00	.3	.00	.00	.00	.42

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUL 08...	.01	.00	.00	.00	.00	.01	.02	.03	.00
AUG 18...	.01	.00	.00	.00	.00	.01	.04	.01	.00
29...	.02	.00	.00	.00	.00	.01	.05	.26	.00
30...	.02	.00	.00	.00	.01	.02	.02	.51	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHERE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUL 08...	.00	.00	.00	.00	0	.00	.05	.01	.00
AUG 18...	.00	.00	.00	.00	0	.00	.19	.02	.00
29...	.00	.00	.00	.00	0	.00	1.5	.01	.00
30...	.00	.00	.00	.00	0	.00	.12	.02	.01

STA. NO. 08075000		STORM RAINFALL AND RUNOFF RECORD											
BRAYS BAYOU AT HOUSTON, TEX.		1981 WATER YEAR											
DATE & TIME		STORM OF MAY 3 - 6, 1981											
		G A G E				N U M B E R		A C C U M .		DISCHARGE!			
		4780	4800	4910	308R	303R	33R	32R	WEIGHTED PRECIP. IN.	IN	CFS	IN.	RUNOFF
MAY 3													
0000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	91.0		0.0015	
0200		0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.00	92.0		0.0034	
0230		0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.00	92.0		0.0041	
0300		0.02	0.0	0.0	0.0	0.02	0.03	0.03	0.01	92.0		0.0052	
0400		0.02	0.0	0.0	0.0	0.02	0.03	0.04	0.02	91.0		0.0064	
0430		0.02	0.0	0.0	0.0	0.02	0.03	0.04	0.02	89.0		0.0074	
0530		0.03	0.0	0.0	0.0	0.04	0.08	0.10	0.04	88.0		0.0083	
0545		0.03	0.0	0.0	0.0	0.05	0.08	0.13	0.04	88.0		0.0087	
0600		0.04	0.20	0.0	0.01	0.06	0.11	0.16	0.09	86.0		0.0091	
0615		0.10	0.42	0.0	0.01	0.06	0.20	0.34	0.17	86.0		0.0094	
0630		0.31	0.56	0.0	0.01	0.06	0.29	0.52	0.27	85.0		0.0098	
0645		0.44	0.60	0.06	0.01	0.10	0.41	0.71	0.36	83.0		0.0101	
0700		0.47	0.72	0.11	0.04	0.45	0.53	0.92	0.49	86.0		0.0104	
0715		0.65	0.82	0.21	0.07	0.51	0.67	1.11	0.61	91.0		0.0108	
0730		1.02	1.24	0.27	0.12	0.53	0.82	1.32	0.79	133.0		0.0114	
0745		1.29	1.70	0.30	0.18	0.62	0.97	1.53	0.97	193.0		0.0121	
0800		1.42	2.10	0.33	0.24	0.95	1.12	1.74	1.15	239.0		0.0131	
0815		1.51	2.35	0.41	0.27	1.30	1.18	1.92	1.30	288.0		0.0143	
0830		1.63	2.62	0.79	0.30	1.32	1.24	2.10	1.50	327.0		0.0156	
0845		1.94	3.15	1.34	0.36	1.35	1.30	2.29	1.81	364.0		0.0171	
0900		2.08	3.15	2.16	0.42	1.39	1.36	2.50	2.09	641.0		0.0197	
0915		2.29	3.18	2.95	0.63	1.45	1.42	2.65	2.38	1910.0		0.0275	
0930		2.33	3.35	4.08	0.84	1.52	1.48	2.83	2.77	3700.0		0.0426	
0945		2.37	3.75	4.61	1.05	1.56	1.55	3.01	3.04	5960.0		0.0670	
1000		2.55	4.08	4.98	1.26	1.62	1.64	3.19	3.28	8760.0		0.1027	
1015		2.83	4.45	5.10	1.41	1.70	1.70	3.31	3.45	11400.0		0.1493	
1030		3.03	4.46	5.46	1.58	1.95	1.76	3.43	3.64	13500.0		0.2044	
1045		3.22	4.48	6.11	1.76	2.04	1.82	3.56	3.88	15400.0		0.2672	
1100		3.26	4.49	6.24	1.94	2.08	1.91	3.71	3.98	17200.0		0.3374	
1115		3.28	4.55	6.26	1.97	2.20	1.93	3.74	4.02	18200.0		0.4117	
1130		3.29	4.58	6.50	2.00	2.23	1.96	3.77	4.10	18800.0		0.4885	
1145		3.33	4.58	6.53	2.03	2.26	1.99	3.80	4.13	19100.0		0.5665	
1200		3.36	4.58	6.54	2.06	2.28	2.02	3.84	4.15	19200.0		0.6448	
1215		3.37	4.58	6.56	2.11	2.29	2.02	3.99	4.20	19300.0		0.7236	
1230		3.38	4.75	6.57	2.17	2.32	2.05	4.14	4.28	19400.0		0.8028	
1245		3.39	4.95	6.63	2.23	2.34	2.08	4.31	4.38	19200.0		0.8812	
1300		3.71	5.08	6.63	2.29	2.36	2.11	4.49	4.48	19100.0		0.9592	
1315		3.79	5.08	6.63	2.31	2.36	2.17	4.64	4.53	18700.0		1.0355	
1330		3.91	5.08	6.64	2.34	2.36	2.23	4.81	4.60	18400.0		1.1106	







STA. NO. 08075000		STORM RAINFALL AND RUNOFF RECORD												
BRAYS BAYOU AT HOUSTON, TEX.		1981 WATER YEAR												
DATE & TIME		STORM OF AUG. 28 TO SEP. 3, 1981					DISCHARGE!			ACCUM.				
		4800	4910	308R	G A G E	303R	N U M B E R	32R	31R	WEIGHTED PRECIP. IN.	IN	CFS	IN.	ACCUM. RUNOFF
AUG. 28														
0000		0.0	0.0	0.0		0.0		0.0	0.0	0.0		103.0	0.0101	0.0101
1200		0.0	0.0	0.0		0.0		0.0	0.0	0.0		111.0	0.0219	0.0232
1300		0.0	0.0	0.0		0.0		0.0	0.0	0.0		111.0	0.0232	0.0232
1330		0.0	0.28	0.0		0.0		0.0	0.0	0.07		148.0	0.0244	0.0244
1400		0.40	0.35	0.0		0.0		0.0	0.0	0.17		244.0	0.0264	0.0264
1430		1.80	0.35	0.0		0.0		0.0	0.0	0.45		279.0	0.0287	0.0287
1500		1.92	0.35	0.0		0.0		0.0	0.0	0.47		291.0	0.0323	0.0323
1600		1.92	0.35	0.0		0.0		0.0	0.0	0.47		752.0	0.0415	0.0415
1630		1.92	0.35	0.0		0.0		0.0	0.0	0.47		1100.0	0.0505	0.0505
1700		1.92	0.37	0.0		0.0		0.0	0.0	0.48		1220.0	0.0654	0.0654
1800		1.92	0.37	0.0		0.0		0.0	0.0	0.48		1100.0	0.0968	0.0968
2030		1.92	0.37	0.0		0.0		0.0	0.0	0.48		627.0	0.1173	0.1173
2200		1.92	0.37	0.0		0.0		0.0	0.0	0.48		458.0	0.1304	0.1304
2400		1.92	0.37	0.0		0.0		0.0	0.0	0.48		336.0	0.1414	0.1414
AUG. 29														
0000		1.92	0.37	0.0		0.0		0.0	0.0	0.48		336.0	0.1414	0.1414
0200		1.92	0.37	0.0		0.0		0.0	0.0	0.48		255.0	0.1497	0.1497
0400		1.92	0.37	0.0		0.06		0.0	0.0	0.48		195.0	0.1561	0.1561
0600		1.92	0.37	0.0		0.12		0.0	0.0	0.49		152.0	0.1648	0.1648
1100		1.92	0.38	0.0		0.12		0.0	0.0	0.49		125.0	0.1709	0.1709
1200		1.92	0.38	0.01		0.12		0.0	0.14	0.50		127.0	0.1730	0.1730
1300		1.92	0.40	0.01		0.12		0.0	0.14	0.50		133.0	0.1751	0.1751
1400		1.92	0.41	0.01		0.12		0.07	0.14	0.53		138.0	0.1774	0.1774
1500		1.95	0.43	0.05		0.12		0.08	0.14	0.55		142.0	0.1797	0.1797
1600		1.97	0.44	0.05		0.12		0.11	0.14	0.56		152.0	0.1822	0.1822
1700		2.00	0.46	0.08		0.12		0.14	0.14	0.58		155.0	0.1847	0.1847
1800		2.03	0.47	0.11		0.12		0.14	0.14	0.60		159.0	0.1938	0.1938
2400		2.03	0.47	0.11		0.12		0.14	0.14	0.60		159.0	0.2094	0.2094
AUG. 30														
0000		2.03	0.47	0.11		0.12		0.14	0.14	0.60		159.0	0.2094	0.2094
0600		2.03	0.47	0.11		0.12		0.14	0.14	0.60		116.0	0.2188	0.2188
1000		2.03	0.48	0.11		0.12		0.14	0.14	0.60		97.0	0.2228	0.2228
1100		2.03	0.48	0.11		0.12		0.14	0.14	0.60		101.0	0.2240	0.2240
1130		2.03	0.48	0.11		0.12		0.38	0.14	0.67		103.0	0.2249	0.2249
1200		2.03	0.48	0.11		0.12		0.63	0.14	0.74		106.0	0.2257	0.2257
1230		2.03	0.48	0.11		0.12		0.63	0.15	0.75		110.0	0.2266	0.2266
1300		2.08	0.48	0.11		0.12		0.66	0.22	0.77		117.0	0.2276	0.2276
1330		2.26	0.48	0.11		0.42		0.66	0.24	0.83		124.0	0.2286	0.2286
1400		2.26	0.48	0.11		0.42		0.66	0.26	0.84		129.0	0.2302	0.2302
1500		2.26	0.48	0.11		0.42		0.66	0.26	0.84		142.0	0.2348	0.2348
1800		2.29	0.48	0.11		0.42		0.66	0.26	0.84		148.0	0.2397	0.2397

STA. NO. 08075000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
BRAYS BAYOU AT HOUSTON, TEX.		STORM OF AUG. 28 TO SEP. 3, 1981										DISCHARGE! ACCUM.	
DATE & TIME		G A G E N U M B E R										PRECIP. IN.	
		4800	4910	308R	303R	32R	31R					CFS	IN.
AUG. 30													
1900		2.29	0.48	0.11	0.42	0.67	0.26					183.0	0.2427
2000		2.29	0.68	0.53	0.42	0.71	0.33					288.0	0.2456
2015		2.29	0.88	0.56	0.42	0.71	0.51					778.0	0.2488
2030		2.43	0.89	0.60	0.42	0.71	0.51					1280.0	0.2540
2045		2.50	0.90	0.66	0.42	0.72	0.51					1540.0	0.2603
2100		2.51	0.90	0.72	0.42	0.75	0.51					1580.0	0.2667
2115		2.52	0.90	0.72	0.42	0.99	0.51					1460.0	0.2727
2130		2.52	0.90	0.72	0.42	1.23	0.51					1280.0	0.2779
2145		2.52	0.90	0.72	0.42	1.49	0.51					1090.0	0.2824
2200		2.52	0.90	0.72	0.42	1.76	0.80					929.0	0.2862
2215		2.52	1.21	0.78	0.42	1.94	0.93					798.0	0.2894
2230		3.05	1.28	0.84	0.46	2.13	0.97					809.0	0.2927
2245		3.13	1.35	0.90	0.60	2.34	1.02					964.0	0.2966
2300		3.15	1.40	0.97	0.62	2.55	1.07					1090.0	0.3011
2315		3.20	1.44	1.03	0.63	2.64	1.53					1270.0	0.3063
2330		3.35	1.58	1.09	0.64	2.75	1.96					1390.0	0.3120
2345		3.75	1.78	1.15	0.65	2.87	3.13					1530.0	0.3182
2400		4.61	2.22	1.22	1.07	2.99	3.62					1890.0	0.3259
AUG. 31													
0000		4.61	2.22	1.22	1.07	2.99	3.62					1890.0	0.3259
0015		5.15	3.25	1.55	1.12	3.50	3.75					2630.0	0.3367
0030		5.29	3.39	1.88	1.32	4.01	3.80					4880.0	0.3566
0045		5.29	3.51	2.21	1.62	4.52	3.81					7440.0	0.3869
0100		5.32	3.54	2.57	1.72	5.04	3.82					9110.0	0.4241
0115		5.33	3.57	2.65	1.76	5.07	3.87					10300.0	0.4662
0130		5.34	3.58	2.74	1.84	5.10	3.91					10900.0	0.5107
0145		5.41	3.60	2.83	2.33	5.13	4.03					11100.0	0.5560
0200		5.56	3.76	2.92	3.17	5.17	4.12					11200.0	0.6017
0215		5.71	4.52	2.98	3.27	5.26	4.12					11400.0	0.6482
0230		5.73	4.52	3.05	3.32	5.37	4.12					12100.0	0.6976
0245		5.73	4.52	3.14	3.35	5.49	4.18					12400.0	0.7483
0300		5.76	4.52	3.23	3.37	5.61	4.40					12600.0	0.7997
0315		5.83	4.68	3.38	3.42	5.67	4.48					12500.0	0.8507
0330		6.02	4.80	3.53	3.75	5.73	4.52					12700.0	0.9026
0345		6.03	4.89	3.70	3.90	5.79	4.55					12800.0	0.9548
0400		6.07	4.95	3.88	3.95	5.87	4.55					13200.0	1.0087
0415		6.09	4.96	4.00	3.97	6.14	4.65					13400.0	1.0634
0430		6.11	5.03	4.14	3.97	6.42	4.82					13300.0	1.1177
0445		6.26	5.18	4.29	4.17	6.72	4.94					13400.0	1.1724
0500		6.31	5.31	4.44	4.23	7.02	5.10					13500.0	1.2275

STA. NO. 08075000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
BRAYS BAYOU AT HOUSTON, TEX.		STORM OF AUG. 28 TO SEP. 3, 1981										DISCHARGE	
DATE & TIME		G A G E N U M B E R										ACCUM. WEIGHTED PRECIP. IN.	IN
		4800	4910	308R	303R	32R	31R						
AUG. 31													
0515	6.56	5.41	4.50	4.27	7.23	5.22					5.97	13500.0	1.2826
0530	6.66	5.50	4.56	4.41	7.47	5.32					6.11	13500.0	1.3377
0545	6.79	5.55	4.62	4.45	7.71	5.38					6.23	13300.0	1.3920
0600	6.93	5.58	4.71	4.82	7.95	5.42					6.39	13100.0	1.4455
0615	7.01	5.60	4.72	5.22	7.98	5.45					6.46	12800.0	1.4977
0630	7.11	5.61	4.75	5.67	8.04	5.50					6.55	12400.0	1.5484
0645	7.23	5.66	4.78	6.45	8.10	5.55					6.69	12100.0	1.5977
0700	7.29	5.70	4.81	6.75	8.16	5.55					6.76	11700.0	1.6455
0715	7.31	5.74	4.84	6.83	8.19	5.58					6.80	11500.0	1.6925
0730	7.33	5.77	4.87	6.89	8.25	5.62					6.84	11300.0	1.7386
0745	7.41	5.81	4.90	6.97	8.31	5.64					6.90	11200.0	1.7843
0800	7.43	5.84	4.94	7.03	8.37	5.68					6.94	11100.0	1.8296
0815	7.47	5.88	4.97	7.07	8.64	5.72					7.05	11000.0	1.8745
0830	7.56	5.88	5.00	7.13	8.91	5.78					7.16	11000.0	1.9194
0845	7.61	6.15	5.04	7.19	9.19	5.82					7.33	11000.0	1.9643
0900	7.63	6.21	5.10	7.25	9.49	5.91					7.46	11200.0	2.0100
0915	7.67	6.24	5.16	7.30	9.75	6.00					7.56	11300.0	2.0562
0930	7.73	6.27	5.22	7.45	10.02	6.11					7.69	11400.0	2.1027
0945	8.11	6.51	5.29	7.65	10.29	6.24					7.94	11500.0	2.1497
1000	8.26	6.55	5.38	8.28	10.56	6.94					8.17	11900.0	2.1982
1015	9.01	6.97	5.74	8.75	10.58	7.07					8.52	12300.0	2.2484
1030	9.03	8.02	6.10	8.96	10.61	7.20					8.86	13200.0	2.3023
1045	9.31	8.24	6.47	9.12	10.64	7.31					9.04	15700.0	2.3664
1100	9.43	8.44	6.86	9.52	10.67	7.41					9.21	18600.0	2.4423
1115	9.46	8.71	7.10	9.57	10.67	7.67					9.32	21000.0	2.5281
1130	9.71	8.91	7.34	9.62	10.67	7.79					9.46	22300.0	2.6191
1145	9.89	8.98	7.58	9.64	10.68	7.81					9.54	23900.0	2.7167
1200	9.93	9.01	7.83	9.65	10.71	7.83					9.59	24700.0	2.8175
1215	9.96	9.04	7.86	9.66	10.71	7.85					9.61	25300.0	2.9208
1230	9.99	9.05	7.89	9.67	10.71	7.86					9.62	25400.0	3.0245
1245	9.99	9.06	7.92	9.68	10.73	7.86					9.63	25400.0	3.1281
1300	9.99	9.06	7.96	9.69	10.76	7.86					9.65	25300.0	3.2314
1315	9.99	9.07	7.96	9.70	10.76	7.86					9.65	24900.0	3.3331
1330	9.99	9.07	7.96	9.71	10.76	7.87					9.65	24500.0	3.4331
1345	9.99	9.07	7.96	9.72	10.76	7.87					9.65	23900.0	3.5306
1400	9.99	9.07	7.97	9.73	10.76	7.87					9.66	23200.0	3.9095
1545	9.99	9.07	7.97	9.73	10.76	7.87					9.66	18500.0	4.2871
1630	9.99	9.07	7.97	9.73	10.76	7.87					9.66	15000.0	4.4095
1645	9.99	9.07	7.97	9.73	10.76	7.87					9.66	15600.0	4.4732

STA. NO. 08075000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR				
BRAYS BAYOU AT HOUSTON, TEX.																
DATE & TIME		STORM OF AUG. 28 TO SEP. 3, 1981										ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	CFS	IN.	ACCUM. RUNOFF
		4800	4910	308R	G A G E			N U M B E R			32R					
AUG. 31																
1700		9.99	9.07	7.97	9.73	10.76	7.87	9.66	14900.0	4.6253						
1800		9.99	9.07	7.97	9.73	10.76	7.87	9.66	12300.0	4.7508						
1815		10.01	9.07	7.97	9.73	10.76	7.87	9.66	11700.0	4.8702						
1915		10.01	9.07	7.97	9.73	10.76	7.87	9.66	9490.0	4.9670						
1930		10.01	9.07	7.97	9.73	10.76	7.87	9.66	9020.0	5.0039						
1945		10.01	9.07	7.97	9.73	10.76	8.12	9.67	8550.0	5.0388						
2000		10.01	9.07	7.98	9.73	10.76	8.13	9.67	8100.0	5.0718						
2015		10.07	9.09	7.98	9.73	10.76	8.13	9.69	7680.0	5.1032						
2030		10.07	9.10	7.98	9.73	10.76	8.13	9.69	7330.0	5.1929						
2145		10.07	9.10	7.98	9.73	10.76	8.13	9.69	5790.0	5.3111						
2300		10.07	9.10	7.98	9.73	10.76	8.13	9.69	4660.0	5.3967						
2400		10.07	9.10	7.98	9.73	10.76	8.13	9.69	3990.0	5.5596						
SEP. 1																
0000		10.07	9.10	7.98	9.73	10.76	8.13	9.69	3990.0	5.5596						
0400		10.07	9.10	7.98	9.97	10.76	8.19	9.72	2400.0	5.6576						
0500		10.12	9.10	7.98	10.01	10.76	8.19	9.74	2150.0	5.6927						
0600		10.12	9.10	7.98	10.01	10.76	8.19	9.74	1960.0	5.7727						
1000		10.12	9.10	7.98	10.01	10.81	8.19	9.75	1470.0	5.8447						
1200		10.12	9.10	7.98	10.01	10.81	8.19	9.75	1320.0	5.9094						
1600		10.12	9.11	7.98	10.01	10.81	8.19	9.75	1030.0	5.9598						
1800		10.12	9.11	7.98	10.01	10.81	8.19	9.75	904.0	5.9820						
1900		10.12	9.11	7.98	10.01	10.81	8.19	9.75	846.0	6.0234						
2400		10.12	9.11	7.98	10.09	10.81	8.19	9.76	655.0	6.0715						
SEP. 2																
0000		10.12	9.11	7.98	10.09	10.81	8.19	9.76	655.0	6.0715						
0400		10.12	9.11	7.98	10.09	10.81	8.19	9.76	537.0	6.0978						
0600		10.12	9.11	7.99	10.09	10.81	8.19	9.76	462.0	6.1205						
1000		10.12	9.11	7.99	10.09	10.81	8.19	9.76	401.0	6.1401						
1200		10.12	9.11	8.02	10.09	10.81	8.19	9.76	412.0	6.1536						
1400		10.12	9.11	8.02	10.09	10.81	8.19	9.76	429.0	6.1676						
1600		10.17	9.11	8.02	10.09	10.85	8.19	9.79	426.0	6.1815						
1800		10.17	9.16	8.02	10.09	10.85	8.19	9.80	352.0	6.2045						
2400		10.17	9.16	8.02	10.09	10.85	8.19	9.80	297.0	6.2336						
SEP. 3																
0000		10.17	9.16	8.02	10.09	10.85	8.19	9.80	297.0	6.2336						
0600		10.17	9.16	8.02	10.09	10.94	8.19	9.83	236.0	6.2567						
1200		10.28	9.16	8.17	10.09	11.18	8.24	9.94	388.0	6.2947						
1800		10.28	9.16	8.17	10.09	11.18	8.24	9.94	250.0	6.3192						
2400		10.28	9.16	8.17	10.09	11.18	8.24	9.94	207.0	6.3293						

SAN JACINTO RIVER BASIN

08075100 BRAYS BAYOU AT SCOTT STREET, HOUSTON, TX  
(Low-flow partial-record station)

LOCATION.--Lat 29°42'35", long 95°21'23", Harris County, Hydrologic Unit 12040104, at bridge on Scott Street in Houston.

DRAINAGE AREA.--106 mi<sup>2</sup> (275 km<sup>2</sup>).

PERIOD OF RECORD.--Occasional discharge measurements and water-quality data: May 1971 to September 1981 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DATE	TIME											
MAY 04...	0925	1320	270	7.4	22.0	120	58	7.5	85	12	2200000	460000
	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DATE												
MAY 04...	130000	86	9	27	4.4	22	1.0	4.4	77	22	18	.2
	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
DATE												
MAY 04...	9.8	154	128	10	.99	.110	1.1	.590	1.6	2.2	.830	18

## SIMS BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Sims Bayou drainage basin are shown in figure 15.

Berry Bayou is shown as a separate drainage basin within the Sims Bayou section.

Weighted-mean rainfall for the upper portion of the drainage basin above the Hiram Clarke Street station, based on two rain gages for the 1981 water year was 46.14 inches, or 2.05 inches less than the 30-year (1941-70) average of 48.19 inches for Houston.

Weighted-mean rainfall in the drainage basin above the Telephone Road station, based on five rain gages, for the 1981 water year was 53.56 inches or 5.37 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

No storms were analyzed for the 1981 water year at station 08075470, Sims Bayou at Martin Luther King Blvd.

The storm of Aug. 31-Sept. 3 was selected for analysis at station 08075400, Sims Bayou at Hiram Clarke Street. The storm of Aug. 30-Sept. 4 was selected for analysis at station 08075500, Sims Bayou at Houston.

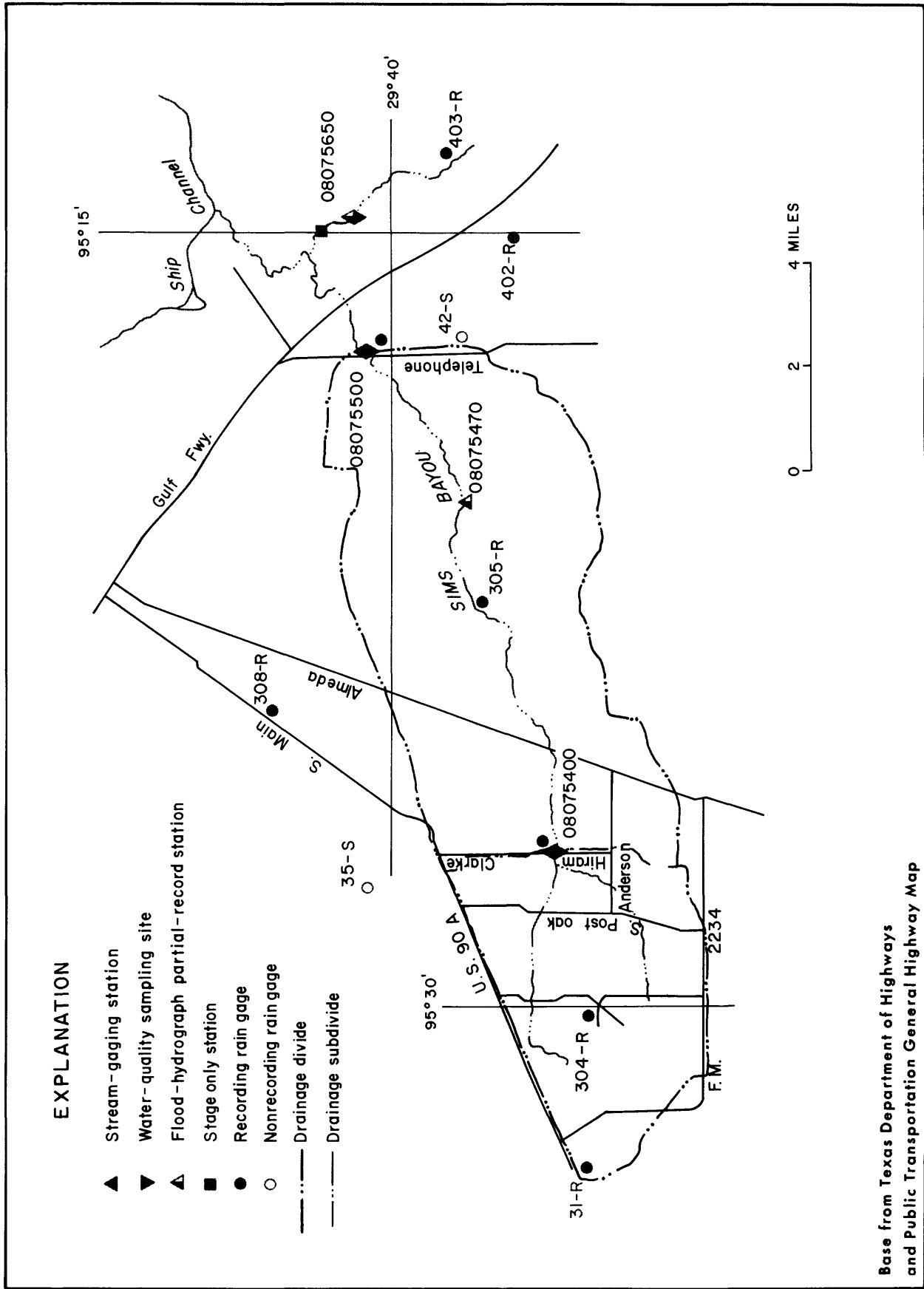


Figure 15.- Locations of data-collection sites in and near the Sims Bayou drainage basin



UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 13.--Storm rainfall-runoff data, 1981 Water Year, Sims Bayou

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Sims Bayou at Hiram Clarke Street, Houston, TX. (Drainage area -- 20.2 mi <sup>2</sup> )								
Aug. 31-Sept. 3, 1981	11.5	6.74	0.72	1.32	2.52	5.53	0.82	3,820*

Sims Bayou at Hiram Clarke Street, Houston, TX.  
(Drainage area -- 20.2 mi<sup>2</sup>)

Sims Bayou at Houston, TX.  
(Drainage area -- 63.0 mi<sup>2</sup>)

Aug. 30-Sept. 4, 1981	14.0	9.13		0.83	1.66	2.55	5.02	0.55	8,610*

\* - Annual peak discharge for 1981 Water Year.

SAN JACINTO RIVER BASIN

08075400 SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TX

LOCATION.--Lat 29°37'07", long 95°26'45", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Hiram Clarke Street in southwest Houston, 12.7 mi (20.4 km) upstream from gage Sims Bayou at Houston, and 19.7 mi (31.7 km) upstream from mouth.

DRAINAGE AREA.--20.2 mi<sup>2</sup> (52.3 km<sup>2</sup>).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1964 to-current year (discharge measurements and supplemental peak discharges only Dec. 6, 1978, to Aug. 31, 1979).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1959 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Channel bed was lowered 5 to 6 ft (1.5 to 1.8 m) during rectification of 1978. No known diversion above station. Low flow is partly sustained by sewage effluent from Houston suburbs. Records furnished by Houston Lighting and Power Co. show that during the current year, about 553 acre-ft (682,000 m<sup>3</sup>) of ground water was used for cooling purposes then released to the bayou about 300 ft (90 m) upstream from gage. Rain gage and gage-height telemeters located at station.

AVERAGE DISCHARGE.--16 years (water years 1965-78, 1980-81), 27.7 ft<sup>3</sup>/s (0.784 m<sup>3</sup>/s), 20,070 acre-ft/yr (24.7 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft<sup>3</sup>/s (127 m<sup>3</sup>/s) June 15, 1976, elevation, 57.12 ft (17.410 m); minimum daily, 1.5 ft<sup>3</sup>/s (0.042 m<sup>3</sup>/s) July 26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 650 ft<sup>3</sup>/s (18.4 m<sup>3</sup>/s), and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
May 3	1145	3,320 94.0	51.83 15.798	Aug. 31	1330	*3,820 108	54.58 16.636
July 7	1230	709 20.1	43.12 13.143	Sept. 14	1715	1,040 29.5	46.09 14.048

Minimum daily discharge, 9.6 ft<sup>3</sup>/s (0.27 m<sup>3</sup>/s) Apr. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	12	11	14	28	12	11	16	17	16	17	431
2	28	13	12	13	18	12	12	16	17	13	17	165
3	21	14	10	11	14	11	12	1450	43	13	18	73
4	19	12	14	11	19	125	14	544	29	12	47	33
5	15	12	12	11	67	38	12	98	150	66	21	22
6	15	13	12	12	77	16	10	38	34	40	17	18
7	18	11	15	13	22	15	10	23	16	345	16	16
8	13	13	19	12	17	13	10	19	13	102	16	14
9	13	13	97	11	16	13	9.6	34	13	38	16	14
10	13	12	32	11	37	16	10	54	15	23	14	12
11	14	13	16	11	18	14	11	21	83	24	18	12
12	16	12	14	12	17	16	10	15	113	18	22	12
13	14	12	14	12	17	20	14	14	84	17	54	13
14	14	14	15	22	14	16	12	52	29	17	37	294
15	16	14	19	15	13	13	12	20	20	15	19	158
16	13	13	17	12	13	12	12	16	18	15	15	33
17	14	17	12	12	12	13	12	17	16	15	86	19
18	57	12	12	13	12	12	12	17	14	17	96	15
19	53	12	11	99	11	17	12	16	14	16	93	15
20	16	14	10	129	11	16	14	15	15	15	65	14
21	14	15	11	31	12	16	11	14	14	16	18	13
22	13	34	11	20	13	14	12	14	14	15	16	14
23	12	31	10	14	11	13	62	16	36	15	15	14
24	12	18	11	11	13	15	37	16	83	15	13	13
25	12	24	11	9.8	33	13	56	20	45	16	13	12
26	12	63	10	10	24	14	58	15	50	61	13	16
27	13	20	10	16	14	13	20	14	60	103	13	15
28	14	12	11	16	12	13	17	17	26	61	13	17
29	14	15	10	14	---	14	14	15	26	24	14	14
30	12	12	10	12	---	12	15	15	21	18	39	12
31	13	---	12	11	---	12	---	15	---	17	2350	---
TOTAL	615	502	491	620.8	585	569	533.6	2666	1128	1198	3221	1523
MEAN	19.8	16.7	15.8	20.0	20.9	18.4	17.8	86.0	37.6	38.6	104	50.8
MAX	92	63	97	129	77	125	62	1450	150	345	2350	431
MIN	12	11	10	9.8	11	11	9.6	14	13	12	13	12
AC-FT (††)	1220	996	974	1230	1160	1130	1060	5290	2240	2380	6390	3020
a/	1.9	2.04	1.08	2.30	2.21	1.56	1.70	6.76	7.44	4.80	11.84	3.22
CAL YR 1980	TOTAL	12334.3	MEAN 33.7	MAX 1430	MIN 7.7	AC-FT 24470	†† 33.25					
WTR YR 1981	TOTAL	13652.4	MEAN 37.4	MAX 2350	MIN 9.6	AC-FT 27080	†† 46.14					

†† Weighted-mean rainfall, in inches, based on two rain gages.

a/ Revised

SAN JACINTO RIVER BASIN

08075400 SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
MAR 11...	1050	14	1000	7.8	18.0	10	24	8.3	86	1.9	40	K7
MAY 04...	1420	343	180	7.8	25.0	120	94	5.6	--	9.6	400000	16000
JUL 08...	1120	85	420	7.8	28.0	80	70	6.7	84	3.9	500	22
AUG 17...	1340	13	810	8.6	33.0	10	17	13.6	186	5.2	--	--

DATE	TIME	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR 11...	20	--	--	--	--	--	--	--	--	--	--	--	--
MAY 04...	1400	59	0	18	3.5	14	.8	3.7	61	3.4	13	.1	.1
JUL 08...	370	100	0	30	6.0	40	1.7	4.3	100	15	54	.2	.2
AUG 17...	--	140	0	40	8.5	120	4.7	5.2	240	51	76	.5	.5

DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 11...	--	--	--	29	0	1.9	.160	2.1	1.900	1.6	3.5	3.400	12
MAY 04...	8.3	101	300	20	.25	.060	.31	.210	2.3	2.5	.720	17	17
JUL 08...	14	224	130	46	.19	.100	.29	.730	1.1	1.8	1.300	11	11
AUG 17...	24	470	28	6	3.0	.220	3.2	.980	1.2	2.2	1.600	5.6	5.6

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUL 08...	1120	11	90	<1	10	<10	60
AUG 17...	1340	8	110	<1	0	<10	14

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL 08...		<10	20	.2	0	0	8
AUG 17...		<10	17	.1	0	0	9

SAN JACINTO RIVER BASIN

08075400 SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUL 08...	1120	.00	.0	.00	.1	.00	.00	.00	.33
AUG 17...	1340	.00	.0	.00	.0	.00	.00	.00	.48

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUL 08...	.00	.00	.00	.00	.00	.01	.01	.27	.00
AUG 17...	.01	.00	.00	.00	.00	.01	.02	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUL 08...	.00	.00	.00	.00	0	.00	.14	.00	.00
AUG 17...	.00	.00	.00	.00	0	.00	.03	.01	.00

STA. NO. 08075400		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR			
SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TEX.		STORM OF AUG 31 TO SEP. 3, 1981										DISCHARGE		ACCUM.	
DATE & TIME		G A G E N U M B E R										PRECIP.		IN	
		5400	31R									IN.	CFS	IN	RUNOFF
AUG 31															
0000		0.0	0.0									0.0	302.0	0.0029	
0015		0.50	0.13									0.41	302.0	0.0087	
0030		0.60	0.18									0.43	528.0	0.0188	
0045		0.60	0.19									0.44	604.0	0.0304	
0100		0.60	0.20									0.44	819.0	0.0461	
0115		0.72	0.25									0.53	914.0	0.0636	
0130		0.72	0.29									0.55	1120.0	0.0851	
0145		0.72	0.41									0.60	1250.0	0.1091	
0200		0.96	0.50									0.78	1380.0	0.1356	
0215		1.08	0.50									0.85	1510.0	0.1645	
0230		1.08	0.50									0.85	1630.0	0.1958	
0245		1.08	0.56									0.87	1700.0	0.2284	
0300		1.08	0.78									0.96	1740.0	0.2617	
0315		1.44	0.86									1.21	1770.0	0.2957	
0330		1.80	0.90									1.44	1890.0	0.3319	
0345		2.04	0.93									1.60	2010.0	0.3705	
0400		2.04	0.93									1.60	2110.0	0.4109	
0415		2.16	1.03									1.71	2150.0	0.4522	
0430		2.40	1.20									1.92	2250.0	0.4953	
0445		2.40	1.32									1.97	2430.0	0.5419	
0500		2.52	1.48									2.10	2310.0	0.5862	
0515		2.76	1.60									2.30	2420.0	0.6326	
0530		2.88	1.70									2.41	2460.0	0.6798	
0545		2.88	1.76									2.43	2460.0	0.7270	
0600		2.88	1.80									2.45	2470.0	0.7744	
0615		2.88	1.83									2.46	2520.0	0.8227	
0630		2.88	1.88									2.48	2530.0	0.8712	
0645		2.88	1.93									2.50	2560.0	0.9203	
0700		3.00	1.93									2.57	2380.0	0.9660	
0715		3.00	1.96									2.58	2350.0	1.0110	
0730		3.00	2.00									2.60	2330.0	1.0557	
0745		3.00	2.02									2.61	2260.0	1.0991	
0800		3.00	2.06									2.62	2240.0	1.1420	
0815		3.12	2.10									2.71	2200.0	1.1842	
0830		3.12	2.16									2.74	2170.0	1.2258	
0845		3.24	2.20									2.82	2120.0	1.2665	
0900		3.24	2.29									2.85	2070.0	1.3062	
0915		3.24	2.38									2.90	2040.0	1.3453	
0930		3.36	2.49									3.01	2030.0	1.3842	

STA. NO. 08075400		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TEX.		STORM OF AUG. 31 TO SEP. 3, 1981				DISCHARGE			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP.		IN	
		5400	31R			IN.		CFS	IN.
AUG. 31									
0945		3.48	2.62			3.14		2020.0	1.4230
1000		3.60	3.32			3.49		2020.0	1.4617
1015		3.72	3.45			3.61		2070.0	1.5014
1030		4.32	3.58			4.02		2170.0	1.5430
1045		4.92	3.69			4.43		2410.0	1.5892
1100		5.54	3.79			4.90		2600.0	1.6391
1115		6.24	4.05			5.36		2840.0	1.6936
1130		6.60	4.17			5.63		3080.0	1.7526
1145		6.84	4.19			5.78		3320.0	1.8163
1200		6.96	4.21			5.86		3560.0	1.8846
1215		6.96	4.23			5.87		3670.0	1.9550
1230		7.08	4.24			5.94		3740.0	2.0984
1330		7.08	4.25			5.94		3800.0	2.2442
1715		7.08	4.25			5.95		3820.0	2.8302
1800		7.08	4.25			5.95		3110.0	3.3670
1915		7.08	4.25			5.95		2750.0	3.5780
1930		7.20	4.25			6.02		2310.0	3.7109
1945		7.20	4.50			6.12		2250.0	3.7541
2000		7.20	4.51			6.12		2170.0	3.7957
2130		7.20	4.51			6.12		2090.0	3.9360
2300		7.20	4.51			6.12		1700.0	4.1316
2400		7.20	4.51			6.12		1360.0	4.2620
SEP. 1						6.12		1160.0	4.3732
0000		7.20	4.51			6.12		1160.0	4.3732
0130		7.20	4.51			6.12		944.0	4.4818
0300		7.20	4.51			6.12		766.0	4.5406
0330		7.20	4.51			6.12		717.0	4.5681
0400		7.20	4.57			6.15		668.0	4.6322
0600		7.20	4.57			6.15		552.0	4.7274
0830		7.20	4.57			6.15		450.0	4.8224
1200		7.20	4.57			6.15		363.0	4.8711
1500		7.20	4.57			6.15		353.0	4.9185
1800		7.20	4.57			6.15		284.0	4.9838
2100		7.20	4.57			6.15		225.0	5.0356
2400		7.20	4.57			6.15		182.0	5.0775
SEP. 2						6.15		153.0	5.1186
0000		7.20	4.57			6.15		153.0	5.1186
0400		7.20	4.57			6.15		120.0	5.1462
0600		7.20	4.57			6.15		100.0	5.1692

STORM RAINFALL AND RUNOFF RECORD									
STA. NO. 08075400		1981 WATER YEAR							
SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TEX									
STORM OF AUG. 31 TO SEP. 3, 1981									
DATE & TIME	G A G E		N U M B E R		ACCUM. WEIGHTED PRECIP.		DISCHARGE IN		ACCUM. RUNOFF
	5400	31R			IN.		CFS	IN.	
SEP. 2									
1000	7.20	4.57				6.15		82.0	5.1849
1100	8.04	4.57				6.65		150.0	5.1964
1200	8.04	4.57				6.65		209.0	5.2205
1400	8.04	4.57				6.65		287.0	5.2535
1500	8.04	4.57				6.65		288.0	5.2977
1800	8.04	4.57				6.65		217.0	5.3476
2100	8.04	4.57				6.65		162.0	5.3849
2400	8.04	4.57				6.65		136.0	5.4162
SEP. 3									
0000	8.04	4.57				6.65		136.0	5.4162
0300	8.04	4.57				6.65		109.0	5.4413
0600	8.04	4.57				6.65		86.0	5.4545
0700	8.16	4.57				6.72		78.0	5.4635
0900	8.16	4.57				6.72		72.0	5.4718
1000	8.16	4.62				6.74		69.0	5.4797
1200	8.16	4.62				6.74		66.0	5.4999
1800	8.16	4.62				6.74		53.0	5.5243
2400	8.16	4.62				6.74		43.0	5.5342

08075470 SIMS BAYOU AT MARTIN LUTHER KING BLVD., HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°38'42", long 95°20'13", Harris County, Hydrologic Unit 12040104, at downstream side of upstream bridge on Martin Luther King Boulevard (formerly South Park Boulevard), 1.6 miles upstream from Atchison, Topeka, and Santa Fe Railway Co. bridge in south Houston.

DRAINAGE.--48.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Gage-height records good. Peak discharges were not computed at this time because an adequate stage-discharge relationship has not been determined.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (est.) 1,500 ft<sup>3</sup>/s Jan. 19, 1978 (elevation unknown); minimum not determined.

EXTREMES OUTSIDE PERIOD OF RECORD.--Peak stage of 38.28 ft (discharge unknown) on June 15, 1976. This same storm produced the largest peak for the period of record (1952-81) at the gaging station Sims Bayou at Houston (08075500).

EXTREMES FOR CURRENT YEAR.--Peak stages above elevation of 25.0 ft and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
May 3	2345	unknown	31.99
Jun. 5	0930	unknown	33.49
Aug. 31	1545	unknown	*37.33

Minimum discharge not determined.



SAN JACINTO RIVER BASIN  
08075500 SIMS BAYOU AT HOUSTON, TX

Location.--Lat 29°40'27", long 95°17'21", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge on State Highway 35 in southeast Houston and 7.0 mi (11.3 km) upstream from mouth.

DRAINAGE AREA.--63.0 mi<sup>2</sup> (163.2 km<sup>2</sup>). Prior to Oct. 1, 1976, 64.0 mi<sup>2</sup> (165.8 km<sup>2</sup>).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1922: 1960. WDR TX-76-2: 1975(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3.09 ft (0.942 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Low flow is largely sustained by sewage effluent from Houston suburbs and industrial wastes. Rainfall and gage-height telemeter at station.

AVERAGE DISCHARGE.--29 years, 80.8 ft<sup>3</sup>/s (2.288 m<sup>3</sup>/s), 58,540 acre-ft/yr (72.2 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s (317 m<sup>3</sup>/s) June 9, 1975, and June 16, 1976; maximum gage height, 33.17 ft (10.110 m) June 9, 1975; minimum daily, 0.9 ft<sup>3</sup>/s (0.025 m<sup>3</sup>/s) Aug. 7, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft<sup>3</sup>/s (62.3 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 4	a0100	7,470 212	29.90 9.114
June 5	a0900	7,340 208	30.11 9.178
Aug. 31	1700	*8,610 244	31.89 9.720

a About.

Minimum daily discharge, 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	45	47	46	74	44	34	32	35	51	39	2190
2	62	45	45	49	59	45	33	31	42	39	36	278
3	50	46	45	44	45	42	36	2950	260	54	35	174
4	47	44	46	42	63	433	38	3010	350	46	39	95
5	46	42	48	43	165	120	36	348	3550	203	60	66
6	71	41	46	54	205	52	32	98	427	175	36	55
7	45	42	46	52	73	44	30	61	78	820	34	49
8	44	41	54	44	53	43	32	51	49	259	33	49
9	42	42	184	45	48	42	33	82	41	87	34	48
10	40	43	90	45	75	42	33	102	40	73	33	44
11	39	43	59	42	57	41	33	54	232	70	34	41
12	40	42	48	42	45	42	34	41	256	46	58	41
13	41	42	46	41	43	47	32	41	289	42	88	42
14	40	43	46	64	44	46	36	123	88	42	78	339
15	41	44	55	51	43	37	32	53	51	40	53	547
16	42	49	57	45	45	36	31	39	139	38	36	100
17	45	68	45	39	44	36	33	38	121	37	72	56
18	112	51	41	41	44	40	32	37	51	37	162	44
19	124	46	40	198	42	36	34	36	40	37	450	44
20	51	47	39	340	41	40	34	37	37	36	242	45
21	49	51	39	82	44	44	33	38	33	41	58	47
22	45	96	42	54	52	39	33	36	33	41	40	46
23	42	92	42	47	44	37	97	34	35	35	37	48
24	44	61	41	44	41	41	72	35	571	35	37	46
25	42	57	42	42	102	40	69	57	506	35	36	45
26	45	158	42	42	80	37	87	38	180	550	37	42
27	43	68	42	61	48	37	44	33	215	320	39	41
28	42	55	44	59	44	35	35	33	96	177	34	43
29	45	52	44	42	---	40	35	34	60	64	38	40
30	48	51	42	42	---	37	32	32	103	45	44	36
31	46	---	42	42	---	35	---	34	---	39	5740	---
TOTAL	1647	1647	1589	1924	1763	1730	1205	7668	8008	3614	7792	4781
MEAN	53.1	54.9	51.3	62.1	63.0	55.8	40.2	247	267	117	251	159
MAX	134	158	184	340	205	433	97	3010	3550	820	5740	2190
MIN	39	41	39	39	41	35	30	31	33	35	33	36
AC-FT	3270	3270	3150	3820	3500	3430	2390	15210	15880	7170	15460	9480
a/(††)	1.25	2.17	1.16	2.67	2.55	1.82	1.69	6.51	11.88	6.67	12.10	3.09
CAL YR 1980	TOTAL	35657	MEAN	97.4	MAX	4790	MIN	34	AC-FT	70730	††	36.23
WTR YR 1981	TOTAL	43368	MEAN	119	MAX	5740	MIN	30	AC-FT	86020	††	53.56

†† Weighted-mean rainfall, in inches, based on five rain gages.

a/ Revised.

SAN JACINTO RIVER BASIN  
08075500 SIMS BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	
DATE	TIME												
MAR 11...	1150	41	1030	7.7	17.0	10	29	5.4	55	7.9	500000	36000	
MAY 04...	1530	1340	220	7.7	23.5	140	88	4.5	--	5.8	560000	46000	
JUN 05...	1130	6980	145	8.3	23.5	80	200	6.3	74	4.4	460000	125000	
JUN 06...	1150	272	350	7.7	27.0	100	120	5.2	64	6.1	620000	55000	
JUL 08...	1310	193	410	7.8	27.0	100	85	6.1	75	5.4	600000	30000	
AUG 17...	1625	31	880	8.2	33.5	10	19	7.0	97	5.0	--	--	
		STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR 11...	1000	--	--	--	--	--	--	--	--	--	--	--	--
MAY 04...	20000	69	5	21	3.9	19	1.0	3.8	64	6.6	20	.1	.1
JUN 05...	120000	36	0	11	2.0	12	.9	2.2	41	1.4	13	.1	.1
JUN 06...	25000	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	11000	98	0	29	6.3	45	2.0	3.9	110	30	42	.2	.2
AUG 17...	--	140	0	40	9.5	120	4.7	4.6	210	49	110	.5	.5
DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDEDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAR 11...	--	--	--	43	0	1.8	.270	2.1	2.800	2.0	4.8	3.100	8.2
MAY 04...	9.2	122	208	7	.38	.070	.45	.320	1.2	1.5	.580	17	17
JUN 05...	4.6	71	182	26	.21	.030	.24	.290	.71	1.0	.350	15	15
JUN 06...	--	--	74	36	.53	.060	.59	.240	1.2	1.4	.690	17	17
JUL 08...	15	237	186	50	.50	.110	.61	.440	1.2	1.6	.850	13	13
AUG 17...	19	479	34	5	3.7	.260	4.0	.360	1.0	1.4	3.400	6.8	6.8
		ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)						
JUN 05...	1130	4	200	<1	0	<10	60						
JUL 08...	1310	10	80	<1	10	<10	90						
AUG 17...	1625	7	110	<1	0	<10	<10						

SAN JACINTO RIVER BASIN

08075500 SIMS BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN 05...	<10	2	.1	0	0	5
JUL 08...	<10	10	.2	0	0	10
AUG 17...	<10	55	.0	0	0	10

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN 05...	1130	.00	.0	.00	.1	.00	.00	.00	.17
JUL 08...	1310	.00	.0	.00	.1	.00	.00	.00	.23
AUG 17...	1625	.00	.0	.00	.1	.00	.00	.00	.19

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN 05...	.01	.00	.00	.00	.00	.00	.00	.00	.00
JUL 08...	.00	.00	.00	.00	.00	.00	.00	.05	.00
AUG 17...	.01	.00	.00	.00	.00	.01	.01	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 05...	.00	.00	.00	.00	0	.00	.05	.01	.00
JUL 08...	.00	.00	.00	.00	0	.00	.08	.07	.00
AUG 17...	.00	.00	.00	.00	0	.00	.06	.02	.00

STA. NO. 08075500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
SIMS BAYOU AT HOUSTON, TEX.		STORM OF AUG 30 TO SEP. 4, 1981										ACCUM. DISCHARGE!	
DATE & TIME		5400	5470	5500	G A G E	30SR	N U M B E R	31R	WEIGHTED PRECIP.	IN.	CFS	IN.	
AUG. 30													
0000		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0300		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0600		0.0	0.0	0.12		0.0	0.0	0.0	0.01	41.0	39.0	0.0015	
0900		0.0	0.0	0.12		0.0	0.0	0.0	0.01	39.0	37.0	0.0056	
1200		0.0	0.0	0.12		0.0	0.0	0.0	0.01	36.0	36.0	0.0085	
1500		0.0	0.0	0.12		0.0	0.01	0.01	0.01	36.0	36.0	0.0089	
1800		0.24	0.0	0.12		0.0	0.08	0.12	0.12	36.0	36.0	0.0094	
2100		0.24	0.0	0.12		0.0	0.10	0.12	0.12	36.0	36.0	0.0098	
2400		0.24	0.0	0.12		0.0	0.12	0.12	0.12	36.0	36.0	0.0118	
2700		0.24	0.0	0.12		0.0	0.12	0.12	0.12	36.0	36.0	0.0138	
3000		0.24	0.0	0.12		0.0	0.12	0.12	0.12	36.0	36.0	0.0142	
3300		0.24	0.0	0.12		0.12	0.12	0.12	0.14	36.0	36.0	0.0147	
3600		0.24	0.0	0.12		0.12	0.12	0.12	0.14	36.0	36.0	0.0151	
3900		0.84	0.0	0.12		0.24	0.19	0.19	0.41	36.0	36.0	0.0156	
4200		0.84	0.0	0.12		0.24	0.37	0.37	0.43	36.0	36.0	0.0162	
4500		0.84	0.0	0.12		0.24	0.37	0.37	0.43	36.0	36.0	0.0169	
4800		1.08	0.0	0.12		0.36	0.66	0.66	0.58	37.0	37.0	0.0173	
5100		1.44	0.12	0.48		0.36	0.83	0.83	0.80	46.0	46.0	0.0179	
5400		1.56	0.24	0.48		0.48	0.93	0.93	0.91	72.0	72.0	0.0188	
5700		1.80	0.48	1.56		0.60	1.82	1.82	1.27	150.0	150.0	0.0206	
6000		2.16	0.60	1.68		0.96	3.48	3.48	1.69	306.0	306.0	0.0244	
AUG. 31													
0000		2.16	0.60	1.68		0.96	3.48	3.48	1.69	306.0	306.0	0.0244	
0300		2.76	1.20	1.80		2.40	3.66	3.66	2.37	285.0	285.0	0.0279	
0600		2.76	1.68	2.04		2.76	3.68	3.68	2.56	315.0	315.0	0.0318	
0900		2.88	2.04	2.16		2.76	3.77	3.77	2.70	410.0	410.0	0.0368	
1200		3.12	2.04	2.16		2.88	3.98	3.98	2.85	510.0	510.0	0.0431	
1500		3.24	2.28	2.64		3.00	3.98	3.98	3.01	780.0	780.0	0.0527	
1800		3.96	2.76	3.00		3.84	4.36	4.36	3.11	1020.0	1020.0	0.0652	
2100		4.20	3.36	3.24		4.32	4.41	4.41	3.64	1230.0	1230.0	0.0804	
2400		4.56	4.56	3.72		5.64	4.68	4.68	3.98	1520.0	1520.0	0.0990	
2700		4.68	5.04	4.32		5.76	4.96	4.96	4.70	1860.0	1860.0	0.1219	
3000		5.04	5.16	4.68		5.88	5.18	5.18	4.96	2790.0	2790.0	0.1562	
3300		5.04	5.16	4.80		5.88	5.28	5.28	5.21	3570.0	3570.0	0.2001	
3600		5.04	5.28	4.80		5.88	5.36	5.36	5.23	4140.0	4140.0	0.2511	
3900		5.16	5.28	4.92		6.00	5.41	5.41	5.26	4610.0	4610.0	0.3077	
4200		5.16	5.40	4.92		6.00	5.48	5.48	5.35	4930.0	4930.0	0.3684	
4500		5.16	5.40	5.04		6.12	5.54	5.54	5.38	5170.0	5170.0	0.4320	
4800		5.16	5.40	5.04		6.12	5.54	5.54	5.43	5420.0	5420.0	0.4986	
5100		5.28	5.40	5.04		6.12	5.54	5.54	5.48	5590.0	5590.0	0.5674	

STA. NO. 08075500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR					
SIMS BAYOU AT HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 4, 1981										DISCHARGE		ACCUM.			
DATE & TIME		5400		5470		5500		G A G E		N U M B E R		WEIGHTED PRECIP.		IN		RUNOFF	
												IN.		CFS		IN.	
AUG. 31																	
0900	5.40	5.52	5.16	6.24	5.77	5.60	5690.0	0.6373									
0930	5.52	5.64	5.28	6.36	5.97	5.73	5800.0	0.7087									
1000	5.76	5.76	5.28	6.48	6.80	5.96	5880.0	0.7810									
1030	6.48	5.88	5.40	6.60	7.06	6.33	5930.0	0.8539									
1100	7.80	6.12	5.64	7.44	7.27	7.12	5960.0	0.9272									
1130	8.76	7.08	6.60	8.28	7.65	8.00	6400.0	1.0059									
1200	9.12	7.32	6.96	8.64	7.69	8.30	6980.0	1.0918									
1230	9.24	7.44	7.08	8.64	7.72	8.39	7400.0	1.1828									
1300	9.24	7.44	7.20	8.76	7.73	8.43	7670.0	1.2771									
1330	9.24	7.56	7.20	8.76	7.73	8.45	7900.0	1.6657									
1700	9.24	7.56	7.20	8.76	7.73	8.45	8610.0	2.1422									
1800	9.24	7.56	7.20	8.76	7.73	8.45	8590.0	2.3535									
1900	9.24	7.56	7.20	8.76	7.73	8.45	8520.0	2.5107									
1930	9.36	7.56	7.20	8.88	7.73	8.52	8390.0	2.6139									
2000	9.36	7.56	7.20	8.88	7.99	8.55	8300.0	2.8180									
2130	9.36	7.56	7.20	8.88	7.99	8.55	7760.0	3.0089									
2200	9.36	7.68	7.20	8.88	7.99	8.57	7520.0	3.2401									
2400	9.36	7.68	7.20	8.88	7.99	8.57	6300.0	3.5500									
SEP. 1																	
0000	9.36	7.68	7.20	8.88	7.99	8.57	6300.0	3.5500									
0200	9.36	7.68	7.20	8.88	7.99	8.57	5040.0	3.7669									
0330	9.36	7.68	7.20	8.88	7.99	8.57	4200.0	3.8703									
0400	9.36	7.68	7.20	8.88	8.05	8.58	3940.0	3.9914									
0600	9.36	7.68	7.20	8.88	8.05	8.58	3130.0	4.1454									
0800	9.36	7.68	7.20	8.88	8.05	8.58	2500.0	4.2683									
1000	9.36	7.68	7.20	8.88	8.05	8.58	2020.0	4.3677									
1200	9.36	7.68	7.20	8.88	8.05	8.58	1650.0	4.4590									
1430	9.36	7.68	7.20	8.88	8.05	8.58	1300.0	4.5310									
1630	9.36	7.68	7.20	8.88	8.05	8.58	1060.0	4.5766									
1800	9.36	7.68	7.20	8.88	8.05	8.58	920.0	4.6615									
2400	9.36	7.68	7.20	8.88	8.05	8.58	482.0	4.7326									
SEP. 2																	
0000	9.36	7.68	7.20	8.88	8.05	8.58	482.0	4.7326									
0600	9.36	7.68	7.20	8.88	8.05	8.58	266.0	4.7588									
0800	9.36	7.68	7.20	8.88	8.05	8.58	234.0	4.7674									
0900	9.36	7.68	7.32	8.88	8.05	8.59	224.0	4.7729									
1000	9.36	7.68	7.32	8.88	8.05	8.59	214.0	4.7782									
1100	10.20	7.68	7.32	9.24	8.05	9.00	209.0	4.7833									
1200	10.20	7.68	7.44	9.36	8.05	9.04	199.0	4.7882									
1300	10.20	7.68	7.44	9.36	8.05	9.04	196.0	4.7882									
1800	10.20	7.68	7.44	9.36	8.05	9.04	275.0	4.8297									

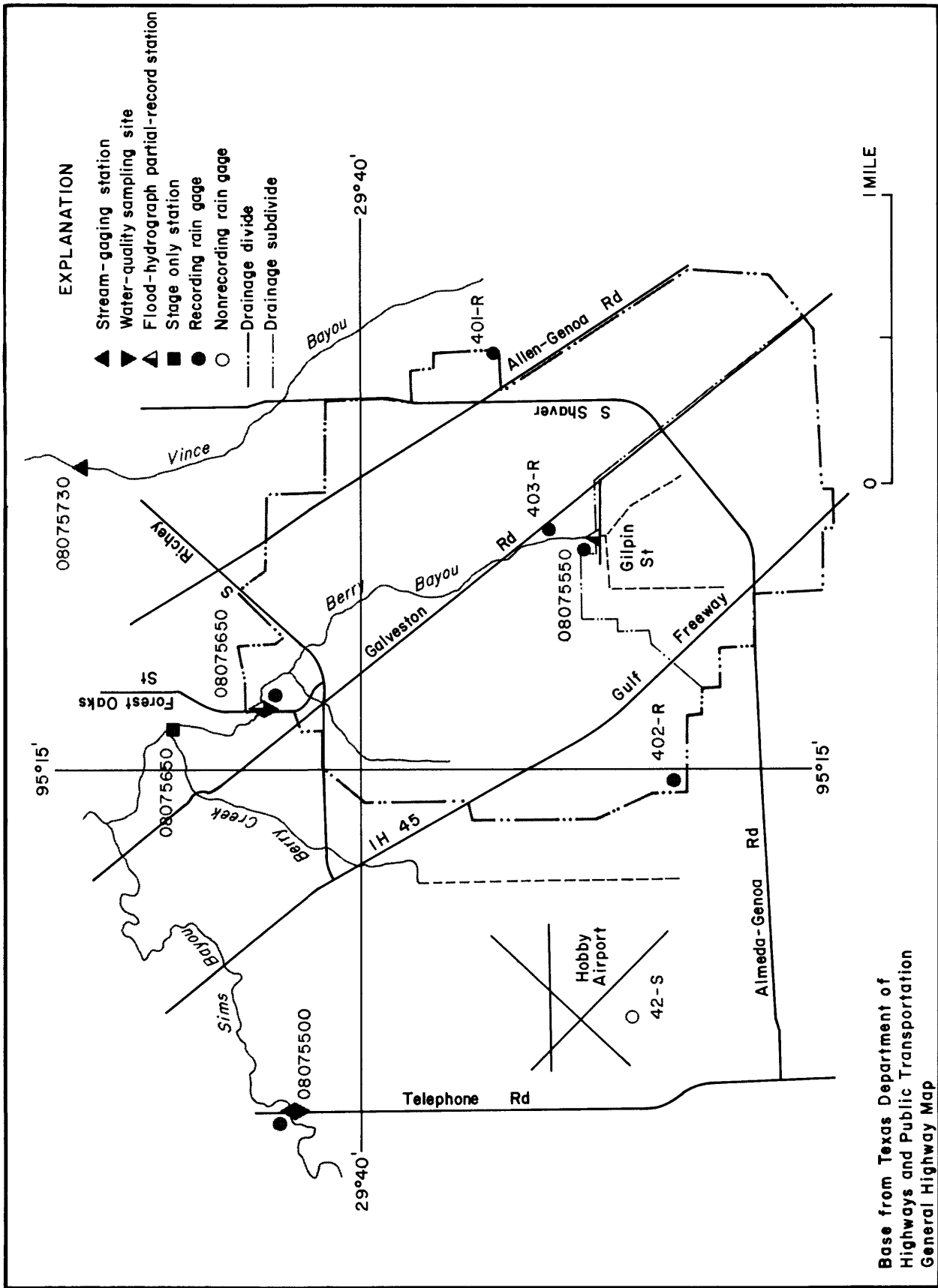
STA. NO. 08075500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
SIMS BAYOU AT HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 4, 1981										ACCUM. DISCHARGE	
DATE & TIME		G A G E N U M B E R										WEIGHTED PRECIP. IN	
		5400	5470	5500	305R	31R						CFS	IN.
SEP. 2													
2100		10.20	7.68	7.44	9.36	8.05					9.04	318.0	4.8532
2400		10.20	7.68	7.44	9.36	8.05					9.04	286.0	4.8848
SEP. 3													
0000		10.20	7.68	7.44	9.36	8.05					9.04	286.0	4.8848
0600		10.20	7.68	7.44	9.36	8.05					9.04	200.0	4.9021
0700		10.32	7.68	7.44	9.36	8.05					9.08	191.0	4.9091
0900		10.32	7.68	7.44	9.36	8.05					9.08	177.0	4.9156
1000		10.32	7.68	7.44	9.36	8.10					9.09	169.0	4.9219
1200		10.32	7.68	7.44	9.36	8.10					9.09	156.0	4.9295
1400		10.32	7.68	7.44	9.36	8.10					9.09	144.0	4.9349
1500		10.32	7.68	7.44	9.48	8.10					9.11	141.0	4.9383
1600		10.32	7.68	7.44	9.48	8.10					9.11	143.0	4.9418
1700		10.32	7.68	7.56	9.48	8.10					9.13	144.0	4.9454
1800		10.32	7.68	7.56	9.48	8.10					9.13	141.0	4.9575
2400		10.32	7.68	7.56	9.48	8.10					9.13	126.0	4.9684
SEP. 4													
0000		10.32	7.68	7.56	9.48	8.10					9.13	126.0	4.9684
0100		10.32	7.68	7.56	9.48	8.10					9.13	126.0	4.9777
0600		10.32	7.68	7.56	9.48	8.10					9.13	106.0	4.9920
1200		10.32	7.68	7.56	9.48	8.10					9.13	86.0	5.0047
1800		10.32	7.68	7.56	9.48	8.10					9.13	78.0	5.0162
2400		10.32	7.68	7.56	9.48	8.10					9.13	67.0	5.0211

## BERRY BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Berry Bayou drainage basin are shown in figure 16.

Weighted-mean rainfall over the drainage basin for the 1981 water year was not determined.

The storms of May 3-4 and Aug. 31-Sept. 1 were selected for analysis at gaging station 08075550, Berry Bayou at Gilpin Street. The storms of May 3-4 and June 4-6 were selected for analysis at station 08075650, Berry Bayou at Forest Oaks Street.





UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 14. -- Storm rainfall-runoff data, 1981 Water Year, Berry Bayou

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum	Increment	Recorded in Basin			
			15-minute	30-minute	60-minute			
Berry Bayou at Gilpin Street, Houston, TX. (Drainage area -- 2.56 mi <sup>2</sup> )								
May 3-4, 1981	8.8	9.92	1.08	1.62	2.59	6.33	0.64	628*
Aug. 31, 1981	3.8	1.21	0.36	0.48	0.60	4.27	0.88	185
Aug. 31-Sept. 1, 1981	2.3	3.64	1.08	1.68	2.40			574
Berry Bayou at Forest Oaks Street, Houston, TX. (Drainage area -- 10.7 mi <sup>2</sup> )								
May 3-4, 1981	8.5	10.19	0.84	1.68	2.59	6.96	0.68	4,950*
June 4-6, 1981	10.5	5.85	0.96	1.92	3.12	4.85	0.83	4,660

\* - Annual peak discharge for 1981 Water Year.

08075550 BERRY BAYOU AT GILPIN STREET, HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°38'32", long 95°13'22", Harris County, Hydrologic Unit 12040104, at bridge on Gilpin Street in southeast Houston.

DRAINAGE AREA.--2.56 mi<sup>2</sup>, Oct. 1, 1973 to Oct. 1, 1978, 2.87 mi<sup>2</sup>. Prior to Oct. 1, 1973, 3.26 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Prior to April 26, 1978 a flood hydrograph and rainfall recorder (type SR) and a crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1959 adjustment, unadjusted for land surface subsidence.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 738 ft<sup>3</sup>/s May 10, 1968; maximum elevation, 37.07 ft, July 26, 1979. Minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft<sup>3</sup>/s and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	GAGE HEIGHT (ft)
May 3	1930	*628	35.92
Jun. 5	0730	566	35.42
Aug. 19	1630	455	34.34
Aug. 31	1300	574	35.50

Minimum discharge not determined.

STA. NO. 08075550		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
BERRY BAYOU AT GILPIN STREET, HOUSTON, TEX.									
STORM OF MAY 3 -4 , 1981									
DATE & TIME		G A G E		N U M B E R		ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	ACCUM. RUNOFF	IN.
		5550	402R				CFS		
MAY 3									
0000		0.0	0.0			0.0	2.1	0.0038	
0600		0.0	0.0			0.0	2.1	0.0079	
0630		0.0	0.04			0.00	2.1	0.0084	
0645		0.12	0.10			0.12	2.1	0.0087	
0700		0.12	0.14			0.12	2.1	0.0091	
0715		0.24	0.20			0.24	2.1	0.0094	
0730		0.24	0.22			0.24	2.1	0.0097	
0745		0.24	0.25			0.24	2.1	0.0100	
0800		0.36	0.30			0.36	2.1	0.0103	
0815		0.36	0.35			0.36	2.1	0.0106	
0830		0.36	0.39			0.36	2.1	0.0110	
0845		0.48	0.43			0.48	2.1	0.0113	
0900		0.48	0.45			0.48	2.7	0.0117	
0915		0.48	0.47			0.48	8.3	0.0129	
0930		0.48	0.57			0.48	19.0	0.0158	
0945		0.60	0.63			0.60	33.0	0.0208	
1000		0.72	0.67			0.72	63.0	0.0303	
1015		0.84	0.73			0.83	94.0	0.0446	
1030		0.84	0.87			0.84	110.0	0.0612	
1045		1.08	1.16			1.08	128.0	0.0806	
1100		1.56	1.45			1.55	146.0	0.1027	
1115		1.68	1.65			1.68	158.0	0.1266	
1130		2.04	1.92			2.03	217.0	0.1594	
1145		2.28	2.08			2.27	268.0	0.2000	
1200		2.28	2.10			2.27	285.0	0.2431	
1215		2.28	2.12			2.27	287.0	0.2865	
1230		2.28	2.15			2.27	286.0	0.3298	
1245		2.40	2.20			2.39	281.0	0.3723	
1300		2.52	2.40			2.51	276.0	0.4141	
1315		2.76	2.65			2.75	292.0	0.4583	
1330		3.00	2.71			2.99	318.0	0.5064	
1345		3.12	2.72			3.10	331.0	0.5565	
1400		3.48	2.80			3.45	355.0	0.6102	
1415		3.72	3.03			3.69	376.0	0.6671	
1430		3.84	3.19			3.81	396.0	0.7271	
1445		4.20	3.20			4.15	411.0	0.7893	
1500		4.20	3.21			4.15	416.0	0.8522	
1515		4.20	3.25			4.15	414.0	0.9149	
1530		4.32	3.41			4.27	410.0	0.9769	

STORM RAINFALL AND RUNOFF RECORD									
STA. NO. 08075550				1981 WATER YEAR					
BERRY BAYOU AT GILPIN STREET, HOUSTON, TEX.				DISCHARGE: ACCUM.					
DATE & TIME				STORM OF MAY 3 -4, 1981		WEIGHTED		PRECIP.	
				G A G E N U M B E R		IN.		CFS	
				5550		402R			
MAY 3									
1545	4.32	3.53		4.28	402.0	1.0377			
1600	4.44	3.56		4.40	398.0	1.0980			
1615	4.80	3.71		4.75	399.0	1.1583			
1630	5.04	3.90		4.98	414.0	1.2210			
1645	5.40	4.20		5.34	427.0	1.2856			
1700	5.76	4.31		5.69	453.0	1.3542			
1715	5.88	4.52		5.81	471.0	1.4254			
1730	6.12	4.80		6.05	487.0	1.4991			
1745	7.20	5.10		7.09	518.0	1.5775			
1800	7.68	5.63		7.58	549.0	1.6606			
1815	8.04	6.06		7.94	565.0	1.7461			
1830	8.28	6.83		8.21	577.0	1.8334			
1845	8.88	7.68		8.82	598.0	1.9239			
1900	9.24	8.22		9.19	621.0	2.0179			
1915	9.24	8.23		9.19	625.0	2.1124			
1930	9.36	8.27		9.31	628.0	2.2075			
1945	9.48	8.38		9.42	625.0	2.3021			
2000	9.48	8.43		9.43	623.0	2.3963			
2015	9.48	8.46		9.43	622.0	2.4905			
2030	9.60	8.61		9.55	619.0	2.5841			
2045	9.60	8.62		9.55	617.0	2.6775			
2100	9.60	8.62		9.55	611.0	2.7700			
2115	9.72	8.63		9.67	605.0	2.8615			
2130	9.72	8.63		9.67	599.0	2.9522			
2145	9.72	8.64		9.67	594.0	3.0420			
2200	9.72	8.80		9.67	588.0	3.1310			
2215	9.72	8.94		9.68	582.0	3.2191			
2230	9.72	8.95		9.68	576.0	3.3063			
2245	9.72	8.96		9.68	572.0	3.3928			
2300	9.84	9.07		9.80	568.0	3.4788			
2315	9.84	9.08		9.80	565.0	3.6498			
2400	9.84	9.08		9.80	552.0	4.6104			
MAY 4									
0000	9.84	9.08		9.80	552.0	4.6104			
0500	9.84	9.08		9.80	342.0	5.2314			
0600	9.84	9.13		9.80	285.0	5.5765			
0900	9.84	9.13		9.80	169.0	5.8834			
1200	9.96	9.13		9.92	113.0	6.1911			
1800	9.96	9.13		9.92	36.0	6.3219			
2400	9.96	9.13		9.92	2.1	6.3257			

STA. NO. 08075550		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR			
BERRY BAYOU AT GILPIN STREET, HOUSTON, TEX.		STORM OF AUG. 31 TO SEP. 1, 1981										DISCHARGE		ACCUM.	
DATE & TIME		G A G E N U M B E R										IN		RUNOFF	
		5550	402R									CFS	IN.		IN.
AUG. 31															
0000	0.0	0.0	0.0									0.0	0.0	0.0	0.0
0015	0.12	0.0	0.0									0.0	0.0	0.0	0.0
0030	0.12	0.02	0.02									0.11	0.0	0.0	0.0
0045	0.12	0.06	0.06									0.12	0.0	0.0	0.0
0100	0.12	0.08	0.08									0.12	0.0	0.0	0.0
0115	0.12	0.12	0.12									0.12	0.0	0.0	0.0
0130	0.24	0.14	0.14									0.23	0.0	0.0	0.0
0145	0.24	0.16	0.16									0.24	44.0	0.0067	0.0067
0200	0.24	0.17	0.17									0.24	63.0	0.0162	0.0162
0215	0.24	0.18	0.18									0.24	72.0	0.0271	0.0271
0230	0.24	0.32	0.32									0.24	87.0	0.0403	0.0403
0245	0.24	0.33	0.33									0.24	97.0	0.0549	0.0549
0300	0.36	0.33	0.33									0.36	116.0	0.0725	0.0725
0315	0.72	0.35	0.35									0.70	131.0	0.0923	0.0923
0330	0.84	0.64	0.64									0.83	134.0	0.1126	0.1126
0345	0.84	0.69	0.69									0.83	162.0	0.1371	0.1371
0400	0.96	0.75	0.75									0.95	176.0	0.1637	0.1637
0415	0.96	0.80	0.80									0.95	182.0	0.1913	0.1913
0430	0.96	0.92	0.92									0.96	185.0	0.2193	0.2193
0445	1.08	0.98	0.98									1.07	184.0	0.2471	0.2471
0500	1.08	1.03	1.03									1.08	182.0	0.2747	0.2747
0515	1.20	1.12	1.12									1.20	180.0	0.3019	0.3019
0530	1.20	1.21	1.21									1.20	179.0	0.3290	0.3290
0545	1.20	1.25	1.25									1.20	176.0	0.3556	0.3556
0600	1.20	1.28	1.28									1.20	172.0	0.3816	0.3816
0615	1.20	1.30	1.30									1.20	166.0	0.4068	0.4068
0630	1.20	1.31	1.31									1.21	158.0	0.4307	0.4307
0645	1.20	1.32	1.32									1.21	151.0	0.4535	0.4535
0700	1.20	1.33	1.33									1.21	141.0	0.4749	0.4749
0715	1.32	1.35	1.35									1.32	132.0	0.4948	0.4948
0730	1.32	1.37	1.37									1.32	124.0	0.5324	0.5324
0815	1.32	1.37	1.37									1.32	92.0	0.5602	0.5602
0830	1.32	1.39	1.39									1.32	87.0	0.5734	0.5734
0845	1.32	1.42	1.42									1.32	82.0	0.5858	0.5858
0900	1.32	1.44	1.44									1.33	68.0	0.5961	0.5961
0915	1.32	1.48	1.48									1.33	56.0	0.6046	0.6046
0930	1.44	1.52	1.52									1.44	48.0	0.6118	0.6118
0945	1.44	1.56	1.56									1.45	42.0	0.6182	0.6182
1000	1.44	1.60	1.60									1.45	28.0	0.6224	0.6224

STA. NO. 08075550		STORM RAINFALL AND RUNOFF RECORD									
		1981 WATER YEAR									
BERRY BAYOU AT GILPIN STREET, HOUSTON, TEX.		DISCHARGE: ACCUM.									
		IN IN. RUNOFF									
DATE & TIME		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		CFS IN.									
		IN.									
		PRECIP. IN.									
		C									

## SAN JACINTO RIVER BASIN

08075650 BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TX  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°40'35", long 95°14'37", Harris County, Hydrologic Unit 12040104, at gaging station at Forest Oaks Street Bridge in southeast Houston, 0.8 mi (1.3 km) upstream from auxiliary gage at mouth of Berry Creek, and 1.7 mi (2.7 km) upstream from Sims Bayou.

DRAINAGE AREA.--10.7 mi<sup>2</sup> (27.7 km<sup>2</sup>). Prior to Oct. 1, 1973, 11.1 mi<sup>2</sup> (28.7 km<sup>2</sup>). Oct. 1, 1976, to Dec. 31, 1977, 10.1 mi<sup>2</sup> (26.2 km<sup>2</sup>). Drainage ditch relocations resulted in drainage area changes.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year. April 1964 to September 1966 operated as a daily discharge station.

REVISED RECORDS.--WRD TX-80-2: 1979(P).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 2.72 ft (0.829 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment. Auxiliary water-stage recorder 0.8 mi (1.3 km) downstream at same datum. June 25, 1964, to Jan. 11, 1965, auxiliary nonrecording gage 0.8 mi (1.3 km) downstream at same datum.

REMARKS.--Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1980."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft<sup>3</sup>/s (144 m<sup>3</sup>/s), corrected, June 9, 1975; maximum gage height, 23.85 ft (7.269 m) Sept. 20, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft<sup>3</sup>/s (25.5 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 3	1945	*4,950 140	a22.73 6.928	June 5	0700	4,660 132	a20.29 6.184
June 3	0215	1,380 39.1	a13.15 4.008	Aug. 31	b1400	b3,000 85.0	a20.16 6.145

a Not at same time as peak discharge.

b About.

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to September 1981 (discontinued).  
Water temperatures: April 1964 to September 1981 (discontinued).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS./ 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	
MAY													
04...	1120	325	166	7.3	21.5	50	33	3.9	44	9.3	540000	100000	
JUN													
05...	1015	2810	93	8.0	23.5	60	52	6.1	72	4.0	400000	100000	
05...	1450	1210	125	7.8	25.5	60	41	5.0	61	4.7	420000	120000	
06...	1055	35	291	7.4	27.0	80	18	4.9	60	5.9	520000	160000	
		STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAY													
04...	48000	60	6	19	3.0	10	.6	3.6	54	3.5	9.2	.1	
JUN													
05...	100000	34	0	11	1.5	4.9	.4	1.9	38	1.5	4.3	.1	
05...	64000	--	--	--	--	--	--	--	--	--	--	--	
06...	9700	--	--	--	--	--	--	--	--	--	--	--	
		SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY													
04...	5.7	86	86	4	.47	.080	.55	.260	2.0	2.3	.630	16	
JUN													
05...	4.2	53	145	25	.18	.010	.19	.110	1.1	1.2	.310	16	
05...	--	--	29	22	.17	.020	.19	.140	.96	1.1	.340	14	
06...	--	--	93	28	.34	.080	.42	.500	1.2	1.7	.600	10	

SAN JACINTO RIVER BASIN

08075650 BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)			
DATE	TIME									
JUN 05...	1015	4	200	<1	10	<10	110			
		LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)			
DATE										
JUN 05...		<10	2	.1	0	0	10			
		NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)		
DATE	TIME									
JUN 05...	1015	.00	.0	.00	.1	.00	.00	.00	.24	
		DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
DATE										
JUN 05...	.02	.00	.00	.00	.01	.02	.00	.04	.00	
		METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
DATE										
JUN 05...	.00	.00	.00	.00	.00	0	.00	.07	.01	.00



STA. NO 08075650		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR		
BERRY BAYOU AT FOREST OAKS ST., HOUSTON, TEX.		STORM OF MAY 3 - 4, 1981										DISCHARGE: ACCUM.		
DATE & TIME		G A G E										WEIGHTED PRECIP.		
		5550	403R	402R	401R	N U M B E R					IN			IN.
MAY 3														
0000		0.0	0.0	0.0	0.0	0.0					0.0	6.0	0.0026	
0600		0.0	0.0	0.0	0.0	0.0					0.0	6.0	0.0054	
0630		0.0	0.0	0.04	0.12	0.12					0.03	6.0	0.0059	
0700		0.12	0.24	0.14	0.20	0.20					0.18	20.0	0.0073	
0730		0.24	0.24	0.22	0.26	0.26					0.24	40.0	0.0102	
0800		0.36	0.36	0.30	0.34	0.34					0.35	60.0	0.0146	
0830		0.36	0.48	0.39	0.40	0.40					0.41	110.0	0.0225	
0900		0.48	0.60	0.45	0.44	0.44					0.51	160.0	0.0341	
0930		0.48	0.60	0.57	0.55	0.55					0.55	190.0	0.0479	
1000		0.72	0.84	0.67	0.73	0.73					0.76	205.0	0.0627	
1030		0.84	1.08	0.87	0.98	0.98					0.96	210.0	0.0779	
1100		1.56	1.68	1.45	1.45	1.45					1.56	220.0	0.0938	
1130		2.04	2.40	1.92	1.83	1.83					2.11	280.0	0.1141	
1200		2.28	2.76	2.10	1.86	1.86					2.34	416.0	0.1442	
1230		2.28	2.88	2.15	1.94	1.94					2.40	650.0	0.1913	
1300		2.52	3.00	2.40	2.18	2.18					2.60	828.0	0.2513	
1330		3.00	3.60	2.71	2.51	2.51					3.07	920.0	0.3179	
1400		3.48	4.20	2.80	3.22	3.22					3.58	976.0	0.3886	
1430		3.84	4.68	3.19	3.75	3.75					4.02	1110.0	0.4689	
1500		4.20	5.16	3.21	3.77	3.77					4.30	1290.0	0.5623	
1530		4.32	5.16	3.41	3.86	3.86					4.39	1280.0	0.6550	
1600		4.44	5.40	3.56	4.00	4.00					4.56	1260.0	0.7463	
1630		5.04	5.52	3.90	4.72	4.72					4.97	1120.0	0.8274	
1700		5.76	6.72	4.31	5.84	5.84					5.89	1040.0	0.9027	
1730		6.12	7.20	4.80	7.28	7.28					6.53	1320.0	0.9983	
1800		7.68	8.88	5.63	8.12	8.12					7.88	1720.0	1.1228	
1830		8.28	9.60	6.83	8.25	8.25					8.52	2260.0	1.2864	
1900		9.24	10.92	8.22	8.27	8.27					9.48	3410.0	1.5334	
1930		9.36	10.92	8.27	8.38	8.38					9.55	4860.0	1.7973	
1945		9.48	11.16	8.27	8.43	8.43					9.68	4950.0	1.9765	
2000		9.48	11.16	8.43	8.43	8.43					9.70	4640.0	2.2285	
2030		9.60	11.28	8.61	8.53	8.53					9.83	4830.0	2.5782	
2100		9.60	11.40	8.62	8.57	8.57					9.88	4690.0	2.9179	
2130		9.72	11.40	8.63	8.59	8.59					9.92	4570.0	3.2488	
2200		9.72	11.40	8.80	8.59	8.59					9.94	4100.0	3.5457	
2230		9.72	11.40	8.95	8.61	8.61					9.97	3810.0	3.8215	
2300		9.84	11.52	9.07	8.70	8.70					10.08	3480.0	4.1995	
2400		9.84	11.52	9.08	8.71	8.71					10.09	3110.0	4.7625	
MAY 4														
0000		9.84	11.52	9.08	8.71	8.71					10.09	3110.0	4.7625	

STA. NO.	08075650	STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
		BERRY BAYOU AT FOREST OAKS ST., HOUSTON, TEX.				STORM OF MAY 3 -4, 1981				ACCUM. DISCHARGE		ACCUM. RUNOFF	
DATE & TIME	5550	403R		402R		G A G E		N U M B E R		WEIGHTED PRECIP.		IN CFS	
								401R		IN			
MAY 4													
0130	9.84	11.52		9.08				8.71		10.09		2510.0	5.3078
0300	9.84	11.52		9.08				8.71		10.09		1990.0	5.7401
0430	9.84	11.52		9.08				8.71		10.09		1500.0	5.9573
0500	9.84	11.52		9.08				8.71		10.09		1350.0	6.0550
0530	9.84	11.64		9.10				8.75		10.14		1200.0	6.1419
0600	9.84	11.64		9.13				8.77		10.15		1090.0	6.2603
0700	9.84	11.64		9.13				8.77		10.15		860.0	6.3849
0800	9.84	11.64		9.13				8.77		10.15		682.0	6.4836
0900	9.84	11.64		9.13				8.77		10.15		500.0	6.5923
1100	9.84	11.64		9.13				8.77		10.15		330.0	6.6520
1130	9.96	11.64		9.13				8.79		10.19		310.0	6.6744
1200	9.96	11.64		9.13				8.81		10.19		290.0	6.8109
1800	9.96	11.64		9.13				8.81		10.19		150.0	6.9413
2400	9.96	11.64		9.13				8.81		10.19		50.0	6.9630

STA. NO.		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
08075650		BERRY BAYOU AT FOREST OAKS ST , HOUSTON, TEX.										DISCHARGE	
		STORM OF JUNE 4 -6 , 1981										IN	
DATE & TIME		G A G E N U M B E R										ACCUM. WEIGHTED PRECIP.	
		5550 5650 403R 402R										IN	
												CFS	
												IN.	
JUNE 4													
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0018
0230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0039
0300	0.24	0.24	0.24	0.24	0.08	0.08	0.08	0.08	0.08	0.22	0.22	9.7	0.0046
0330	0.36	0.36	0.36	0.45	0.45	0.45	0.45	0.45	0.45	0.41	0.41	9.7	0.0053
0400	0.36	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.44	0.44	9.6	0.0071
0600	0.36	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.44	0.44	9.4	0.0125
1200	0.36	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.44	0.44	8.7	0.0188
1600	0.36	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.44	0.44	8.2	0.0215
1630	0.48	0.48	0.48	0.48	0.50	0.50	0.50	0.50	0.50	0.48	0.48	8.2	0.0221
1700	0.48	0.48	0.48	0.48	0.51	0.51	0.51	0.51	0.51	0.48	0.48	8.1	0.0230
1800	0.48	0.48	0.48	0.48	0.51	0.51	0.51	0.51	0.51	0.48	0.48	8.0	0.0238
1830	0.48	0.48	0.48	0.48	0.51	0.51	0.51	0.51	0.51	0.48	0.48	260.0	0.0427
1900	0.48	0.72	0.72	0.48	0.51	0.51	0.51	0.51	0.51	0.53	0.53	250.0	0.0608
1930	0.48	0.84	0.84	0.48	0.51	0.51	0.51	0.51	0.51	0.56	0.56	175.0	0.0734
2000	0.48	1.08	1.08	0.60	0.51	0.51	0.51	0.51	0.51	0.64	0.64	125.0	0.0825
2030	0.48	1.20	1.20	0.60	0.51	0.51	0.51	0.51	0.51	0.66	0.66	100.0	0.0897
2100	0.48	1.44	1.44	0.60	0.51	0.51	0.51	0.51	0.51	0.71	0.71	90.0	0.0963
2130	0.72	1.44	1.44	0.72	0.65	0.65	0.65	0.65	0.65	0.85	0.85	100.0	0.1035
2200	0.84	1.44	1.44	0.96	0.78	0.78	0.78	0.78	0.78	0.99	0.99	110.0	0.1115
2230	0.96	1.56	1.56	1.20	0.93	0.93	0.93	0.93	0.93	1.15	1.15	150.0	0.1223
2300	1.20	1.56	1.56	1.44	1.10	1.10	1.10	1.10	1.10	1.33	1.33	200.0	0.1368
2330	1.32	1.56	1.56	1.68	1.12	1.12	1.12	1.12	1.12	1.45	1.45	260.0	0.1556
2400	1.32	1.80	1.80	1.68	1.12	1.12	1.12	1.12	1.12	1.49	1.49	310.0	0.1781
JUNE 5													
0000	1.32	1.80	1.80	1.68	1.12	1.12	1.12	1.12	1.12	1.49	1.49	310.0	0.1781
0030	1.32	1.80	1.80	1.68	1.12	1.12	1.12	1.12	1.12	1.49	1.49	360.0	0.2041
0100	1.32	1.80	1.80	1.68	1.14	1.14	1.14	1.14	1.14	1.50	1.50	380.0	0.2317
0130	1.44	1.92	1.92	1.68	1.15	1.15	1.15	1.15	1.15	1.56	1.56	370.0	0.2585
0200	1.44	1.92	1.92	1.80	1.19	1.19	1.19	1.19	1.19	1.61	1.61	320.0	0.2816
0230	1.56	1.92	1.92	1.92	1.28	1.28	1.28	1.28	1.28	1.70	1.70	290.0	0.3026
0300	1.68	2.04	2.04	2.04	1.34	1.34	1.34	1.34	1.34	1.81	1.81	270.0	0.3222
0330	1.68	3.24	3.24	2.16	1.39	1.39	1.39	1.39	1.39	2.09	2.09	250.0	0.3403
0400	1.80	5.16	5.16	2.16	1.40	1.40	1.40	1.40	1.40	2.52	2.52	240.0	0.3577
0430	1.80	6.36	6.36	2.16	1.47	1.47	1.47	1.47	1.47	2.77	2.77	250.0	0.3758
0500	1.92	6.48	6.48	2.28	1.50	1.50	1.50	1.50	1.50	2.88	2.88	320.0	0.3989
0530	2.88	6.60	6.60	3.36	2.66	2.66	2.66	2.66	2.66	3.73	3.73	1030.0	0.4735
0600	4.08	6.60	6.60	4.80	4.43	4.43	4.43	4.43	4.43	4.85	4.85	1730.0	0.5988
0630	4.56	6.84	6.84	5.52	5.10	5.10	5.10	5.10	5.10	5.38	5.38	3140.0	0.8262
0700	4.80	6.84	6.84	5.76	5.42	5.42	5.42	5.42	5.42	5.59	5.59	4660.0	1.1636
0730	4.80	6.84	6.84	5.88	5.51	5.51	5.51	5.51	5.51	5.64	5.64	3280.0	1.4011

STA. NO. 08075650		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR			
BERRY BAYOU AT FOREST OAKS ST., HOUSTON, TEX.		STORM OF JUNE 4 -6, 1981					DISCHARGE!			
DATE & TIME		G A G E		N U M B E R		PRECIP. IN.	ACCUM. WEIGHTED PRECIP.		IN	
		5550	5650	403R	402R				CFS	IN
JUNE5										
0800	4.92	6.84	6.00	5.57	5.73	5.73	3180.0	1.6314		
0830	5.04	6.84	6.12	5.67	5.82	5.82	3100.0	1.8958		
0900	5.04	6.84	6.12	5.67	5.82	5.82	3070.0	2.0781		
0930	5.04	6.84	6.12	5.72	5.83	5.83	2950.0	2.6122		
1130	5.04	6.84	6.12	5.72	5.83	5.83	2300.0	3.0285		
1200	5.04	6.84	6.12	5.72	5.83	5.83	2130.0	3.1828		
1230	5.04	6.84	6.12	5.72	5.83	5.83	1930.0	3.3225		
1300	5.04	6.96	6.12	5.72	5.85	5.85	1730.0	3.5104		
1400	5.04	6.96	6.12	5.72	5.85	5.85	1400.0	3.7638		
1530	5.04	6.96	6.12	5.72	5.85	5.85	1060.0	3.9941		
1700	5.04	6.96	6.12	5.72	5.85	5.85	800.0	4.1389		
1800	5.04	6.96	6.12	5.72	5.85	5.85	663.0	4.2590		
1930	5.04	6.96	6.12	5.72	5.85	5.85	530.0	4.4892		
2400	5.04	6.96	6.12	5.72	5.85	5.85	280.0	4.7021		
JUNE6										
0000	5.04	6.96	6.12	5.72	5.85	5.85	280.0	4.7021		
0600	5.04	6.96	6.12	5.72	5.85	5.85	113.0	4.8003		
1200	5.04	6.96	6.12	5.72	5.85	5.85	30.0	4.8264		
1800	5.04	6.96	6.12	5.72	5.85	5.85	20.0	4.8437		
2400	5.04	6.96	6.12	5.72	5.85	5.85	10.0	4.8481		

## VINCE BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the drainage basin are shown in figure 17.

Weighted-mean rainfall in the drainage basin based on two rain gages for the 1981 water year was 51.50 inches or 3.31 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of May 3-6 and Aug. 30-Sept. 1 were selected for analysis at station 08075730, Vince Bayou at Pasadena, Tex.

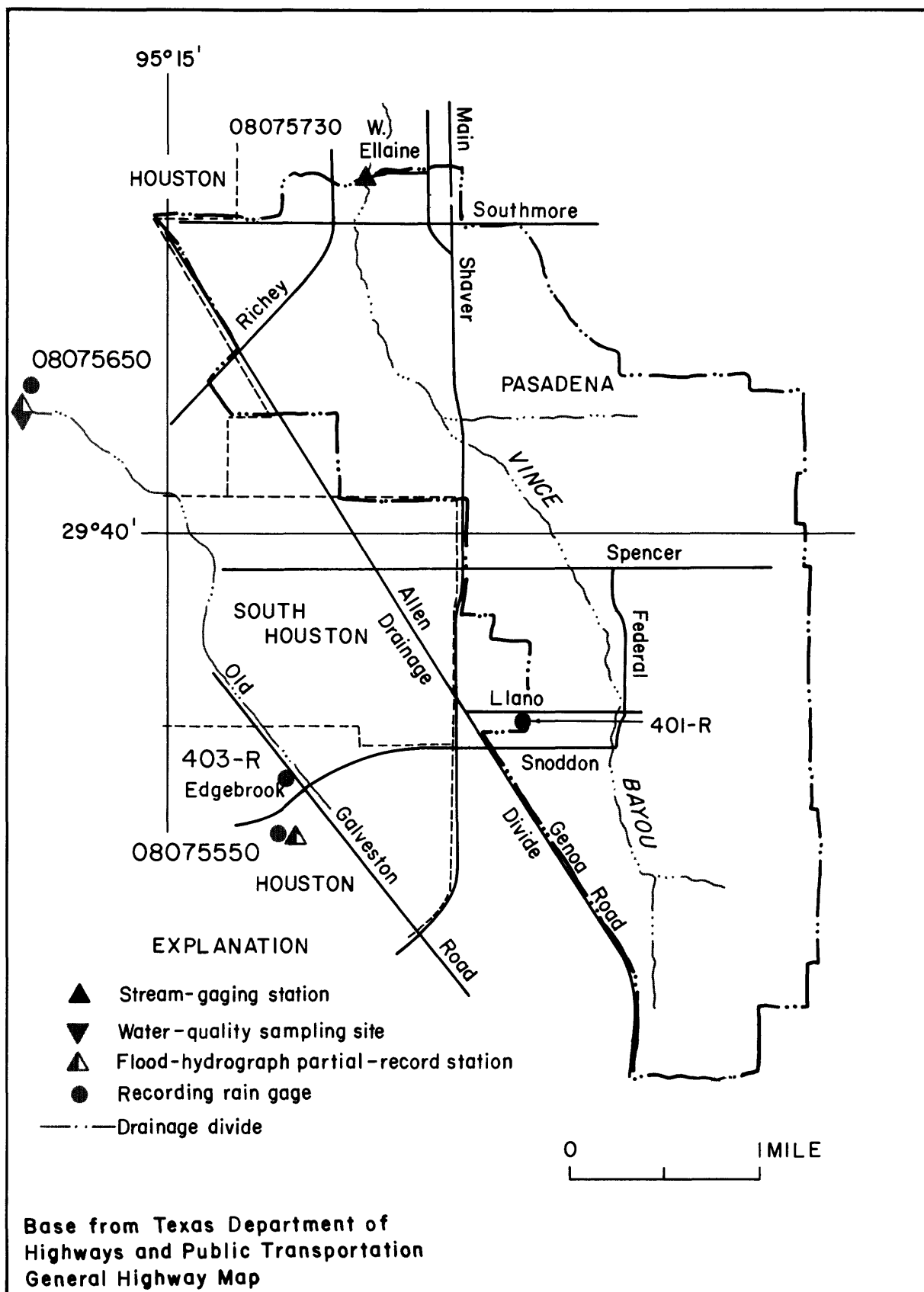


Figure 17.- Locations of data-collection sites in and near the Vince Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 15.--Storm rainfall-runoff data, 1981 Water Year, Vince Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Vince Bayou at Pasadena, TX. (Drainage area -- 7.32 mi2)								
May 3-6, 1981	8.0	8.81	0.92	1.46	2.57	7.39	0.84	4,720 *, ++
Aug. 30-31, 1981	10.5	0.48	0.16	0.17	0.23	4.49	0.74	276
Aug. 31, 1981	3.3	1.27	.35	.37	.63			653
Aug. 31-Sept. 1, 1981	1.8	4.30	1.15	1.90	3.15			3,340

\* - Annual peak discharge for 1981 Water Year.

++ - Peak discharge for period of record.

SAN JACINTO RIVER BASIN

08075730 VINCE BAYOU AT PASADENA, TX

LOCATION.--Lat 29°41'40", long 95°12'58", Harris County, Hydrologic Unit 12040104, on right bank of concrete lined channel at end of West Ellaine Avenue in Pasadena and 2.4 mi (3.9 km) upstream from mouth.

DRAINAGE AREA.--7.32 mi<sup>2</sup> (18.96 km<sup>2</sup>). Prior to Jan. 1, 1978, 8.21 mi<sup>2</sup> (21.26 km<sup>2</sup>). Jan. 1 to Sept. 30, 1978, 7.61 mi<sup>2</sup> (19.71 km<sup>2</sup>). Drainage area revisions due to drainage ditch changes.

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.54 ft (0.774 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment; unadjusted for land-surface subsidence (levels by Corps of Engineers).

REMARKS.--Records fair. Low flow is sustained by sewage effluent.

AVERAGE DISCHARGE.--10 years, 17.4 ft<sup>3</sup>/s (0.493 m<sup>3</sup>/s), 12,610 acre-ft/yr (15.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft<sup>3</sup>/s (134 m<sup>3</sup>/s) May 3, 1981, gage height, 18.30 ft (5.578 m); no flow Aug. 5, 6, 18, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft<sup>3</sup>/s (39.6 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
May 3	1900	*4,720 134	18.30 5.578	June 5	0715	3,590 102	16.84 5.133
June 3	0200	1,580 44.7	13.57 4.136	Aug. 31	1245	3,340 94.6	16.49 5.026

Minimum daily discharge, 0.08 ft<sup>3</sup>/s (0.002 m<sup>3</sup>/s) July 21, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.48	.50	1.1	30	.80	.56	.44	50	1.3	.10	70
2	.38	.48	.42	.88	3.0	.70	.56	.35	5.2	.28	.10	33
3	.26	.29	.46	1.2	1.0	1.0	.35	1230	228	.63	.10	29
4	.19	.31	.48	.91	10	15	1.5	233	64	.21	6.0	4.4
5	.19	.41	.74	1.0	40	3.0	.83	16	1010	28	3.0	1.8
6	.90	.30	.46	6.0	5.0	1.5	.44	4.4	41	7.4	1.0	3.2
7	.90	.48	.65	2.3	.90	3.0	.56	1.5	6.6	154	.50	3.1
8	.46	.56	16	1.1	.70	1.3	.44	.83	2.0	18	.40	1.0
9	.11	.40	53	1.3	5.6	.60	.56	18	.44	2.8	.35	1.0
10	.19	.38	3.6	.86	10	.50	.56	4.0	1.1	61	.32	1.0
11	.15	.45	1.3	.71	1.7	.40	.35	.83	161	6.8	.56	.89
12	.11	.30	.86	.70	.79	.40	.35	.35	196	.66	.38	1.0
13	.22	.30	.84	.65	.76	.40	.30	.30	101	.31	.46	.77
14	.19	.55	.77	9.2	.84	.35	.35	13	13	.23	5.8	86
15	.15	.30	3.3	1.7	.81	.35	1.0	1.7	4.0	.22	.45	14
16	.56	6.5	1.5	1.1	1.0	.35	.44	.44	2.8	.28	.54	2.3
17	.38	.60	.98	1.2	1.1	.35	.30	.30	1.6	.25	71	2.0
18	42	.40	.93	1.2	1.3	.56	.30	.30	.27	.59	14	.23
19	9.3	.40	1.1	88	1.2	.44	.35	.30	.13	.09	83	.17
20	.60	.30	1.2	33	1.2	.44	.35	.30	.09	.09	7.6	.14
21	.25	.30	1.1	2.0	3.0	5.2	.68	.25	.09	.08	.37	.21
22	.20	20	1.2	1.3	1.5	2.2	.56	.25	.10	.09	.11	.13
23	.40	2.0	.72	.68	1.3	.83	67	.25	.11	.08	.09	.14
24	.20	.50	1.0	.63	1.2	.56	8.8	.25	9.0	.08	.09	.25
25	.35	9.0	.93	.54	20	1.0	6.1	14	2.2	.10	.13	.14
26	.30	3.0	1.2	.49	3.0	.25	6.6	1.7	19	64	.24	.11
27	.25	1.0	1.4	42	1.5	.30	1.7	.35	46	74	.17	.10
28	3.5	.40	1.4	6.0	1.0	.35	.68	.21	26	2.9	.09	.19
29	1.5	.50	1.1	1.0	---	1.7	.44	.17	1.7	.21	4.1	.14
30	.38	.40	1.0	.70	---	1.2	.44	.30	42	.10	12	.16
31	.26	---	.87	1.7	---	.68	---	.68	---	.10	797	---
TOTAL	66.93	51.29	101.01	211.15	149.40	45.71	103.45	1544.75	2034.43	424.88	1010.05	256.57
MEAN	2.16	1.71	3.26	6.81	5.34	1.47	3.45	49.8	67.8	13.7	32.6	8.55
MAX	.42	20	53	88	40	15	67	1230	1010	154	797	86
MIN	.11	.29	.42	.49	.70	.25	.30	.17	.09	.08	.09	.10
AC-FT	133	102	200	419	296	91	205	3060	4040	843	2000	509
(††)	1.38	1.80	1.01	2.95	2.28	.89	1.62	9.73	13.84	5.12	8.78	2.10

CAL YR 1980	TOTAL	3585.04	MEAN	9.80	MAX	642	MIN	.08	AC-FT	7110	††	32.10
WTR YR 1981	TOTAL	5999.62	MEAN	16.4	MAX	1230	MIN	.08	AC-FT	11900	††	51.50

†† Weighted-mean rainfall, in inches, based on two rain gages.



STA. NO. 08075730		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
VINCE BAYOU AT PASADENA, TEX.		STORM OF MAY 3 -6, 1981				DISCHARGE!			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP.		IN	
						IN.		CFS	
								IN.	
MAY 3									
0000	0.0					0.0	0.4	0.0003	0.0003
0615	0.06					0.06	0.4	0.0005	0.0005
0630	0.12					0.12	0.7	0.0006	0.0006
0645	0.17					0.17	1.3	0.0006	0.0006
0700	0.20					0.20	8.8	0.0011	0.0011
0715	0.23					0.23	12.0	0.0017	0.0017
0730	0.26					0.26	15.0	0.0025	0.0025
0745	0.29					0.29	24.0	0.0038	0.0038
0800	0.34					0.34	36.0	0.0057	0.0057
0815	0.37					0.37	58.0	0.0088	0.0088
0830	0.40					0.40	77.0	0.0129	0.0129
0845	0.42					0.42	85.0	0.0174	0.0174
0900	0.44					0.44	92.0	0.0222	0.0222
0915	0.47					0.47	87.0	0.0268	0.0268
0930	0.55					0.55	84.0	0.0313	0.0313
0945	0.63					0.63	94.0	0.0363	0.0363
1000	0.73					0.73	124.0	0.0428	0.0428
1015	0.80					0.80	160.0	0.0513	0.0513
1030	0.98					0.98	190.0	0.0613	0.0613
1045	1.26					1.26	231.0	0.0736	0.0736
1100	1.45					1.45	533.0	0.1018	0.1018
1115	1.61					1.61	751.0	0.1415	0.1415
1130	1.83					1.83	953.0	0.1920	0.1920
1145	1.84					1.84	917.0	0.2405	0.2405
1200	1.86					1.86	882.0	0.2872	0.2872
1215	1.91					1.91	663.0	0.3222	0.3222
1230	1.94					1.94	609.0	0.3545	0.3545
1245	1.98					1.98	577.0	0.3850	0.3850
1300	2.18					2.18	558.0	0.4145	0.4145
1315	2.38					2.38	751.0	0.4543	0.4543
1330	2.51					2.51	1030.0	0.5088	0.5088
1345	2.78					2.78	1130.0	0.5686	0.5686
1400	3.22					3.22	1310.0	0.6379	0.6379
1415	3.55					3.55	1630.0	0.7242	0.7242
1430	3.75					3.75	1720.0	0.8152	0.8152
1445	3.77					3.77	1910.0	0.9163	0.9163
1500	3.77					3.77	2080.0	1.0264	1.0264
1515	3.82					3.82	1910.0	1.1275	1.1275
1530	3.86					3.86	1860.0	1.2259	1.2259

STA. NO. 08075730		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR					
VINCE BAYOU AT PASADENA, TEX.		STORM OF MAY 3 - 6, 1981					ACCUM. WEIGHTE		DISCHARGE		ACCUM.	
DATE & TIME		G A G E N U M B E R					PRECIP.		IN		RUNOFF	
							IN.		CFS		IN.	
MAY 3												
1545	3.88						3.88		1800.0		1.3212	
1600	4.00						4.00		1530.0		1.4021	
1615	4.27						4.27		1620.0		1.4879	
1630	4.72						4.72		1750.0		1.5805	
1645	5.25						5.25		2020.0		1.6874	
1700	5.84						5.84		2520.0		1.8208	
1715	6.36						6.36		2910.0		1.9748	
1730	7.28						7.28		3180.0		2.1431	
1745	7.82						7.82		3490.0		2.3278	
1800	8.12						8.12		4080.0		2.5437	
1815	8.24						8.24		4050.0		2.7580	
1830	8.25						8.25		4010.0		2.9702	
1845	8.26						8.26		4240.0		3.1946	
1900	8.27						8.27		4720.0		3.4444	
1915	8.28						8.28		4440.0		3.6794	
1930	8.38						8.38		4200.0		3.9017	
1945	8.42						8.42		3860.0		4.1060	
2000	8.43						8.43		3530.0		4.2928	
2015	8.52						8.52		3320.0		4.4685	
2030	8.53						8.53		3180.0		4.6368	
2045	8.54						8.54		3080.0		4.7998	
2100	8.57						8.57		2880.0		4.9522	
2115	8.58						8.58		2680.0		5.0940	
2130	8.59						8.59		2590.0		5.4367	
2230	8.61						8.61		1750.0		5.6683	
2245	8.69						8.69		1650.0		5.7556	
2300	8.70						8.70		1550.0		5.9607	
2400	8.71						8.71		1120.0		6.3756	
MAY 4												
0000	8.71						8.71		1120.0		6.3756	
0230	8.71						8.71		555.0		6.6987	
0530	8.75						8.75		321.0		6.9875	
1100	8.77						8.77		138.0		7.0824	
1200	8.81						8.81		118.0		7.2448	
2400	8.81						8.81		26.0		7.3108	
MAY 5												
0000	8.81						8.81		26.0		7.3108	
1200	8.81						8.81		14.0		7.3464	
2400	8.81						8.81		8.2		7.3776	
MAY 6												
0000	8.81						8.81		8.2		7.3776	
2400	8.81						8.81		5.2		7.3908	

STA. NO. 08075730		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
VINCE BAYOU AT PASADENA, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981				DISCHARGE! ACCUM.			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP. IN. CFS IN. RUNOFF			
		401R							
AUG. 30									
0000	0.0					0.0	3.7	0.0023	
0600	0.0					0.0	1.5	0.0043	
1200	0.0					0.0	30.0	0.0281	
1330	0.0					0.0	34.0	0.0344	
1345	0.16					0.16	35.0	0.0362	
1400	0.17					0.17	35.0	0.0520	
1800	0.17					0.17	3.7	0.0549	
2130	0.17					0.17	1.5	0.0557	
2300	0.19					0.19	6.1	0.0573	
2400	0.32					0.32	276.0	0.0938	
AUG. 31									
0000	0.32					0.32	276.0	0.0938	
0015	0.45					0.45	218.0	0.1054	
0030	0.48					0.48	164.0	0.1184	
0100	0.48					0.48	123.0	0.1314	
0130	0.52					0.52	123.0	0.1412	
0145	0.53					0.53	123.0	0.1477	
0200	0.55					0.55	114.0	0.1567	
0230	0.57					0.57	118.0	0.1661	
0245	0.58					0.58	144.0	0.1737	
0300	0.59					0.59	158.0	0.1821	
0315	0.63					0.63	166.0	0.1909	
0330	0.68					0.68	487.0	0.2166	
0345	0.71					0.71	600.0	0.2484	
0400	0.72					0.72	626.0	0.2815	
0415	1.07					1.07	653.0	0.3161	
0430	1.09					1.09	623.0	0.3490	
0445	1.31					1.31	600.0	0.3808	
0500	1.35					1.35	600.0	0.4126	
0515	1.42					1.42	629.0	0.4458	
0530	1.47					1.47	626.0	0.4790	
0545	1.53					1.53	577.0	0.5095	
0600	1.60					1.60	520.0	0.5370	
0615	1.62					1.62	470.0	0.5619	
0630	1.67					1.67	421.0	0.5842	
0645	1.68					1.68	383.0	0.6045	
0700	1.71					1.71	351.0	0.6509	
0800	1.73					1.73	251.0	0.6841	
0815	1.75					1.75	229.0	0.7083	
0900	1.75					1.75	186.0	0.7330	

STA. NO. 08075730		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
VINCE BAYOU AT PASADENA, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981				DISCHARGE! ACCUM.			
DATE & TIME	401R	G A G E		N U M B E R		ACCUM. WEIGHED PRECIP. IN.	DISCHARGE! IN	CFS	IN.
AUG. 31									
0930	1.77					1.77	182.0		0.7474
0945	1.79					1.79	198.0		0.7579
1000	1.82					1.82	212.0		0.7691
1015	1.86					1.86	229.0		0.7812
1030	1.90					1.90	244.0		0.7941
1045	1.94					1.94	262.0		0.8080
1100	1.98					1.98	292.0		0.8234
1115	2.02					2.02	388.0		0.8440
1130	2.07					2.07	985.0		0.8961
1145	2.12					2.12	2210.0		1.0131
1200	2.27					2.27	2610.0		1.1512
1215	2.82					2.82	3000.0		1.3100
1230	3.97					3.97	3210.0		1.4799
1245	4.72					4.72	3340.0		1.6566
1300	5.42					5.42	3340.0		1.8334
1315	5.69					5.69	3250.0		2.0054
1330	5.72					5.72	3110.0		2.1700
1345	5.77					5.77	2990.0		2.3282
1400	5.82					5.82	2800.0		2.4764
1415	5.87					5.87	2590.0		2.6135
1430	5.90					5.90	2320.0		2.7362
1445	5.92					5.92	2150.0		2.8500
1500	5.93					5.93	1900.0		3.0511
1545	5.93					5.93	1490.0		3.2877
1630	5.93					5.93	1130.0		3.4671
1715	5.93					5.93	859.0		3.5808
1745	5.93					5.93	698.0		3.6362
1800	5.93					5.93	633.0		3.7869
2000	5.93					5.93	391.0		3.8904
2030	6.04					6.04	367.0		4.0458
2400	6.05					6.05	235.0		4.1701
SEP. 1									
0000	6.05					6.05	235.0		4.1701
0130	6.05					6.05	180.0		4.2273
0300	6.05					6.05	140.0		4.2940
0600	6.05					6.05	91.0		4.3807
1200	6.05					6.05	54.0		4.4492
1800	6.05					6.05	27.0		4.4835
2400	6.05					6.05	18.0		4.4950

## HUNTING BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Hunting Bayou drainage basin are shown in figure 18.

Weighted-mean rainfall in the drainage basin based on two rain gages for the 1981 water year was 49.26 inches, or 1.07 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of Jun. 4-6, July 5-9, and Aug. 30-Sept. 1 were selected for analysis at station 08075760, Hunting Bayou at Falls Street. The storms of Jun. 3-8, July 5-9, and Aug. 30-Sept. 2 were selected for analysis at station 08075770, Hunting Bayou at Interstate Highway 610.

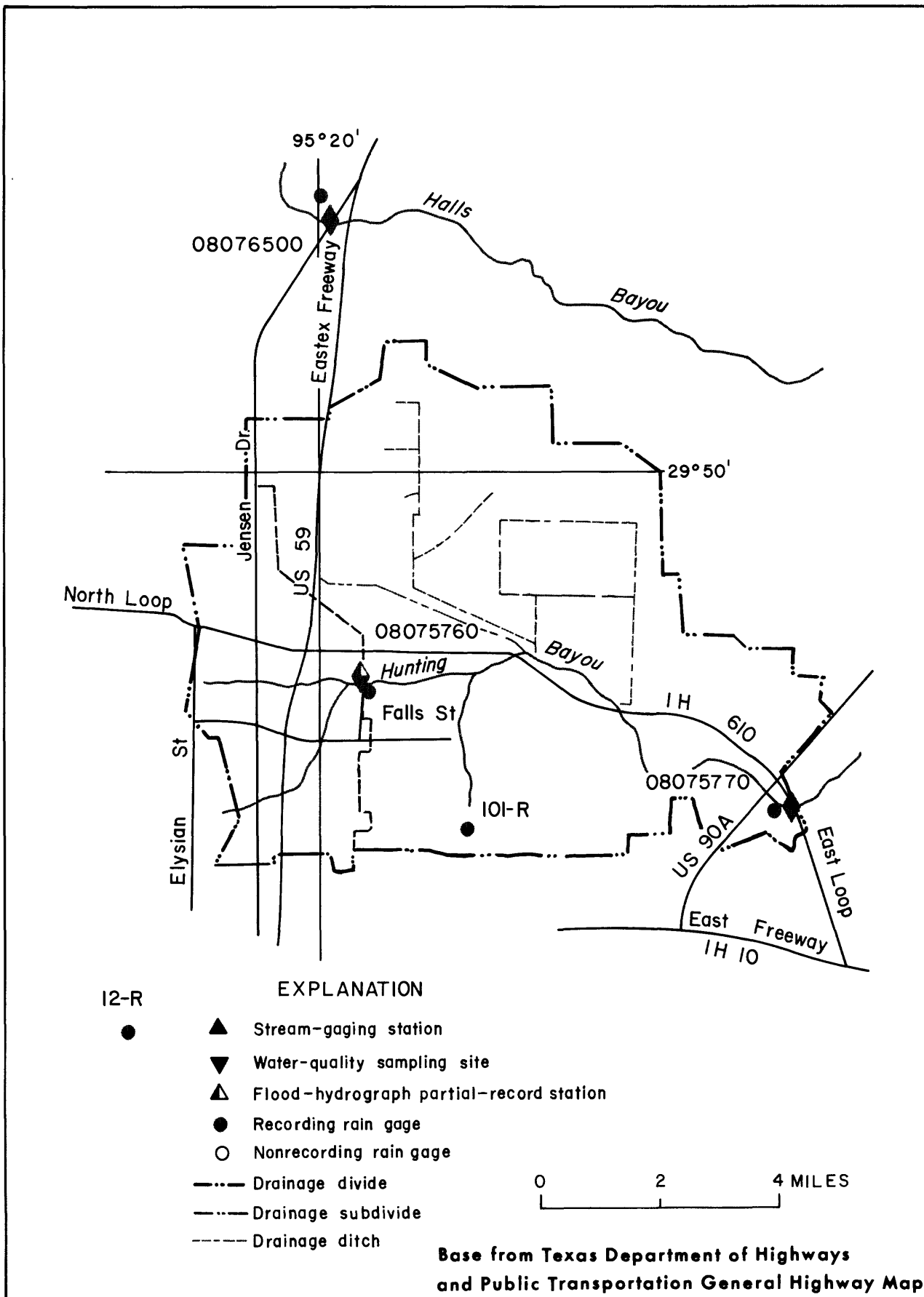


Figure 18'.—Locations of data-collection sites in and near the Hunting Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 16.--Storm rainfall-runoff data, 1981 Water Year, Hunting Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Hunting Bayou at Falls Street, Houston, TX. (Drainage area -- 2.57 mi <sup>2</sup> )								
June 4, 1981	0.8	0.55	0.30	0.40	0.50	3.59	0.84	51
June 4-6, 1981	9.3	3.70	.35	.65	1.00			534
July 5-6, 1981	0.5	2.20	1.10	1.50	1.90	2.61	0.69	452
July 7-9, 1981	39.3	1.60	.35	.45	.45			78
Aug. 30-31, 1981	6.3	4.40	0.75	0.95	1.50	4.39	0.56	333
Aug. 31-Sept.1,1981	2.3	3.40	.90	1.80	2.50			664 *

\* - Annual peak discharge for 1981 Water Year.

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 6. --Storm rainfall-runoff data, 1981 Water Year, Hunting Bayou -- Continued

[illegible]

* - Annual peak discharge for 1981 Water Year.
--



# SAN JACINTO RIVER BASIN

08075760 HUNTING BAYOU AT FALLS STREET, HOUSTON, TX  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°48'22", long 95°19'50", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on Falls Street in northeast Houston.

DRAINAGE AREA.--2.57 mi<sup>2</sup> (6.66 km<sup>2</sup>). Oct. 1, 1973, to Sept. 30, 1978, 2.75 mi<sup>2</sup> (7.12 km<sup>2</sup>). Prior to Oct. 1, 1973, 3.50 mi<sup>2</sup> (9.07 km<sup>2</sup>). Drainage area changes due to changes in storm sewers.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1964 to current year.

GAGE.--Flood-hydrograph and rainfall recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Additional storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1980."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 778 ft<sup>3</sup>/s (22.0 m<sup>3</sup>/s) June 13, 1973, elevation, 46.70 ft (14.234 m); maximum elevation, 47.35 ft (14.432 m) Sept. 1, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft<sup>3</sup>/s (7.08 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
May 3	2300	367 10.4	43.15 13.152	July 5	1445	452 12.8	44.26 13.490
June 5	0845	534 15.1	44.97 13.707	Aug. 31	1215	*664 18.8	45.97 14.012

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1970 to current year. Water temperatures: April 1964 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	
FEB 24...	0950	.56	1140	7.0	15.0	20	4.3	2.1	20	11	1400000	440000	
JUN 02...	0940	.79	539	7.2	27.0	40	24	.8	10	>85	1100000	300000	
JUL 06...	1100	11	468	7.3	25.0	40	28	2.2	26	11	>800000	>600000	
07...	1110	54	280	7.7	25.0	50	71	4.3	51	13	3600000	660000	
08...	1345	4.2	790	7.6	28.5	40	11	.4	5	24	>800000	>600000	
08...	1630	22	460	7.7	28.5	30	56	3.7	47	20	--	--	
09...	1030	2.2	981	7.7	27.5	40	16	.9	11	16	>800000	>600000	
AUG 18...	1000	.45	840	7.5	28.0	20	3.1	2.1	27	6.5	84000	10000	
DATE	TIME	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB 24...	5800	--	--	--	--	--	--	--	--	--	--	--	--
JUN 02...	7300	120	0	37	5.9	59	2.4	4.6	140	29	60	.3	
JUL 06...	>1000000	--	--	--	--	--	--	--	--	--	--	--	--
07...	>1000000	90	0	30	3.6	17	.8	4.5	97	6.0	17	.2	
08...	120000	220	0	67	13	72	2.1	4.9	260	43	52	.6	
08...	--	140	0	43	6.8	36	1.3	3.9	140	29	33	.3	
09...	78000	250	0	77	15	97	2.6	5.2	270	42	110	.5	
AUG 18...	25000	170	0	49	12	110	3.9	4.5	270	29	83	.6	

SAN JACINTO RIVER BASIN

08075760 HUNTING BAYOU AT FALLS STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, VOLTA- TILE, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 24...	--	--	10	5	2.8	.250	3.0	2.90	1.3	4.20	3.30	26
JUN 02...	9.5	289	153	32	.00	.000	.00	5.00	4.9	9.90	2.30	21
JUL 06...	--	--	39	14	.34	.120	.46	1.70	1.6	3.30	1.40	11
07...	8.7	146	144	24	.47	.100	.57	.920	3.2	4.10	.850	19
08...	18	428	12	13	.00	.050	.05	6.40	.60	7.00	1.90	20
08...	11	247	108	26	.14	.080	.22	2.40	3.7	6.10	.740	18
09...	19	529	6	10	.00	.030	.03	2.30	4.3	6.60	2.40	17
AUG 18...	17	468	14	9	--	.030	<.09	2.00	.90	2.90	4.20	9.4

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN 02...	0940	280	300	<1	0	<10	850
JUL 07...	1110	5	60	<1	10	<10	80
08...	1345	7	200	<1	0	<10	790
08...	1630	4	100	<1	10	<10	40
09...	1030	20	100	<1	0	<10	70
AUG 18...	1000	9	60	<1	0	<10	24

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN 02...	18	270	.0	0	0	30
JUL 07...	<10	40	.1	0	0	80
08...	<10	270	.1	0	1	20
08...	<10	130	.1	0	0	20
09...	<10	370	.1	0	0	40
AUG 18...	<10	170	.1	0	0	12

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN 02...	0940	.00	.00	.00	.00	.00	.00	.00	.00
JUL 07...	1110	.00	.00	.00	.00	.00	.00	.00	.16
08...	1345	.00	.00	.00	.10	.00	.00	.00	.29
08...	1630	.00	.00	.00	.00	.00	.00	.00	.16
09...	1030	.00	.00	.00	.00	.00	.00	.00	--
AUG 18...	1000	.00	.00	.00	.00	.01	.00	.00	.06

SAN JACINTO RIVER BASIN

08075760 HUNTING BAYOU AT FALLS STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN 02...	.00	.00	.00	.00	.00	.00	.00	12	.00
JUL 07...	.00	.00	.00	.00	.00	.00	.00	.71	.00
08...	.00	.00	.00	.00	.00	.01	.00	.06	.00
08...	.00	.02	.00	.00	.00	.00	.00	.34	.00
09...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 18...	.00	.00	.00	.00	.00	.00	.00	.03	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 02...	.00	.00	.00	.00	0	.00	.65	.17	.00
JUL 07...	.00	.00	.00	.00	0	.00	.10	.02	.00
08...	.00	.00	.00	.00	0	.00	.20	.05	.00
08...	.00	.00	.00	.00	0	.00	.04	.00	.00
09...	.00	.00	.00	.00	0	.00	.19	.06	.00
AUG 18...	.00	.00	.00	.00	0	.00	.03	.00	.00

STA. NO.	08075760	STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUNTING BAYOU AT FALLS STREET, HOUSTON, TEX.		STORM OF JUNE 4 -6, 1981							
DATE & TIME	5760	G A G E	N U M B E R	WEIGHTED PRECIP. IN.	DISCHARGE IN	ACCUM. PRECIP. IN.	DISCHARGE IN	ACCUM. PRECIP. IN.	DISCHARGE IN
JUNE4									
0000	0.0			0.0	0.0	0.0	0.0	0.0	0.0
0300	0.0			0.0	2.0	0.0	2.0	0.0020	0.0
0315	0.05			0.05	2.0	0.05	2.0	0.0023	0.0
0330	0.35			0.35	4.0	0.35	4.0	0.0029	0.0
0345	0.45			0.45	21.0	0.45	21.0	0.0060	0.0
0400	0.50			0.50	40.0	0.50	40.0	0.0121	0.0
0415	0.50			0.50	51.0	0.50	51.0	0.0428	0.0
0600	0.50			0.50	43.0	0.50	43.0	0.0752	0.0
0645	0.50			0.50	34.0	0.50	34.0	0.0906	0.0
0730	0.50			0.50	26.0	0.50	26.0	0.1024	0.0
0815	0.50			0.50	20.0	0.50	20.0	0.1114	0.0
0900	0.50			0.50	15.0	0.50	15.0	0.1182	0.0
0945	0.50			0.50	12.0	0.50	12.0	0.1290	0.0
1200	0.50			0.50	6.0	0.50	6.0	0.1340	0.0
1230	0.50			0.50	11.0	0.50	11.0	0.1373	0.0
1300	0.50			0.50	15.0	0.50	15.0	0.1418	0.0
1330	0.50			0.50	20.0	0.50	20.0	0.1479	0.0
1400	0.50			0.50	25.0	0.50	25.0	0.1573	0.0
1445	0.50			0.50	32.0	0.50	32.0	0.1669	0.0
1500	0.50			0.50	34.0	0.50	34.0	0.1721	0.0
1515	0.50			0.50	29.0	0.50	29.0	0.1764	0.0
1530	0.50			0.50	24.0	0.50	24.0	0.1801	0.0
1545	0.55			0.55	19.0	0.55	19.0	0.1829	0.0
1600	0.55			0.55	13.0	0.55	13.0	0.1917	0.0
1800	0.55			0.55	3.0	0.55	3.0	0.1960	0.0
2045	0.55			0.55	3.0	0.55	3.0	0.1987	0.0
2100	0.60			0.60	3.0	0.60	3.0	0.1994	0.0
2130	0.60			0.60	4.0	0.60	4.0	0.2003	0.0
2145	0.65			0.65	6.0	0.65	6.0	0.2012	0.0
2200	0.85			0.85	10.0	0.85	10.0	0.2027	0.0
2215	0.85			0.85	16.0	0.85	16.0	0.2052	0.0
2230	0.90			0.90	25.0	0.90	25.0	0.2089	0.0
2245	1.00			1.00	34.0	1.00	34.0	0.2140	0.0
2300	1.10			1.10	43.0	1.10	43.0	0.2205	0.0
2315	1.20			1.20	53.0	1.20	53.0	0.2285	0.0
2330	1.30			1.30	67.0	1.30	67.0	0.2386	0.0
2345	1.35			1.35	82.0	1.35	82.0	0.2510	0.0
2400	1.40			1.40	92.0	1.40	92.0	0.2648	0.0
JUNE5									
0000	1.40			1.40	92.0	1.40	92.0	0.2648	0.0

STA. NO. 08075760		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUNTING BAYOU AT FALLS STREET, HOUSTON, TEX.		STORM OF JUNE 4 -6 , 1981							
DATE & TIME	5760	G A G E	N U M B E R	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	ACCUM. RUNOFF			
JUNE5									
0015	1.45			1.45	97.0	0.3380			
0230	1.45			1.45	73.0	0.3930			
0245	1.50			1.50	70.0	0.4035			
0300	1.55			1.55	69.0	0.4139			
0315	1.60			1.60	71.0	0.4246			
0330	1.65			1.65	76.0	0.4361			
0345	1.70			1.70	82.0	0.4608			
0430	1.70			1.70	88.0	0.4873			
0445	1.70			1.70	87.0	0.5004			
0500	1.75			1.75	86.0	0.5134			
0515	1.80			1.80	85.0	0.5262			
0530	1.90			1.90	84.0	0.5389			
0545	2.05			2.05	103.0	0.5544			
0600	2.40			2.40	137.0	0.5751			
0615	2.70			2.70	230.0	0.6097			
0630	2.90			2.90	298.0	0.6547			
0645	3.05			3.05	337.0	0.7055			
0700	3.25			3.25	374.0	0.7618			
0715	3.45			3.45	423.0	0.8256			
0730	3.60			3.60	441.0	0.8921			
0745	3.90			3.90	479.0	0.9643			
0800	4.05			4.05	504.0	1.0402			
0815	4.20			4.20	527.0	1.1197			
0830	4.25			4.25	533.0	1.2000			
0845	4.25			4.25	534.0	1.6830			
1130	4.25			4.25	430.0	2.1043			
1200	4.25			4.25	402.0	2.3467			
1330	4.25			4.25	320.0	2.6120			
1445	4.25			4.25	256.0	2.8049			
1600	4.25			4.25	202.0	2.9419			
1700	4.25			4.25	163.0	3.0402			
1800	4.25			4.25	134.0	3.1816			
2030	4.25			4.25	83.0	3.3318			
2400	4.25			4.25	46.0	3.4635			
JUNE6									
0000	4.25			4.25	46.0	3.4635			
0600	4.25			4.25	19.0	3.5322			
1200	4.25			4.25	8.0	3.5756			
2400	4.25			4.25	3.0	3.5865			

STA. NO. 08075760		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUNTING BAYOU AT FALLS STREET, HOUSTON, TEX.		STORM OF JULY 5 -9 ,1981				DISCHARGE! ACCUM.			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP.		IN RUNOFF	
						IN.		CFS	

STA. NO. 08075760		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUNTING BAYOU AT FALLS STREET, HOUSTON, TEX.		STORM OF JULY 5 -9, 1981				DISCHARGE!			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP.		IN	
						IN.		CFS	
JULY7									
0515	2.60					2.60		30.0	1.9018
0530	2.65					2.65		31.0	1.9065
0545	2.70					2.70		32.0	1.9113
0600	2.75					2.75		34.0	1.9165
0615	2.80					2.80		35.0	1.9376
0800	2.80					2.80		30.0	1.9557
0815	2.85					2.85		29.0	1.9600
0830	2.90					2.90		34.0	1.9652
0845	2.95					2.95		44.0	1.9751
0915	2.95					2.95		59.0	1.9884
0930	2.95					2.95		63.0	1.9979
0945	3.00					3.00		63.0	2.0359
1130	3.00					3.00		51.0	2.0705
1200	3.00					3.00		47.0	2.1237
1515	3.00					3.00		25.0	2.1500
1530	3.35					3.35		31.0	2.1547
1545	3.45					3.45		52.0	2.1625
1600	3.45					3.45		68.0	2.1779
1630	3.45					3.45		78.0	2.1956
1645	3.45					3.45		78.0	2.2308
1800	3.45					3.45		65.0	2.2798
1915	3.45					3.45		51.0	2.3721
2400	3.45					3.45		22.0	2.4069
JULY8									
0000	3.45					3.45		22.0	2.4069
0030	3.45					3.45		25.0	2.4521
0600	3.45					3.45		10.0	2.4868
1200	3.45					3.45		7.0	2.5058
1500	3.45					3.45		3.8	2.5098
1530	3.50					3.50		3.8	2.5109
1600	3.75					3.75		6.0	2.5127
1630	3.80					3.80		22.0	2.5194
1700	3.80					3.80		25.0	2.5307
1800	3.80					3.80		19.0	2.5708
2400	3.80					3.80		3.0	2.5816
JULY9									
0000	3.80					3.80		3.0	2.5816
0600	3.80					3.80		2.5	2.5907
1200	3.80					3.80		2.2	2.5986
1800	3.80					3.80		2.1	2.6062
2400	3.80					3.80		2.0	2.6098

STA. NO. 08075760		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR	
HUNTING BAYOU AT FALLS STREET, HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981		ACCUM. DISCHARGE		ACCUM. RUNOFF	
DATE & TIME	GAGE	NUMBER	PRECIP. IN.	CFS	IN.		
AUG. 30	5760						
0000	0.0		0.0	0.0	0.0	0.0	0.0
1200	0.0		0.0	1.0	0.0038	0.0	0.0038
1230	0.05		0.05	1.0	0.0056	0.0	0.0056
1800	0.05		0.05	1.0	0.0077	0.0	0.0077
1930	0.05		0.05	1.0	0.0083	0.0	0.0083
2000	0.10		0.10	1.0	0.0086	0.0	0.0086
2030	0.25		0.25	1.0	0.0092	0.0	0.0092
2200	0.25		0.25	1.0	0.0098	0.0	0.0098
2230	0.40		0.40	11.0	0.0131	0.0	0.0131
2300	0.45		0.45	23.0	0.0200	0.0	0.0200
2330	0.65		0.65	31.0	0.0294	0.0	0.0294
2400	0.70		0.70	42.0	0.0389	0.0	0.0389
AUG. 31							
0000	0.70		0.70	42.0	0.0389	0.0	0.0389
0015	0.75		0.75	44.0	0.0455	0.0	0.0455
0030	0.95		0.95	44.0	0.0522	0.0	0.0522
0045	1.70		1.70	52.0	0.0600	0.0	0.0600
0100	1.90		1.90	120.0	0.0781	0.0	0.0781
0115	2.05		2.05	200.0	0.1082	0.0	0.1082
0130	2.45		2.45	235.0	0.1437	0.0	0.1437
0145	2.55		2.55	289.0	0.1872	0.0	0.1872
0200	2.60		2.60	305.0	0.2332	0.0	0.2332
0215	3.00		3.00	306.0	0.3024	0.0	0.3024
0245	3.00		3.00	330.0	0.3770	0.0	0.3770
0300	3.00		3.00	320.0	0.4252	0.0	0.4252
0315	3.10		3.10	307.0	0.4715	0.0	0.4715
0330	3.15		3.15	296.0	0.5161	0.0	0.5161
0345	3.20		3.20	282.0	0.5586	0.0	0.5586
0400	3.40		3.40	272.0	0.5996	0.0	0.5996
0415	3.45		3.45	279.0	0.6417	0.0	0.6417
0430	3.65		3.65	275.0	0.6831	0.0	0.6831
0445	3.90		3.90	292.0	0.7272	0.0	0.7272
0500	4.00		4.00	324.0	0.7760	0.0	0.7760
0515	4.05		4.05	331.0	0.8259	0.0	0.8259
0530	4.15		4.15	333.0	0.8761	0.0	0.8761
0545	4.20		4.20	329.0	0.9257	0.0	0.9257
0600	4.20		4.20	325.0	0.9747	0.0	0.9747
0615	4.30		4.30	314.0	1.0220	0.0	1.0220
0630	4.30		4.30	306.0	1.0681	0.0	1.0681
0645	4.35		4.35	295.0	1.1126	0.0	1.1126



STA. NO. 08075760		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
HUNTING BAYOU AT FALLS STREET, HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 1, 1981											
DATE & TIME		5760		G A G E		N U M B E R		A C C U M. W E I G H T E D P R E C I P. I N.		D I S C H A R G E I N		A C C U M. R U N O F F	
AUG. 31													
0700		4.40						4.40		282.0		1.1551	
0715		4.40						4.40		271.0		1.1960	
0730		4.45						4.45		259.0		1.2350	
0745		4.50						4.50		250.0		1.2915	
0815		4.50						4.50		229.0		1.3433	
0830		4.55						4.55		220.0		1.3765	
0845		4.60						4.60		211.0		1.4083	
0900		4.65						4.65		204.0		1.4390	
0915		4.65						4.65		200.0		1.4692	
0930		4.70						4.70		192.0		1.4981	
0945		4.75						4.75		189.0		1.5266	
1000		4.85						4.85		188.0		1.5549	
1015		4.90						4.90		192.0		1.5839	
1030		5.00						5.00		192.0		1.6128	
1045		5.45						5.45		202.0		1.6433	
1100		6.35						6.35		286.0		1.6864	
1115		7.25						7.25		443.0		1.7531	
1130		7.50						7.50		581.0		1.8407	
1145		7.55						7.55		640.0		1.9372	
1200		7.60						7.60		657.0		2.0362	
1215		7.65						7.65		664.0		2.1363	
1230		7.70						7.70		661.0		2.4851	
1400		7.70						7.70		571.0		2.7863	
1415		7.75						7.75		557.0		3.0382	
1530		7.75						7.75		430.0		3.3299	
1630		7.75						7.75		340.0		3.5349	
1730		7.75						7.75		250.0		3.6479	
1800		7.75						7.75		230.0		3.7346	
1845		7.75						7.75		180.0		3.8296	
1945		7.75						7.75		145.0		3.9279	
2100		7.75						7.75		115.0		4.0059	
2200		7.75						7.75		87.0		4.0846	
2400		7.75						7.75		52.0		4.2100	
SEP. 1													
0000		7.75						7.75		52.0		4.2100	
0600		7.75						7.75		20.0		4.2763	
1100		7.75						7.75		16.0		4.3029	
1130		7.80						7.80		15.0		4.3074	
1200		7.80						7.80		15.0		4.3639	
2400		7.80						7.80		7.5		4.3911	

# SAN JACINTO RIVER BASIN

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX

LOCATION.--Lat 29°47'35", long 95°16'04", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of downstream service road bridge of Interstate Highway 610 in northeast Houston and 8.8 mi (14.2 km) upstream from mouth.

DRAINAGE AREA.--15.8 mi<sup>2</sup> (40.9 km<sup>2</sup>). Prior to Oct. 1, 1973, 16.8 mi<sup>2</sup> (43.5 km<sup>2</sup>). Oct. 1, 1973, to Sept. 30, 1978, 14.7 mi<sup>2</sup> (38.1 km<sup>2</sup>). Changes due to storm sewer relocations.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1973, published as "U.S. Highway 90-A, Houston".

REVISED RECORDS.--WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1959 adjustment; unadjusted for land-surface subsidence. Prior to Oct. 1, 1972, water-stage recorder at site 1,800 ft (549 m) upstream at same datum.

REMARKS.--Water-discharge records good. Low flow is largely maintained by sewage and industrial effluent. Recording rain gage at station.

AVERAGE DISCHARGE.--17 years, 23.2 ft<sup>3</sup>/s (0.657 m<sup>3</sup>/s), 16,810 acre-ft/yr (20.7 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,380 ft<sup>3</sup>/s (95.7 m<sup>3</sup>/s) June 13, 1973, elevation, 38.11 ft (11.616 m); maximum gage height, 39.28 ft (11.973 m) June 15, 1976; minimum daily, 0.88 ft<sup>3</sup>/s (0.025 m<sup>3</sup>/s) Aug. 24, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft<sup>3</sup>/s (19.8 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
May 3	2130	2,100 59.5	35.77 10.903	July 5	1830	1,080 30.6	32.30 9.845
June 5	1030	*2,600 73.6	37.35 11.384	Aug. 31	1500	1,960 55.5	36.06 10.991

Minimum daily discharge, 2.8 ft<sup>3</sup>/s (0.079 m<sup>3</sup>/s) Jan. 2, 18.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	4.2	6.0	3.0	19	7.7	4.8	5.3	13	8.9	4.8	247
2	5.6	4.0	6.6	2.8	8.3	8.0	4.9	9.2	12	11	4.6	25
3	5.0	4.0	5.9	2.9	6.0	5.6	4.6	682	139	14	4.4	14
4	4.7	3.9	5.5	2.9	16	152	5.7	772	78	11	4.2	9.7
5	4.6	3.6	5.8	3.0	60	19	4.8	153	1260	362	16	7.1
6	4.1	3.6	5.7	7.2	50	10	4.0	28	193	240	6.9	5.9
7	4.3	3.5	5.1	5.5	12	8.1	4.4	17	40	247	4.6	5.2
8	4.6	3.6	16	4.2	8.6	7.4	6.1	12	32	125	4.1	5.0
9	4.7	3.7	106	4.3	7.8	6.8	6.0	20	9.1	47	3.7	4.9
10	4.9	3.9	12	4.2	19	6.3	4.5	33	10	44	3.7	4.7
11	4.6	3.6	4.9	3.6	8.2	6.7	4.4	12	72	58	3.5	4.6
12	4.4	3.5	5.0	3.6	7.1	6.6	4.3	9.5	105	20	3.6	4.3
13	4.6	3.5	3.9	3.6	6.5	6.9	4.2	9.1	139	38	7.0	3.8
14	4.7	4.0	3.7	4.2	6.0	5.6	4.5	23	29	49	16	70
15	4.6	3.9	4.5	3.6	5.9	5.3	4.3	11	15	20	6.9	28
16	4.8	5.7	4.5	3.5	5.9	5.2	4.2	11	20	12	4.1	16
17	4.7	11	3.5	3.1	5.2	5.3	4.0	9.7	14	8.8	3.8	6.0
18	44	4.4	3.5	2.8	5.1	5.2	4.0	9.6	9.4	7.6	3.7	4.8
19	26	3.9	4.1	64	5.1	4.9	3.9	10	8.0	6.9	5.8	4.4
20	8.0	4.1	3.2	54	5.0	4.8	3.7	9.6	6.9	6.2	4.0	4.4
21	6.0	3.9	3.2	11	5.5	7.8	3.7	9.5	6.6	5.9	3.5	4.3
22	5.5	30	3.5	6.5	11	8.9	3.9	9.8	6.3	5.6	3.5	5.0
23	5.0	12	3.1	5.4	5.4	5.1	129	10	5.7	5.6	3.5	4.4
24	4.7	6.2	3.5	5.1	5.0	5.2	36	9.8	59	6.6	3.6	4.1
25	4.3	12	3.3	4.9	32	4.8	11	15	23	5.6	3.5	4.5
26	4.0	55	3.5	4.9	14	5.1	6.4	9.5	13	17	3.6	3.8
27	25	9.5	4.0	16	8.0	5.1	5.2	7.4	13	21	5.2	3.4
28	12	7.2	3.8	7.9	7.3	5.0	8.3	7.6	34	6.5	3.8	3.7
29	4.6	5.9	3.7	5.5	---	6.8	7.1	7.5	13	5.6	4.2	3.3
30	3.9	5.7	3.6	5.1	---	5.2	5.2	9.1	11	5.1	6.5	3.1
31	3.9	---	3.5	5.2	---	4.8	---	9.3	---	5.0	1130	---
TOTAL	240.9	233.0	254.1	263.5	354.9	351.2	307.1	1950.5	2389.0	1425.9	1286.3	514.4
MEAN	7.77	7.77	8.20	8.50	12.7	11.3	10.2	62.9	79.6	46.0	41.5	17.1
MAX	44	55	106	64	60	152	129	772	1260	362	1130	247
MIN	3.9	3.5	3.1	2.8	5.0	4.8	3.7	5.3	5.7	5.0	3.5	3.1
AC-FT	478	462	504	523	704	697	609	3870	4740	2830	2550	1020
(††)	2.40	2.11	1.47	2.05	2.71	1.93	1.90	7.40	11.13	6.54	8.38	1.24

CAL YR 1980	TOTAL	7700.5	MEAN	21.0	MAX	959	MIN	2.8	AC-FT	15270	††	66.05
WTR YR 1981	TOTAL	9570.8	MEAN	26.2	MAX	1260	MIN	2.8	AC-FT	18980	††	49.26

†† Weighted-mean rainfall, in inches, based on two rain gages.

## SAN JACINTO RIVER BASIN

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DATE	TIME											
FEB 24...	1130	4.7	793	7.3	16.5	15	2.1	5.4	54	5.6	14000	2000
JUN 02...	1100	9.8	750	7.8	27.5	40	19	.9	11	70	1400000	290000
JUL 06...	1150	207	237	7.5	25.0	60	32	4.2	50	4.0	1500000	400000
07...	1155	284	300	7.6	25.0	60	45	4.8	57	6.9	1100000	140000
08...	1410	73	410	7.8	28.0	50	48	5.5	69	6.9	1200000	540000
08...	1710	124	390	7.6	28.5	60	65	4.5	57	10	--	--
09...	1055	46	454	7.4	28.0	60	22	4.2	52	5.1	54000	8000
AUG 18...	1110	3.6	722	7.6	29.0	20	10	7.4	95	6.6	9700	2200
DATE	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB 24...	130	--	--	--	--	--	--	--	--	--	--	--
JUN 02...	17000	160	0	50	8.9	86	2.9	5.4	220	31	73	.5
JUL 06...	30000	--	--	--	--	--	--	--	--	--	--	--
07...	>1000000	100	8	33	4.4	17	.7	3.4	93	27	14	.3
08...	16000	150	8	48	6.9	27	1.0	3.8	140	41	20	.3
08...	--	140	3	46	6.7	27	1.0	3.6	140	35	20	.3
09...	2800	160	0	50	8.2	32	1.1	3.7	170	36	22	.3
AUG 18...	750	170	0	52	10	80	2.8	5.5	200	61	66	.4
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 24...	--	--	7	3	.24	.040	.28	8.400	1.4	9.8	3.000	21
JUN 02...	13	401	115	31	.02	.000	.02	3.000	5.3	8.3	3.100	12
JUL 06...	--	--	49	15	.52	.080	.60	.550	1.2	1.7	.500	8.2
07...	10	165	78	25	.74	.090	.83	1.200	.80	2.0	.960	15
08...	15	246	87	15	.51	.100	.61	1.000	1.4	2.4	.780	12
08...	14	237	135	31	.49	.090	.58	1.100	1.0	2.1	.770	12
09...	17	271	24	13	.56	.080	.64	1.700	1.1	2.8	1.400	12
AUG 18...	13	408	23	14	.65	.450	1.1	5.400	2.8	8.2	1.700	11

## SAN JACINTO RIVER BASIN

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN 02...	1100	18	300	<1	10	<10	250
JUL 07...	1155	10	70	<1	10	<10	100
08...	1410	10	100	<1	20	<10	90
08...	1710	10	100	<1	10	<10	90
09...	1055	22	100	<1	0	<10	90
AUG 18...	1110	14	90	<1	0	<10	31

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN 02...	<10	320	.1	0	0	8
JUL 07...	<10	10	.2	0	1	40
08...	<10	4	.2	0	0	30
08...	<10	60	.2	0	0	40
09...	<10	10	.1	0	0	30
AUG 18...	<10	180	.0	0	0	18

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN 02...	1100	.00	.0	.00	.0	.00	.00	.00	.23
JUL 07...	1155	.00	.0	.00	.0	.00	.00	.00	.09
08...	1410	.00	.0	.00	.1	.00	.00	.00	.12
08...	1710	.00	.0	.00	.0	.00	.00	.00	.21
09...	1055	.00	.0	.00	.0	.00	.00	.00	.12
AUG 18...	1110	.00	.0	.00	.0	.01	.00	.00	.40

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN 02...	.00	.00	.00	.00	.00	.00	.00	.84	.00
JUL 07...	.00	.00	.00	.00	.00	.00	.00	.44	.00
08...	.00	.00	.00	.00	.00	.00	.00	.60	.00
08...	.00	.00	.00	.00	.00	.00	.00	1.2	.00
09...	.00	.00	.00	.00	.00	.00	.00	.23	.00
AUG 18...	.00	.00	.00	.00	.00	.00	.01	.04	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 02...	.00	.00	.00	.00	0	.00	>.47	>.10	.00
JUL 07...	.00	.00	.00	.00	0	.00	.08	.01	.00
08...	.00	.00	.00	.00	0	.00	.04	.01	.00
08...	.00	.00	.00	.00	0	.00	.04	.01	.00
09...	.00	.00	.00	.00	0	.00	.04	.01	.00
AUG 18...	.00	.00	.00	.00	0	.00	.96	.06	.00

STA. NO. 08075770		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUNTING BAYOU AT I.H. 610, HOUSTON, TEX.		STORM OF JUNE 3 -8, 1981				DISCHARGE			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN			
		5760	5770			IN.	CFS	IN.	ACCUM. RUNOFF
JUNE3									
0000		0.0	0.0			0.0	17.0	0.0004	
0030		0.40	0.12			0.34	17.0	0.0013	
0100		0.75	1.40			0.88	34.0	0.0029	
0130		1.20	2.00			1.36	165.0	0.0110	
0200		1.25	2.05			1.41	248.0	0.0293	
0300		1.25	2.05			1.41	280.0	0.0498	
0330		1.25	2.05			1.41	291.0	0.0713	
0430		1.25	2.05			1.41	297.0	0.0931	
0500		1.25	2.05			1.41	297.0	0.1149	
0600		1.25	2.05			1.41	292.0	0.1722	
0900		1.25	2.05			1.41	230.0	0.2286	
1100		1.25	2.05			1.41	179.0	0.2549	
1200		1.25	2.05			1.41	148.0	0.2695	
1300		1.25	2.05			1.41	119.0	0.2811	
1400		1.25	2.05			1.41	94.0	0.2904	
1500		1.25	2.05			1.41	73.0	0.2975	
1600		1.25	2.05			1.41	58.0	0.3046	
1730		1.25	2.05			1.41	43.0	0.3088	
1800		1.25	2.05			1.41	39.0	0.3127	
1930		1.25	2.05			1.41	31.0	0.3218	
2400		1.25	2.05			1.41	20.0	0.3291	
JUNE4									
0000		1.25	2.05			1.41	20.0	0.3291	
0300		1.25	2.05			1.41	18.0	0.3322	
0330		1.60	2.25			1.73	40.0	0.3342	
0400		1.75	2.78			1.96	94.0	0.3388	
0430		1.75	2.78			1.96	111.0	0.3442	
0500		1.75	2.83			1.97	122.0	0.3532	
0600		1.75	2.83			1.97	134.0	0.3894	
1030		1.75	2.83			1.97	107.0	0.4208	
1200		1.75	2.83			1.97	89.0	0.4339	
1330		1.75	2.83			1.97	71.0	0.4444	
1500		1.75	2.83			1.97	56.0	0.4499	
1530		1.75	2.83			1.97	52.0	0.4524	
1600		1.80	2.83			2.01	48.0	0.4548	
1630		1.80	2.83			2.01	44.0	0.4569	
1700		1.80	2.85			2.01	41.0	0.4599	
1800		1.80	2.85			2.01	36.0	0.4661	
2030		1.80	2.85			2.01	27.0	0.4701	
2100		1.85	2.85			2.05	26.0	0.4714	



STA. NO. 08075770		STORM RAINFALL AND RUNOFF RECORD										
HUNTING BAYOU AT I. H. 610, HOUSTON, TEX.		STORM OF JUNE 3 - 8 , 1981										
DATE & TIME		5760		5770		G A G E		N U M B E R		ACCUM. DISCHARGE! ACCUM. RUNOFF		
										WEIGHTED PRECIP. IN CFS IN		
JUNE 6												
0600		5.50		9.11						6.22	267.0	3.7249
1000		5.50		9.11						6.22	207.0	3.7858
1200		5.50		9.11						6.22	176.0	3.8290
1500		5.50		9.11						6.22	125.0	3.8596
1700		5.50		9.11						6.22	90.0	3.8729
1800		5.50		9.11						6.22	81.0	3.8888
2100		5.50		9.11						6.22	61.0	3.9067
2400		5.50		9.11						6.22	51.0	3.9217
JUNE 7												
0000		5.50		9.11						6.22	51.0	3.9217
0300		5.50		9.11						6.22	41.0	3.9338
0600		5.50		9.11						6.22	37.0	3.9501
1200		5.50		9.11						6.22	34.0	3.9618
1300		5.55		9.11						6.26	33.0	3.9650
1400		5.60		9.11						6.30	32.0	3.9682
1500		5.70		9.11						6.38	32.0	3.9713
1600		6.05		9.11						6.66	31.0	3.9758
1800		6.05		9.11						6.66	33.0	3.9823
2000		6.05		9.11						6.66	44.0	3.9910
2200		6.05		9.11						6.66	56.0	3.9992
2300		6.05		9.11						6.66	58.0	4.0049
2400		6.05		9.11						6.66	57.0	4.0161
JUNE 8												
0000		6.05		9.11						6.66	57.0	4.0161
0300		6.05		9.11						6.66	44.0	4.0290
0600		6.05		9.11						6.66	32.0	4.0353
0700		6.05		9.11						6.66	30.0	4.0382
0800		6.05		9.11						6.66	42.0	4.0423
0900		6.05		9.11						6.66	54.0	4.0476
1000		6.05		9.11						6.66	52.0	4.0553
1200		6.05		9.11						6.66	37.0	4.0625
1400		6.05		9.11						6.66	29.0	4.0697
1700		6.05		9.11						6.66	21.0	4.0738
1800		6.05		9.11						6.66	19.0	4.0775
2100		6.05		9.11						6.66	14.0	4.0816
2400		6.05		9.11						6.66	12.0	4.0834

STORM RAINFALL AND RUNOFF RECORD									
STA. NO. 08075770		1981 WATER YEAR							
HUNTING BAYOU AT I.H. 610, HOUSTON, TEX.		STORM OF JULY 5 -9, 1981							
DATE & TIME		G A G E		N U M B E R		ACCUM. WEIGHTED PRECIP.		DISCHARGE IN	
		5760	5770			IN.		CFS	IN.
JULY5									
0000		0 0	0 0			0 0		0 0	0 0
1130		0 0	0 0			0 0		9 6	0 0056
1200		0 05	0 0			0 04		9 3	0 0061
1230		0 30	0 18			0 28		9 3	0 0066
1300		0 30	0 28			0 30		37 0	0 0084
1330		1 80	0 40			1 52		54 0	0 0110
1400		2 20	1 65			2 09		245 0	0 0230
1430		2 20	1 90			2 14		358 0	0 0406
1500		2 20	1 95			2 15		492 0	0 0647
1530		2 20	1 98			2 16		609 0	0 0946
1600		2 20	2 15			2 19		738 0	0 1308
1630		2 20	2 25			2 21		852 0	0 1726
1700		2 20	2 35			2 23		986 0	0 2451
1800		2 20	2 35			2 23		1080 0	0 3245
1830		2 20	2 40			2 24		1080 0	0 5364
2200		2 20	2 40			2 24		855 0	0 7670
2400		2 20	2 40			2 24		684 0	0 9011
JULY6									
0000		2 20	2 40			2 24		684 0	0 9011
0200		2 20	2 40			2 24		540 0	1 0070
0400		2 20	2 40			2 24		428 0	1 0910
0600		2 20	2 40			2 24		342 0	1 1581
0800		2 20	2 40			2 24		277 0	1 2124
1000		2 20	2 40			2 24		245 0	1 2485
1100		2 35	2 40			2 36		224 0	1 2704
1200		2 35	2 40			2 36		203 0	1 3003
1400		2 35	2 40			2 36		158 0	1 3313
1600		2 35	2 40			2 36		113 0	1 3534
1800		2 35	2 40			2 36		86 0	1 3703
2000		2 35	2 40			2 36		69 0	1 3872
2300		2 35	2 40			2 36		53 0	1 3976
2400		2 40	2 40			2 40		50 0	1 4025
JULY7									
0000		2 40	2 40			2 40		50 0	1 4025
0100		2 40	2 48			2 42		51 0	1 4063
0130		2 45	2 48			2 46		49 0	1 4123
0330		2 45	2 48			2 46		47 0	1 4180
0400		2 55	3 14			2 67		46 0	1 4203
0430		2 55	3 22			2 68		152 0	1 4278
0500		2 60	3 28			2 74		220 0	1 4385
0530		2 65	3 48			2 82		258 0	1 4512



STA. NO. 08075770		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
HUNTING BAYOU AT I. H. 610, HOUSTON, TEX.		STORM OF JULY 5 -9, 1981										DISCHARGE	
DATE & TIME		G A G E		N U M B E R		PRECIP.		ACCUM.		IN		CFS	
		5760	5770			IN.		WEIGHTED		IN.		IN.	ACCUM. RUNOFF
JULY7													
0600	2.75	3.52				2.90				300.0		1.4659	
0630	2.80	3.52				2.94				328.0		1.4900	
0730	2.80	3.52				2.94				340.0		1.5150	
0800	2.80	3.53				2.95				341.0		1.5318	
0830	2.90	3.53				3.03				346.0		1.5487	
0900	2.95	3.57				3.07				343.0		1.5655	
0930	2.95	3.57				3.07				338.0		1.5821	
1000	3.00	3.57				3.11				331.0		1.6065	
1100	3.00	3.57				3.11				309.0		1.6292	
1130	3.00	3.62				3.12				295.0		1.6437	
1200	3.00	3.62				3.12				283.0		1.6784	
1400	3.00	3.62				3.12				242.0		1.7080	
1430	3.00	3.82				3.16				232.0		1.7194	
1500	3.00	4.35				3.27				240.0		1.7312	
1530	3.35	4.40				3.56				309.0		1.7461	
1600	3.45	4.40				3.64				325.0		1.7621	
1630	3.45	4.40				3.64				333.0		1.7947	
1800	3.45	4.40				3.64				324.0		1.8821	
2200	3.45	4.40				3.64				263.0		1.9595	
2400	3.45	4.40				3.64				230.0		2.0159	
JULY8													
0000	3.45	4.40				3.64				230.0		2.0159	
0300	3.45	4.40				3.64				178.0		2.0682	
0600	3.45	4.40				3.64				132.0		2.1006	
0800	3.45	4.40				3.64				117.0		2.1178	
0900	3.45	4.40				3.64				119.0		2.1295	
1000	3.45	4.40				3.64				108.0		2.1454	
1200	3.45	4.40				3.64				86.0		2.1980	
1300	3.45	4.44				3.65				77.0		2.1656	
1400	3.45	4.48				3.66				74.0		2.1728	
1500	3.45	4.78				3.72				83.0		2.1810	
1600	3.75	4.80				3.96				110.0		2.1918	
1700	3.80	4.85				4.01				123.0		2.2038	
1800	3.80	4.85				4.01				132.0		2.2491	
2400	3.80	4.85				4.01				99.0		2.3074	
JULY9													
0000	3.80	4.85				4.01				99.0		2.3074	
0600	3.80	4.85				4.01				56.0		2.3376	
1100	3.80	4.85				4.01				46.0		2.3511	
1200	3.80	4.88				4.02				41.0		2.3773	
2400	3.80	4.88				4.02				25.0		2.3920	

STA. NO. 08075770		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HUNTING BAYOU AT I.H. 610, HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 2, 1981				DISCHARGE			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN.			
		5760	5770				CFS	IN.	ACCUM. RUNOFF
AUG. 30									
0000		0.0	0.0			0.0	0.0	0.0	0.0
0400		0.0	0.0			0.0	5.0	0.0012	0.0012
0500		0.0	0.02			0.00	4.9	0.0017	0.0017
0600		0.0	0.04			0.01	5.3	0.0022	0.0022
0700		0.0	0.10			0.02	5.8	0.0039	0.0039
1200		0.0	0.10			0.02	4.7	0.0053	0.0053
1300		0.05	0.10			0.06	4.1	0.0065	0.0065
1800		0.05	0.10			0.06	4.0	0.0077	0.0077
1900		0.05	0.10			0.06	4.0	0.0081	0.0081
2000		0.10	0.10			0.10	4.0	0.0085	0.0085
2100		0.25	0.10			0.22	4.0	0.0089	0.0089
2200		0.25	0.10			0.22	4.3	0.0093	0.0093
2300		0.45	0.24			0.41	11.0	0.0104	0.0104
2400		0.70	1.54			0.87	140.0	0.0207	0.0207
AUG. 31									
0000		0.70	1.54			0.87	140.0	0.0207	0.0207
0030		0.95	1.59			1.08	176.0	0.0293	0.0293
0100		1.90	1.82			1.88	206.0	0.0394	0.0394
0130		2.45	1.99			2.36	239.0	0.0511	0.0511
0200		2.60	2.10			2.50	273.0	0.0645	0.0645
0230		3.00	2.36			2.87	325.0	0.0805	0.0805
0300		3.00	2.56			2.91	383.0	0.0992	0.0992
0330		3.15	2.82			3.08	463.0	0.1219	0.1219
0400		3.40	3.04			3.33	549.0	0.1489	0.1489
0430		3.65	3.19			3.56	647.0	0.1806	0.1806
0500		4.00	3.64			3.93	751.0	0.2174	0.2174
0530		4.15	3.82			4.08	846.0	0.2589	0.2589
0600		4.20	3.86			4.13	956.0	0.3058	0.3058
0630		4.30	3.94			4.23	1020.0	0.3598	0.3598
0700		4.40	4.04			4.33	1060.0	0.4078	0.4078
0730		4.45	4.09			4.38	1080.0	0.4607	0.4607
0800		4.50	4.12			4.42	1100.0	0.5147	0.5147
0830		4.55	4.14			4.47	1100.0	0.5686	0.5686
0900		4.65	4.22			4.56	1090.0	0.6221	0.6221
0930		4.70	4.29			4.62	1070.0	0.6745	0.6745
1000		4.85	4.36			4.75	1050.0	0.7260	0.7260
1030		5.00	4.46			4.89	1040.0	0.7770	0.7770
1100		6.35	4.64			6.01	1030.0	0.8275	0.8275
1130		7.50	6.04			7.21	1160.0	0.8844	0.8844
1200		7.60	6.32			7.34	1380.0	0.9521	0.9521

STORM RAINFALL AND RUNOFF RECORD									
STA. NO.	08075770	1981 WATER YEAR							
HUNTING BAYOU AT I. H. 610, HOUSTON, TEX.									
STORM OF AUG. 30 TO SEP. 2, 1981									
DATE & TIME	5760	5770	G A G E	N U M B E R	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	CFS	IN.	ACCUM. RUNOFF
AUG. 31									
1230	7.70	6.42			7.44	1550.0		1.0281	
1300	7.70	6.49			7.46	1730.0		1.1129	
1330	7.70	6.52			7.46	1850.0		1.2037	
1400	7.70	6.52			7.46	1940.0		1.2988	
1430	7.75	6.52			7.50	1950.0		1.3944	
1500	7.75	6.52			7.50	1960.0		1.7308	
1800	7.75	6.52			7.50	1630.0		2.1305	
2000	7.75	6.52			7.50	1300.0		2.3855	
2200	7.75	6.52			7.50	1010.0		2.5836	
2400	7.75	6.52			7.50	773.0		2.7352	
SEP. 1									
0000	7.75	6.52			7.50	773.0		2.7352	
0200	7.75	6.52			7.50	595.0		2.8519	
0400	7.75	6.52			7.50	455.0		2.9411	
0600	7.75	6.52			7.50	355.0		3.0108	
0800	7.75	6.52			7.50	273.0		3.0777	
1100	7.75	6.52			7.50	228.0		3.1224	
1200	7.80	6.52			7.54	203.0		3.1523	
1400	7.80	6.52			7.54	146.0		3.1809	
1600	7.80	6.52			7.54	99.0		3.2004	
1800	7.80	6.52			7.54	75.0		3.2298	
2400	7.80	6.52			7.54	42.0		3.2463	
SEP. 2									
0000	7.80	6.52			7.54	42.0		3.2463	
0200	7.80	6.52			7.54	34.0		3.2546	
0500	7.80	6.52			7.54	27.0		3.2599	
0600	7.80	6.52			7.54	26.0		3.2663	
1000	7.80	6.52			7.54	23.0		3.2719	
1100	7.85	6.52			7.58	21.0		3.2740	
1200	7.85	6.52			7.58	21.0		3.2770	
1400	7.85	6.52			7.58	20.0		3.2800	
1500	7.95	6.52			7.66	20.0		3.2839	
1800	7.95	6.52			7.66	28.0		3.2894	
1900	7.95	6.52			7.66	29.0		3.2951	
2200	7.95	6.52			7.66	24.0		3.3010	
2400	7.95	6.52			7.66	21.0		3.3030	

## GREENS BAYOU DRAINAGE BASIN

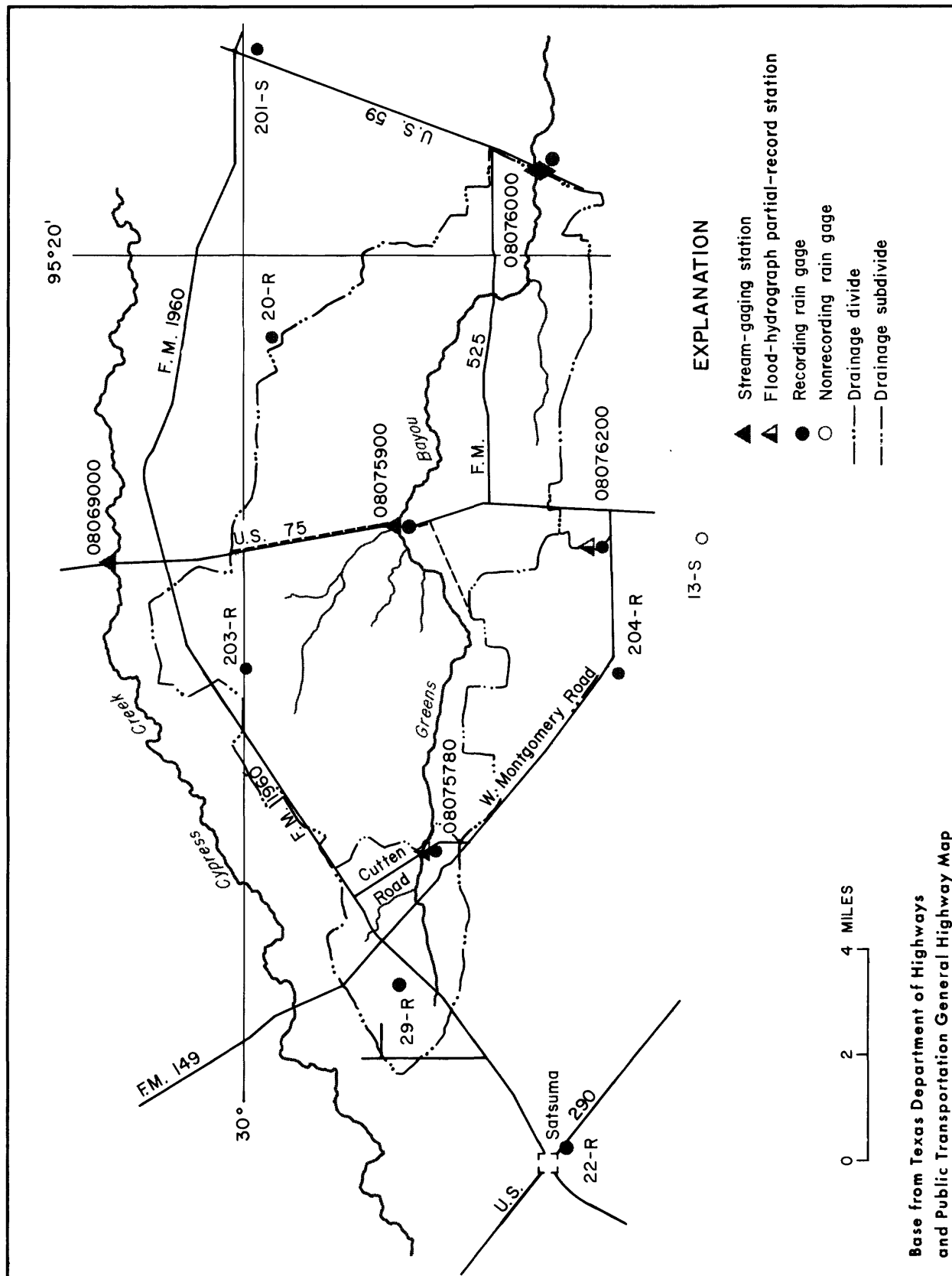
The locations of data-collection sites in and near the Greens Bayou drainage basin above U.S. Highway 59 are shown in figure 19. Data-collection sites in the lower portion of the drainage basin are shown in figure 1.

Halls Bayou, which is a part of the Greens Bayou drainage basin, is shown as a separate drainage basin within the Greens Bayou section.

Weighted-mean rainfall for the drainage basin, above the U.S. Highway 75 station, based on five rain gages, for the 1981 water year was 56.00 inches or 7.81 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

Weighted-mean rainfall for the drainage basin above the U.S. Highway 59 station, based on seven rain gages, for the 1981 water year was 52.25 inches or 4.06 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of Oct. 15-21 and Aug. 31-Sept. 5 were selected for analysis at station 08075780, Greens Bayou at Cutten Road near Houston. The storms of May 9-13, June 10-11, and Aug. 30-Sept. 3 were selected for analysis at station 08075900, Greens Bayou at U.S. Highway 75 near Houston. The storms of May 3-8, Jun. 1-9, and Aug. 30-Sept. 6 were selected for analysis at station 08076000, Greens Bayou near Houston (U.S. Highway 59). The storms of June 2-9 and June 10-15 were selected for analysis at station 08076700, Greens Bayou at Ley Road, Houston.



## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 17.---Storm rainfall-runoff data, 1981 Water Year, Greens Bayou

Date of Storm	85% Duration (hours)	Weighted Total	Rainfall (inches)			Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
			Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Greens Bayou at Cutten Road, Houston, TX. (Drainage area -- 8.06 mi <sup>2</sup> )								
Oct. 15-17, 1981	1.5	2.37	0.45	0.90	1.49	2.77	0.52	175
Oct. 18-21, 1981	2.0	2.92	.44	.89	1.27			278
Aug. 31-Sept. 5, 1981	12.5	8.23	0.40	.79	1.15	3.54	0.43	498*
Greens Bayou at U.S. Highway 75 near Houston, TX. (Drainage area -- 36.1 mi <sup>2</sup> )								
May 9-13, 1981	1.0	3.19	0.92	1.84	2.84	1.41	0.44	1,630
June 10-11, 1981	10.0	3.14	0.55	1.10	1.71	1.75	0.56	3,100
Aug. 30-Sept. 3, 1981	19.0	9.10	0.62	1.23	1.50	4.13	0.45	3,570 *,++

\*- Annual peak discharge for 1981 Water Year.

++ - Peak discharge for period of record.

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-Texas DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 17.--Storm rainfall-runoff data, 1981 Water Year, Greens Bayou -- Continued

[illegible]

\* - Annual peak discharge for 1981 Water Year.

## ANNUAL STORM RAINFALL--RUNOFF SUMMARY DATA

Table 17.--Storm rainfall-runoff data, 1981 Water Year, Greens Bayou -- Continued

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Greens Bayou at Ley Road, Houston, TX. (Drainage area -- 182.0 mi <sup>2</sup> )								
June 2-4, 1981	12.0	0.88	0.36	0.72	1.43	2.71	0.60	990
June 4-9, 1981	10.0	3.63	.28	.55	1.10			9,580
June 10-12, 1981	19.0	2.23	.035	0.70	1.40	2.33	0.69	4,060
June 12-15, 1981	17.0	1.13	.33	.66	1.32			4,740

[illegible]



08075780 GREENS BAYOU AT CUTTEN ROAD NEAR HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--29°56'56", long 95°31'10", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on Cutten Road, 16.2 miles upstream from station 08076000, Greens Bayou near Houston, and 16.5 miles northwest of the main post office in downtown Houston.

DRAINAGE AREA.--8.06 mi<sup>2</sup>. Prior to Oct. 1, 1973, 8.73 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1964 to Nov. 1977, April 20, 1978 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Prior to Nov. 1977 a flood-hydrograph recorder (type SR) and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 576 ft<sup>3</sup>/s, Sept. 19, 1979 (elevation 113.16 ft) after channel rectification. Maximum discharge, 520 ft<sup>3</sup>/s, June 13, 1973 (elevation 118.27), prior to channel rectification; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 150 ft<sup>3</sup>/s and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	ELEVATION (ft)
Oct. 15	2345	175	109.95
Oct. 18	2015	278	111.14
Jan. 19	2300	183	109.11
Mar. 4	0930	189	109.16
May 4	0130	281	111.20
May 10	0300	266	111.09
Jun. 5	1245	169	109.48
Jun. 12	1700	186	109.68
Aug. 31	2015	*498	112.94

Minimum discharge not determined.

STA. NO. 08075780		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
GREENS BAYOU AT CUTTEN ROAD NEAR HOUSTON, TEX.		STORM OF OCT. 15-21, 1980				DISCHARGE!			
DATE & TIME		G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN.			
		5780				CFS			
OCT. 15									
0000		0.0				0.0	6.0	0.0035	
0600		0.0				0.0	6.0	0.0104	
1200		0.0				0.0	6.0	0.0161	
1600		0.0				0.0	6.0	0.0187	
1630		0.02				0.02	6.0	0.0193	
1700		0.09				0.09	6.0	0.0199	
1730		0.56				0.56	7.2	0.0206	
1800		1.46				1.46	32.0	0.0237	
1830		2.05				2.05	54.0	0.0289	
1900		2.33				2.33	73.0	0.0359	
1930		2.34				2.34	107.0	0.0462	
2000		2.35				2.35	124.0	0.0700	
2130		2.35				2.35	158.0	0.1308	
2400		2.35				2.35	175.0	0.2233	
OCT. 16									
0000		2.35				2.35	175.0	0.2233	
0300		2.35				2.35	159.0	0.2844	
0400		2.36				2.36	151.0	0.3280	
0600		2.36				2.36	138.0	0.4341	
1200		2.36				2.36	117.0	0.5690	
1800		2.36				2.36	92.0	0.6663	
2300		2.36				2.36	72.0	0.7079	
2400		2.36				2.36	67.0	0.7433	
OCT. 17									
0000		2.36				2.36	67.0	0.7433	
0430		2.36				2.36	53.0	0.7739	
0600		2.36				2.36	50.0	0.8003	
1000		2.36				2.36	39.0	0.8172	
1030		2.36				2.36	39.0	0.8209	
1100		2.37				2.37	37.0	0.8262	
1200		2.37				2.37	35.0	0.8414	
1530		2.37				2.37	28.0	0.8575	
1800		2.37				2.37	25.0	0.8707	
2100		2.37				2.37	21.0	0.8778	
2130		2.39				2.39	21.0	0.8808	
2230		2.39				2.39	21.0	0.8839	
2300		2.40				2.40	20.0	0.8868	
2400		2.40				2.40	20.0	0.8896	
OCT. 18									
0000		2.40				2.40	20.0	0.8896	
0030		2.41				2.41	20.0	0.8973	
0400		2.41				2.41	18.0	0.9042	

STA. NO. 08075780		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
GREENS BAYOU AT CUTTEN ROAD NEAR HOUSTON, TEX.		STORM OF OCT. 15-21, 1980				DISCHARGE! ACCUM. RUNOFF			
DATE & TIME	5780	G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN.		CFS IN.	
OCT. 18									
0430	2.42					2.42		18.0	0.9077
0600	2.42					2.42		15.0	0.9142
0900	2.42					2.42		14.0	0.9223
1200	2.42					2.42		21.0	0.9303
1300	2.42					2.42		21.0	0.9334
1330	2.43					2.43		21.0	0.9354
1400	3.26					3.26		28.0	0.9381
1430	3.69					3.69		68.0	0.9446
1500	3.71					3.71		77.0	0.9520
1530	4.09					4.09		88.0	0.9605
1600	4.98					4.98		159.0	0.9758
1630	5.13					5.13		194.0	1.0037
1730	5.13					5.13		236.0	1.0378
1800	5.14					5.14		250.0	1.0618
1830	5.15					5.15		259.0	1.0867
1900	5.15					5.15		269.0	1.1126
1930	5.19					5.19		273.0	1.1388
2000	5.25					5.25		276.0	1.1653
2030	5.25					5.25		278.0	1.1921
2100	5.26					5.26		278.0	1.2188
2130	5.26					5.26		278.0	1.2455
2200	5.27					5.27		276.0	1.3118
2400	5.27					5.27		275.0	1.5233
OCT. 19									
0000	5.27					5.27		275.0	1.5233
0600	5.27					5.27		254.0	1.7919
1100	5.27					5.27		212.0	1.9142
1200	5.28					5.28		203.0	2.0312
1700	5.28					5.28		162.0	2.1247
1800	5.28					5.28		158.0	2.2310
2400	5.28					5.28		118.0	2.3671
OCT. 20									
0000	5.28					5.28		118.0	2.3671
0600	5.28					5.28		89.0	2.4698
1200	5.29					5.29		68.0	2.5482
1800	5.29					5.29		52.0	2.6082
2400	5.29					5.29		39.0	2.6757
OCT. 21									
0000	5.29					5.29		39.0	2.6757
1200	5.29					5.29		28.0	2.7403
2400	5.29					5.29		24.0	2.7680

STA. NO. 08075780		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
GREENS BAYOU AT CUTTEN ROAD NEAR HOUSTON, TEX.		STORM OF AUG. 31 TO SEP. 5, 1981				DISCHARGE! ACCUM.			
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP.		IN RUNOFF	
5780						IN.		CFS IN.	
AUG. 31									
0000	0.0					0.0		6.0	0.0003
0030	0.21					0.21		7.5	0.0010
0100	1.00					1.00		15.0	0.0025
0130	1.27					1.27		24.0	0.0048
0200	1.42					1.42		40.0	0.0086
0230	1.53					1.53		45.0	0.0129
0300	2.30					2.30		53.0	0.0180
0330	2.61					2.61		81.0	0.0258
0400	2.78					2.78		85.0	0.0340
0430	2.93					2.93		89.0	0.0425
0500	3.01					3.01		89.0	0.0511
0530	3.19					3.19		90.0	0.0597
0600	3.31					3.31		94.0	0.0688
0630	3.56					3.56		99.0	0.0783
0700	4.23					4.23		113.0	0.0892
0730	4.71					4.71		157.0	0.1043
0800	4.85					4.85		214.0	0.1248
0830	4.91					4.91		241.0	0.1480
0900	4.97					4.97		247.0	0.1717
0930	5.05					5.05		249.0	0.1957
1000	5.15					5.15		249.0	0.2196
1030	5.57					5.57		251.0	0.2437
1100	6.15					6.15		285.0	0.2711
1130	6.57					6.57		351.0	0.3049
1200	6.80					6.80		401.0	0.3434
1230	6.87					6.87		430.0	0.3848
1300	7.00					7.00		433.0	0.4264
1330	7.32					7.32		437.0	0.4684
1400	7.42					7.42		460.0	0.5126
1430	7.44					7.44		465.0	0.5573
1500	7.45					7.45		465.0	0.6020
1530	7.47					7.47		462.0	0.6686
1600	7.47					7.47		449.0	0.7334
1630	7.50					7.50		440.0	0.7757
1700	7.50					7.50		433.0	0.8173
1730	7.55					7.55		437.0	0.8593
1800	8.00					8.00		437.0	0.9013
1830	8.05					8.05		471.0	0.9466
1900	8.05					8.05		471.0	0.9466
1930	8.07					8.07		487.0	0.9934

STA. NO. 08075780		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR	
GREENS BAYOU AT CUTTEN ROAD NEAR HOUSTON, TEX.		STORM OF AUG. 31 TO SEP. 5, 1981					DISCHARGE: ACCUM.	
DATE & TIME		G A G E N U M B E R					IN RUNOFF	
		5780					CFS IN.	
AUG. 31								
2000	8.08						8.08	495.0
2015	8.08						8.08	498.0
2030	8.08						8.08	498.0
2100	8.08						8.08	498.0
2300	8.08						8.08	480.0
2330	8.08						8.08	482.0
2400	8.08						8.08	474.0
SEP. 1								
0000	8.08						8.08	474.0
0300	8.08						8.08	454.0
0400	8.09						8.09	437.0
0600	8.09						8.09	409.0
1100	8.09						8.09	330.0
1200	8.09						8.09	306.0
1600	8.09						8.09	235.0
1800	8.09						8.09	203.0
2100	8.09						8.09	159.0
2400	8.09						8.09	122.0
SEP. 2								
0000	8.09						8.09	122.0
0500	8.09						8.09	97.0
0600	8.09						8.09	94.0
1100	8.09						8.09	77.0
1200	8.19						8.19	75.0
1500	8.19						8.19	69.0
1600	8.19						8.19	75.0
1800	8.19						8.19	72.0
2400	8.19						8.19	64.0
SEP. 3								
0000	8.19						8.19	64.0
0600	8.19						8.19	55.0
1200	8.19						8.19	43.0
2000	8.19						8.19	31.0
2100	8.22						8.22	30.0
2400	8.22						8.22	27.0
SEP. 4								
0000	8.22						8.22	27.0
0900	8.22						8.22	21.0
1000	8.23						8.23	20.0
2400	8.23						8.23	15.0
SEP. 5								
0000	8.23						8.23	15.0
1200	8.23						8.23	11.0
2400	8.23						8.23	8.8

SAN JACINTO RIVER BASIN

08075900 GREENS BAYOU AT U.S. HIGHWAY 75 NEAR HOUSTON, TX

LOCATION.--Lat 29°57'24", long 95°25'04", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of U.S. Highway 75 bridge, 9.0 mi (14.5 km) upstream from station 08076000 21 mi (34 km) upstream from Halls Bayou.

DRAINAGE AREA.--36.1 mi<sup>2</sup> (93.5 km<sup>2</sup>). Prior to October 1973, 34.8 mi<sup>2</sup> (90.1 km<sup>2</sup>).

PERIOD OF RECORD.--August 1965 to current year (discharge measurements and supplemental peak discharges only, Oct. 1, 1980, to Mar. 26, 1981).

REVISED RECORDS.--WDR TX-76-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Datum of 1929, 1959 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records fair. Channel was rectified (widened and bed lowered about 2 ft) in 1980-81. Records furnished by Houston Lighting and Power Co. show that about 2,090 acre-ft (2.58 hm<sup>3</sup>) of ground water used for cooling purposes was released to bayou about 8 mi (13 km) upstream from gage during the current year. No know diversion above station. Recording rain gage at station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1966-80), 30.8 ft<sup>3</sup>/s (0.872 m<sup>3</sup>/s), 22,310 acre-ft/yr (27.5 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,570 ft<sup>3</sup>/s (101 m<sup>3</sup>/s) Aug. 31, 1981, elevation, 83.37 ft (25.411 m); maximum elevation, 91.09 ft (27.764 m) Feb. 21, 1969, occurred prior to 1980-81 channel rectification; minimum daily discharge, 0.16 ft<sup>3</sup>/s (0.004 m<sup>3</sup>/s) Oct. 21, 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft<sup>3</sup>/s (340 m<sup>3</sup>/s), revised, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Elevation (ft) (m)
Oct. 18	unknown	1,500 42.5	82.86 25.256	June 11	0300	3,100 87.8	82.50 25.146
May 3	2200	2,290 64.9	80.90 24.658	Aug. 31	1500	*3,570 101	83.37 25.911
May. 9	2130	1,630 46.2	79.46 24.219				

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---		---	8.2	9.2	65	27	8.2	1280
2	---	---		---		---	7.8	9.8	117	16	7.8	325
3	---	---		---		---	8.3	808	289	14	8.2	148
4	---	---		---		---	9.8	1070	58	25	7.6	60
5	---	---		---		---	9.5	412	692	73	9.0	27
6	---	---		---		---	8.2	134	205	58	9.9	18
7	---	---		9.1		---	8.2	60	120	301	9.2	12
8	---	---		---		---	11	34	58	158	8.0	11
9	---	---		---		---	11	399	30	83	6.8	12
10	---	9.4		---		---	9.1	681	105	48	6.6	11
11	---	---		---		---	9.5	182	1590	153	7.2	9.8
12	---	---		---		---	8.2	76	580	38	12	9.2
13	---	---		---		---	7.0	28	540	47	22	9.2
14	---	---		---		---	8.3	56	155	90	18	24
15	---	---		---		---	8.5	26	65	68	11	42
16	---	---		---		---	7.0	18	60	20	8.7	16
17	---	---		---		---	7.6	13	33	13	9.2	12
18	---	---		---		---	8.1	11	22	26	8.7	9.8
19	416	---		---		---	9.4	11	20	44	9.8	8.7
20	---	---		---		---	8.7	12	17	28	8.7	8.7
21	---	---		---		---	7.8	11	15	13	6.5	8.7
22	---	---		---		---	9.2	13	13	12	6.5	8.2
23	---	---		---		---	325	12	10	11	6.5	9.2
24	---	---		---		---	123	11	9.8	9.2	7.3	9.2
25	---	---		---		---	33	17	11	8.7	7.8	7.0
26	---	---		---		---	15	15	12	11	7.3	6.9
27	---	---		---		8.2	13	9.8	12	2.0	7.3	7.8
28	---	---		---		8.2	16	9.2	11	36	7.3	9.2
29	---	---		---		13	25	23	11	34	7.8	9.2
30	---	---		---		12	13	18	39	9.8	12	8.2
31	---	---		---		9.9	---	23	---	7.3	2230	---
TOTAL	---	---		---		---	753.4	4212.0	4964.8	1484.0	2502.9	2137.0
MEAN	---	---		---		---	25.1	136	165	47.9	80.7	71.2
MAX	---	---		---		---	325	1070	1590	301	2230	1280
MIN	---	---		---		---	7.0	9.2	9.8	2.0	6.5	6.9
AC-FT (††)	5.13	2.09	1.33	2.68	2.81	1.79	1490	8350	9850	2940	4960	4240
							2.97	8.81	10.76	6.79	9.63	1.21

CAL YR 1980 TOTAL †† 37.47  
WTR YR 1980 TOTAL †† 56.00

†† Weighted-mean rainfall, in inches, based on five rain gages.  
NOTE.--No elevation record Oct. 1 to Mar. 26.

STA. NO. 08075900		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
GREENS BAYOU AT U.S. HWY. 75 NR HOUSTON, TEX.		STORM OF MAY 9 -13, 1981				DISCHARGE		ACCUM.	
DATE & TIME		G A G E N U M B E R				WEIGHTED PRECIP.		IN RUNOFF	
		5780	204R	203R		IN.	CFS	IN.	
MAY 9									
0000		0.0	0.0	0.0		0.0	27.0	0.0070	
1200		0.0	0.0	0.0		0.0	25.0	0.0155	
1600		0.0	0.0	0.0		0.0	23.0	0.0178	
1630		0.08	0.0	0.02		0.05	117.0	0.0203	
1700		0.20	0.0	1.86		1.02	338.0	0.0275	
1730		1.43	0.70	2.86		2.11	523.0	0.0388	
1800		2.54	1.92	3.20		2.84	697.0	0.0537	
1830		2.93	2.70	3.35		3.13	920.0	0.0735	
1900		2.94	2.70	3.46		3.19	1110.0	0.1092	
2000		2.94	2.70	3.46		3.19	1500.0	0.1897	
2130		2.94	2.70	3.46		3.19	1630.0	0.3296	
2400		2.94	2.70	3.46		3.19	1450.0	0.5008	
MAY 10									
0000		2.94	2.70	3.46		3.19	1450.0	0.5008	
0300		2.94	2.70	3.46		3.19	1110.0	0.6437	
0600		2.94	2.70	3.46		3.19	862.0	0.7732	
1000		2.94	2.70	3.46		3.19	680.0	0.8608	
1200		2.94	2.70	3.46		3.19	608.0	0.9391	
1600		2.94	2.70	3.46		3.19	490.0	1.0022	
1800		2.94	2.70	3.46		3.19	432.0	1.0578	
2200		2.94	2.70	3.46		3.19	338.0	1.1013	
2400		2.94	2.70	3.46		3.19	299.0	1.1398	
MAY 11									
0000		2.94	2.70	3.46		3.19	299.0	1.1398	
0400		2.94	2.70	3.46		3.19	241.0	1.1709	
0600		2.94	2.70	3.46		3.19	221.0	1.2041	
1100		2.94	2.70	3.46		3.19	177.0	1.2269	
1200		2.94	2.70	3.46		3.19	171.0	1.2526	
1800		2.94	2.70	3.46		3.19	139.0	1.2884	
2400		2.94	2.70	3.46		3.19	110.0	1.3238	
MAY 12									
0000		2.94	2.70	3.46		3.19	110.0	1.3238	
0900		2.94	2.70	3.46		3.19	74.0	1.3396	
1000		2.94	2.70	3.46		3.19	100.0	1.3439	
1100		2.94	2.70	3.46		3.19	104.0	1.3484	
1200		2.94	2.70	3.46		3.19	100.0	1.3570	
1500		2.94	2.70	3.46		3.19	76.0	1.3717	
2100		2.94	2.70	3.46		3.19	45.0	1.3804	
2400		2.94	2.70	3.46		3.19	40.0	1.3932	
MAY 13									
0000		2.94	2.70	3.46		3.19	40.0	1.3932	
1200		2.94	2.70	3.46		3.19	27.0	1.4071	
2400		2.94	2.70	3.46		3.19	23.0	1.4131	

STA. NO. 08075900		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR							
GREENS BAYOU AT U. S. HWY. 75 NR HOUSTON, TEX.		STORM OF JUNE 10-11, 1981										ACCUM. DISCHARGE		ACCUM.					
DATE & TIME		5780		5900		203R		G A G E		N U M B E R		PRECIP.		IN		CFS		IN.	
JUNE10																			
0000		0.0		0.0		0.0		0.0		0.0				0.0		26.0		0.0033	
0600		0.0		0.0		0.0		0.0		0.0				0.0		21.0		0.0088	
1200		0.0		0.0		0.0		0.0		0.0				0.0		19.0		0.0118	
1330		0.0		0.0		0.0		0.0		0.0				0.0		19.0		0.0126	
1400		0.11		0.0		0.44		0.44		0.0				0.17		19.0		0.0130	
1430		0.12		0.0		0.50		0.50		0.0				0.19		19.0		0.0134	
1500		0.14		0.0		0.50		0.50		0.0				0.20		19.0		0.0139	
1530		0.16		0.0		0.62		0.62		0.0				0.24		19.0		0.0143	
1600		0.16		0.0		0.67		0.67		0.0				0.44		81.0		0.0166	
1630		0.61		0.12		0.89		0.89		0.0				0.50		145.0		0.0197	
1700		0.61		0.12		0.92		0.92		0.0				0.61		215.0		0.0243	
1730		0.61		0.60		0.93		0.93		0.0				0.61		212.0		0.0289	
1800		0.61		0.60		0.93		0.93		0.0				0.61		328.0		0.0359	
1830		0.61		0.60		0.93		0.93		0.0				0.72		322.0		0.0428	
1900		0.61		1.15		0.93		0.93		0.0				0.73		315.0		0.0665	
1930		0.61		1.17		0.93		0.93		0.0				0.73		262.0		0.0862	
2230		0.61		1.17		0.93		0.93		0.0				0.76		265.0		0.0919	
2300		0.63		1.23		0.98		0.98		0.0				1.09		400.0		0.1004	
2330		0.86		1.50		1.42		1.42		0.39				1.62		919.0		0.1202	
2400		1.17		2.60		2.10		2.10		0.42									
JUNE11																			
0000		1.17		2.60		2.10		2.10		0.42				1.62		919.0		0.1202	
0030		1.61		3.00		3.13		3.13		0.45				2.17		1390.0		0.1500	
0100		1.67		4.00		3.23		3.23		0.45				2.42		2240.0		0.1981	
0130		2.03		4.70		3.85		3.85		0.45				2.87		2800.0		0.2582	
0200		2.03		4.70		3.90		3.90		0.45				2.89		2990.0		0.3223	
0230		2.03		4.70		3.90		3.90		0.45				2.89		3070.0		0.3882	
0300		2.03		4.71		3.90		3.90		0.45				2.89		3100.0		0.4880	
0400		2.03		4.71		3.90		3.90		0.45				2.89		3020.0		0.5853	
0430		2.03		4.72		3.90		3.90		0.45				2.89		2940.0		0.6484	
0500		2.03		4.72		3.90		3.90		0.45				2.89		2860.0		0.7097	
0530		2.04		4.72		3.90		3.90		0.45				2.90		2730.0		0.7683	
0600		2.04		4.72		3.90		3.90		0.45				2.90		2620.0		0.8246	
0630		2.05		4.72		3.90		3.90		0.45				2.90		2490.0		0.8780	
0700		2.07		4.73		3.90		3.90		0.45				2.91		2350.0		0.9537	
0800		2.07		4.73		3.90		3.90		0.45				2.91		2090.0		1.0209	
0830		2.07		4.73		3.90		3.90		0.47				2.91		1990.0		1.0637	
0900		2.08		4.76		3.91		3.91		0.47				2.92		1880.0		1.1040	
0930		2.09		4.77		3.91		3.91		0.52				2.94		1780.0		1.1422	
1000		2.10		4.78		3.92		3.92		0.54				2.95		1680.0		1.1783	



STA. NO. 08075900			STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR		
GREENS BAYOU AT U. S. HWY. 75 NR HOUSTON, TEX.			STORM OF JUNE 10-11, 1981							
DATE & TIME	G A G E		N U M B E R		ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	ACCUM. RUNOFF IN.			
	5780	5900	203R	29R						
JUNE 11										
1030	2.11	4.78	3.94	0.54	2.96	1580.0	1.2122			
1100	2.13	4.80	3.96	0.56	2.98	1500.0	1.2444			
1130	2.14	4.80	3.96	0.57	2.98	1440.0	1.2753			
1200	2.15	4.82	3.98	0.57	3.00	1370.0	1.3047			
1230	2.16	4.84	3.98	0.57	3.00	1300.0	1.3326			
1300	2.17	4.86	4.00	0.64	3.03	1250.0	1.3594			
1330	2.20	4.87	4.00	0.64	3.04	1210.0	1.3854			
1400	2.23	4.88	4.02	0.66	3.06	1160.0	1.4103			
1430	2.25	4.89	4.02	0.66	3.07	1110.0	1.4341			
1500	2.26	4.90	4.10	0.69	3.10	1060.0	1.4568			
1530	2.27	4.92	4.10	0.69	3.11	1020.0	1.4787			
1600	2.27	4.94	4.10	0.72	3.12	985.0	1.4999			
1630	2.27	4.96	4.10	0.72	3.12	952.0	1.5203			
1700	2.27	4.96	4.10	0.72	3.12	916.0	1.5400			
1730	2.28	4.96	4.10	0.72	3.13	887.0	1.5590			
1800	2.28	4.96	4.10	0.72	3.13	858.0	1.5774			
1830	2.28	4.96	4.10	0.76	3.13	830.0	1.5952			
1900	2.28	4.96	4.10	0.78	3.14	799.0	1.6552			
2200	2.28	4.96	4.10	0.78	3.14	644.0	1.7244			
2400	2.28	4.96	4.10	0.78	3.14	553.0	1.7481			

STA. NO. 08075900		STORM RAINFALL AND RUNOFF RECORD											
GREENS BAYOU AT U.S. HWY. 75 NR HOUSTON, TEX.		1981 WATER YEAR											
DATE & TIME	STORM OF AUG. 30 TO SEP. 3, 1981												
	DISCHARGE! ACCUM. RUNOFF												
	5780	5900	204R	G A G E		N U M B E R		PRECIP. IN.		CFS		IN.	
AUG. 30													
0000	0.0	0.0	0.0					0.0	8.2		0.0011		
0600	0.0	0.0	0.0					0.0	9.2		0.0034		
1200	0.0	0.0	0.0					0.0	9.2		0.0048		
1300	0.0	0.0	0.18					0.01	9.2		0.0052		
1400	0.16	0.08	0.24					0.13	9.2		0.0056		
1500	0.18	0.08	0.24					0.14	18.0		0.0064		
1600	0.18	0.08	0.24					0.14	16.0		0.0071		
1700	0.18	0.08	0.24					0.14	16.0		0.0077		
1800	0.20	0.08	0.24					0.15	14.0		0.0083		
1900	0.20	0.08	0.24					0.15	13.0		0.0089		
2000	0.20	0.08	0.29					0.16	13.0		0.0095		
2100	0.25	0.10	0.44					0.20	12.0		0.0100		
2200	0.31	0.18	0.44					0.26	12.0		0.0105		
2300	0.33	0.18	0.90					0.30	14.0		0.0111		
2400	0.85	0.78	1.34					0.85	97.0		0.0142		
AUG. 31													
0000	0.85	0.78	1.34					0.85	97.0		0.0142		
0030	1.06	0.79	1.68					0.98	66.0		0.0156		
0100	1.85	0.88	1.84					1.46	64.0		0.0170		
0130	2.12	1.13	1.98					1.72	68.0		0.0185		
0200	2.27	1.38	2.23					1.91	110.0		0.0208		
0230	2.38	1.58	3.46					2.11	171.0		0.0245		
0300	3.15	2.58	3.59					2.94	241.0		0.0297		
0330	3.46	2.96	3.68					3.27	826.0		0.0474		
0400	3.63	2.99	3.76					3.38	1120.0		0.0714		
0430	3.78	3.06	3.86					3.50	1250.0		0.0983		
0500	3.86	3.16	4.12					3.59	1360.0		0.1275		
0530	4.04	3.48	4.28					3.83	1510.0		0.1599		
0600	4.16	3.62	4.46					3.96	1770.0		0.1978		
0630	4.41	3.76	4.59					4.16	1890.0		0.2384		
0700	5.08	3.86	4.96					4.59	1980.0		0.2809		
0730	5.56	3.96	5.06					4.89	2030.0		0.3245		
0800	5.70	4.03	5.13					5.00	2050.0		0.3685		
0830	5.76	4.09	5.16					5.06	2070.0		0.4129		
0900	5.82	4.13	5.21					5.11	2100.0		0.4580		
0930	5.90	4.16	5.30					5.17	2120.0		0.5035		
1000	6.00	4.22	5.62					5.27	2150.0		0.5496		
1030	6.42	4.40	5.86					5.58	2220.0		0.5973		
1100	7.00	4.53	6.84					6.00	2290.0		0.6464		
1130	7.42	4.93	7.36					6.42	2360.0		0.6971		

STA. NO. 08075900		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR				
GREENS BAYOU AT U. S. HWY. 75 NR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981					DISCHARGE		ACCUM.		
DATE & TIME		G A G E		N U M B E R		WEIGHTED PRECIP.		IN		RUNOFF	
		5780	5900	204R				CFS	IN.		IN.
AUG. 31											
1200	7.65	5.78	7.44				6.89	2700.0	0.7550		0.7550
1230	7.72	5.90	7.46				6.98	3210.0	0.8239		0.8239
1300	7.85	5.94	7.58				7.07	3320.0	0.8952		0.8952
1330	8.17	6.00	7.65				7.28	3360.0	0.9673		0.9673
1400	8.27	6.54	7.67				7.55	3400.0	1.0402		1.0402
1430	8.29	6.74	7.72				7.64	3530.0	1.1160		1.1160
1500	8.30	6.82	7.74				7.68	3570.0	1.1926		1.1926
1530	8.32	6.83	7.82				7.70	3540.0	1.2686		1.2686
1600	8.32	6.84	7.84				7.70	3490.0	1.3435		1.3435
1630	8.32	6.84	7.84				7.70	3420.0	1.4169		1.4169
1700	8.35	6.84	7.84				7.72	3310.0	1.4879		1.4879
1730	8.35	6.84	7.84				7.72	3180.0	1.5562		1.5562
1800	8.40	6.84	7.84				7.75	3020.0	1.6210		1.6210
1830	8.85	6.90	8.02				8.03	2880.0	1.6828		1.6828
1900	8.90	7.13	8.19				8.16	2740.0	1.7416		1.7416
1930	8.92	7.88	8.19				8.47	2760.0	1.8009		1.8009
2000	8.93	7.96	8.19				8.50	2970.0	1.8646		1.8646
2030	8.93	8.10	8.19				8.56	2940.0	1.9277		1.9277
2100	8.93	8.14	8.19				8.58	2900.0	2.1456		2.1456
2400	8.93	8.14	8.19				8.58	2520.0	2.4701		2.4701
SEP. 1											
0000	8.93	8.14	8.19				8.58	2520.0	2.4701		2.4701
0300	8.93	8.16	8.19				8.58	1980.0	2.7250		2.7250
0600	8.94	8.17	8.19				8.59	1600.0	3.0341		3.0341
1200	8.94	8.24	8.19				8.62	1160.0	3.3329		3.3329
1800	8.94	8.24	8.19				8.62	865.0	3.5956		3.5956
2400	8.94	8.24	8.19				8.62	619.0	3.7151		3.7151
SEP. 2											
0000	8.94	8.24	8.19				8.62	619.0	3.7151		3.7151
0600	8.94	8.24	8.19				8.62	406.0	3.8196		3.8196
1200	9.04	8.42	8.79				8.78	271.0	3.8894		3.8894
1800	9.04	8.55	8.79				8.83	235.0	3.9499		3.9499
2400	9.04	8.55	8.79				8.83	218.0	4.0061		4.0061
SEP. 3											
0000	9.04	8.55	8.79				8.83	218.0	4.0061		4.0061
0600	9.04	8.66	8.79				8.88	163.0	4.0481		4.0481
1200	9.04	8.67	8.79				8.88	128.0	4.0810		4.0810
1800	9.04	9.05	8.79				9.03	123.0	4.1127		4.1127
2400	9.07	9.19	8.79				9.10	107.0	4.1265		4.1265

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX

LOCATION.--Lat 29°55'05", long 95°18'24", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge on U.S. Highway 59, 10.5 mi (16.9 km) northeast of Houston, 12.0 mi (19.3 km) upstream from Halls Bayou, and 23.4 mi (37.7 km) upstream from mouth.

DRAINAGE AREA.--69.6 mi<sup>2</sup> (180.3 km<sup>2</sup>). Prior to Oct. 1, 1973, 72.7 mi<sup>2</sup> (188.3 km<sup>2</sup>).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft (0.201 m) below National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. Channel rectified during the water years 1974-75. No known diversion above station. Low flow is sustained by Houston Light and Power Co. effluent, which is obtained from ground-water sources. Recording rain gage at station.

AVERAGE DISCHARGE.--29 years, 58.2 ft<sup>3</sup>/s (1.648 m<sup>3</sup>/s), 42,170 acre-ft/yr (52.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,730 ft<sup>3</sup>/s (219 m<sup>3</sup>/s) Apr. 18, 1976, gage height, 61.92 ft (18.873 m); maximum gage height, 65.75 ft (20.041 m) Sept. 12, 1961 (prior to channel rectification); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft<sup>3</sup>/s (56.6 m<sup>3</sup>/s), revised, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
Oct. 18	2200	2,910 82.4	59.07 18.005	June 5	1030	2,910 82.4	59.92 18.264
May 3	2330	4,740 134	62.55 19.065	June 11	0700	3,760 106	61.40 18.715
May 10	0100	2,030 57.5	57.51 17.529	Aug. 31	1800	*5,840 165	63.90 19.477

Minimum daily discharge, 11 ft<sup>3</sup>/s (0.31 m<sup>3</sup>/s) Oct. 6, Aug. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	14	15	17	105	16	18	13	26	60	15	2500
2	30	15	15	16	69	18	19	13	162	35	15	633
3	20	19	14	16	29	16	19	1370	379	30	15	419
4	19	18	14	17	31	393	23	2820	94	60	14	192
5	18	15	14	17	95	134	24	939	1780	140	14	67
6	11	14	13	26	204	44	21	244	530	130	16	42
7	15	13	13	23	43	24	19	87	251	450	15	32
8	18	12	35	17	27	20	19	43	152	350	14	28
9	17	14	333	17	22	19	22	337	50	190	12	28
10	18	14	49	18	41	16	18	1260	102	92	12	29
11	16	16	23	16	28	17	17	356	2350	278	14	25
12	16	15	18	16	23	19	16	121	1170	84	20	23
13	16	14	17	15	19	47	15	50	1190	91	26	23
14	16	14	18	15	17	24	15	104	367	177	18	49
15	37	14	19	16	15	19	16	49	131	138	16	93
16	525	17	20	16	17	17	15	33	188	38	12	42
17	68	37	17	16	18	16	15	24	107	24	13	28
18	834	18	17	16	18	17	15	19	54	33	13	22
19	1270	14	16	250	18	15	16	17	41	43	13	22
20	157	14	16	477	18	15	16	20	26	124	16	22
21	45	13	16	66	18	18	16	19	23	29	12	22
22	29	50	16	30	49	22	16	18	22	21	11	23
23	25	50	17	20	22	18	717	19	19	20	11	23
24	21	21	18	17	17	17	404	15	31	18	12	23
25	20	25	17	17	46	17	67	22	40	16	14	21
26	19	256	16	16	46	18	25	21	30	21	13	22
27	53	41	17	42	23	19	18	15	25	45	12	23
28	36	21	17	27	17	19	17	14	23	48	13	25
29	19	16	17	19	---	33	27	26	22	74	14	26
30	16	15	18	18	---	25	21	46	80	20	16	26
31	14	---	18	18	---	19	---	36	---	15	3750	---
TOTAL	3516	829	883	1327	1095	1131	1686	8170	9465	2894	4181	4553
MEAN	113	27.6	28.5	42.8	39.1	36.5	56.2	264	316	93.4	135	152
MAX	1270	256	333	477	204	393	717	2820	2350	450	3750	2500
MIN	11	12	13	15	15	15	15	13	19	15	11	21
AC-FT	6970	1640	1750	2630	2170	2240	3340	16210	18770	5740	8290	9030
(††)	4.48	2.05	1.28	2.49	2.44	1.48	2.76	8.46	10.25	6.26	8.89	1.41

CAL YR 1980	TOTAL	29071	MEAN	79.4	MAX	1840	MIN	11	AC-FT	57660	††	36.67
WTR YR 1981	TOTAL	39730	MEAN	109	MAX	3750	MIN	11	AC-FT	78800	††	52.25

†† Weighted-mean rainfall, in inches, based on seven rain gages.

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANECUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
FEB										
23...	1230	21	670	7.4	17.0	15	340	8.2	83	11
JUN										
11...	1045	3070	101	8.3	23.0	100	180	6.1	70	4.6
JUL										
06...	1310	120	313	7.7	26.0	55	170	5.1	62	9.9
AUG										
25...	0840	15	1020	7.7	28.0	5	11	2.7	34	11
31...	0750	3070	123	8.3	24.5	70	250	6.1	73	5.9
31...	1420	5520	123	8.1	24.0	100	260	5.9	69	4.4
SEP										
01...	1100	2250	107	7.6	25.0	120	120	4.9	59	3.6
02...	1025	496	172	7.4	27.0	120	68	4.9	61	4.1

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
FEB									
23...	50000	2200	76	--	--	--	--	--	--
JUN									
11...	140000	54000	72000	42	8	14	1.8	6.1	.4
JUL									
06...	200000	34000	29000	87	5	29	3.4	26	1.2
AUG									
25...	500000	150000	9300	200	0	65	8.5	120	3.9
31...	400000	130000	110000	34	0	11	1.5	8.1	.6
31...	400000	50000	220000	47	0	16	1.7	6.8	.4
SEP									
01...	150000	29000	46000	44	0	15	1.7	5.7	.4
02...	64000	26000	4400	63	2	21	2.5	12	.7

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)
FEB									
23...	--	--	--	--	--	--	--	65	7
JUN									
11...	1.8	34	2.5	11	.1	5.6	63	630	74
JUL									
06...	3.8	89	10	28	.2	10	163	310	44
AUG									
25...	6.8	200	120	110	.3	31	582	23	21
31...	2.9	39	5.0	6.5	.1	4.0	62	40	17
31...	3.1	48	5.0	7.0	.1	4.5	73	752	10
SEP									
01...	2.9	45	5.0	5.4	.1	5.6	68	102	13
02...	3.4	61	11	11	.1	9.0	107	308	7

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUS- PENDE D (MG/L AS C)
FEB 23...	.18	.060	.24	3.600	1.1	4.7	3.000	12	--
JUN 11...	.04	.060	.10	.180	1.2	1.4	.240	17	--
JUL 06...	.37	.180	.55	.610	1.3	1.9	1.900	10	1.4
AUG 25...	--	--	--	--	--	--	4.300	7.2	--
31...	.22	.040	.26	.270	1.9	2.2	.630	16	--
31...	.16	.030	.19	.220	1.4	1.6	.470	16	--
SEP 01...	.06	.020	.08	.180	1.3	1.5	.280	12	--
02...	.06	.040	.10	.300	1.4	1.7	.390	11	--

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN 11...	1045	2	100	0	10	0	80
JUL 06...	1310	6	100	<1	10	<10	50
AUG 25...	0840	9	270	<1	0	<10	<10
31...	0750	6	49	<1	0	3	30

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN 11...	0	20	.2	0	0	10
JUL 06...	<10	5	.2	0	1	9
AUG 25...	12	91	.1	1	0	20
31...	2	<1	.1	0	0	<3

DATE	TIME	PCB TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN 11...	1045	.00	.0	.00	.1	.00	.00	.00	.29
JUL 06...	1310	.00	.0	.00	.0	.00	.00	.00	1.1
AUG 25...	0840	.00	.0	.00	.0	.00	.00	.00	.50
31...	0750	.00	.0	.00	.1	.00	.00	.00	.39

SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN									
11...	.00	.00	.00	.00	.00	.01	.01	.02	.00
JUL									
06...	.00	.00	.00	.00	.00	.00	.00	.19	.00
AUG									
25...	.00	.00	.00	.00	.00	.00	.02	.03	.00
31...	.00	.00	.00	.00	.01	.01	.01	.09	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN									
11...	.00	.00	.00	.00	0	.00	.02	.00	.00
JUL									
06...	.00	.00	.00	.00	0	.00	.07	.12	.00
AUG									
25...	.00	.00	.00	.00	0	.00	.06	.00	.00
31...	.00	.00	.00	.00	0	.00	<.45	<.06	.00

STA. NO. 08076000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR					
GREENS BAYOU NEAR HOUSTON, TEX.		STORM OF MAY 3 - 8, 1981										DISCHARGE IN		ACCUM. RUNOFF			
DATE & TIME		5780		6000		6200		G A G E		N U M B E R		WEIGHTED PRECIP. IN.		CFS		IN.	
MAY 3																	
0000		0.0		0.0		0.0		0.0		0.0		0.0		12.0		0.0008	
0600		0.0		0.0		0.0		0.0		0.0		0.0		12.0		0.0017	
0630		0.0		0.0		0.0		0.0		0.03		0.01		12.0		0.0018	
0700		0.0		0.05		0.0		0.0		0.09		0.03		12.0		0.0019	
0730		0.03		0.10		0.12		0.21		0.21		0.11		12.0		0.0021	
0800		0.14		0.28		0.24		0.33		0.33		0.23		12.0		0.0022	
0830		0.29		0.40		0.36		0.63		0.63		0.42		12.0		0.0023	
0900		0.46		0.48		0.60		0.99		0.99		0.65		12.0		0.0025	
0930		0.58		0.72		0.60		1.14		1.14		0.77		14.0		0.0026	
1000		0.66		0.85		0.96		1.32		1.32		0.94		15.0		0.0028	
1030		0.78		0.95		1.44		1.38		1.38		1.11		19.0		0.0030	
1100		1.13		1.00		1.68		1.50		1.50		1.34		23.0		0.0033	
1130		1.99		1.20		1.92		1.79		1.79		1.84		40.0		0.0037	
1200		2.32		1.70		2.28		2.09		2.09		2.18		57.0		0.0043	
1230		2.41		2.07		2.52		2.27		2.27		2.36		149.0		0.0060	
1300		2.51		2.32		2.52		2.46		2.46		2.48		242.0		0.0087	
1330		2.78		2.32		2.76		2.57		2.57		2.67		565.0		0.0150	
1400		2.82		2.32		2.76		2.69		2.69		2.72		887.0		0.0249	
1430		3.00		2.35		2.76		2.72		2.72		2.80		1260.0		0.0389	
1500		3.07		2.35		2.88		2.78		2.78		2.87		1640.0		0.0571	
1530		3.15		2.35		3.00		2.78		2.78		2.93		1850.0		0.0777	
1600		3.19		2.35		3.12		2.79		2.79		2.97		2070.0		0.1008	
1630		3.21		2.40		3.24		2.79		2.79		3.01		2170.0		0.1249	
1700		3.21		2.42		3.24		2.80		2.80		3.01		2280.0		0.1503	
1730		3.22		2.58		3.24		2.82		2.82		3.03		2310.0		0.1760	
1800		3.22		2.80		3.24		2.80		2.80		3.06		2350.0		0.2022	
1830		3.22		3.60		3.24		3.26		3.26		3.27		2370.0		0.2286	
1900		3.22		4.15		3.24		3.74		3.74		3.47		2390.0		0.2552	
1930		3.22		4.40		3.24		4.02		4.02		3.58		2590.0		0.2840	
2000		3.24		4.50		3.24		4.32		4.32		3.69		2800.0		0.3152	
2030		3.49		4.55		3.60		4.38		4.38		3.88		3010.0		0.3487	
2100		3.58		4.55		4.44		4.49		4.49		4.12		3230.0		0.3846	
2130		3.87		4.70		4.44		4.73		4.73		4.32		3470.0		0.4233	
2200		3.98		4.95		4.56		4.99		4.99		4.50		3720.0		0.4647	
2230		3.98		5.00		4.68		4.99		4.99		4.52		3940.0		0.5085	
2300		3.98		5.00		4.68		5.04		5.04		4.54		4170.0		0.5550	
2330		3.98		5.05		4.80		5.04		5.04		4.57		4740.0		0.6077	
2400		3.98		5.05		4.80		5.10		5.10		4.59		4740.0		0.6605	
MAY 4																	
0000		3.98		5.05		4.80		5.10		5.10		4.59		4740.0		0.6605	



STA. NO. 08076000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR			
GREENS BAYOU NEAR HOUSTON, TEX.		STORM OF MAY 3 -8, 1981										DISCHARGE!		ACCUM.	
DATE & TIME	G A G E N U M B E R										WEIGHTED		IN	CFS	IN.
	5780	6000	6200	20R							PRECIP.	IN.			
MAY 4															
0030	4.06	5.05	4.92	5.10							4.64	4740.0	0.7133		
0100	4.09	5.05	4.92	5.10							4.65	4700.0	0.7656		
0130	4.10	5.05	4.92	5.10							4.66	4640.0	0.9980		
0530	4.10	5.05	4.92	5.10							4.66	3960.0	1.1964		
0600	4.11	5.05	4.92	5.11							4.67	3850.0	1.2393		
0630	4.11	5.05	4.92	5.11							4.67	3650.0	1.2799		
0700	4.11	5.05	4.92	5.12							4.67	3460.0	1.3184		
0730	4.11	5.07	4.92	5.12							4.67	3350.0	1.3557		
0800	4.12	5.15	4.92	5.15							4.69	3240.0	1.3918		
0830	4.13	5.30	5.04	5.21							4.75	3110.0	1.4264		
0900	4.39	5.33	5.04	5.33							4.90	2980.0	1.4596		
0930	4.50	5.33	5.16	5.33							4.96	2890.0	1.5561		
1200	4.50	5.33	5.16	5.33							4.96	2540.0	1.5561		
1230	4.50	5.33	5.16	5.36							4.97	2470.0	1.6409		
1300	4.50	5.43	5.16	5.42							5.00	2400.0	1.6951		
1330	4.50	5.43	5.16	5.42							5.00	2330.0	1.7210		
1400	4.50	5.43	5.16	5.43							5.00	2270.0	1.7463		
1430	4.50	5.52	5.16	5.46							5.02	2210.0	1.7709		
1500	4.51	5.55	5.16	5.52							5.05	2150.0	1.7949		
1530	5.01	5.55	5.16	5.52							5.25	2090.0	1.8181		
1600	5.28	5.95	5.28	5.55							5.43	2030.0	1.8407		
1630	5.45	6.35	5.28	5.61							5.55	2010.0	1.8631		
1700	5.80	6.35	5.28	5.67							5.71	1990.0	1.8852		
1730	5.80	6.35	5.28	5.67							5.71	2070.0	1.9083		
1800	5.80	6.35	5.28	5.68							5.71	2160.0	1.9323		
1830	5.80	6.35	5.28	5.68							5.71	2180.0	1.9566		
1900	5.81	6.35	5.40	5.68							5.74	2210.0	1.9812		
1930	5.81	6.35	5.40	5.68							5.74	2190.0	2.0056		
2000	5.81	6.35	5.40	5.69							5.75	2180.0	2.0662		
2200	5.81	6.35	5.40	5.69							5.75	1980.0	2.1213		
2230	5.81	6.40	5.40	5.69							5.75	1930.0	2.1428		
2300	5.81	6.42	5.40	5.69							5.75	1890.0	2.1744		
2400	5.81	6.42	5.40	5.69							5.75	1780.0	2.2735		
MAY 5															
0000	5.81	6.42	5.40	5.69							5.75	1780.0	2.2735		
0400	5.81	6.42	5.40	5.69							5.75	1430.0	2.3531		
0500	5.82	6.42	5.40	5.69							5.76	1360.0	2.3833		
0600	5.82	6.42	5.40	5.69							5.76	1280.0	2.4546		
1000	5.82	6.42	5.40	5.69							5.76	1010.0	2.5220		
1200	5.82	6.42	5.40	5.69							5.76	921.0	2.5836		

STA. NO. 08076000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
GREENS BAYOU NEAR HOUSTON, TEX.		STORM OF MAY 3 - 8, 1981										ACCUM. DISCHARGE	
DATE & TIME		G A G E N U M B E R										WEIGHTED PRECIP.	
		5780	6000	6200	20R							IN.	IN.
MAY 5													
1600		5.82	6.42	5.40	5.69							5.76	738.0
1800		5.82	6.42	5.40	5.69							5.76	2.6329
2200		5.82	6.42	5.40	5.69							5.76	674.0
2400		5.82	6.42	5.40	5.69							5.76	2.6779
MAY 6													531.0
0000		5.82	6.42	5.40	5.69							5.76	2.7133
0600		5.82	6.42	5.40	5.69							5.76	478.0
1200		5.82	6.42	5.40	5.69							5.76	2.7559
1800		5.82	6.42	5.40	5.69							5.76	478.0
2400		5.82	6.42	5.40	5.69							5.76	326.0
MAY 7													225.0
0000		5.82	6.42	5.40	5.69							5.76	2.8295
0600		5.82	6.42	5.40	5.69							5.76	170.0
1200		5.82	6.42	5.40	5.69							5.76	2.8522
1500		5.82	6.42	5.40	5.69							5.76	128.0
1600		5.82	6.42	5.52	5.69							5.76	2.8693
1800		5.82	6.42	5.52	5.69							5.76	128.0
1900		5.82	6.42	5.64	5.69							5.76	108.0
2400		5.82	6.42	5.64	5.69							5.76	87.0
MAY 8													2.8925
0000		5.82	6.42	5.64	5.69							5.76	78.0
0600		5.82	6.42	5.64	5.69							5.76	76.0
1200		5.82	6.42	5.64	5.69							5.78	2.8985
1800		5.82	6.42	5.64	5.69							5.78	72.0
2400		5.82	6.42	5.64	5.69							5.80	2.9009
MAY 9													70.0
0000		5.82	6.42	5.64	5.69							5.80	2.9055
0600		5.82	6.42	5.64	5.69							5.80	58.0
1200		5.82	6.42	5.64	5.69							5.80	2.9127
1800		5.82	6.42	5.64	5.69							5.80	58.0
2400		5.82	6.42	5.64	5.69							5.80	51.0
												5.80	2.9195
												5.80	43.0
												5.80	2.9252
												5.80	36.0
												5.80	2.9300
												5.80	30.0
												5.80	2.9320

STA. NO. 08076000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
GREENS BAYOU NEAR HOUSTON, TEX.		STORM OF JUNE 1 -9, 1981										DISCHARGE!	
DATE & TIME		G A G E										WEIGHTED	
		5780	6000	6200	203R	N U M B E R	20R	PRECIP.		IN.		CFS	IN.
JUNE1													
0000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	0.0015
0600		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0045
1200		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0064
1500		0.0	0.0	0.0	0.0	0.0	0.13	0.03	0.03	0.03	0.03	19.0	0.0072
1600		0.0	0.0	0.0	0.02	0.10	0.13	0.03	0.03	0.06	0.06	19.0	0.0076
1700		0.01	0.0	0.0	0.10	0.16	0.14	0.06	0.06	0.45	0.45	19.0	0.0081
1800		1.37	0.0	0.0	0.25	0.16	0.16	0.45	0.45	20.0	20.0	20.0	0.0085
1900		1.38	0.0	0.12	0.52	0.16	0.16	0.55	0.55	22.0	22.0	32.0	0.0095
2200		1.38	0.0	0.12	0.54	0.16	0.16	0.56	0.56	32.0	32.0	45.0	0.0109
2300		1.38	0.0	0.12	0.54	0.16	0.16	0.56	0.56	45.0	45.0	85.0	0.0119
2400		1.38	0.0	0.12	0.54	0.16	0.16	0.56	0.56	85.0	85.0		0.0138
JUNE2													
0000		1.38	0.0	0.12	0.54	0.16	0.16	0.56	0.56	85.0	85.0	85.0	0.0138
0100		1.38	0.0	0.12	0.54	0.16	0.16	0.56	0.56	158.0	158.0	319.0	0.0209
0400		1.38	0.0	0.12	0.54	0.16	0.16	0.56	0.56	344.0	344.0	347.0	0.0351
0500		1.38	0.0	0.12	0.54	0.16	0.16	0.56	0.56	347.0	347.0	347.0	0.0427
0600		1.39	0.0	0.12	0.54	0.16	0.16	0.56	0.56	255.0	255.0	128.0	0.0582
0900		1.39	0.0	0.12	0.54	0.16	0.16	0.56	0.56	128.0	128.0	104.0	0.0752
1200		1.39	0.0	0.12	0.54	0.16	0.16	0.56	0.56	88.0	88.0	88.0	0.0809
1300		1.40	0.0	0.12	0.54	0.18	0.18	0.85	0.85	75.0	75.0	50.0	0.0832
1400		2.15	0.0	0.12	0.87	0.18	0.18	0.88	0.88	50.0	50.0	42.0	0.0852
1500		2.16	0.0	0.12	0.94	0.18	0.18	0.88	0.88	42.0	42.0	68.0	0.0913
1800		2.16	0.0	0.12	0.94	0.18	0.18	0.88	0.88	44.0	44.0	68.0	0.0927
2000		2.16	0.0	0.12	0.94	0.18	0.18	0.88	0.88	68.0	68.0	129.0	0.0937
2100		2.16	0.0	0.12	0.94	0.18	0.18	0.88	0.88	129.0	129.0	129.0	0.0959
2200		2.16	0.0	0.12	0.94	0.18	0.18	0.88	0.88	129.0	129.0	129.0	0.1003
2400		2.18	0.0	0.12	0.94	0.47	0.47	0.94	0.94	129.0	129.0	129.0	0.1003
JUNE3													
0000		2.18	0.0	0.12	0.94	0.47	0.47	0.94	0.94	129.0	129.0	159.0	0.1003
0100		2.65	0.40	0.72	0.94	0.55	0.55	1.20	1.20	159.0	159.0	174.0	0.1038
0200		2.94	0.50	1.08	2.37	0.57	0.57	1.77	1.77	174.0	174.0	179.0	0.1077
0300		2.95	0.50	1.08	2.40	0.57	0.57	1.78	1.78	179.0	179.0	208.0	0.1117
0400		2.95	0.50	1.08	2.40	0.57	0.57	1.78	1.78	208.0	208.0	274.0	0.1163
0500		2.96	0.52	1.08	2.40	0.57	0.57	1.79	1.79	274.0	274.0	335.0	0.1224
0600		2.96	0.57	1.08	2.43	0.68	0.68	1.82	1.82	335.0	335.0	389.0	0.1298
0700		2.96	0.57	1.20	2.43	0.68	0.68	1.84	1.84	389.0	389.0	494.0	0.1428
0900		2.96	0.57	1.20	2.43	0.68	0.68	1.84	1.84	494.0	494.0	592.0	0.1703
1200		2.96	0.57	1.20	2.43	0.68	0.68	1.84	1.84	592.0	592.0	593.0	0.1967
1300		2.97	0.57	1.20	2.43	0.68	0.68	1.84	1.84	593.0	593.0	481.0	0.2297
1700		2.97	0.57	1.20	2.43	0.68	0.68	1.84	1.84	481.0	481.0	437.0	0.2565
1800		2.97	0.57	1.20	2.43	0.68	0.68	1.84	1.84	437.0	437.0		0.2711

STORM RAINFALL AND RUNOFF RECORD									
STA. NO. 08076000									
GREENS BAYOU NEAR HOUSTON, TEX.									
DATE & TIME	G A G E					STORM OF JUNE 1 - 9, 1981			
	5780	6000	6200	203R	20R	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.	1981 WATER YEAR
JUNES									
2000	2.97	0.57	1.20	2.43	0.68	1.84	332.0	0.2858	
2200	2.97	0.57	1.20	2.43	0.68	1.84	242.0	0.2966	
2400	2.97	0.57	1.20	2.43	0.68	1.84	184.0	0.3048	
JUNE4									
0000	2.97	0.57	1.20	2.43	0.68	1.84	184.0	0.3048	
0200	2.97	0.62	1.20	2.43	0.71	1.86	152.0	0.3116	
0400	2.97	0.69	1.32	2.43	0.73	1.88	132.0	0.3175	
0600	3.04	0.71	1.32	2.43	0.73	1.90	114.0	0.3225	
0800	3.04	0.72	1.32	2.49	0.73	1.92	102.0	0.3294	
1200	3.05	0.72	1.32	2.49	0.73	1.93	79.0	0.3346	
1400	3.08	0.72	1.32	2.49	0.73	1.93	72.0	0.3378	
1600	3.08	0.72	1.32	2.49	0.74	1.93	65.0	0.3407	
1800	3.09	0.77	1.32	2.49	0.76	1.95	57.0	0.3433	
2000	3.09	0.78	1.32	2.49	0.77	1.95	51.0	0.3455	
2200	3.22	0.83	1.56	2.57	1.34	2.16	46.0	0.3471	
2300	3.44	1.55	2.16	2.96	1.96	2.62	71.0	0.3487	
2400	3.88	2.30	2.40	3.81	2.19	3.14	244.0	0.3527	
JUNES									
0000	3.88	2.30	2.40	3.81	2.19	3.14	244.0	0.3527	
0030	3.89	2.43	2.40	3.89	2.25	3.19	365.0	0.3568	
0100	3.91	2.52	2.40	3.91	2.37	3.24	487.0	0.3622	
0130	3.92	2.54	2.52	3.91	2.37	3.26	612.0	0.3690	
0200	3.92	2.58	2.52	3.91	2.41	3.27	736.0	0.3772	
0230	3.92	2.58	2.52	3.91	2.48	3.28	856.0	0.3867	
0300	3.93	2.68	2.52	3.94	2.60	3.33	977.0	0.3976	
0330	3.97	2.77	2.64	4.03	2.60	3.39	1070.0	0.4095	
0400	3.98	2.86	2.76	4.07	2.62	3.44	1160.0	0.4225	
0430	3.98	2.86	2.76	4.07	2.62	3.44	1220.0	0.4360	
0500	3.99	2.86	2.76	4.09	2.62	3.45	1280.0	0.4503	
0530	4.00	2.86	2.76	4.09	2.68	3.46	1320.0	0.4650	
0600	4.02	3.23	2.88	4.09	2.75	3.54	1360.0	0.4801	
0630	4.12	3.41	3.00	4.28	3.29	3.76	1420.0	0.4959	
0700	4.52	3.80	3.12	4.39	3.85	4.06	1480.0	0.5124	
0730	4.99	4.58	4.08	4.53	3.85	4.45	1710.0	0.5314	
0800	5.01	4.64	4.08	4.62	3.85	4.48	1950.0	0.5640	
0900	5.01	4.64	4.08	4.62	3.85	4.48	2420.0	0.6313	
1030	5.01	4.64	4.08	4.62	3.85	4.48	2910.0	0.6961	
1100	5.02	4.64	4.08	4.62	3.85	4.49	2890.0	0.7283	
1130	5.02	4.64	4.08	4.62	3.85	4.49	2860.0	0.7601	
1200	5.02	4.66	4.08	4.69	3.85	4.51	2830.0	0.7916	
1230	5.05	4.66	4.08	4.69	3.85	4.52	2750.0	0.8223	

STA. NO. 08076000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR					
GREENS BAYOU NEAR HOUSTON, TEX.		STORM OF JUNE 1 -9, 1981										ACCUM. WEIGHTED PRECIP.		DISCHARGE IN		ACCUM. RUNOFF	
DATE & TIME		5780	6000	6200	G A G E	203R	20R			PRECIP. IN.		CFS	IN.				
JUNE5																	
1300	5.05	4.67	4.08	4.69	3.85					4.52	2680.0	0.9267					
1600	5.05	4.67	4.08	4.69	3.85					4.52	2180.0	1.0237					
1700	5.05	4.67	4.08	4.69	3.85					4.52	2040.0	1.0578					
1730	5.06	4.67	4.08	4.69	3.85					4.52	1970.0	1.0797					
1800	5.06	4.67	4.08	4.69	3.85					4.52	1900.0	1.1538					
2100	5.06	4.67	4.08	4.69	3.85					4.52	1530.0	1.2474					
2330	5.06	4.67	4.08	4.69	3.85					4.52	1240.0	1.2889					
2400	5.06	4.67	4.08	4.69	3.85					4.52	1180.0	1.3742					
JUNE6																	
0000	5.06	4.67	4.08	4.69	3.85					4.52	1180.0	1.3742					
0600	5.06	4.67	4.08	4.69	3.85					4.52	693.0	1.4668					
1200	5.06	4.67	4.08	4.69	3.85					4.52	452.0	1.5272					
1800	5.06	4.67	4.08	4.69	3.85					4.52	292.0	1.5662					
2400	5.06	4.67	4.08	4.69	3.85					4.52	196.0	1.6011					
JUNE7																	
0000	5.06	4.67	4.08	4.69	3.85					4.52	196.0	1.6011					
1000	5.38	4.67	4.32	5.00	4.73					4.91	122.0	1.6160					
1100	5.38	4.67	4.32	5.07	4.73					4.93	116.0	1.6186					
1200	5.38	4.67	4.32	5.07	4.73					4.93	134.0	1.6291					
1800	5.38	4.67	4.32	5.07	4.73					4.93	397.0	1.6821					
2400	5.38	4.67	4.32	5.07	4.73					4.93	326.0	1.7474					
JUNE8																	
0000	5.38	4.67	4.32	5.07	4.73					4.93	326.0	1.7474					
1200	5.38	4.67	4.32	5.07	4.73					4.93	129.0	1.7819					
2400	5.38	4.67	4.32	5.07	4.73					4.93	68.0	1.8001					
JUNE9																	
0000	5.38	4.67	4.32	5.07	4.73					4.93	68.0	1.8001					
1200	5.38	4.67	4.32	5.07	4.73					4.93	41.0	1.8110					
2400	5.38	4.67	4.32	5.07	4.73					4.93	57.0	1.8186					

STA. NO. 08076000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
GREENS BAYOU NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 6, 1981										DISCHARGE!	ACCUM.
DATE & TIME		5780	5900	6000	AGE	20R	N U M B E R	WEIGHTED	PRECIP.	IN.	CFS	IN.	RUNOFF
AUG. 30													
0000		0.0	0.0	0.0		0.0			0.0		15.0	0.0010	0.0010
0600		0.0	0.0	0.0		0.0			0.0		15.0	0.0030	0.0030
1200		0.0	0.0	0.0		0.0			0.0		16.0	0.0043	0.0043
1300		0.0	0.0	0.0		0.11			0.01		16.0	0.0046	0.0046
1400		0.16	0.08	0.0		0.11			0.09		16.0	0.0050	0.0050
1500		0.18	0.08	0.0		0.11			0.10		16.0	0.0055	0.0055
1700		0.18	0.08	0.0		0.11			0.10		15.0	0.0060	0.0060
1800		0.20	0.08	0.0		0.11			0.11		15.0	0.0063	0.0063
1900		0.20	0.08	0.0		0.11			0.11		15.0	0.0067	0.0067
2000		0.20	0.08	0.0		0.17			0.11		17.0	0.0070	0.0070
2100		0.25	0.10	0.0		0.20			0.14		19.0	0.0075	0.0075
2200		0.31	0.18	0.0		0.25			0.20		21.0	0.0079	0.0079
2300		0.33	0.18	0.0		0.55			0.23		22.0	0.0084	0.0084
2400		0.85	0.78	0.0		1.01			0.71		30.0	0.0089	0.0089
AUG. 31													
0000		0.85	0.78	0.0		1.01			0.71		30.0	0.0089	0.0089
0030		1.06	0.79	0.0		1.49			0.82		39.0	0.0094	0.0094
0100		1.85	0.88	0.50		1.98			1.22		48.0	0.0099	0.0099
0130		2.12	1.13	1.60		2.59			1.64		152.0	0.0116	0.0116
0200		2.27	1.38	1.86		3.25			1.91		257.0	0.0144	0.0144
0230		2.38	1.58	2.30		3.31			2.10		422.0	0.0191	0.0191
0300		3.15	2.58	2.60		3.39			2.83		588.0	0.0257	0.0257
0330		3.46	2.96	2.64		3.49			3.11		814.0	0.0348	0.0348
0400		3.63	2.99	2.86		3.61			3.22		1040.0	0.0463	0.0463
0430		3.78	3.06	3.03		3.73			3.34		1270.0	0.0605	0.0605
0500		3.86	3.16	3.28		3.87			3.46		1510.0	0.0773	0.0773
0530		4.04	3.48	3.42		3.93			3.68		1790.0	0.0972	0.0972
0600		4.16	3.62	3.56		4.01			3.81		2080.0	0.1204	0.1204
0630		4.41	3.76	3.61		4.02			3.96		2350.0	0.1465	0.1465
0700		5.08	3.86	3.66		4.08			4.22		2630.0	0.1758	0.1758
0730		5.56	3.96	3.74		4.11			4.42		2880.0	0.2079	0.2079
0800		5.70	4.03	3.82		4.17			4.51		3140.0	0.2428	0.2428
0830		5.76	4.09	3.86		4.21			4.57		3250.0	0.2790	0.2790
0900		5.82	4.13	3.88		4.27			4.61		3360.0	0.3164	0.3164
0930		5.90	4.16	3.89		4.43			4.67		3400.0	0.3542	0.3542
1000		6.00	4.22	3.96		4.61			4.75		3440.0	0.3925	0.3925
1030		6.42	4.40	4.06		5.24			5.04		3540.0	0.4319	0.4319
1100		7.00	4.53	4.30		5.90			5.37		3640.0	0.4725	0.4725
1130		7.42	4.93	5.22		5.92			5.82		4010.0	0.5171	0.5171
1200		7.65	5.78	5.40		5.98			6.30		4390.0	0.5660	0.5660

STA. NO. 08076000		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
GREENS BAYOU NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 6, 1981										DISCHARGE: ACCUM.	
DATE & TIME		G A G E N U M B E R										PRECIP. IN.	CFS IN.
		5780	5900	6000	20R								
AUG. 31													
1230		7.72	5.90	5.48	6.14						6.41	4710.0	0.6184
1300		7.85	5.94	5.52	6.32						6.49	5030.0	0.6744
1330		8.17	6.00	5.55	6.45						6.63	5240.0	0.7327
1400		8.27	6.54	5.56	6.63						6.92	5460.0	0.7935
1430		8.29	6.74	5.58	6.63						7.02	5550.0	0.8553
1500		8.30	6.82	5.68	6.69						7.08	5640.0	0.9181
1530		8.32	6.83	5.70	6.69						7.09	5710.0	0.9816
1600		8.32	6.84	5.70	6.73						7.10	5780.0	1.0460
1630		8.32	6.84	5.72	6.73						7.10	5800.0	1.1106
1700		8.35	6.84	5.74	6.75						7.12	5820.0	1.1753
1730		8.35	6.84	5.74	6.79						7.12	5830.0	1.2402
1800		8.40	6.84	5.74	6.85						7.14	5840.0	1.3053
1830		8.85	6.90	5.74	6.88						7.31	5780.0	1.3696
1900		8.90	7.13	5.78	6.94						7.44	5720.0	1.4333
1930		8.92	7.88	5.82	6.94						7.79	5670.0	1.4964
2000		8.93	7.96	5.82	6.99						7.83	5620.0	1.5590
2030		8.93	8.10	5.82	6.99						7.90	5620.0	1.6213
2100		8.93	8.14	5.82	6.99						7.91	5590.0	1.8391
2400		8.93	8.14	5.82	6.99						7.91	5160.0	2.0689
SEP. 1													
0000		8.93	8.14	5.82	6.99						7.91	5160.0	2.0689
0100		8.93	8.14	5.82	7.00						7.91	4960.0	2.1793
0200		8.93	8.14	5.82	7.05						7.92	4740.0	2.2848
0300		8.93	8.16	5.88	7.05						7.94	4460.0	2.3841
0400		8.94	8.16	5.89	7.05						7.94	4190.0	2.4774
0500		8.94	8.17	5.89	7.05						7.95	3850.0	2.5631
0600		8.94	8.17	5.89	7.05						7.95	3510.0	2.6413
0700		8.94	8.18	5.89	7.05						7.95	3220.0	2.7130
0800		8.94	8.24	5.89	7.05						7.98	2940.0	2.8439
1100		8.94	8.24	5.89	7.05						7.98	2250.0	2.9441
1200		8.94	8.24	5.89	7.05						7.98	2100.0	3.0376
1500		8.94	8.24	5.89	7.05						7.98	1700.0	3.1511
1800		8.94	8.24	5.89	7.05						7.98	1400.0	3.2446
2100		8.94	8.24	5.89	7.05						7.98	1140.0	3.3208
2400		8.94	8.24	5.89	7.05						7.98	931.0	3.3933
SEP. 2													
0000		8.94	8.24	5.89	7.05						7.98	931.0	3.3933
0400		8.94	8.24	5.89	7.05						7.98	718.0	3.4413
0600		8.94	8.24	5.89	7.05						7.98	639.0	3.4839
1000		8.94	8.24	5.89	7.05						7.98	509.0	3.5123
1100		8.94	8.24	5.89	7.95						8.07	479.0	3.5229

STA. NO.	08076000	STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
		GREENS BAYOU NEAR HOUSTON, TEX.										DISCHARGE!	ACCUM.
DATE & TIME		STORM OF AUG. 30 TO SEP. 6, 1981										IN	RUNOFF
		5780	5900	6000	6200	6400	6600	6800	7000	7200	7400	CFS	IN.
SEP. 2													
1200		9.04	8.42	5.89	7.96							460.0	3.5332
1300		9.04	8.44	5.89	7.96							472.0	3.5437
1400		9.04	8.44	5.89	7.96							497.0	3.5548
1500		9.04	8.44	5.96	8.78							554.0	3.5671
1600		9.04	8.55	6.24	8.78							620.0	3.5878
1800		9.04	8.55	6.24	8.78							675.0	3.6103
1900		9.04	8.55	6.24	8.78							688.0	3.6563
2400		9.04	8.55	6.24	8.78							592.0	3.7024
SEP. 3													
0000		9.04	8.55	6.24	8.78							592.0	3.7024
0200		9.04	8.55	6.24	8.78							523.0	3.7199
0300		9.04	8.55	6.24	8.82							488.0	3.7308
0400		9.04	8.55	6.24	9.13							458.0	3.7409
0500		9.04	8.55	6.24	9.13							425.0	3.7504
0600		9.04	8.66	6.24	9.13							400.0	3.7593
0700		9.04	8.66	6.24	9.13							387.0	3.7679
0800		9.04	8.67	6.24	9.13							404.0	3.7814
1000		9.04	8.67	6.24	9.13							442.0	3.8011
1200		9.04	8.67	6.24	9.13							432.0	3.8155
1300		9.04	8.67	6.24	9.13							410.0	3.8247
1400		9.04	8.67	6.24	9.15							386.0	3.8333
1500		9.04	9.05	6.24	9.19							359.0	3.8412
1600		9.04	9.05	6.24	9.19							338.0	3.8488
1700		9.04	9.05	6.24	9.19							360.0	3.8568
1800		9.04	9.05	6.26	9.19							393.0	3.8699
2000		9.04	9.05	6.26	9.19							404.0	3.8834
2100		9.07	9.19	6.26	9.19							392.0	3.9009
2400		9.07	9.19	6.26	9.19							362.0	3.9371
SEP. 4													
0000		9.07	9.19	6.26	9.19							362.0	3.9371
0600		9.07	9.19	6.26	9.19							248.0	3.9703
1200		9.08	9.19	6.26	9.19							165.0	3.9923
1800		9.08	9.19	6.26	9.19							124.0	4.0089
2400		9.08	9.19	6.26	9.19							95.0	4.0279
SEP. 5													
0000		9.08	9.19	6.26	9.19							95.0	4.0279
1200		9.08	9.19	6.26	9.19							63.0	4.0447
2400		9.08	9.19	6.26	9.19							50.0	4.0581
SEP. 6													
0000		9.08	9.19	6.26	9.19							50.0	4.0581
1200		9.08	9.19	6.26	9.19							38.0	4.0682
2400		9.09	9.19	6.26	9.19							36.0	4.0730

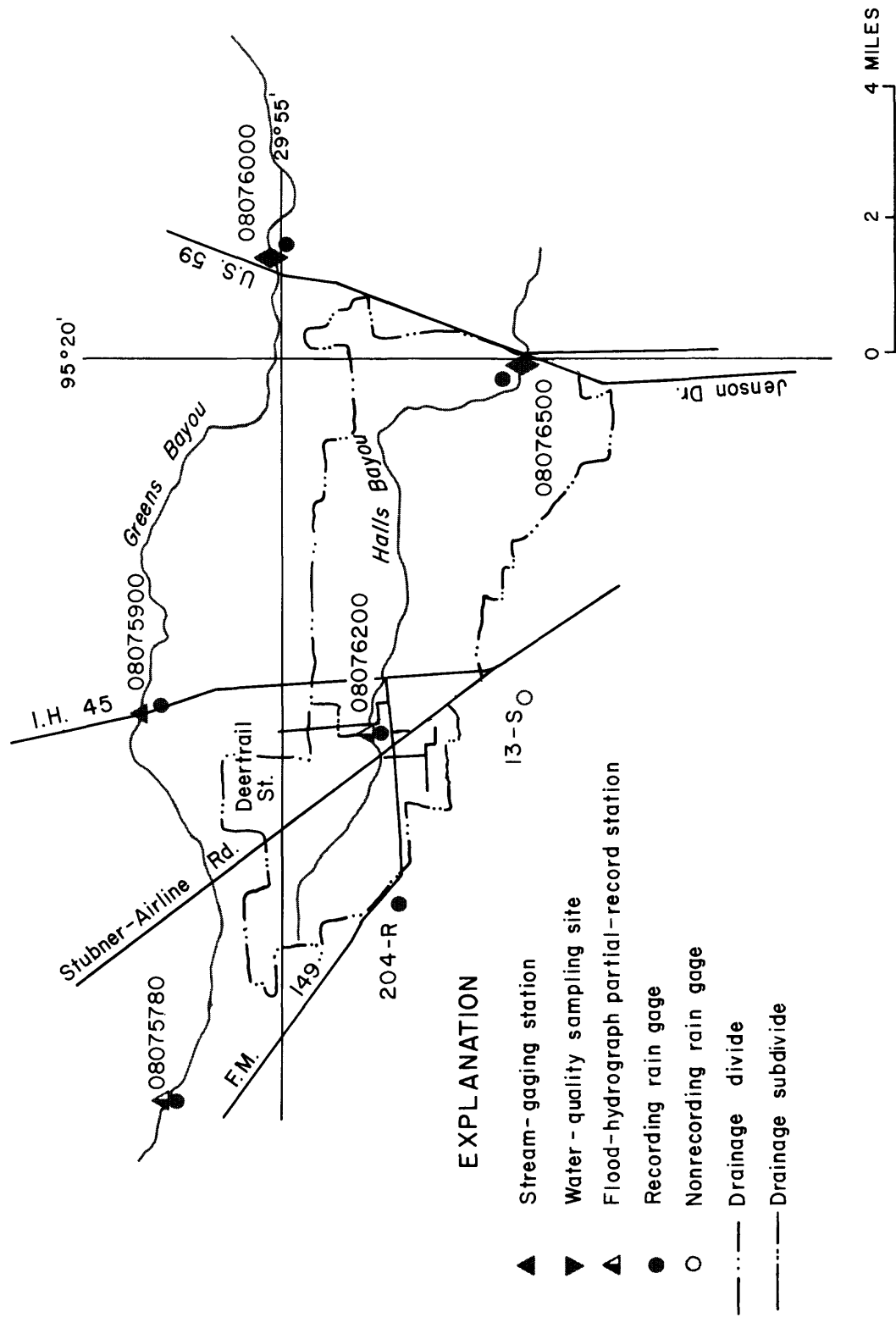


## HALLS BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Halls Bayou drainage basin are shown in figure 20.

Weighted-mean rainfall for the drainage basin, based on five rain gages above the Jensen Drive station for the 1981 water year was 47.97 inches, or 0.22 inches less than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of April 23-24, May 9-10, and Aug. 30-Sept. 3 were selected for analysis at station 08076200, Halls Bayou at Deertrail Street near Houston. The storms of May 3-7 and Aug. 30-Sept. 5 were selected for analysis at station 08076500, Halls Bayou at Houston (Jensen Drive).



Base from Texas Department of Highways  
and Public Transportation General Highway Map

Figure 20.- Locations of data-collection sites in the Halls Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY-TEXAS DISTRICT

## ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 18.--Storm rainfall-runoff data, 1981 Water Year, Halls Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft <sup>3</sup> /s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Halls Bayou at Deertrail Street, Houston, TX. (Drainage area -- 8.99 mi <sup>2</sup> )								
April 23-24, 1981	1.3	3.11	1.44	2.88	3.12	0.76	0.24	557
May 9-10, 1981	0.8	2.38	0.84	1.25	2.48	1.07	0.45	635
Aug. 30-Sept. 3, 1981	19.8	8.83	0.90	1.24	1.57	3.95	0.45	1,020 *

Halls Bayou at Houston, TX.  
(Drainage area -- 27.6 mi<sup>2</sup>)

May 3-4, 1981	13.0	4.59	0.42	0.84	1.35	0.50	1,960
May 4-7, 1981	88.0	0.75	.20	.40	.80		1,010
Aug. 30-Sept. 5, 1981	15.5	7.52	0.62	1.23	1.60	0.42	2,040 *

\* - Annual peak discharge for 1981 Water Year.

08076200 HALLS BAYOU AT DEERTRAIL STREET NEAR HOUSTON, TEX.  
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°54'07", long 95°25'21", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on Deertrail Street, 0.6 mile west of U.S. Highway 75, 3.0 miles north of city limits of Houston, and 7.7 miles upstream from station 08076500, Halls Bayou at Houston.

DRAINAGE AREA.--8.99 mi<sup>2</sup>. For period Oct. 1, 1973 to Sept. 30, 1977, 8.69 mi<sup>2</sup>. Prior to Oct. 1, 1973, 6.31 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 1964 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Prior to April 27, 1978 a flood-hydrograph and rainfall recorder (type SR) and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929, 1961 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,180 ft<sup>3</sup>/s, Mar. 20, 1972; maximum gage height, 86.07 ft, April 18, 1976. Minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 400 ft<sup>3</sup>/s and maximum (\*):

DATE	TIME	DISCHARGE (ft <sup>3</sup> /s)	ELEVATION (ft)
Apr. 23	1115	557	83.04
May 3	2115	601	83.31
May 9	1930	635	83.51
Jun. 5	0845	479	82.53
Jun. 11	0315	828	84.55
Aug. 31	1345	*1,020	85.43

Minimum discharge not determined.

STA. NO. 08076200		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
HALLS BAYOU AT DEERTRAIL ST. NEAR HOUSTON, TEX.		STORM OF APR. 23-24, 1981										DISCHARGE: IN	
DATE & TIME		G A G E N U M B E R										ACCUM. WEIGHTED PRECIP. IN.	
		6200	204R									CFS	IN.
APR. 23													
0000		0.0	0.0								0.0	1.2	0.0006
0600		0.0	0.0								0.0	1.2	0.0015
0845		0.0	0.0								0.0	1.2	0.0018
0900		0.0	0.10								0.04	1.2	0.0019
0915		0.12	0.30								0.19	1.5	0.0020
0930		0.12	1.70								0.75	25.0	0.0030
0945		0.12	2.14								0.93	144.0	0.0092
1000		0.24	2.15								1.00	280.0	0.0213
1015		1.68	2.16								1.87	434.0	0.0400
1030		3.12	2.18								2.74	500.0	0.0615
1045		3.24	2.20								2.82	525.0	0.0842
1100		3.24	2.22								2.83	545.0	0.1077
1115		3.24	2.22								2.83	557.0	0.1317
1130		3.24	2.22								2.83	557.0	0.1557
1145		3.24	2.23								2.84	544.0	0.1791
1200		3.24	2.24								2.84	527.0	0.2245
1245		3.24	2.24								2.84	440.0	0.2624
1300		3.24	2.28								2.86	405.0	0.2799
1315		3.36	2.28								2.93	385.0	0.2965
1330		3.36	2.29								2.93	360.0	0.3120
1345		3.36	2.32								2.94	345.0	0.3343
1415		3.36	2.32								2.94	305.0	0.3540
1430		3.36	2.40								2.98	285.0	0.3663
1445		3.36	2.48								3.01	275.0	0.3781
1500		3.36	2.52								3.02	265.0	0.3896
1515		3.36	2.54								3.03	255.0	0.4006
1530		3.48	2.55								3.11	245.0	0.4322
1645		3.48	2.55								3.11	199.0	0.4751
1800		3.48	2.55								3.11	172.0	0.5233
2000		3.48	2.55								3.11	140.0	0.5685
2145		3.48	2.55								3.11	114.0	0.6029
2330		3.48	2.55								3.11	93.0	0.6209
2400		3.48	2.55								3.11	88.0	0.6399
APR. 24													
0000		3.48	2.55								3.11	88.0	0.6399
0200		3.48	2.55								3.11	69.0	0.6756
0600		3.48	2.55								3.11	42.0	0.7118
1200		3.48	2.55								3.11	23.0	0.7356
1800		3.48	2.55								3.11	16.0	0.7521
2400		3.48	2.55								3.11	10.0	0.7573

STA. NO. 08076200		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HALLS BAYOU AT DEERTRAIL ST. NEAR HOUSTON, TEX.		STORM OF MAY 9 -10, 1981							
DATE & TIME	6200	204R	G A G E N U M B E R				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
MAY 9									
0000	0.0	0.0					0.0	0.0	0.0
0600	0.0	0.0					0.0	5.0	0.0052
1200	0.0	0.0					0.0	5.0	0.0100
1715	0.0	0.0					0.0	5.0	0.0124
1730	0.84	0.70					0.78	48.0	0.0145
1745	1.20	1.25					1.22	136.0	0.0203
1800	1.56	1.92					1.70	252.0	0.0312
1815	2.04	2.48					2.22	377.0	0.0474
1830	2.16	2.70					2.38	482.0	0.0786
1900	2.16	2.70					2.38	608.0	0.1310
1930	2.16	2.70					2.38	635.0	0.3088
2215	2.16	2.70					2.38	516.0	0.5090
2400	2.16	2.70					2.38	415.0	0.6252
MAY 10									
0000	2.16	2.70					2.38	415.0	0.6252
0130	2.16	2.70					2.38	330.0	0.7105
0300	2.16	2.70					2.38	260.0	0.7889
0500	2.16	2.70					2.38	203.0	0.8414
0600	2.16	2.70					2.38	175.0	0.8942
0830	2.16	2.70					2.38	135.0	0.9466
1030	2.16	2.70					2.38	104.0	0.9780
1200	2.16	2.70					2.38	80.0	1.0021
1400	2.16	2.70					2.38	65.0	1.0357
1800	2.16	2.70					2.38	35.0	1.0659
2400	2.16	2.70					2.38	15.0	1.0736

STA. NO. 08076200		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR			
HALLS BAYOU AT DEERTRAIL ST. NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981				DISCHARGE! ACCUM.			
DATE & TIME		G A G E		N U M B E R		WEIGHTED PRECIP.		IN	
		5900	204R			IN.	CFS	IN.	
=====									
AUG. 30									
0000		0.0	0.0			0.0	2.5	0.0013	
0600		0.0	0.0			0.0	2.5	0.0039	
1200		0.0	0.0			0.0	2.5	0.0053	
1230		0.0	0.0			0.0	2.5	0.0055	
1300		0.0	0.18			0.16	2.6	0.0057	
1330		0.0	0.24			0.22	3.0	0.0060	
1400		0.08	0.24			0.22	3.0	0.0071	
1800		0.08	0.24			0.22	3.0	0.0086	
1930		0.08	0.24			0.22	3.0	0.0091	
2000		0.08	0.29			0.27	3.0	0.0093	
2030		0.08	0.33			0.30	4.0	0.0097	
2100		0.10	0.44			0.41	5.0	0.0101	
2130		0.13	0.44			0.41	5.0	0.0105	
2200		0.18	0.44			0.41	5.0	0.0110	
2230		0.18	0.68			0.63	10.0	0.0118	
2300		0.18	0.90			0.83	30.0	0.0144	
2330		0.72	0.92			0.90	51.0	0.0188	
2400		0.78	1.34			1.28	57.0	0.0225	
AUG. 31									
0000		0.78	1.34			1.28	57.0	0.0225	
0015		0.78	1.48			1.41	55.0	0.0249	
0030		0.79	1.68			1.59	54.0	0.0272	
0045		0.86	1.76			1.67	58.0	0.0297	
0100		0.88	1.84			1.74	69.0	0.0327	
0115		0.98	1.94			1.84	81.0	0.0362	
0130		1.13	1.98			1.89	96.0	0.0403	
0145		1.18	2.08			1.99	114.0	0.0452	
0200		1.38	2.23			2.14	133.0	0.0509	
0215		1.50	2.99			2.84	149.0	0.0574	
0230		1.58	3.46			3.27	201.0	0.0660	
0245		1.68	3.58			3.39	300.0	0.0790	
0300		2.58	3.59			3.49	379.0	0.0953	
0315		2.92	3.60			3.53	443.0	0.1144	
0330		2.96	3.68			3.61	486.0	0.1353	
0345		2.98	3.72			3.65	515.0	0.1575	
0400		2.99	3.76			3.68	532.0	0.1804	
0415		3.02	3.78			3.70	541.0	0.2037	
0430		3.06	3.86			3.78	549.0	0.2274	
0445		3.13	4.00			3.91	557.0	0.2514	
0500		3.16	4.12			4.02	578.0	0.2763	

STA. NO. 08076200		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
HALLS BAYOU AT DEERTRAIL ST. NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981										DISCHARGE! ACCUM.	
DATE & TIME		G A G E N U M B E R										WEIGHTED IN RUNOFF	
		5900	204R									CFS	IN.
AUG. 31													
0515		3.28	4.17									603.0	0.3023
0530		3.48	4.28									621.0	0.3291
0545		3.54	4.37									638.0	0.3566
0600		3.62	4.46									656.0	0.3848
0615		3.72	4.48									666.0	0.4135
0630		3.76	4.59									670.0	0.4424
0645		3.82	4.79									670.0	0.4713
0700		3.86	4.96									678.0	0.5005
0715		3.89	5.01									682.0	0.5299
0730		3.96	5.06									684.0	0.5593
0745		4.00	5.10									684.0	0.5888
0800		4.03	5.13									680.0	0.6181
0815		4.06	5.15									678.0	0.6473
0830		4.09	5.16									673.0	0.6763
0845		4.11	5.17									666.0	0.7050
0900		4.13	5.21									657.0	0.7333
0915		4.15	5.26									650.0	0.7614
0930		4.16	5.30									642.0	0.7890
0945		4.18	5.48									636.0	0.8164
1000		4.22	5.62									647.0	0.8443
1015		4.28	5.67									666.0	0.8730
1030		4.40	5.86									680.0	0.9023
1045		4.48	6.10									720.0	0.9333
1100		4.53	6.84									763.0	0.9662
1115		4.68	7.24									820.0	1.0016
1130		4.93	7.36									893.0	1.0400
1145		5.48	7.44									934.0	1.0803
1200		5.78	7.44									962.0	1.1217
1215		5.86	7.45									976.0	1.1638
1230		5.90	7.46									988.0	1.2064
1245		5.93	7.48									995.0	1.2492
1300		5.94	7.58									1000.0	1.2923
1315		5.96	7.64									1010.0	1.3359
1330		6.00	7.65									1010.0	1.3794
1345		6.43	7.66									1020.0	1.4233
1400		6.54	7.67									1010.0	1.4669
1415		6.58	7.72									1010.0	1.5104
1430		6.74	7.72									1000.0	1.5535
1445		6.79	7.72									995.0	1.5963



STA. NO. 08076200		STORM RAINFALL AND RUNOFF RECORD				1981 WATER YEAR	
HALLS BAYOU AT DEERTRAIL ST. NEAR HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 3, 1981				DISCHARGE! ACCUM.	
DATE & TIME		G A G E N U M B E R				IN IN. CFS IN.	
		5700	204R				
AUG. 31							
1500		6.82	7.74			986.0	1.6388
1515		6.82	7.76			981.0	1.6811
1530		6.83	7.82			973.0	1.7230
1545		6.83	7.84			966.0	1.7647
1600		6.84	7.84			957.0	1.9502
1800		6.84	7.84			862.0	2.1174
1815		6.86	7.94			846.0	2.1538
1830		6.90	8.02			842.0	2.1901
1845		6.96	8.16			836.0	2.2261
1900		7.13	8.19			830.0	2.2619
1915		7.28	8.19			820.0	2.2972
1930		7.88	8.19			810.0	2.3322
1945		7.94	8.19			806.0	2.3669
2000		7.96	8.19			802.0	2.4014
2015		8.08	8.19			792.0	2.4356
2030		8.10	8.19			781.0	2.4692
2045		8.12	8.19			771.0	2.5025
2100		8.14	8.19			760.0	2.6989
2345		8.14	8.19			611.0	2.8569
2400		8.14	8.19			599.0	3.0247
SEP. 1							
0000		8.14	8.19			599.0	3.0247
0300		8.16	8.19			424.0	3.2440
0600		8.17	8.19			285.0	3.3422
0700		8.18	8.19			264.0	3.3877
0800		8.24	8.19			243.0	3.4924
1200		8.24	8.19			160.0	3.6303
1800		8.24	8.19			100.0	3.7337
2400		8.24	8.19			70.0	3.8061
SEP. 2							
0000		8.24	8.19			70.0	3.8061
0600		8.24	8.19			49.0	3.8568
1200		8.42	8.79			30.0	3.8878
1800		8.55	8.79			21.0	3.9095
2400		8.55	8.79			12.0	3.9220
SEP. 3							
0000		8.55	8.79			12.0	3.9220
0600		8.66	8.79			11.0	3.9333
1200		8.67	8.79			9.0	3.9426
1800		9.05	8.79			7.5	3.9504
2400		9.19	8.79			6.0	3.9535

# SAN JACINTO RIVER BASIN

08076500 HALLS BAYOU AT HOUSTON, TX

LOCATION.--Lat 29°51'42", long 95°20'05", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of bridge on Jensen Drive in northeast section of Houston and 11.0 mi (17.7 km) upstream from mouth.

DRAINAGE AREA.--27.6 mi<sup>2</sup> (71.5 km<sup>2</sup>). Oct. 1, 1973, to Sept. 30, 1977, 28.3 mi<sup>2</sup> (73.3 km<sup>2</sup>). Prior to Oct. 1, 1973, 24.7 mi<sup>2</sup> (64.0 km<sup>2</sup>). Changes were result of drainage ditch extensions or relocations.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1732: Drainage area. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft (0.201 m) below National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair except those for period October through December and July, which are poor. No known diversion above station. Low flow is sustained by sewage effluent from Houston suburbs.

AVERAGE DISCHARGE.--29 years, 27.7 ft<sup>3</sup>/s (0.784 m<sup>3</sup>/s), 20,070 acre-ft/yr (24.7 hm<sup>3</sup>).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,780 ft<sup>3</sup>/s (107 m<sup>3</sup>/s) Mar. 21, 1972, gage height, 60.70 ft (18.501 m); maximum gage height, 60.75 ft (18.517 m) June 13, 1973; no flow at times prior to 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft<sup>3</sup>/s (34.0 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Discharge (m <sup>3</sup> /s)	Gage height (ft)	Gage height (m)
May 4	0030	1,960	55.5	58.12	17.715
June 5	1230	1,320	37.4	57.28	17.459
Aug. 31	1500	*2,040	57.8	59.82	18.233

Minimum daily discharge, 6.1 ft<sup>3</sup>/s (0.17 m<sup>3</sup>/s) Oct. 31.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	7.5	7.8	7.2	18	8.0	7.8	8.5	15	45	9.6	615
2	12	9.9	8.1	6.7	11	8.5	7.5	10	40	30	9.7	150
3	10	8.4	7.0	8.5	8.8	7.6	8.1	634	90	20	9.2	88
4	9.0	8.1	7.0	6.9	12	80	7.6	1000	29	15	9.2	65
5	8.0	7.5	6.9	7.1	43	25	8.1	286	723	60	20	22
6	7.5	7.3	6.8	8.6	69	10	7.8	51	145	40	12	17
7	7.0	7.1	6.8	8.7	15	8.4	7.7	23	56	200	9.0	13
8	6.8	7.0	8.5	7.5	12	8.6	7.4	16	32	100	8.0	11
9	6.7	7.6	94	8.2	11	9.2	7.7	198	18	50	7.5	11
10	6.6	7.0	17	7.6	19	8.6	7.4	399	17	150	7.0	11
11	6.6	6.8	12	7.9	12	8.5	6.8	66	512	60	6.8	10
12	6.6	6.7	10	8.5	11	8.6	7.5	28	292	32	14	9.8
13	9.0	6.6	9.0	8.4	9.8	11	7.4	18	269	37	18	10
14	7.0	7.0	8.0	9.8	9.3	10	6.9	23	85	50	13	13
15	12	7.3	7.5	11	9.6	9.6	6.5	17	31	25	10	23
16	205	8.1	7.0	10	10	9.5	6.4	16	23	20	9.2	13
17	38	20	7.0	9.1	9.6	8.6	6.9	13	22	28	9.0	9.4
18	128	15	6.5	9.2	10	8.4	6.5	12	18	42	8.8	8.7
19	253	8.1	9.0	79	9.5	7.6	6.8	11	15	18	22	8.7
20	38	7.8	6.9	118	9.1	7.4	6.4	10	12	24	11	9.1
21	11	7.0	7.1	17	9.0	10	6.6	10	11	15	9.2	9.8
22	10	31	7.3	10	19	9.0	6.4	9.9	10	12	8.7	9.6
23	8.4	25	7.4	11	11	8.6	296	9.5	9.5	11	9.0	9.3
24	7.9	13	7.4	9.4	9.4	7.9	88	9.4	10	12	9.6	9.0
25	9.2	14	7.2	11	26	7.6	14	11	12	12	12	9.0
26	8.7	25	9.2	11	22	7.5	10	10	12	13	9.3	8.9
27	31	28	7.1	15	9.7	7.8	9.8	9.3	11	24	9.0	9.2
28	38	14	7.6	12	8.5	7.3	8.9	9.5	10	21	9.0	9.6
29	6.5	11	7.7	10	---	9.6	8.7	9.5	10	14	8.7	8.9
30	8.4	9.0	7.6	9.2	---	8.7	8.7	16	80	12	9.3	8.3
31	6.1	---	6.8	8.5	---	7.7	---	13	---	10	1380	---
TOTAL	948.0	347.8	335.2	472.0	433.3	354.8	602.3	2956.6	2619.5	1202	1696.8	1209.3
MEAN	30.6	11.6	10.8	15.2	15.5	11.4	20.1	95.4	87.3	38.8	54.7	40.3
MAX	253	31	94	118	69	80	296	1000	723	200	1380	615
MIN	6.1	6.6	6.5	6.7	8.5	7.3	6.4	8.5	9.5	10	6.8	8.3
AC-FT	1880	690	665	936	859	704	1190	5860	5200	2380	3370	2400
(††)	3.70	1.95	1.31	2.34	2.25	1.21	2.61	8.03	8.71	5.54	8.83	1.49

CAL YR 1980 TOTAL 11042.7 MEAN 30.2 MAX 994 MIN 6.1 AC-FT 21900 †† 34.85  
WTR YR 1981 TOTAL 13177.6 MEAN 36.1 MAX 1380 MIN 6.1 AC-FT 26140 †† 47.97

†† Weighted-mean rainfall, in inches, based on five rain gages.

## SAN JACINTO RIVER BASIN

08076500 HALLS BAYOU AT HOUSTON, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB 23...	1135	10	590	8.4	17.0	30	21	16.2	164	14	1400000	130000
JUN 02...	1230	47	298	7.7	29.5	80	81	4.2	55	12	2000000	960000
11...	1125	742	130	7.8	23.0	80	150	5.3	61	6.6	290000	100000
AUG 25...	0950	10	740	7.7	28.0	20	5.5	7.6	96	13	1600000	840000
31...	0925	1440	106	7.9	24.5	50	25	5.4	64	5.8	420000	120000
31...	1500	2040	105	7.8	24.0	60	72	4.5	53	6.0	440000	100000
SEP 01...	1150	515	142	7.3	25.5	80	69	3.9	48	4.5	860000	210000
02...	1125	102	220	7.1	28.0	100	58	4.4	56	5.7	840000	260000

DATE	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEB 23...	1700	--	--	--	--	--	--	--	--	--	--	--
JUN 02...	78000	73	0	23	3.7	27	1.4	4.2	90	1.8	27	.2
11...	72000	46	0	15	2.0	6.8	.4	2.1	49	2.9	5.9	.1
AUG 25...	14000	150	0	48	8.1	79	2.9	8.0	220	14	65	.2
31...	120000	33	0	11	1.4	5.3	.4	2.8	38	5.0	5.0	.1
31...	120000	42	1	14	1.6	5.3	.4	3.1	41	5.0	6.6	.1
SEP 01...	36000	57	0	19	2.4	7.6	.5	3.6	57	5.0	7.8	.1
02...	10000	78	1	25	3.7	18	.9	4.1	77	12	29	.1

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
FEB 23...	--	--	32	8	.66	.120	.78	4.00	2.9	6.90	4.30	21
JUN 02...	9.8	151	43	27	.30	.130	.43	2.90	1.3	4.20	2.60	11
11...	6.0	71	458	50	.11	.040	.15	.320	1.4	1.70	.550	14
AUG 25...	25	380	128	13	.10	.090	.19	<.090	--	15.0	7.80	8.2
31...	3.5	57	256	19	.34	.040	.38	.450	1.8	2.20	.670	15
31...	4.3	65	156	4	.20	.030	.23	.270	1.1	1.40	.590	13
SEP 01...	6.8	86	362	9	.12	.030	.15	.390	1.4	1.80	.640	14
02...	11	149	95	5	.13	.060	.19	.990	1.6	2.60	.920	19

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
JUN 02...	1230	13	300	<1	0	<10	40
11...	1125	5	200	<1	10	<10	110
AUG 25...	0950	45	180	<1	0	<10	39
31...	0925	14	49	<1	0	2	55

SAN JACINTO RIVER BASIN

08076500 HALLS BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN						
02...	<10	6	.2	0	0	4
11...	13	30	.1	0	0	7
AUG						
25...	<10	300	.1	1	0	29
31...	2	1	.1	0	0	<3

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
JUN									
02...	1230	.00	.00	.00	.10	.00	.00	.00	.65
11...	1125	.00	.00	.00	.10	.00	.00	.00	.47
AUG									
31...	0925	.00	.00	.00	.10	.00	.00	.00	.35

DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
JUN									
02...	.01	.00	.00	.00	.00	.01	.02	.21	.00
11...	.00	.00	.00	.00	.00	.01	.00	.04	.00
AUG									
31...	.01	.00	.00	.00	.00	.01	.01	.13	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN									
02...	.00	.00	.00	.00	0	.00	.08	.11	.00
11...	.00	.00	.00	.00	0	.00	.00	.00	.00
AUG									
31...	.00	.00	.00	.00	0	.00	.14	.03	.00

STA. NO. 08076500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
HALLS BAYOU AT HOUSTON, TEX.		STORM OF MAY 3 - 7, 1981										DISCHARGE	
DATE & TIME		G A G E N U M B E R										IN	
		6000	6200	6500								PRECIP	IN
MAY 3													
0000		0.0	0.0	0.0								0.0	9.9
0600		0.0	0.0	0.0								0.0	9.4
0700		0.05	0.0	0.24								0.10	10.0
0730		0.10	0.12	0.24								0.17	10.0
0800		0.28	0.24	0.36								0.29	11.0
0830		0.40	0.36	0.48								0.41	14.0
0900		0.48	0.60	0.72								0.64	17.0
0930		0.72	0.60	0.84								0.70	28.0
1000		0.85	0.96	0.96								0.95	38.0
1030		0.95	1.44	1.20								1.32	53.0
1100		1.00	1.68	1.32								1.50	68.0
1130		1.20	1.92	1.44								1.69	139.0
1200		1.70	2.28	2.04								2.15	211.0
1230		2.07	2.52	2.16								2.35	363.0
1300		2.32	2.52	2.28								2.41	514.0
1330		2.32	2.76	2.28								2.55	659.0
1400		2.32	2.76	2.40								2.59	804.0
1430		2.35	2.76	2.40								2.60	952.0
1500		2.35	2.88	2.40								2.66	1100.0
1530		2.35	3.00	2.40								2.73	1170.0
1600		2.35	3.12	2.40								2.79	1250.0
1630		2.40	3.24	2.40								2.86	1260.0
1700		2.42	3.24	2.40								2.86	1270.0
1730		2.58	3.24	2.40								2.87	1240.0
1800		2.80	3.24	2.88								3.07	1220.0
1830		3.60	3.24	3.12								3.21	1240.0
1900		4.15	3.24	3.24								3.29	1270.0
1930		4.40	3.24	3.60								3.44	1330.0
2000		4.50	3.24	3.72								3.49	1390.0
2030		4.55	3.60	3.72								3.70	1430.0
2100		4.55	4.44	3.72								4.16	1480.0
2130		4.70	4.44	3.96								4.26	1570.0
2200		4.95	4.56	4.08								4.39	1670.0
2230		5.00	4.68	4.08								4.46	1760.0
2300		5.00	4.68	4.08								4.46	1850.0
2330		5.05	4.80	4.08								4.52	1900.0
2400		5.05	4.80	4.08								4.52	1950.0
MAY 4													
0000		5.05	4.80	4.08								4.52	1950.0
0030		5.05	4.92	4.08								4.59	1960.0

STA. NO. 08076500		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
HALLS BAYOU AT HOUSTON, TEX.		STORM OF MAY 3 - 7, 1981										DISCHARGE	
DATE & TIME		G A G E N U M B E R										ACCUM. WEIGHTED PRECIP. IN.	IN
		6000	6200	6500									
MAY 4													
0100		5.05	4.92	4.08								4.59	1940.0
0330		5.05	4.92	4.08								4.59	1570.0
0530		5.05	4.92	4.08								4.59	1210.0
0600		5.05	4.92	4.08								4.59	1130.0
0700		5.05	4.92	4.08								4.59	972.0
0730		5.07	4.92	4.20								4.64	912.0
0800		5.15	4.92	4.56								4.79	852.0
0830		5.30	5.04	4.56								4.86	818.0
0900		5.33	5.04	4.56								4.86	784.0
0930		5.33	5.16	4.56								4.93	759.0
1200		5.33	5.16	4.56								4.93	644.0
1230		5.33	5.16	4.56								4.93	620.0
1300		5.43	5.16	4.56								4.93	597.0
1400		5.43	5.16	4.56								4.93	552.0
1500		5.55	5.16	4.56								4.94	550.0
1530		5.55	5.16	4.56								4.94	594.0
1600		5.95	5.28	4.68								5.07	639.0
1630		6.35	5.28	4.80								5.14	688.0
1800		6.35	5.28	4.80								5.14	856.0
1900		6.35	5.40	4.80								5.21	968.0
2000		6.35	5.40	4.80								5.21	1010.0
2200		6.35	5.40	4.80								5.21	924.0
2230		6.40	5.40	4.80								5.21	885.0
2300		6.42	5.40	4.80								5.21	846.0
2400		6.42	5.40	4.80								5.21	769.0
MAY 5													
0000		6.42	5.40	4.80								5.21	769.0
0400		6.42	5.40	4.80								5.21	498.0
0800		6.42	5.40	4.80								5.21	319.0
1100		6.42	5.40	4.80								5.21	240.0
1200		6.42	5.40	4.80								5.21	221.0
1800		6.42	5.40	4.80								5.21	134.0
2400		6.42	5.40	4.80								5.21	88.0
MAY 6													
0000		6.42	5.40	4.80								5.21	88.0
0600		6.42	5.40	4.80								5.21	64.0
1200		6.42	5.40	4.80								5.21	47.0
2400		6.42	5.40	4.80								5.21	31.0
MAY 7													
0000		6.42	5.40	4.80								5.21	31.0
1200		6.42	5.40	4.80								5.21	21.0
2400		6.42	5.64	4.80								5.34	18.0

STA. NO. 08076500		STORM RAINFALL AND RUNOFF RECORD					1981 WATER YEAR		
HALLS BAYOU AT HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 5, 1981					ACCUM.	DISCHARGE	ACCUM.
DATE & TIME	6000	204R	G A G E			N U M B E R	WEIGHTED PRECIP.	I N	RUNOFF
							I N.	CFS	I N.
AUG. 30									
0000	0.0	0.0					0.0	9.0	0.0030
1200	0.0	0.0					0.0	9.0	0.0063
1300	0.0	0.18					0.09	9.0	0.0068
1400	0.0	0.24					0.12	9.0	0.0086
2000	0.0	0.29					0.14	9.0	0.0104
2100	0.0	0.44					0.22	9.0	0.0109
2200	0.0	0.44					0.22	9.9	0.0114
2300	0.0	0.90					0.45	13.0	0.0121
2400	0.0	1.34					0.67	19.0	0.0129
AUG. 31									
0000	0.0	1.34					0.67	19.0	0.0129
0030	0.0	1.68					0.84	27.0	0.0137
0100	0.50	1.84					1.17	35.0	0.0147
0130	1.60	1.98					1.79	121.0	0.0181
0200	1.86	2.23					2.04	207.0	0.0239
0230	2.30	3.46					2.88	341.0	0.0335
0300	2.60	3.59					3.10	474.0	0.0468
0330	2.64	3.68					3.16	587.0	0.0633
0400	2.86	3.76					3.31	700.0	0.0829
0430	3.03	3.86					3.44	802.0	0.1054
0500	3.28	4.12					3.70	904.0	0.1308
0530	3.42	4.28					3.85	1030.0	0.1597
0600	3.56	4.46					4.01	1160.0	0.1923
0630	3.61	4.59					4.10	1240.0	0.2271
0700	3.66	4.96					4.31	1330.0	0.2644
0730	3.74	5.06					4.40	1370.0	0.3029
0800	3.82	5.13					4.47	1420.0	0.3427
0830	3.86	5.16					4.51	1430.0	0.3829
0900	3.88	5.21					4.54	1440.0	0.4233
0930	3.89	5.30					4.59	1440.0	0.4637
1000	3.96	5.62					4.79	1440.0	0.5042
1030	4.06	5.86					4.96	1450.0	0.5449
1100	4.30	6.84					5.57	1460.0	0.5858
1130	5.22	7.36					6.29	1620.0	0.6313
1200	5.40	7.44					6.42	1780.0	0.6813
1230	5.48	7.46					6.47	1870.0	0.7338
1300	5.52	7.58					6.55	1970.0	0.7891
1330	5.55	7.65					6.60	2000.0	0.8452
1400	5.56	7.67					6.61	2030.0	0.9022
1430	5.58	7.72					6.65	2030.0	0.9592

STA. NO. 08076500		STORM RAINFALL AND RUNOFF RECORD									
HALLS BAYOU AT HOUSTON, TEX.		STORM OF AUG. 30 TO SEP. 5, 1981									
DATE & TIME	G A G E		N U M B E R	PRECIP. IN.	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN	CFS	IN.	ACCUM. RUNOFF		
	6000	204R									
AUG. 31											
1500	5.68	7.74		6.71	2040.0	1.0165					
1530	5.70	7.82		6.76	2040.0	1.0737					
1600	5.70	7.84		6.77	2040.0	1.1310					
1630	5.72	7.84		6.78	2010.0	1.1874					
1700	5.74	7.84		6.79	1980.0	1.2708					
1800	5.74	7.84		6.79	1890.0	1.3504					
1830	5.74	8.02		6.88	1840.0	1.4020					
1900	5.78	8.19		6.98	1800.0	1.4526					
1930	5.82	8.19		7.00	1750.0	1.6736					
2330	5.82	8.19		7.00	1420.0	1.8530					
2400	5.82	8.19		7.00	1380.0	2.1048					
SEP. 1											
0000	5.82	8.19		7.00	1380.0	2.1048					
0600	5.89	8.19		7.04	867.0	2.3969					
1200	5.89	8.19		7.04	507.0	2.5677					
1800	5.89	8.19		7.04	308.0	2.6714					
2400	5.89	8.19		7.04	208.0	2.7415					
SEP. 2											
0000	5.89	8.19		7.04	208.0	2.7415					
0600	5.89	8.19		7.04	141.0	2.7890					
1200	5.89	8.79		7.34	100.0	2.8115					
1400	5.89	8.79		7.34	93.0	2.8193					
1500	5.96	8.79		7.37	111.0	2.8255					
1600	6.24	8.79		7.51	154.0	2.8385					
1800	6.24	8.79		7.51	199.0	2.8553					
1900	6.24	8.79		7.51	200.0	2.8833					
2300	6.24	8.79		7.51	150.0	2.9044					
2400	6.24	8.79		7.51	136.0	2.9349					
SEP. 3											
0000	6.24	8.79		7.51	136.0	2.9349					
0700	6.24	8.79		7.51	79.0	2.9615					
1200	6.26	8.79		7.52	99.0	2.9921					
1800	6.26	8.79		7.52	70.0	3.0157					
2400	6.26	8.79		7.52	85.0	3.0372					
SEP. 4											
0000	6.26	8.79		7.52	85.0	3.0372					
0300	6.26	8.79		7.52	110.0	3.0742					
1200	6.26	8.79		7.52	56.0	3.1072					
2400	6.26	8.79		7.52	31.0	3.1281					
SEP. 5											
0000	6.26	8.79		7.52	31.0	3.1281					
1200	6.26	8.79		7.52	21.0	3.1423					
2400	6.26	8.79		7.52	20.0	3.1490					



SAN JACINTO RIVER BASIN

08076700 GREENS BAYOU AT LEY ROAD, HOUSTON, TX

LOCATION.--Lat 29°50'13", long 95°13'59", Harris County, Hydrologic Unit 12040104, on right bank at downstream side of Ley Road Bridge in northeast Houston and 300 ft (91 m) downstream from mouth of Halls Bayou.

DRAINAGE AREA.--182 mi<sup>2</sup> (471 km<sup>2</sup>).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1962 to December 1964, May to September 1971 (discharge measurements only), October 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2.13 ft (0.649 m) below National Geodetic Vertical Datum of 1929, 1973 adjustment.

REMARKS.--Water-discharge records fair except those below 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s), which are poor. Discharge is computed for all storms which produce peak discharges over 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s). Tidal influences on the stage-discharge relationship affect discharge below about 500 ft<sup>3</sup>/s (14.2 m<sup>3</sup>/s). Discharge below 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s) is estimated following designated storm periods only.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft<sup>3</sup>/s (473 m<sup>3</sup>/s) June 13, 1973, gage height, 34.27 ft (10.445 m); minimum not determined (affected by tides).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,200 ft<sup>3</sup>/s (119 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 4	a0800	*11,700 331	30.53 9.306	June 13	0500	4,700 134	20.95 6.386
June 5	1700	9,580 271	28.20 8.595	Aug. 31	a2400	8,530 242	26.83 8.178

a Estimated.

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---		---	---	---		---	---	---	---	---	5800
2	---		---	---	---		---	---	340	---	---	1200
3	---		---	---	---		---	1960	720	---	---	880
4	---		---	---	---		---	10000	440	---	---	300
5	---		---	---	170		---	3930	6430	300	---	150
6	---		---	---	700		---	780	3890	400	---	---
7	---		---	---	160		---	250	780	1200	---	---
8	---		80	---	---		---	100	580	1000	---	---
9	---		850	---	---		---	400	150	500	---	---
10	---		190	---	---		---	2740	100	300	---	---
11	---		50	---	---		---	840	2790	800	---	---
12	---		---	---	---		---	300	2800	300	---	---
13	---		---	---	---		---	120	3920	---	---	---
14	---		---	---	---		---	---	1350	---	---	---
15	---		---	---	---		---	---	500	---	---	---
16	710		---	---	---		---	---	200	---	---	---
17	230		---	---	---		---	---	---	---	---	---
18	400		---	---	---		---	---	---	---	---	---
19	2300		---	210	---		---	---	---	---	---	---
20	440		---	1250	---		---	---	---	---	---	---
21	100		---	400	---		---	---	---	---	---	---
22	---		---	150	---		---	---	---	---	---	---
23	---		---	---	---		1120	---	---	---	---	---
24	---		---	---	---		1360	---	---	---	---	---
25	---		---	---	---		300	---	---	---	---	---
26	---		---	---	---		120	---	---	---	---	---
27	---		---	---	---		---	---	---	---	---	---
28	---		---	---	---		---	---	---	---	---	---
29	---		---	---	---		---	---	---	---	---	---
30	---		---	---	---		---	---	---	---	---	---
31	---		---	---	---		---	---	---	---	4300	---
TOTAL	---		---	---	---		---	---	---	---	---	---
MEAN	---		---	---	---		---	---	---	---	---	---
MAX	---		---	---	---		---	---	---	---	---	---
MIN	---		---	---	---		---	---	---	---	---	---
AC-FT	---		---	---	---		---	---	---	---	---	---

## SAN JACINTO RIVER BASIN

08076700 GREENS BAYOU AT LEY ROAD, HOUSTON, TX--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1970 to September 1981 (discontinued).

## WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	
DATE	TIME												
MAY													
04...	1400	10900	90	7.2	22.0	90	93	7.8	89	4.7	160000	38000	
05...	1315	3520	156	7.3	22.0	150	70	4.8	54	4.6	110000	6700	
DATE	TIME	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAY													
04...	29000	33	2	11	1.4	5.2	.4	1.9	31	8.0	5.4	.1	
05...	4000	57	5	19	2.3	8.5	.5	2.6	52	7.7	9.0	.1	
DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, VOLA- TILE, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
MAY													
04...	4.2	56	232	8	.16	.040	.20	.250	.95	1.2	.370	16	
05...	7.3	88	404	4	.18	.050	.23	.300	1.1	1.4	.440	17	

STA. NO.		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
GREENS BAYOU AT LEY ROAD, HOUSTON, TEX.		STORM OF JUNE 2 - 9, 1981										DISCHARGE: ACCUM. RUNOFF	
DATE & TIME		G A G E N U M B E R										WEIGHTED PRECIP. IN.	
		5780	6000	6200	6500	203R	20R					CFS	IN.
JUNE2													
0000		0.0	0.0	0.0	0.0	0.0	0.0				0.0	40.0	0.0009
0500		0.0	0.0	0.0	0.0	0.0	0.0				0.0	140.0	0.0044
0600		0.01	0.0	0.0	0.0	0.0	0.0				0.00	225.0	0.0073
0800		0.01	0.0	0.0	0.0	0.0	0.0				0.00	400.0	0.0141
1000		0.01	0.0	0.0	0.0	0.0	0.0				0.00	520.0	0.0230
1200		0.01	0.0	0.0	0.0	0.0	0.0				0.00	570.0	0.0302
1300		0.02	0.0	0.0	0.12	0.0	0.02				0.02	540.0	0.0350
1400		0.77	0.0	0.0	0.12	0.33	0.02				0.13	540.0	0.0396
1500		0.78	0.0	0.0	0.12	0.40	0.02				0.14	520.0	0.0485
1800		0.78	0.0	0.0	0.12	0.40	0.02				0.14	420.0	0.0592
2100		0.78	0.0	0.0	0.12	0.40	0.02				0.14	330.0	0.0648
2200		0.78	0.0	0.0	0.12	0.40	0.02				0.14	300.0	0.0674
2300		0.79	0.0	0.0	0.12	0.40	0.02				0.14	275.0	0.0697
2400		0.80	0.0	0.0	0.12	0.40	0.31				0.18	250.0	0.0718
JUNE3													
0000		0.80	0.0	0.0	0.12	0.40	0.31				0.18	250.0	0.0718
0100		1.27	0.40	0.60	0.48	0.40	0.39				0.53	270.0	0.0741
0200		1.56	0.50	0.96	0.60	1.83	0.41				0.81	410.0	0.0776
0300		1.57	0.50	0.96	0.60	1.86	0.41				0.81	490.0	0.0818
0400		1.57	0.50	0.96	0.60	1.86	0.41				0.81	500.0	0.0861
0500		1.58	0.52	0.96	0.60	1.86	0.41				0.82	460.0	0.0900
0600		1.58	0.57	0.96	0.60	1.89	0.52				0.86	410.0	0.0935
0700		1.58	0.57	1.08	0.60	1.89	0.52				0.88	430.0	0.0990
0900		1.58	0.57	1.08	0.60	1.89	0.52				0.88	550.0	0.1107
1200		1.58	0.57	1.08	0.60	1.89	0.52				0.88	870.0	0.1403
1700		1.59	0.57	1.08	0.60	1.89	0.52				0.88	990.0	0.1656
1800		1.59	0.57	1.08	0.60	1.89	0.52				0.88	990.0	0.1951
2400		1.59	0.57	1.08	0.60	1.89	0.52				0.88	780.0	0.2250
JUNE4													
0000		1.59	0.57	1.08	0.60	1.89	0.52				0.88	780.0	0.2250
0300		1.59	0.63	1.08	0.60	1.89	0.56				0.90	600.0	0.2403
0600		1.66	0.71	1.20	0.72	1.89	0.57				0.98	470.0	0.2523
0900		1.67	0.72	1.20	0.72	1.95	0.57				0.99	395.0	0.2624
1200		1.67	0.72	1.20	0.72	1.95	0.57				0.99	345.0	0.2712
1500		1.70	0.72	1.20	0.72	1.95	0.57				0.99	310.0	0.2791
1800		1.71	0.77	1.20	0.72	1.95	0.57				1.01	280.0	0.2875
2200		1.84	0.83	1.44	0.84	2.03	1.18				1.20	250.0	0.2928
2300		2.06	1.55	2.04	1.92	2.42	1.80				1.85	620.0	0.2981
2400		2.50	2.30	2.28	2.28	3.27	2.03				2.37	1240.0	0.3086
JUNE5													
0000		2.50	2.30	2.28	2.28	3.27	2.03				2.37	1240.0	0.3086
0100		2.53	2.52	2.28	2.40	3.37	2.21				2.51	1960.0	0.3253

STA. NO. 08076700		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
GREENS BAYOU AT LEY ROAD, HOUSTON, TEX.													
DATE & TIME	STORM OF JUNE 2 -9, 1981										ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE! IN CFS	ACCU. RUNOFF IN.
	5780	6000	6200	G A G E			N U M B E R			20R			
				6200	6500	203R							
JUNE5													
0200	2.54	2.58	2.40		2.40	3.37	2.25		2.55	2140.0	0.3435		
0300	2.55	2.68	2.40		2.52	3.40	2.44		2.64	2320.0	0.3633		
0400	2.60	2.86	2.64		2.64	3.53	2.46		2.77	2500.0	0.3846		
0500	2.61	2.86	2.64		2.64	3.55	2.46		2.78	2700.0	0.4076		
0600	2.64	3.23	2.76		3.12	3.55	2.59		3.02	2880.0	0.4321		
0700	3.14	3.80	3.00		3.84	3.85	3.69		3.61	3570.0	0.4625		
0800	3.63	4.64	3.96		4.32	4.08	3.69		4.19	4370.0	0.4997		
0900	3.63	4.64	3.96		4.44	4.08	3.69		4.21	5280.0	0.5446		
1000	3.63	4.64	3.96		4.44	4.08	3.69		4.21	6340.0	0.5986		
1100	3.64	4.66	3.96		4.44	4.15	3.69		4.22	7300.0	0.6608		
1200	3.64	4.66	3.96		4.44	4.15	3.69		4.22	8020.0	0.7291		
1300	3.67	4.67	3.96		4.44	4.15	3.69		4.23	8590.0	0.9119		
1700	3.67	4.67	3.96		4.44	4.15	3.69		4.23	9580.0	1.1158		
1800	3.68	4.67	3.96		4.44	4.15	3.69		4.23	9540.0	1.4001		
2400	3.68	4.67	3.96		4.44	4.15	3.69		4.23	8100.0	1.7449		
JUNE6													
0000	3.68	4.67	3.96		4.44	4.15	3.69		4.23	8100.0	1.7449		
0400	3.68	4.67	3.96		4.44	4.15	3.69		4.23	6380.0	1.9079		
0600	3.68	4.67	3.96		4.44	4.15	3.69		4.23	5480.0	2.0945		
1200	3.68	4.67	3.96		4.44	4.15	3.69		4.23	3530.0	2.2298		
1500	3.68	4.67	3.96		4.44	4.15	3.69		4.23	2740.0	2.2998		
1800	3.68	4.67	3.96		4.44	4.15	3.69		4.23	1960.0	2.3748		
2400	3.68	4.67	3.96		4.44	4.15	3.69		4.23	1050.0	2.4285		
JUNE7													
0000	3.68	4.67	3.96		4.44	4.15	3.69		4.23	1050.0	2.4285		
0600	3.68	4.67	3.96		4.44	4.15	3.69		4.23	725.0	2.4655		
1200	4.00	4.67	4.20		4.56	4.53	4.57		4.49	550.0	2.5053		
2300	4.00	4.67	4.20		4.68	4.53	4.57		4.50	985.0	2.5556		
2400	4.00	4.67	4.20		4.68	4.53	4.57		4.50	975.0	2.6096		
JUNE8													
0000	4.00	4.67	4.20		4.68	4.53	4.57		4.50	975.0	2.6096		
1200	4.00	4.67	4.20		4.68	4.53	4.57		4.50	510.0	2.6617		
2400	4.00	4.67	4.20		4.68	4.53	4.57		4.50	290.0	2.6913		
JUNE9													
0000	4.00	4.67	4.20		4.68	4.53	4.57		4.50	290.0	2.6913		
1200	4.00	4.67	4.20		4.68	4.53	4.57		4.50	150.0	2.7067		
2400	4.00	4.67	4.20		4.68	4.53	4.57		4.50	85.0	2.7110		

STA. NO. 08076700		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR	
GREENS BAYOU AT LEY ROAD, HOUSTON, TEX.		STORM OF JUNE 10-15, 1981										ACCUM. DISCHARGE	
DATE & TIME		G A G E N U M B E R										WEIGHTED PRECIP.	
		5780	5900	6000	6200	6500	203R	20R	IN	CFS	IN	ACCUM. RUNOFF	
JUNE10													
0000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0	0.0	0.0041	0.0041
1200		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.0	0.0	0.0079	0.0079
1300		0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.01	68.0	0.01	0.0085	0.0085
1400		0.11	0.0	0.03	0.0	0.0	0.44	0.05	0.05	67.0	0.05	0.0091	0.0091
1500		0.14	0.0	0.08	0.0	0.12	0.50	0.09	0.10	66.0	0.10	0.0096	0.0096
1600		0.16	0.0	0.08	0.12	0.12	0.62	0.27	0.15	65.0	0.15	0.0102	0.0102
1700		0.61	0.12	0.37	0.24	0.24	0.89	0.92	0.44	64.0	0.44	0.0107	0.0107
1800		0.61	0.60	0.38	0.24	0.24	0.93	1.09	0.52	63.0	0.52	0.0113	0.0113
1900		0.61	1.15	0.38	0.36	0.24	0.93	1.09	0.59	62.0	0.59	0.0120	0.0120
2100		0.61	1.17	0.38	0.36	0.24	0.93	1.09	0.59	60.0	0.59	0.0128	0.0128
2200		0.61	1.17	0.38	0.36	0.24	0.93	1.13	0.60	175.0	0.60	0.0143	0.0143
2300		0.63	1.23	0.60	0.36	0.48	0.98	1.94	0.84	350.0	0.84	0.0173	0.0173
2400		1.17	2.60	0.61	1.56	0.60	2.10	2.34	1.29	460.0	1.29	0.0212	0.0212
JUNE11													
0000		1.17	2.60	0.61	1.56	0.60	2.10	2.34	1.29	460.0	1.29	0.0212	0.0212
0100		1.67	4.00	0.69	2.28	0.60	3.23	2.44	1.65	600.0	1.65	0.0263	0.0263
0200		2.03	4.70	0.71	2.40	0.60	3.90	2.45	1.81	745.0	1.81	0.0326	0.0326
0300		2.03	4.71	0.71	2.40	0.72	3.90	2.45	1.83	880.0	1.83	0.0401	0.0401
0400		2.03	4.71	0.71	2.52	0.72	3.90	2.45	1.84	1010.0	1.84	0.0530	0.0530
0600		2.04	4.72	0.72	2.52	0.72	3.90	2.47	1.85	1520.0	1.85	0.0725	0.0725
0700		2.07	4.73	0.74	2.52	0.72	3.90	2.47	1.86	1960.0	1.86	0.0891	0.0891
0800		2.07	4.73	0.74	2.52	0.84	3.90	2.49	1.89	2360.0	1.89	0.1092	0.1092
0900		2.08	4.76	0.81	2.52	0.84	3.91	2.50	1.92	2640.0	1.92	0.1317	0.1317
1000		2.10	4.78	0.83	2.64	1.08	3.92	2.51	1.98	2950.0	1.98	0.1568	0.1568
1100		2.13	4.80	0.89	2.64	1.08	3.96	2.54	2.01	3220.0	2.01	0.1842	0.1842
1200		2.15	4.82	0.89	2.64	1.08	3.98	2.58	2.02	3470.0	2.02	0.2138	0.2138
1300		2.17	4.86	0.92	2.64	1.08	4.00	2.62	2.04	3680.0	2.04	0.2451	0.2451
1400		2.23	4.88	0.95	2.76	1.08	4.02	2.64	2.08	3820.0	2.08	0.2776	0.2776
1500		2.26	4.90	0.97	2.76	1.08	4.10	2.66	2.10	3970.0	2.10	0.3114	0.3114
1600		2.27	4.94	0.99	2.76	1.08	4.10	2.67	2.11	4030.0	2.11	0.3458	0.3458
1700		2.27	4.96	0.99	2.76	1.08	4.10	2.67	2.11	4060.0	2.11	0.3803	0.3803
1800		2.28	4.96	0.99	2.76	1.08	4.10	2.67	2.11	4050.0	2.11	0.4148	0.4148
1900		2.28	4.96	0.99	2.76	1.08	4.10	2.67	2.11	3990.0	2.11	0.4488	0.4488
2000		2.28	4.96	0.99	2.76	1.20	4.10	2.67	2.13	3940.0	2.13	0.4823	0.4823
2100		2.28	4.96	0.99	2.88	1.68	4.10	2.67	2.22	3860.0	2.22	0.5152	0.5152
2200		2.28	4.96	0.99	2.88	1.80	4.10	2.67	2.23	3710.0	2.23	0.5626	0.5626
2400		2.28	4.96	0.99	2.88	1.80	4.10	2.67	2.23	3470.0	2.23	0.6069	0.6069
JUNE12													
0000		2.28	4.96	0.99	2.88	1.80	4.10	2.67	2.23	3470.0	2.23	0.6069	0.6069
0100		2.29	4.96	0.99	2.88	1.80	4.10	2.67	2.23	3340.0	2.23	0.6353	0.6353
0200		2.34	4.96	0.99	2.88	1.80	4.29	2.67	2.25	3210.0	2.25	0.6627	0.6627

STA. NO. 08076700		STORM RAINFALL AND RUNOFF RECORD										1981 WATER YEAR		
GREENS BAYOU AT LEY ROAD, HOUSTON, TEX.		STORM OF JUNE 10-15, 1981										ACCUM. WEIGHTED PRECIP.	DISCHARGE IN	ACCUM. RUNOFF
DATE & TIME		5780	5900	6000	G A G E	6200	N U M B E R	6500	203R	20R	IN	CFS	IN	
=====														
JUNE12														
0300	2.35	4.96	0.99	2.88	1.92	4.29	2.67	2.27	3080.0	0.7151				
0600	2.35	4.96	0.99	2.88	1.92	4.31	2.67	2.27	2630.0	0.7823				
0900	2.36	4.97	0.99	2.88	1.92	4.31	2.67	2.27	2200.0	0.8197				
1000	2.36	4.97	0.99	2.88	1.92	4.31	2.67	2.27	2080.0	0.8375				
1100	2.38	4.97	0.99	2.88	2.04	4.31	2.73	2.30	1960.0	0.8541				
1200	2.52	5.02	1.01	3.00	2.16	4.31	3.04	2.40	1840.0	0.8698				
1300	2.94	5.04	1.06	3.00	2.16	4.52	3.34	2.52	1760.0	0.8848				
1400	4.26	5.98	1.20	3.12	2.16	4.78	3.63	2.86	1760.0	0.8998				
1500	4.27	6.08	1.47	3.24	2.16	4.91	3.65	2.99	2080.0	0.9175				
1600	4.30	6.08	1.52	3.24	2.16	4.91	3.65	3.01	2490.0	0.9387				
1700	4.30	6.11	1.52	3.24	2.16	4.91	3.65	3.01	2740.0	0.9620				
1800	4.31	6.11	1.56	3.24	2.16	4.91	3.67	3.02	2950.0	0.9871				
1900	4.31	6.11	1.56	3.24	2.16	4.91	3.67	3.03	3160.0	1.0140				
2000	4.31	6.11	1.56	3.24	2.16	4.91	3.83	3.06	3400.0	1.0430				
2100	4.38	6.20	1.71	3.36	2.16	5.00	3.85	3.14	3700.0	1.0745				
2200	4.38	6.26	1.75	3.36	2.16	5.02	3.85	3.16	3930.0	1.1247				
2400	4.38	6.26	1.75	3.36	2.16	5.02	3.85	3.16	4370.0	1.2177				
JUNE13														
0000	4.38	6.26	1.75	3.36	2.16	5.02	3.85	3.16	4370.0	1.2177				
0300	4.38	6.26	1.75	3.36	2.16	5.02	3.85	3.16	4680.0	1.2974				
0400	4.38	6.26	1.75	3.36	2.16	5.02	3.94	3.18	4720.0	1.3376				
0500	4.39	6.40	1.99	3.48	2.16	5.08	3.94	3.29	4740.0	1.3779				
0600	4.39	6.40	1.99	3.48	2.16	5.08	3.94	3.29	4720.0	1.5186				
1200	4.39	6.40	1.99	3.48	2.16	5.08	3.94	3.29	4110.0	1.6411				
1300	4.39	6.40	2.01	3.48	2.16	5.08	3.94	3.30	3950.0	1.6747				
1400	4.39	6.42	2.01	3.48	2.16	5.08	3.94	3.30	3820.0	1.7072				
1500	4.39	6.42	2.01	3.48	2.16	5.08	4.05	3.32	3680.0	1.7385				
1600	4.45	6.43	2.03	3.48	2.16	5.08	4.05	3.33	3530.0	1.7686				
1700	4.45	6.44	2.03	3.48	2.16	5.13	4.05	3.34	3380.0	1.7974				
1800	4.45	6.44	2.03	3.48	2.16	5.13	4.06	3.34	3240.0	1.8250				
1900	4.45	6.60	2.05	3.48	2.16	5.13	4.06	3.36	3090.0	1.8644				
2100	4.49	6.61	2.05	3.48	2.16	5.13	4.06	3.36	2780.0	1.9236				
2400	4.50	6.61	2.05	3.48	2.16	5.13	4.06	3.37	2280.0	2.0110				
JUNE14														
0000	4.50	6.61	2.05	3.48	2.16	5.13	4.06	3.37	2280.0	2.0110				
0600	4.50	6.61	2.05	3.48	2.16	5.13	4.06	3.37	1560.0	2.0907				
1200	4.51	6.61	2.05	3.48	2.16	5.13	4.06	3.37	1280.0	2.1887				
2400	4.52	6.61	2.05	3.48	2.16	5.13	4.06	3.37	800.0	2.2705				
JUNE15														
0000	4.52	6.61	2.05	3.48	2.16	5.13	4.06	3.37	800.0	2.2705				
1200	4.52	6.61	2.05	3.48	2.16	5.13	4.06	3.37	475.0	2.3190				
2400	4.53	6.61	2.05	3.48	2.16	5.13	4.06	3.37	300.0	2.3343				

# CLEAR CREEK BASIN

08077000 CLEAR CREEK NEAR PEARLAND, TX

LOCATION.--Lat 29°35'50", long 95°17'11". Harris-Brazoria County line, Hydrologic Unit 12040204, at downstream side of pier of bridge on State Highway 35, 0.7 mi (1.1 km) downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.2 mi (1.9 km) upstream from Hickory Slough, 2.3 mi (3.7 km) north of Pearland, and about 30 mi (48 km) upstream from head of Clear Lake.

DRAINAGE AREA.--38.8 mi<sup>2</sup> (100.5 km<sup>2</sup>).

PERIOD OF RECORD.--July to October 1944, March to October 1946, April 1947 to December 1959, March 1963 to current year. Discharge for some high-water periods in 1944 and 1946 published in WSP 1392.

REVISED RECORDS.--WSP 1392: 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 26.58 ft (8.102 m) National Geodetic Vertical Datum of 1929, 1973 adjustment; prior records unadjusted for land-surface subsidence. Prior to June 9, 1948, nonrecording gage, and June 9, 1948, to Apr. 22, 1952, water-stage recorder at same site and datum 5.80 ft (1.768 m) higher.

REMARKS.--Records fair except those below 0.50 ft<sup>3</sup>/s (0.014 m<sup>3</sup>/s), which are poor. Large area of riceland above station is irrigated with water from the Brazos River. Low flow from April to October is largely drainage from irrigated lands. Many diversions for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1948-59, 1964-81), 36.7 ft<sup>3</sup>/s (1.039 m<sup>3</sup>/s), 26,590 acre-ft/yr (32.8 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft<sup>3</sup>/s (61.5 m<sup>3</sup>/s) Mar. 18, 1957; maximum gage height, 18.57 ft (5.660 m) July 26, 1979; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 26, 1960 (stage and discharge unknown), may have exceeded that of Mar. 18, 1957. Channel was rectified in 1933, 1952, 1968, and 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft<sup>3</sup>/s (17.0 m<sup>3</sup>/s) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)	Date	Time	Discharge (ft <sup>3</sup> /s) (m <sup>3</sup> /s)	Gage height (ft) (m)
May 4	0400	*1,650 46.7	17.11 5.215	Aug. 31	2400	1,380 39.1	16.57 5.051
June 5	1500	1,410 39.9	16.83 5.130	Sept. 14	2300	733 20.8	11.92 3.633

Minimum daily discharge, no flow Jan. 3, Apr. 3.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	1.0	.17	.01	3.5	.56	.92	.43	9.2	16	9.9	1280
2	25	1.1	.15	.01	2.1	.55	.65	.17	11	11	7.4	758
3	11	1.1	.12	.00	1.2	.42	1.0	573	52	8.7	5.7	336
4	5.9	.92	.10	.13	1.2	10	1.1	1560	35	7.3	4.4	158
5	3.1	.92	.17	.09	7.2	17	.83	820	1050	11	3.0	55
6	2.1	.85	.18	.48	39	6.6	3.4	235	792	36	2.9	36
7	1.6	.75	.15	.33	30	3.2	5.2	51	137	241	2.7	24
8	1.4	.65	.27	.17	17	1.9	3.2	15	44	150	6.6	13
9	1.2	.65	4.2	.14	9.8	1.4	1.4	7.1	24	50	2.6	7.0
10	1.2	.63	4.5	.10	7.3	1.4	.42	51	13	56	2.3	4.4
11	1.1	.49	1.7	.10	3.8	1.2	.13	36	85	92	2.1	3.3
12	1.0	.35	1.1	.10	1.9	1.3	.04	10	158	27	2.9	2.6
13	.92	.21	.66	.10	.83	1.8	.00	4.5	270	21	2.9	2.5
14	.92	.11	.43	.60	.52	2.0	.81	22	105	18	2.8	218
15	.83	.12	.32	.25	.41	1.5	1.7	14	42	22	2.6	456
16	1.8	.08	.30	.14	.36	1.4	.59	5.5	144	17	2.5	159
17	.83	.36	.24	.10	.24	1.1	1.1	4.3	236	13	4.8	56
18	5.4	.12	.21	.10	.21	.79	3.9	5.6	42	12	5.3	25
19	9.7	.10	.17	11	.21	.54	6.2	4.1	19	12	6.7	13
20	2.9	.08	.12	49	.21	.41	5.8	3.2	13	11	24	7.8
21	2.1	.07	.08	22	.17	.72	7.0	2.6	10	9.9	23	4.9
22	1.7	1.6	.07	10	.20	.69	13	2.1	12	12	13	3.9
23	1.3	1.0	.12	5.5	.13	.44	18	1.8	9.2	15	7.2	3.5
24	1.2	.66	.14	3.2	.15	.30	16	1.5	69	10	5.1	2.9
25	1.1	.42	.08	1.8	3.2	.31	16	3.8	127	7.1	5.3	2.5
26	1.1	3.5	.07	1.1	2.4	.29	26	4.5	44	50	4.1	2.3
27	.92	2.6	.06	4.3	1.5	.25	16	6.9	88	108	2.7	4.7
28	.74	.86	.05	1.9	.71	.25	4.0	7.9	47	94	2.3	2.8
29	.65	.54	.04	1.4	---	.26	1.2	9.8	26	65	2.5	2.2
30	.56	.31	.03	.70	---	.34	.81	8.1	20	28	4.7	1.9
31	.72	---	.02	.35	---	.92	---	8.2	---	14	807	---
TOTAL	146.99	22.15	16.02	115.20	135.45	59.84	156.40	3479.10	3733.4	1245.0	981.0	3646.2
MEAN	4.74	.74	.52	3.72	4.84	1.93	5.21	112	124	40.2	31.6	122
MAX	57	3.5	4.5	49	39	17	26	1560	1050	241	807	1280
MIN	.56	.07	.02	.00	.13	.25	.00	.17	9.2	7.1	2.1	1.9
AC-FT	292	44	32	228	269	119	310	6900	7410	2470	1950	7230

CAL YR 1980	TOTAL	9691.88	MEAN	26.5	MAX	1500	MIN	.02	AC-FT	19220
WTR YR 1981	TOTAL	13736.75	MEAN	37.6	MAX	1560	MIN	.00	AC-FT	27250

Table 19.--Recording and nonrecording rain gages in the Houston area  
at sites other than stream-gaging stations

Station no. <u>1</u> /	Station name	Location	Period of record <u>2</u> /
10-S	Houston Heights	Lat 29°47', long 95°26' near Houston.	--
12-R	Houston-WB, City	Lat 29°46', long 95°22' at old Federal Building in downtown Houston.	--
13-S	Houston- Independent Heights	Lat 29°52', long 95°25' in northern section of Houston.	--
20-R	Houston WSO Airport	Lat 29°59', long 95°22' at Houston Intercontinental Airport in north Houston.	--
21-R	Brittmore	Lat 29°51'02", long 95°33'46", behind home of Mrs. Annie A. Joseph, 10610 Tanner Road, in northwest Houston.	May 6, 1964 to date
22-R	Houston-Satsuma	Lat 29°54', long 95°37' at Satsuma community northwest of Houston.	--
23-S	Houston-North Houston	Lat 29°53', long 95°31' near Fairbanks-North Houston Road, Houston.	--
24-S	Houston-Spring Branch	Lat 29°48', long 95°30' on Ridgecrest Street, Houston.	--
29-R	Mills Road	Lat 29°57'29", long 95°33'40", at home of Frances L. Farquhar, 9502 Mills Road, north- west Harris County, Houston	July 30, 1970 to June 30, 1981.

See footnotes at end of table.



Table 19.--Recording and nonrecording rain gages in the Houston area  
at sites other than stream-gaging stations--Continued

Station no. <u>1</u> /	Station name	Location	Period of record <u>2</u> /
31-R	Stafford	Lat 29°36'43", long 95°32'58", at Ft. Bend County Water Control and Improvement District No. 2, Stafford.	May 9, 1964 to date
32-R	Houston-Alief	Lat 29°43', long 95°36' at Alief.	--
33-R	Houston-Addicks	Lat 29°46', long 95°39' at U.S. Army Corps of Engineers office, Addicks	--
34-S	Clodine	Lat 29°43', long 95°41' at Clodine.	--
35-S	Houston-Westbury	Lat 29°40', long 95°28' in Westbury Subdivision, Houston.	--
36-S	Sugar Land	Lat 29°37', long 95°38' at Sugar Land.	--
42-S	Houston FAA Airport	Lat 29°39', long 95°17' at old Terminal Building, William P. Hobby Airport, Houston.	--
101-R	Liberty Road	Lat 29°47'19", long 95°18'50", near intersection of Liberty Road and Sakowitz Street, Houston.	Aug. 23, 1972 to Dec. 31, 1980
201-S	Humble	Lat 30°00', long 95°15' at Humble.	--

See footnotes at end of table

Table 19.--Recording and nonrecording rain gages in the Houston area  
at sites other than stream-gaging stations--Continued

Station no. <u>1</u> /	Station name	Location	Period of record <u>2</u> /
202-S	Houston-San Jacinto Dam	Lat 29°55', long 95°09' on west bank of Lake Houston at San Jacinto River Dam, Houston.	--
203-R	Mintz Lane	Lat 29°59'53", long 95°28'39", at home of Mr. Draper D. Mintz, in northwest Harris County, Houston.	Aug. 23, 1972 to date
204-R	Breen Street	Lat 29°53'57", long 95°27'38", at home of Mr. Joseph O. Eiland, 4909 Breen, in north- west Harris County, Houston.	Aug. 23, 1972 to date
205-R	Frontier Street	Lat 29°50'08", long 95°31'22", at home of Mrs. Eva S. Murphree near intersection of Frontier Street and Outpost Street in north- west Harris County, Houston.	Nov. 9, 1972 to date
303-R	Four Corners	Lat 29°40'07", long 95°39'36", Fort Bend County behind home of Mr. Richard Wright, 900 feet west of inter- section of Gaston Road and Gains Road at Four Corners community.	Sept. 24, 1975 to date
304-R	Chasewood	Lat 29°36'32", long 95°29'57", Fort Bend County inside water- treatment plant at 1700 Chasewood Street.	Oct. 29, 1975 to date

See footnotes at end of table.

Table 19.--Recording and nonrecording rain gages in the Houston area  
at sites other than stream-gaging stations--Continued

Station no. <u>1</u> /	Station name	Location	Period of record <u>2</u> /
305-R	Furman	Lat 29°37'45", long 95°22'45", Harris County on extreme right side of floodway for Sims Bayou at 14201 Furman Street.	Sept. 24, 1975 to date
308-R	Public Health	115 N. MacGregor, Houston.	--
401-R	Llano Street	Lat 29°39'11", long 95°12'07", behind home of Mrs. Lana H. Sims, 702 Llano, Pasadena, in Southeast Harris County.	Nov. 9, 1972 to date
402-R	Klondike	Lat 29°38'06", long 95°15'04", behind home of H. F. Reams, 9302 Klondike, 10.9 miles southeast of Harris County Courthouse, Houston.	Nov. 11, 1973 to date
403-R	Edgebrook	Lat 29°38'55", long 95°12'55", southeast Harris County, in Sewage Treatment Plant near the intersection of Old Galveston Road and Edgebrook Street.	Sept. 19, 1975 to date

See footnotes at end of table.

Table 19.--Recording and nonrecording rain gages in the Houston area  
at sites other than stream-gaging stations--Continued

Station no. <u>1</u> /	Station name	Location	Period of record <u>2</u> /
404-S	Deer Park	Lat 29°43', long 95°08' Harris County near Houston.	--

1/ Station numbers are arbitrarily assigned for use in this project as follows:  
R, recording rain gage; S, nonrecording rain gage.

2/ Period of record is given only for those stations operated and maintained by  
the U.S. Geological Survey for this project.

## HOUSTON URBAN HYDROLOGY STUDY

## DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU

PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE: 3630: 4540: 4400: 4250: 4200: 4150: 4145: 205R: 22R: 21R: 6500: 6200: 6000: 5900: 5780: 204R: 203R: 20R: 5770: 5760:

OCT: 15: \*\*\*: 0.0: A0.05: 2.22: A2.60: 3.00: 4.40: 2.56: 4.75: D6.30: 0.12: D1.44: 0.02: \*\*\*: 2.35: 4.42: 0.47: 0.21: 0.0: 0.0:

17: \*\*\*: 0.0: D0.08: 0.10: 0.0: 0.0: 0.04: 0.07: 0.23: 0.0: 0.12: 0.0: 0.14: \*\*\*: 0.04: D0.13: 0.0: 0.27: 0.0: 0.0:

18: D1.98: A1.80: D2.00: 1.30: 1.44: 1.61: 1.62: 1.37: 2.89: D1.65: 1.68: D0.84: 2.32: \*\*\*: 2.87: D2.60: 3.90: 3.36: 1.63: 1.80:

19: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: \*\*\*: 0.01: 0.0: 0.0: 0.0: 0.0: 0.0:

20: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.03: 0.0: 0.0: 0.0: 0.0: 0.0: \*\*\*: 0.01: 0.0: 0.0: 0.0: 0.0: 0.05:

27: D0.30: A0.60: 0.73: 0.65: 0.12: 0.08: 0.27: 0.10: 0.24: 0.25: 1.20: 0.24: 0.82: \*\*\*: 0.37: 0.0: A0.25: 0.18: 0.38: 0.60:

28: D0.06: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: D4.62: 0.15: 0.0: A0.05: 0.01: 0.0: 0.05:

MTOT: 2.34: 2.40: 2.86: 4.27: 4.16: 4.69: 6.33: 4.13: 8.11: 8.20: 3.12: 2.52: 3.30: 4.62: 5.80: 7.15: 4.67: 4.03: 2.01: 2.50:

NOV: 13: 0.03: 0.01: 0.0: 0.0: 0.12: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: \*\*\*: 0.0: 0.0: \*\*\*: 0.02: 0.0: 0.10:

14: 0.01: 0.01: 0.01: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: \*\*\*: 0.03: 0.0: \*\*\*: 0.0: 0.0: 0.0:

15: 0.01: 0.03: 0.01: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: \*\*\*: 0.01: 0.0: \*\*\*: 0.06: 0.0: 0.05:

16: D0.24: 0.23: 0.13: 0.13: A0.30: 0.02: 0.12: 0.33: 0.31: D0.30: 0.12: 0.0: 0.12: \*\*\*: 0.35: 0.30: \*\*\*: 0.24: 0.21: 0.30:

17: D0.20: 0.14: 0.09: 0.20: A0.20: 0.10: 0.25: 0.22: 0.14: D0.20: 0.24: 0.24: 0.28: \*\*\*: 0.17: 0.14: \*\*\*: 0.17: 0.21: 0.0:

21: 0.05: 0.03: \*\*\*: 0.02: A0.05: 0.0: 0.03: 0.05: 0.0: 0.0: 0.0: 0.0: 0.0: \*\*\*: 0.06: 0.0: \*\*\*: 0.04: 0.0: 0.05:

22: 0.63: 0.76: \*\*\*: 0.58: A0.60: 0.53: 0.56: 0.59: 0.0: D0.50: 0.72: 0.60: 0.58: \*\*\*: 0.53: 0.60: \*\*\*: 0.59: 0.73: 0.65:

23: 0.03: 0.05: D0.74: 0.03: A0.03: 0.03: 0.04: 0.03: 0.0: 0.0: 0.0: 0.0: 0.04: \*\*\*: 0.05: 0.0: \*\*\*: 0.03: 0.07: 0.05:

25: D0.90: 0.75: 0.70: 0.63: 0.72: 0.62: 0.46: 0.76: 0.85: D0.73: 0.72: 0.60: D0.70: \*\*\*: 0.73: 0.66: \*\*\*: 0.75: 0.65: 0.75:

26: D0.33: 0.21: 0.20: 0.28: 0.24: 0.28: 0.29: 0.21: 0.16: D0.20: 0.24: 0.36: D0.25: \*\*\*: 0.16: 0.24: \*\*\*: 0.21: 0.24: 0.15:

27: 0.0: 0.02: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: A2.00: 0.05: 0.0: D2.06: 0.01: 0.03: 0.0:

MTOT: 2.43: 2.24: 1.88: 1.87: 2.26: 1.58: 1.75: 2.19: 1.46: 1.93: 2.04: 1.80: 1.97: 2.00: 2.14: 1.94: 2.06: 2.12: 2.14: 2.10:

DEC: 2: 0.01: 0.0: 0.0: 0.0: 0.0: 0.10: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.03: 0.0: 0.0: 0.0: 0.0: 0.0:

7: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.09: 0.0: 0.0:

8: D1.20: 0.86: 0.93: 1.15: A0.95: 0.74: 0.92: 0.96: 1.14: D0.90: 0.96: 0.96: 1.12: A1.00: 1.46: 0.77: 1.05: 1.14: 1.04: 1.00:

9: D0.54: 0.28: D0.42: 0.28: A0.10: 0.17: 0.11: 0.10: 0.11: D0.10: 0.36: 0.12: 0.25: A0.05: 0.04: 0.0: 0.0: 0.06: 0.22: 0.40:

15: 0.08: 0.12: D0.20: 0.06: A0.10: 0.03: 0.10: 0.11: 0.0: 0.05: 0.12: 0.12: 0.06: A0.05: 0.08: 0.0: 0.0: 0.05: 0.07: 0.10:

20: 0.0: 0.0: 0.0: 0.0: A0.05: 0.0: 0.0: 0.04: 0.0: 0.08: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0: 0.0:

MTOT: 1.83: 1.26: 1.55: 1.49: 1.20: 0.94: 1.23: 1.21: 1.25: 1.13: 1.44: 1.20: 1.43: 1.10: 1.61: 0.77: 1.14: 1.25: 1.33: 1.50:

CTOT: \*\*\*\*\*: 36.32: \*\*\*\*\*: 35.20: \*\*\*\*\*: 36.05: \*\*\*\*\*: 42.61: \*\*\*\*\*: 33.69: \*\*\*\*\*: 43.38: \*\*\*\*\*: 38.99: 37.17: \*\*\*\*\*:

MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED.

ALL DAILY VALUES MISSING OR ESTIMATED.

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES

CTOT=CALENDAR YEAR TOTALS

## HOUSTON URBAN HYDROLOGY STUDY

## DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE	3630	4540	4400	4250	4200	4150	4145	205R	22R	21R	6500	6200	6000	5900	5780	204R	203R	20R	5770	5760
JAN.																				
6	0.26	0.27	0.27	0.27	0.16	0.20	0.29	0.24	0.13	0.20	0.24	0.25	0.25	0.12	0.23	0.26	0.15	0.21	0.16	0.25
8	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.03	0.03	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.03	0.0	0.0
9	0.0	0.04	0.02	0.05	0.0	0.06	0.06	0.0	0.03	0.0	0.12	0.0	0.04	0.0	0.05	0.0	0.0	0.02	0.04	0.05
14	0.10	0.06	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
19	0.75	0.51	0.50	1.51	1.62	1.68	1.58	1.81	0.81	1.56	1.68	1.45	1.72	2.00	1.75	2.25	1.86	1.40	1.40	1.40
20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
27	0.14	0.12	0.05	0.14	0.0	0.05	0.07	0.10	0.06	0.03	0.36	0.24	0.50	0.28	0.40	0.18	0.20	0.12	0.30	0.20
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0
MTOT	2.35	2.10	1.91	2.07	1.88	1.93	2.16	2.32	2.30	2.11	2.40	2.29	2.37	2.22	2.86	2.29	2.70	2.32	2.03	2.05
FEB.																				
1	0.34	0.35	0.33	0.35	0.12	0.10	0.11	0.22	0.99	0.19	0.36	0.41	0.25	1.14	0.20	1.25	0.35	0.26	0.40	0.40
4	0.38	0.35	0.35	0.34	0.36	0.32	0.18	0.36	0.27	0.30	0.24	0.21	0.18	0.27	0.26	0.28	0.21	0.29	0.35	0.35
5	0.71	0.80	0.72	0.80	0.72	0.70	0.67	0.83	0.52	0.60	0.96	0.77	0.70	0.59	0.60	0.77	0.71	0.92	0.85	0.85
6	0.0	0.0	0.01	0.0	0.0	0.02	0.0	0.03	0.0	0.0	0.12	0.03	0.01	0.01	0.0	0.01	0.0	0.02	0.0	0.0
8	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.01	0.07	0.01	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.02	0.08	0.10	0.10
10	0.16	0.15	0.17	0.14	0.12	0.05	0.08	0.08	0.12	0.15	0.24	0.18	0.14	0.22	0.05	0.10	0.21	0.14	0.20	0.20
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
21	0.41	0.21	0.20	0.27	0.24	0.12	0.23	0.30	0.26	0.25	0.24	0.36	0.28	0.27	0.18	0.18	0.32	0.16	0.20	0.20
22	0.01	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0
25	0.78	0.64	0.68	0.84	0.84	0.60	0.67	0.85	0.61	0.68	0.48	0.25	0.30	0.46	0.60	0.40	0.36	0.50	0.70	0.70
26	0.0	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0
MTOT	2.81	2.60	2.47	2.55	2.40	1.93	1.94	2.70	2.77	2.17	2.64	1.80	2.28	1.86	3.02	1.89	3.09	2.21	2.37	2.80
MAR.																				
1	0.14	0.08	0.05	0.05	0.03	0.03	0.01	0.06	0.06	0.08	0.12	0.12	0.04	0.0	0.05	0.0	0.0	0.06	0.06	0.05
3	0.04	0.02	0.04	0.04	0.0	0.0	0.0	0.03	0.0	0.03	0.0	0.0	0.03	0.05	0.01	0.05	0.04	0.03	0.02	0.05
4	0.38	1.13	0.57	0.35	0.96	0.65	0.73	1.04	0.78	0.95	0.36	0.84	0.50	0.76	1.57	1.08	0.80	0.60	1.67	1.20
7	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
8	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.03	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.11	0.12	0.08	0.08	0.12	0.05	0.09	0.11	0.38	0.16	0.12	0.24	0.18	0.20	0.54	0.10	0.46	0.46	0.04	0.10
13	0.01	0.02	0.01	0.08	0.0	0.02	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0
21	0.08	0.28	0.22	0.04	0.0	0.02	0.06	0.04	0.13	0.06	0.0	0.12	0.01	0.0	0.12	0.08	0.20	0.17	0.20	0.20
29	0.05	0.29	0.05	0.11	0.0	0.02	0.08	0.02	0.55	0.09	0.12	0.36	0.08	0.06	0.15	0.15	0.29	0.39	0.08	0.10
31	0.0	0.03	0.02	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.05
MTOT	0.87	2.01	1.04	0.58	1.08	0.80	1.01	1.30	1.90	1.48	0.72	1.68	0.87	1.07	2.45	1.46	1.72	1.74	2.07	1.75
MTOT=MONTHLY TOTALS																				

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED;

ALL DAILY VALUES MISSING OR ESTIMATED

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.

# HOUSTON URBAN HYDROLOGY STUDY

## DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU

PERIOD : 1981 WATER YEAR

### G A G E N U M B E R

DATE:	3630:	4540:	4400:	4250:	4200:	4150:	4145:	205R:	22R:	21R:	6500:	6200:	6000:	5900:	5780:	204R:	203R:	20R:	5770:	5760:
APR:																				
2	0.0	0.0	0.01	0.0	0.0	0.0	0.03	0.0	0.0	0.05	0.12	0.0	0.02	0.0	0.0	0.04	0.0	0.06	0.0	0.0
4	0.05	0.06	0.02	0.0	0.0	0.0	0.04	0.0	0.0	0.08	0.0	0.0	0.02	0.0	0.07	0.0	0.0	0.14	0.0	0.10
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0
22	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
23	1.92	1.67	1.73	2.00	A2.20	2.07	2.06	2.26	1.84	3.00	1.56	3.48	2.23	2.34	2.76	2.55	D2.45	2.40	1.13	1.65
24	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.10
25	0.09	0.05	0.01	0.04	A0.05	0.04	0.06	0.05	0.0	0.05	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.04	0.05
28	0.02	0.13	0.0	0.02	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.02	0.05	0.0	D1.00	0.08	0.05	0.05
MTOT:	2.08	2.02	1.77	2.06	2.25	2.12	2.19	2.31	2.08	3.18	1.80	3.60	2.27	2.36	2.92	2.59	3.45	2.69	1.49	2.00
MAY:																				
1	0.53	A0.10	0.17	0.15	***	0.07	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.18	0.05
2	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.03	0.0	0.0
3	5.97	***	5.39	D4.90	***	5.02	***	***	3.64	5.15	4.08	4.80	5.05	***	3.98	***	***	5.10	7.28	4.95
4	2.07	A6.00	1.50	D0.81	***	0.68	D5.32	D5.20	0.22	0.60	0.72	0.60	1.37	D5.00	1.83	D5.10	D4.35	0.59	0.10	0.95
5	0.01	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0
9	0.36	A0.50	0.59	0.55	***	1.51	1.62	1.02	0.0	0.95	1.44	2.16	1.48	1.30	2.94	2.70	3.46	1.90	0.48	0.50
14	0.78	A0.40	0.42	0.30	***	0.20	0.26	0.32	0.31	0.22	0.24	0.24	0.28	0.40	0.49	0.27	0.49	0.50	0.24	0.35
16	0.01	0.01	0.0	0.05	***	0.0	0.02	0.0	0.0	0.0	0.12	0.12	0.25	0.05	0.05	0.0	0.0	0.05	0.0	0.0
18	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0
25	0.21	0.22	0.10	0.17	D7.20	0.04	0.17	0.23	0.32	0.25	0.12	0.12	0.09	0.10	0.20	0.15	0.20	0.16	0.11	0.25
29	0.25	0.07	0.0	0.03	A0.40	0.10	0.28	0.32	0.0	0.62	0.0	0.36	0.0	0.58	0.04	0.73	0.13	0.13	0.0	0.0
30	0.76	0.36	0.23	0.25	A0.10	0.06	0.17	0.08	0.65	0.11	0.12	0.0	0.38	0.0	0.40	D0.25	0.14	0.28	0.0	0.10
31	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.47	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0
MTOT:	10.96	7.66	8.40	7.21	7.70	7.68	7.92	7.26	5.61	7.90	6.84	8.40	8.90	7.43	9.96	9.28	8.77	8.75	8.39	7.15

MTOT=MONTHLY TOTALS

- A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.
- D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.
- X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED;
- E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.

## HOUSTON URBAN HYDROLOGY STUDY

## DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU

PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE	3630	4540	4400	4250	4200	4150	4145	205R	22R	21R	6500	6200	6000	5900	5780	204R	203R	20R	5770	5760
JUNE																				
1	0.03	0.02	0.01	0.0	***	0.16	0.20	0.15	***	0.05	0.0	0.12	0.0	0.24	1.38	0.74	0.54	0.16	0.08	0.35
2	0.03	0.28	0.03	0.06	***	0.0	0.03	0.04	***	0.08	0.12	0.0	0.0	0.04	0.80	0.08	0.40	0.31	0.0	0.10
3	0.12	1.83	0.98	0.30	***	0.12	0.11	0.13	D2.16	0.15	0.48	1.08	0.57	0.61	0.79	0.50	1.49	0.21	2.05	1.25
4	0.83	1.66	0.88	0.53	***	0.80	0.72	0.69	0.46	0.47	1.68	1.20	1.73	***	0.91	***	1.38	1.51	2.44	1.40
5	1.00	2.52	2.08	1.45	***	1.15	1.40	1.20	0.49	2.10	2.16	1.68	2.37	D2.56	1.18	D1.70	0.88	1.66	4.62	2.85
6	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.28	0.08	0.0	A2.40	0.05	0.0	0.08	0.0	0.04	0.24	0.24	0.0	0.30	0.32	D0.80	0.38	0.88	0.0	0.55
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
10	0.78	0.20	0.58	1.00	0.84	0.88	0.80	1.00	***	0.66	0.60	1.56	0.61	2.60	1.16	2.40	2.10	2.34	0.10	0.55
11	1.03	0.78	1.02	1.86	0.84	1.92	2.14	1.07	D0.71	0.79	1.20	1.32	0.38	2.36	1.11	D2.02	2.00	0.33	0.76	0.70
12	0.77	0.60	0.67	0.70	0.84	0.67	0.68	0.90	0.64	0.62	0.36	0.48	0.76	1.30	2.10	D1.06	0.92	1.18	1.25	0.60
13	0.03	0.28	0.07	0.10	0.0	0.0	0.03	0.0	0.03	0.0	0.0	0.12	0.30	0.35	0.12	0.0	0.11	0.21	0.30	0.20
14	0.01	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0
16	0.01	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.12	0.0	0.24	0.20	0.62	0.12	0.23	0.0	0.09	0.76	0.15
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.05	0.0	0.13	0.35	0.12	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.50	0.10	0.0	0.0
24	0.93	0.44	0.42	0.15	0.12	0.0	0.02	0.08	0.04	0.0	***	0.0	0.0	0.0	0.50	0.47	0.14	0.09	1.38	0.65
25	0.14	0.16	1.81	0.70	0.0	0.35	0.28	0.0	0.0	***	0.24	0.24	0.0	0.13	0.10	0.10	0.0	0.0	0.0	0.05
26	0.69	0.81	1.08	0.45	0.60	0.52	0.67	0.54	0.27	***	***	***	***	0.15	0.05	0.05	0.0	0.30	0.18	0.20
27	0.07	0.06	0.05	0.35	0.0	0.0	0.0	0.0	0.0	***	***	***	***	0.0	0.0	0.0	0.0	0.0	0.02	0.05
28	0.32	0.02	0.16	0.17	0.0	0.0	0.0	0.0	0.0	***	***	***	A1.00	0.06	0.0	D0.30	0.28	0.06	1.02	0.10
29	0.03	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.06	D0.64	***	***	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0
30	0.25	1.17	0.26	0.05	A0.24	D0.10	0.12	0.32	0.34	0.08	D1.08	D0.72	A0.10	0.48	0.54	0.86	0.17	0.13	0.29	0.30
MTOT	7.12	11.14	10.33	8.22	6.00	6.72	7.22	6.25	5.22	5.85	7.92	9.00	8.02	11.80	11.22	11.16	11.29	9.65	15.27	10.10

MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED.

ALL DAILY VALUES MISSING OR ESTIMATED.

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.



## HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE:	3630:	4540:	4400:	4250:	4200:	4150:	4145:	205R:	22R:	21R:	6500:	6200:	6000:	5900:	5780:	204R:	203R:	20R:	5770:	5760:
JULY:																				
1	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.10
3	1.17	0.01	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.10
4	0.17	0.15	0.0	0.18	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.10
5	1.03	3.48	1.72	1.20	0.0	0.0	0.0	1.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.45	2.40
6	0.17	0.14	0.01	0.10	0.0	0.0	0.0	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.20
7	1.13	1.27	1.43	0.14	0.0	0.0	0.0	0.97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.23	2.00
8	0.17	0.01	0.0	0.03	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.35
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0
10	1.95	1.37	0.72	0.65	0.72	0.65	0.59	0.71	0.12	0.52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44	1.05
11	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.83	0.0	0.01	0.03	0.36	0.0	0.0	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0
13	0.0	0.04	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.05
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.02	0.0	0.0	0.0	0.36	0.0	0.0	0.35	0.0	0.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05
18	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0
24	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.10
25	0.0	0.0	0.12	0.01	0.12	0.0	0.0	0.17	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.10
26	0.42	1.84	0.66	0.40	0.36	0.16	0.59	0.32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.80
27	0.07	0.31	0.19	0.32	0.0	0.62	0.56	0.03	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.10
28	0.0	0.0	0.0	0.07	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0
MTOT:	7.16	8.66	4.86	4.52	4.67	3.71	4.35	4.37	3.83	4.81	5.44	5.16	6.08	6.18	8.83	4.68	4.47	4.43	7.30	6.35

MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED;

ALL DAILY VALUES MISSING OR ESTIMATED.

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.

## HOUSTON URBAN HYDROLOGY STUDY

## DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE	3630	4540	4400	4250	4200	4150	4145	205R	22R	21R	6500	6200	6000	5900	5780	204R	203R	20R	5770	5760
AUG.	1	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.53	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	4	0.32	0.10	0.0	0.0	0.0	0.0	0.0	0.14	0.0	***	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.0	0.0
	5	1.89	0.53	0.32	0.0	0.0	0.0	0.05	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.14	0.0	0.0	0.33
	6	0.85	0.01	0.03	0.0	0.0	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0
	7	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	12	0.12	0.11	0.47	1.00	0.48	0.70	1.53	0.43	0.0	0.03	***	***	0.50	0.0	1.00	0.08	0.0	0.0	0.0
	13	0.07	0.39	1.37	0.94	0.36	0.73	0.93	0.36	0.29	0.60	***	***	0.70	0.33	1.00	0.40	0.02	0.0	0.25
	14	0.0	0.09	0.02	0.37	0.12	0.78	0.69	0.42	0.0	0.05	***	***	0.0	0.0	0.57	0.14	0.0	0.0	0.40
	18	0.01	0.0	0.0	0.15	0.0	0.56	0.83	0.0	0.0	0.15	***	***	0.0	0.0	0.0	1.08	0.0	0.0	0.0
	19	0.64	0.12	0.03	0.09	0.48	0.03	0.07	0.50	0.0	0.0	***	***	0.0	0.18	0.0	0.0	0.0	0.0	0.0
	24	0.32	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.0	A1.00	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	25	0.01	0.05	0.02	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	28	0.69	0.26	0.19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.0	0.05
	29	0.07	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	30	0.92	1.00	***	0.64	0.72	0.60	0.93	0.86	0.69	0.36	***	***	0.0	0.78	0.85	1.34	***	1.01	1.54
	31	6.31	8.18	04.78	5.76	7.32	6.98	7.27	6.98	6.53	8.62	07.32	A9.50	5.82	7.36	8.08	6.85	09.00	5.98	4.98
MTOT	12.22	10.92	7.23	9.25	9.72	10.38	12.30	9.60	7.65	10.34	8.32	9.50	6.82	9.52	9.87	11.55	9.68	7.01	8.09	8.45
SEPT.	1	0.02	0.01	0.02	0.0	0.12	0.02	0.02	0.10	0.34	0.14	***	0.0	0.07	0.10	0.01	0.0	0.05	0.0	0.05
	2	0.08	0.21	0.38	A0.40	0.48	1.06	0.84	0.53	0.37	0.10	***	A0.60	0.35	0.31	0.10	0.60	0.0	1.73	0.0
	3	0.02	0.03	0.12	0.0	0.0	0.13	0.34	0.0	0.0	0.0	D0.60	0.0	0.02	0.64	0.03	0.0	0.10	0.41	0.0
	14	1.09	0.84	0.63	0.60	0.60	0.35	0.67	0.71	0.70	D0.95	0.60	***	0.22	0.60	1.14	0.02	0.60	0.71	1.16
	15	0.0	0.03	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.24	A0.70	0.0	0.15	0.02	0.55	0.0	0.0	0.25
	16	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MTOT	1.21	1.13	1.15	1.00	1.32	1.56	1.87	1.34	1.41	1.19	1.44	1.30	0.66	1.80	1.30	1.17	0.83	2.91	1.21	1.25
WTOT	53.38	54.14	45.45	45.09	44.64	44.04	50.27	44.98	43.59	50.29	44.12	48.25	44.97	51.96	61.98	55.93	53.87	49.11	53.70	48.00

MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED.

ALL DAILY VALUES MISSING OR ESTIMATED.

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.

WTOT=WATER YEAR TOTAL

## HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU PERIOD 1981 WATER YEAR

## G A G E N U M B E R

DATE:	4910:	4800:	4780:	308R:	303R:	32R:	33R:	12R:	5500:	5470:	5400:	305R:	31R:	5650:	5550:	403R:	402R:	401R:
OCT:	0.0	0.0	0.06	0.0	0.0	0.11	1.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.13	0.18	0.07	0.0	0.0	0.08	0.07	0.12	0.0	0.0	0.0	0.0	0.12	0.12	0.12	0.15	0.0
17	0.0	1.34	1.17	0.93	D1.10	1.21	1.32	1.50	1.80	1.20	1.20	1.08	0.83	D1.44	1.08	1.32	1.31	1.23
18	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.25	0.11	0.18	0.31	0.0	0.0	0.14	0.17	0.0	0.0	0.0	0.0	0.34	0.0	0.0	0.0	0.0	0.0
27	0.05	0.0	0.0	0.04	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.24	0.12	0.0	0.10	0.10
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MTOT:	1.73	1.58	1.60	1.35	1.10	1.32	2.79	1.80	1.92	1.32	1.20	1.08	1.17	1.80	1.32	1.44	1.56	1.33
NOV:	0.02	0.0	0.0	0.04	0.0	0.0	0.0	0.01	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.02	0.0	0.08	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.10	0.0	0.12	0.12	0.07	0.0
14	0.02	0.0	0.03	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.08	0.02	0.03	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0
16	0.23	0.20	0.29	0.29	0.30	0.21	0.39	0.20	0.24	0.48	0.36	0.24	0.23	0.12	0.36	0.24	0.25	0.34
17	0.0	0.11	0.15	0.06	0.18	0.18	0.05	0.13	0.12	0.12	0.0	0.12	0.07	0.24	0.12	0.24	0.11	0.15
21	0.02	0.0	0.02	0.01	0.0	0.04	0.03	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.70	0.63	0.57	0.65	0.80	0.55	0.58	0.68	0.84	0.84	0.72	0.84	0.68	0.72	0.72	0.96	0.65	0.74
23	0.07	0.03	0.05	0.06	0.05	0.0	0.03	0.05	0.12	0.0	0.12	0.0	0.07	0.0	0.0	0.0	0.0	0.04
25	0.74	0.63	0.81	0.66	1.20	0.37	A0.40	0.67	0.48	0.48	0.60	0.60	0.48	0.36	0.48	0.48	0.45	D0.40
26	0.03	0.10	0.26	0.17	0.18	0.14	A0.10	0.15	0.24	0.24	0.36	0.24	0.14	0.36	0.24	0.36	0.22	D0.23
MTOT:	1.91	1.72	2.26	1.94	2.71	1.49	1.58	1.93	2.16	2.16	2.16	2.04	1.84	1.80	2.04	2.40	1.75	1.90
DEC:	0.55	0.53	0.87	0.93	1.12	1.01	0.91	0.94	0.48	0.48	0.36	0.24	0.44	0.48	0.48	0.72	0.45	0.54
8	0.41	0.16	0.28	0.43	0.38	0.19	0.20	0.47	0.84	0.60	0.48	0.48	0.41	0.72	0.24	0.36	0.36	0.35
11	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.12	0.0	0.0
15	0.28	0.20	0.19	0.20	0.10	0.19	0.05	0.14	0.24	0.24	0.24	0.24	0.22	0.12	0.12	0.12	0.12	0.05
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MTOT:	1.25	0.89	1.34	1.56	1.60	1.39	1.16	1.55	1.56	1.32	1.08	0.96	1.07	1.44	0.84	1.32	0.93	0.94
CTOT:	34.51	*****	*****	35.89	35.22	36.80	41.20	39.04	*****	33.81	*****	32.26	33.79	*****	35.79	34.73	31.88	
MTOT=MONTHLY TOTALS																		
A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.																		
D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.																		
X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED																		
E ALL DAILY VALUES MISSING OR ESTIMATED																		
E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.																		
CTOT=CALENDAR YEAR TOTALS																		

## HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE	4910	4800	4780	308R	303R	32R	33R	12R	5500	5470	5400	305R	31R	5650	5550	403R	402R	401R
JAN.	0.23	0.08	0.17	0.18	0.16	0.27	0.11	0.18	0.12	0.24	0.12	0.24	0.24	0.12	0.36	0.36	0.32	0.32
6	0.01	0.01	0.02	0.03	0.0	0.0	0.0	0.03	0.12	0.0	0.12	0.12	0.05	0.0	0.0	0.0	0.07	0.08
8	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.02	0.0	0.0	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.31	0.25	0.30	0.23	0.28	0.21	0.20	0.11	0.36	0.36	0.36	0.36	0.27	0.24	0.36	0.36	0.32	0.30
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0
17	1.35	1.38	1.42	1.33	1.84	1.49	***	1.40	1.80	***	1.56	1.46	1.68	1.56	1.92	1.67	1.67	1.65
20	0.18	0.06	0.06	0.06	0.12	0.15	A1.80	0.08	0.12	0.12	D1.56	0.12	0.07	0.0	0.12	0.12	0.06	0.07
27	0.17	0.0	0.05	0.13	0.0	0.0	A0.10	0.13	0.36	0.48	0.12	0.36	0.17	0.48	0.72	0.84	0.47	0.80
31	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02
MTOT	2.25	1.78	2.05	1.97	2.40	2.20	2.21	1.96	2.88	3.00	2.28	2.88	2.33	2.52	3.12	3.60	2.91	3.24
FEB.	0.46	0.24	0.59	0.30	0.20	0.17	A0.20	0.31	0.36	0.36	0.36	0.36	0.45	0.36	0.48	***	0.40	D0.45
1	0.29	0.23	0.25	0.27	0.23	0.25	0.22	0.30	0.36	0.24	0.24	0.24	0.23	***	0.36	***	0.28	0.28
4	0.66	D0.62	0.53	0.67	0.65	0.58	0.45	0.71	0.96	0.96	0.72	0.84	0.59	***	0.60	***	0.68	0.65
6	0.0	D0.02	0.04	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.02	***	0.0	***	0.02	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	***	0.0	***	0.0	0.0
9	0.06	0.0	0.0	0.20	0.0	0.0	0.0	0.12	0.0	0.0	0.24	0.0	0.08	***	0.24	***	0.21	0.17
10	0.09	0.11	0.19	0.07	0.08	0.11	0.10	0.17	0.12	0.12	0.12	0.24	0.06	A1.60	0.12	D1.92	0.03	0.08
14	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.11	0.12	0.28	0.15	0.34	0.32	0.22	0.19	D0.24	0.12	0.0	0.0	0.16	0.12	***	0.0	0.09	D0.12
22	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	***	0.0	0.01	0.0
25	0.59	A0.50	0.74	0.61	0.55	A0.60	0.75	0.50	D0.84	0.72	0.60	0.84	D0.50	0.60	D0.72	0.72	0.62	D0.60
MTOT	2.29	1.84	2.64	2.27	2.08	2.03	1.94	2.31	3.00	2.76	2.28	2.64	2.09	2.68	2.52	2.64	2.34	2.35
MAR.	0.08	***	0.10	0.11	0.0	0.07	0.12	0.08	0.0	0.12	0.0	0.12	***	0.0	***	0.12	0.09	0.03
3	0.03	***	0.02	0.03	0.11	0.02	0.0	0.03	0.0	0.0	0.0	0.0	***	0.0	***	0.12	0.09	0.03
4	0.83	A1.00	1.08	0.78	0.52	0.45	0.96	0.73	D1.08	1.08	1.20	1.68	D0.82	0.84	***	0.60	0.32	0.38
7	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	***	0.0	0.0	0.0
11	0.09	***	0.07	0.04	0.05	***	0.01	0.02	0.0	0.0	0.0	0.0	0.12	0.0	***	0.0	***	***
12	0.12	***	0.10	0.08	0.16	***	0.19	0.11	D0.24	0.24	0.24	0.24	0.13	0.12	***	0.0	***	***
13	0.02	A0.20	0.04	0.01	0.0	D0.14	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	D0.84	0.0	D0.11	D0.08
21	0.10	A0.10	D0.10	0.08	0.02	0.04	0.06	0.09	0.24	0.12	0.12	0.0	0.08	0.24	0.36	0.36	0.23	0.27
29	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.05	0.12	0.12	0.24	0.0	0.04	0.24	0.12	0.12	0.15	0.0
MTOT	1.27	1.30	1.51	1.24	0.86	0.72	1.34	1.14	1.68	1.68	1.80	2.04	1.19	1.44	1.32	1.32	0.99	0.79

MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED

ALL DAILY VALUES MISSING OR ESTIMATED

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES

## HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU

PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE	4910	4800	4780	308R	303R	32R	33R	12R	5500	5470	5400	305R	31R	5650	5550	403R	402R	401R
APR.																		
4	0.06	0.0	0.0	0.08	0.08	0.03	0.05	0.09	0.12	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.10
18	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.01	0.0	0.04	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.70	1.12	1.20	1.03	***	1.55	2.14	1.09	0.84	0.96	0.84	0.96	0.80	0.72	***	1.56	1.40	D1.48
24	0.25	0.20	0.08	0.40	***	0.0	0.0	0.29	0.36	0.24	0.24	0.24	0.30	0.12	***	0.12	0.09	D0.05
25	0.36	0.20	0.17	0.15	A1.42	0.06	0.13	0.09	0.24	0.24	0.72	0.36	0.46	D0.24	D1.80	0.36	0.39	D0.22
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MTOT	1.37	1.52	1.45	1.67	1.50	1.68	2.37	1.64	1.56	1.44	1.80	1.68	1.56	1.08	1.80	2.04	1.88	1.85
MAY																		
1	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.10	0.0	0.03	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.12	0.24	0.0	0.0
3	8.20	5.68	4.34	3.85	2.75	5.29	2.41	4.00	9.00	2.88	5.28	3.72	5.40	D9.96	9.84	11.52	9.08	8.71
4	0.38	0.11	0.18	0.29	1.22	0.98	0.93	0.06	0.12	0.12	0.0	0.48	0.05	D0.24	0.12	0.12	0.05	0.10
5	0.02	0.0	0.02	0.0	0.12	0.0	0.0	0.0	0.24	0.0	0.0	0.12	0.02	D0.12	0.0	0.0	0.0	0.0
9	0.36	0.39	0.49	0.28	A0.50	0.0	0.51	0.35	0.72	0.84	0.48	0.48	0.66	D0.48	0.24	0.36	0.23	0.24
14	0.92	0.48	0.62	0.65	0.58	0.39	0.33	0.51	0.48	0.60	0.60	D0.60	0.35	D0.36	0.36	0.31	0.22	0.22
16	0.10	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.18	0.10	0.14	0.22	0.15	0.21	0.0	0.19	D0.48	0.48	0.24	D0.36	0.24	D0.48	0.48	0.48	0.43	D0.40
29	0.0	0.0	0.0	0.01	0.0	0.50	0.27	0.05	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.04	0.21	0.10	0.08	0.0	0.80	0.68	0.18	***	0.0	0.0	0.0	0.20	D0.12	0.24	0.24	0.08	0.0
31	0.01	0.0	0.01	0.0	0.0	0.03	0.0	0.0	D0.12	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.13	0.0
MTOT	10.31	6.97	6.07	5.40	5.32	8.21	5.17	5.36	11.16	4.92	6.60	5.76	7.00	11.76	11.64	13.32	10.31	9.67

MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED;

ALL DAILY VALUES MISSING OR ESTIMATED.

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.

## HOUSTON URBAN HYDROLOGY STUDY

## DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU

PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE	4910	4800	4780	303R	308R	303R	32R	33R	12R	5500	5470	5400	305R	31R	5550	403R	402R	401R
JUNE																		
1	0.06	0.0	0.0	0.82	0.28	0.0	0.0	0.0	0.11	0.36	0.0	0.0	0.12	0.02	0.72	0.36	0.60	0.11
2	0.03	0.51	0.37	0.38	0.40	0.37	0.26	0.26	1.25	0.12	0.36	0.0	0.0	0.40	0.0	0.36	0.12	0.15
3	0.27	0.38	0.32	0.73	0.0	0.06	0.03	0.06	0.36	1.08	0.36	0.0	0.0	0.24	0.00	1.68	0.24	2.67
4	0.47	0.14	0.08	1.54	0.10	0.13	0.18	0.18	1.53	1.80	1.56	0.60	0.28	0.15	1.80	1.32	1.68	1.12
5	1.04	1.23	1.19	3.18	1.20	1.07	0.77	2.94	5.28	5.00	1.92	4.92	1.00	5.16	3.72	4.44	4.60	4.75
10	0.78	0.62	0.24	0.16	0.0	0.27	0.03	0.22	0.0	0.0	0.12	0.12	0.0	0.53	0.0	0.12	0.06	0.12
11	0.79	0.89	0.79	0.83	1.20	0.66	0.64	0.64	1.44	1.30	0.96	1.20	0.88	1.08	1.20	1.68	1.92	1.38
12	0.77	0.86	0.67	0.41	0.93	0.76	0.84	0.46	0.84	0.60	0.60	0.48	1.02	1.08	1.08	1.20	0.69	1.14
13	0.01	0.0	0.06	0.13	0.0	0.0	0.03	0.22	0.24	0.10	0.12	0.12	0.0	0.48	0.24	0.24	0.12	0.17
14	0.04	0.04	0.02	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.02	0.0	0.0	0.11	0.05	0.0	0.24	0.50	0.0	0.84	0.0	0.0	0.0	0.12	0.0	0.15
23	0.04	0.0	0.06	0.0	0.0	0.99	0.92	0.0	0.0	0.0	0.36	0.0	1.00	0.0	0.0	0.0	0.0	0.0
24	1.05	0.18	0.02	1.05	0.34	0.55	1.01	0.60	3.36	2.88	1.08	1.20	0.57	0.24	0.0	0.0	0.22	0.18
25	0.07	0.23	0.14	0.31	0.0	0.0	0.02	0.14	0.84	1.32	1.32	1.32	0.29	0.24	0.0	0.0	0.03	0.0
26	0.29	0.32	0.06	1.39	0.34	0.56	0.91	1.42	0.72	0.72	0.72	0.72	0.10	0.10	0.60	0.48	0.43	0.83
27	0.04	0.19	0.02	0.34	0.10	0.04	0.0	0.23	0.12	0.0	0.24	0.12	0.14	0.14	0.60	0.72	0.23	0.58
28	0.0	0.0	0.01	0.60	0.0	0.38	0.21	0.08	0.12	0.24	0.0	0.0	0.0	0.0	0.0	0.12	0.04	0.39
29	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.19	0.42	0.10	0.17	1.24	0.45	0.08	0.74	0.96	0.24	0.60	0.12	0.38	0.18	0.48	0.72	0.32	0.46

-294-

MTOT	5.95	6.01	4.18	12.04	6.13	6.50	5.98	10.66	19.80	16.00	7.92	13.44	6.72	15.72	12.48	14.40	12.32	14.00
JULY																		
3	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.03	0.60	0.12	0.0	0.0	0.0	0.07	0.0	0.0	0.0	0.0
4	0.0	0.0	0.01	0.0	1.15	1.06	0.0	0.0	0.12	0.0	0.12	0.0	0.72	0.0	0.0	0.0	0.04	0.03
5	1.14	1.18	2.13	1.29	0.0	0.11	0.0	1.65	1.08	1.20	0.96	1.20	0.65	0.65	0.48	0.72	0.45	0.60
6	0.98	0.05	0.26	0.13	0.0	0.39	0.0	0.12	0.12	0.12	0.12	0.24	0.04	0.04	0.48	0.24	0.20	0.28
7	1.98	1.35	1.21	0.56	0.0	1.52	0.0	0.63	2.64	1.32	1.08	0.24	2.06	0.0	1.44	1.56	0.20	1.06
8	0.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.12	0.0	0.0	0.0	0.0	0.48	0.60	0.40	0.38
10	0.32	0.18	0.50	1.71	0.55	0.0	0.0	1.33	0.36	0.24	0.12	0.60	0.19	0.84	0.48	0.60	0.40	0.38
11	0.01	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.04	0.01	0.0	0.0	0.0	0.32	0.0	0.0	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0
14	0.0	0.18	0.0	0.0	0.15	0.0	0.0	0.0	0.36	0.0	0.0	0.0	0.0	0.0	0.24	0.12	0.70	0.0
17	0.0	0.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.09	0.13	0.0	0.0	0.0	0.24	0.0	0.12	0.0	0.0	0.0	0.24	0.12	0.0	0.04
26	0.67	0.32	0.28	2.09	0.22	0.60	0.0	1.69	5.40	3.96	1.32	3.00	0.84	1.68	1.92	2.04	3.67	1.68
27	0.56	0.42	0.98	0.24	0.38	0.41	0.0	0.23	0.36	0.36	1.44	0.96	0.31	0.60	0.84	0.96	0.78	0.88
28	0.03	0.0	0.02	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.10	0.12	0.12	0.24	0.15	0.04
MTOT	4.88	4.19	5.44	6.34	7.23	4.81	6.00	6.00	11.28	7.80	5.16	7.08	4.26	6.24	6.60	6.72	8.39	5.06

## MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.

D =TOTAL RAINFALL AMOUNT KNOWN, TIME DISTRIBUTION ESTIMATED.

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED;

ALL DAILY VALUES MISSING OR ESTIMATED

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES

## HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU PERIOD : 1981 WATER YEAR

## G A G E N U M B E R

DATE	4910	4800	4780	308R	303R	32R	33R	12R	5500	5470	5400	305R	31R	5650	5550	403R	402R	401R
AUG.																		
4	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	0.0	0.12	0.0	0.24	0.48	0.60	0.19	0.25
5	0.0	0.0	0.0	0.0	0.0	0.0	0.81	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.0	0.0	0.0
11	1.48	0.18	0.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.0	0.84	0.0	0.0	0.0	0.0	0.0
12	0.02	0.0	0.0	0.08	0.0	0.0	0.76	0.19	0.48	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.50	0.0
13	1.01	0.02	0.04	0.34	0.0	0.0	0.07	1.41	0.72	0.48	0.48	0.24	0.42	0.12	0.36	0.0	1.30	0.0
14	0.04	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.84	0.0	0.0	0.12	0.0	0.0	0.0
17	0.08	0.0	0.0	0.01	0.0	0.0	0.0	0.0	1.56	0.0	0.96	0.24	0.05	****	1.44	1.92	1.12	0.90
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0	****	0.84	0.84	0.66	0.55
19	1.97	1.95	2.87	1.39	1.15	2.55	0.0	0.38	2.16	2.28	0.72	1.92	1.62	****	1.92	1.80	2.16	1.21
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	****	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0
28	0.37	1.92	0.92	0.0	0.0	0.0	0.57	0.34	0.0	0.0	0.0	0.0	0.0	****	0.0	0.0	0.0	0.0
29	0.10	0.11	0.12	0.11	0.12	0.14	0.0	0.07	0.12	0.0	0.0	0.0	0.14	****	0.48	0.36	0.24	0.32
30	1.75	2.58	***	1.11	0.95	2.85	***	2.54	1.68	0.60	2.16	0.96	3.48	****	0.84	0.96	0.89	0.32
31	6.88	5.46	49.00	6.76	8.66	7.77	49.00	5.36	5.52	7.08	7.20	7.92	4.51	08.16	4.92	5.52	3.55	5.73

MTOT	13.90	12.22	12.98	9.81	10.88	13.31	11.54	10.65	12.24	10.44	12.24	12.36	11.06	8.76	11.52	12.00	10.61	9.28
	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E

295

SEPT.																		
1	0.01	0.05	0.0	0.0	0.36	0.05	0.34	0.0	0.0	0.0	0.0	0.0	0.06	****	0.0	0.12	0.0	0.0
2	0.05	0.05	0.03	0.04	0.0	0.04	0.13	0.14	0.24	0.0	0.84	0.48	0.0	****	0.24	0.24	0.11	0.0
3	***	0.11	0.11	0.15	0.0	0.33	0.0	0.0	0.12	0.0	0.12	0.12	0.05	0.24	0.36	0.24	0.07	0.22
13	***	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08
14	***	0.82	0.55	2.45	0.66	0.34	0.85	2.01	0.08	1.56	3.36	1.92	1.47	****	1.92	2.16	2.02	1.86
15	0.29	0.0	0.0	0.03	0.0	0.0	0.0	0.08	0.0	0.0	0.0	0.12	0.0	0.24	0.12	0.12	0.10	0.0

MTOT	2.35	1.03	0.69	2.67	1.02	0.76	1.32	2.23	1.44	1.56	4.32	2.64	1.58	2.28	2.64	2.88	2.30	2.16
	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E

WTOT	49.46	41.05	42.21	48.26	42.83	44.42	43.40	47.23	70.68	54.40	48.84	54.60	41.87	57.52	57.84	64.08	56.29	52.57
	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E

MTOT=MONTHLY TOTALS

A =TOTAL RAINFALL AMOUNT AND TIME DISTRIBUTION ESTIMATED.

D =TOTAL RAINFALL AMOUNT KNOWN ; TIME DISTRIBUTION ESTIMATED.

X =MONTHLY TOTAL RAINFALL AMOUNT ESTIMATED;

ALL DAILY VALUES MISSING OR ESTIMATED.

E =MONTHLY OR YEARLY TOTALS CONTAIN ESTIMATED DAILY VALUES.

WTOT=WATER YEAR TOTAL

MONTHLY RAINFALL-DATA SUMMARY IN THE HOUSTON METROPOLITAN AREA,  
NATIONAL WEATHER SERVICE STATIONS, 1981 WATER YEAR

Rain-gage numbers referenced in table 19

Month	10S	12R	13S	20R	22R	23S	24S	32R	33R	34S	35S	36S	42S	201S	202S	404S
Oct. 1980	3.19	1.80	4.87	4.03	8.11	9.31	3.94	1.32	2.79	3.40	1.90	1.66	1.65	4.75	2.82	1.22
Nov.	2.20	1.93	2.22	2.12	1.46	2.20	2.41	1.49	e/1.58	2.15	1.88	2.38	3.03	2.63	e/3.65	1.82
Dec.	1.12	1.55	2.00	1.25	1.25	.98	1.78	1.39	1.16	1.59	1.28	1.10	1.83	1.55	2.43	1.50
Annual	38.29	41.20	41.39	38.99	40.97	46.79	39.85	35.22	36.80	38.04	37.41	37.09	39.70	40.73	51.28	36.33
1 Jan. 1981	2.89	1.96	2.37	2.32	2.30	3.19	2.22	2.20	e/2.21	2.44	2.08	2.31	3.56	2.68	2.37	1.88
Feb.	2.60	2.31	3.10	2.21	2.77	2.42	2.81	2.03	1.94	2.09	2.45	2.49	3.18	2.04	3.01	3.09
Mar.	1.79	1.14	1.11	1.74	1.90	1.57	1.08	.72	1.34	1.25	1.32	1.85	1.57	2.01	2.06	1.41
April	2.08	1.64	2.13	2.69	2.08	3.12	3.11	1.68	2.37	2.16	1.64	2.07	1.84	3.62	3.01	2.46
May	9.43	5.36	8.69	8.75	5.61	9.74	10.18	8.21	5.17	6.80	9.92	5.70	11.13	11.80	12.19	6.12
June	11.19	10.66	7.60	9.65	5.22	8.31	7.42	6.50	5.98	6.13	6.24	6.92	15.48	10.91	17.38	17.49
July	6.45	6.00	8.27	4.43	3.83	4.55	6.73	4.81	e/6.00	4.91	5.44	7.05	9.14	5.37	9.47	3.81
Aug.	5.44	10.65	5.01	7.01	7.65	6.36	3.46	13.31	e/11.54	8.92	8.68	6.38	16.01	5.87	7.14	5.23
Sept.	4.32	2.23	3.23	2.91	1.41	3.40	7.46	.76	1.32	4.66	6.25	3.78	2.26	4.51	1.74	5.63
Totals	52.70	47.23	50.60	49.11	43.59	56.25	52.60	44.42	43.40	46.50	49.08	43.69	70.68	57.74	67.27	51.66

e/ Incomplete, total estimated.