Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan Area, 1979

By Fred Liscum, J. F. Weigel, and J. P. Bruchmiller

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

HYDROLOGIC DATA FOR URBAN STUDIES IN THE HOUSTON, TEXAS, METROPOLITAN AREA 1979

By

Fred Liscum, J. F. Weigel, and J. P. Bruchmiller

U.S. Geological Survey

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, Houston, and San Antonio.

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 sixteenth 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 1979 water year (October 1, 1978 to September 30, 1979).

A report by Johnson and Sayre (1973) utilized records collected from 1965 to 1969 to make a study of 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 computed runoff from the Houston area and computed concentrations and loads of selected water-quality constituents combined in the inflow 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, 1979."

To facilitate the publication and distribution of this report at the earliest feasible time, 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) 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 in the Houston metropolitan area from 1969 to 1976

Station no.	Station name	1969 a/	1976 b/	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 on figures 4-19.

Precipitation Data

Precipitation data are based on 33 recording rain gages 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 in table 18.

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

Weighted-mean precipitation factors 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). For example, the 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 0.15; to that value add the recorded precipitation at the rain gage at station 205R multiplied by 0.20; 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 0.50.

Rainfall for the current year was unevenly distributed over the area. Individual station totals ranged from 48.2 inches at the NWS (National Weather Service) rain gage at the Satsuma community (station 22R) to 88.8 inches at the NWS rain gage in Deer Park (station 404S). Although not in the study area, it is of interest to note that the NWS rain gage at Alvin, approximately 25 miles south of downtown Houston, recorded 102.6 inches of rain during the 1979 water year. Figure 2 shows the comparison of accumulated monthly rainfall for the 1979 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 significant increase in rainfall, especially for the period April through September, for the current year as compared to the 30-year average.

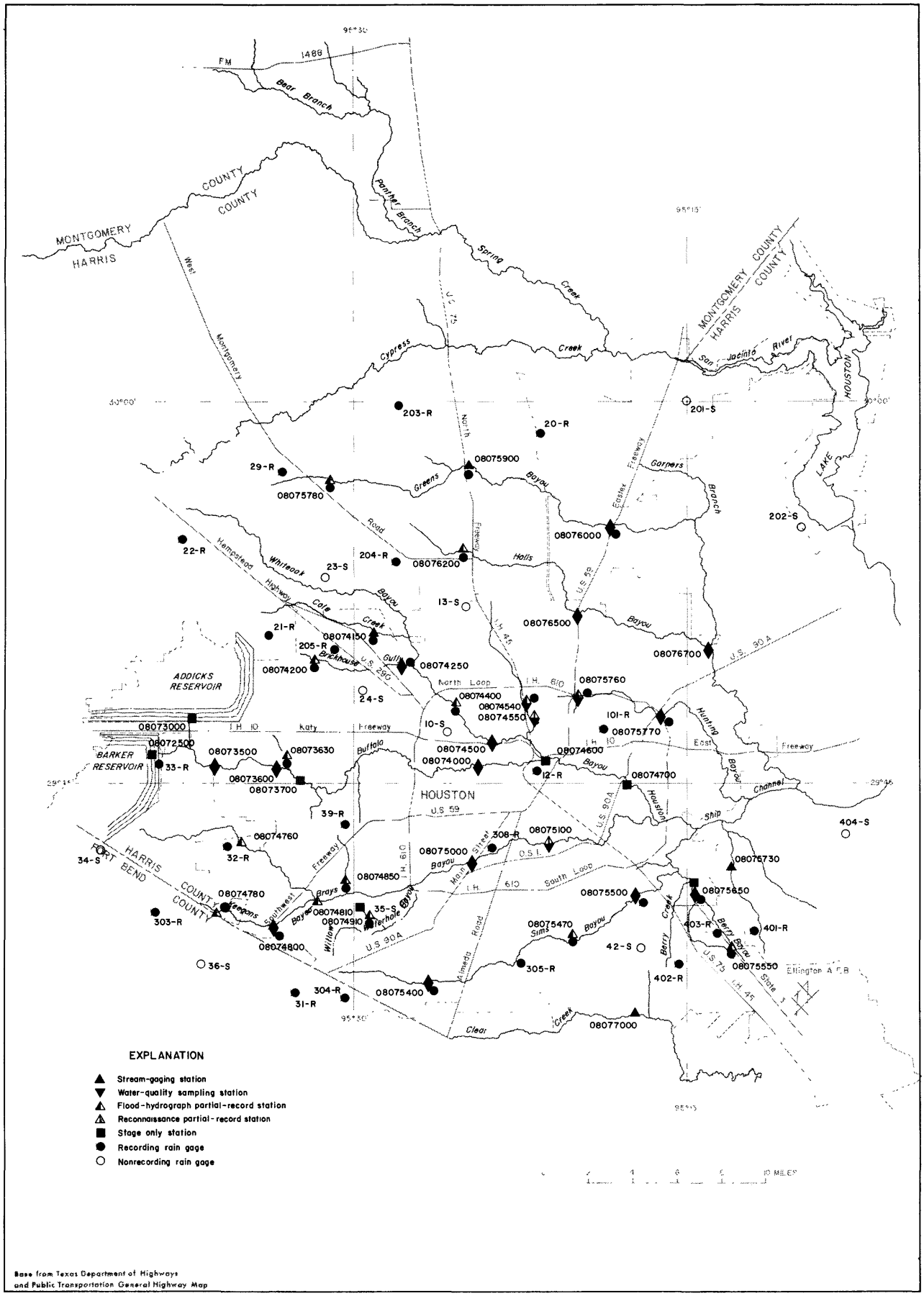

FIGURE 1.- Locations of data-collection sites in the Houston urban study area

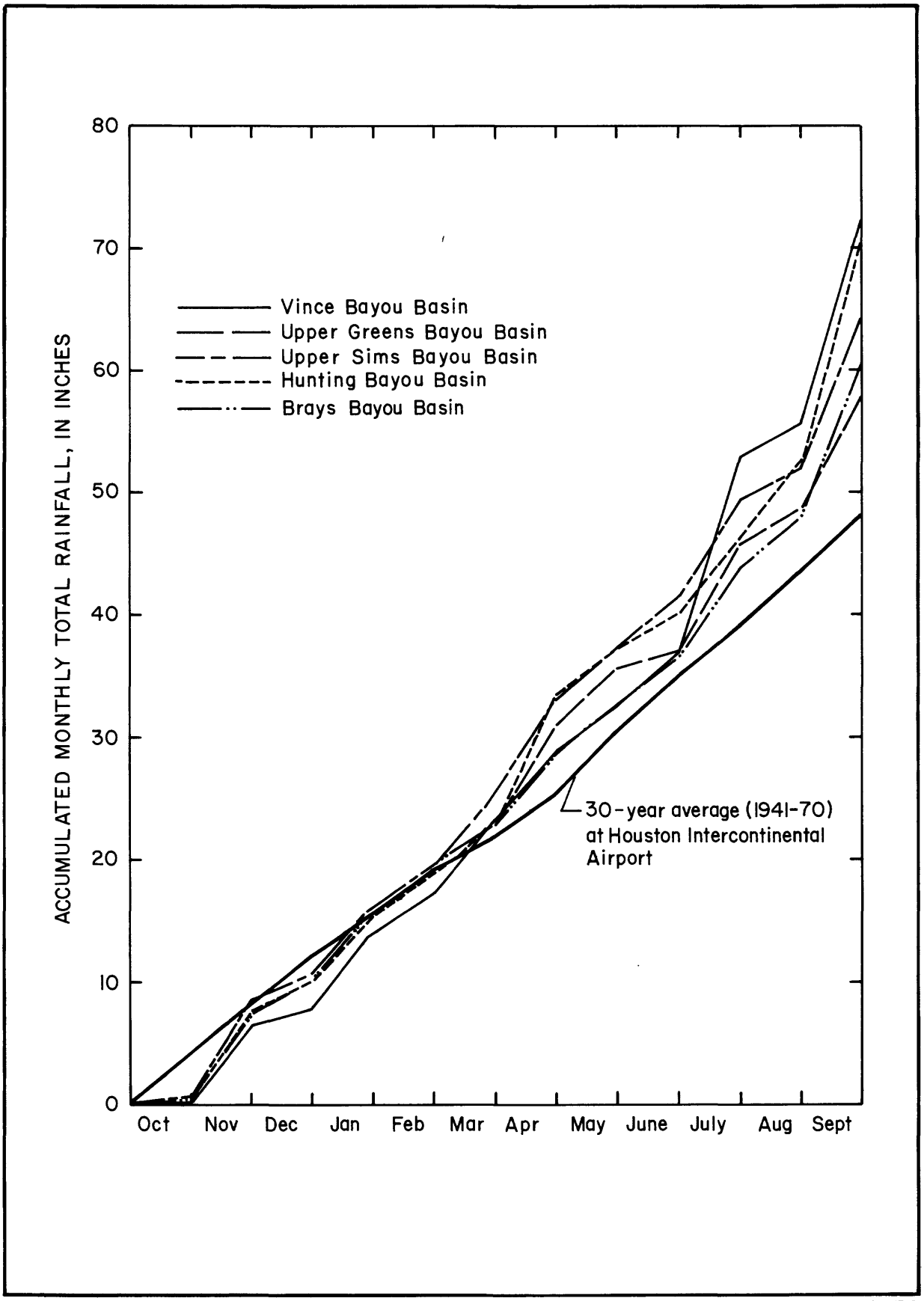

FIGURE 2.-Rainfall at five drainage basins in the Houston metropolitan area, 1979 water year

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

Station number and name	Monthly and yearly totals: Rain gage 1/	Monthly and yearly totals: Weighted-mean precipitation factors 2/	Date of storm	Storm totals: Rain gage 1/	Storm totals: Weighted-mean precipitation factors 2/
08073630 Bettina Street Ditch at Houston	Not computed	--	July 19-20, 1979	08073630	1.00
			Sept. 17-20, 1979	08073630	1.00
08074150 Cole Creek at Deihl Road, Houston	08074150	.25	Sept. 17-21, 1979	08074150	.30
	205R	.15		205R	.15
	23S	.15		21R	.55
	21R	.45			
08074200 Brickhouse Gully at Clarblak Street, Houston	Not computed	--	April 18-20, 1979	205R	.20
				21R	.80
			Sept. 17-21, 1979	08074200	.30
				21R	.70
08074250 Brickhouse Gully at Costa Rica Street, Houston	48074250	.10	April 18-21, 1979	08074250	.15
	08074200	.30		08074150	.05
	08074150	.10		205R	.55
	205R	.25		21R	.25
	24S	.10	Sept. 17-21, 1979	08074250	.15
	21R	.15		08074200	.30
				08074150	.05
				205R	.30
				21R	.20
08074400 Lazybrook Street Storm Sewer at Houston	Not computed	--	April 18-20, 1979	08074400	1.00
			Aug. 19, 1979	08074400	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: Rain gage 1/	Monthly and yearly totals: Weighted-mean precipitation factors 2/	Date of storm	Storm totals: Rain gage 1/	Storm totals: Weighted-mean precipitation factors 2/
08074500 Whiteoak Bayou at Houston	08074400	0.05	Jan. 5-9, 1979	08074400	0.15
	08074250	.05		08074250	.10
	08074200	.05		08074200	.10
	08074150	.10		08074150	.25
	205R	.05		29R	.25
	204R	.10		21R	.15
	29R	.05	April 18-23, 1979	08074400	.15
	24S	.05		08074250	.10
	23S	.20		08074150	.15
	22R	.15		204R	.15
	21R	.05		29R	.15
	13S	.05		22R	.15
	10S	.05		21R	.15
			Sept. 17-24, 1979	08074400	.15
				08074250	.10
				08074150	.15
				204R	.15
				29R	.15
				22R	.15
				21R	.15
08074540 Little Whiteoak Bayou at Houston	Not computed	--	Sept. 17-21, 1979	08075760	.35
				08074400	.50
				204R	.15
08074760 Brays Bayou at Alief	Not computed	--	April 19-22, 1979	303R	.30
				33R	.20
				32R	.50
			Sept. 17-23, 1979	303R	.30
				33R	.20
				32R	.50
08074780 Keegans Bayou at Keegan Road, Houston	Not computed	--	April 3-5, 1979	08074780	.35
				303R	.65
			April 19-22, 1979	08074780	.35
				303R	.65
			Sept. 18-23, 1979	08074780	.35
				303R	.65

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 1/	Weighted-mean precipitation factors 2/		Rain gage 1/	Weighted-mean precipitation factors 2/
08074800 Keegans Bayou at Roark Road, Houston	08074800	0.10	Jan. 5-9, 1979	08074800	0.40
	08074780	.35		303R	.60
	303R	.45	April 3-5, 1979	08074800	.10
	34S	.10		08074780	.45
				303R	.45
			April 18-22, 1979	08074800	.10
				08074780	.45
				303R	.45
			Sept. 17-23, 1979	08074800	.10
				08074780	.45
				303R	.45
08074810 Brays Bayou at Gessner Drive, Houston	Not computed	--	April 18-24, 1979	08074800	.25
				08074780	.15
				303R	.15
				32R	.45
			Sept. 17-23, 1979	08074800	.25
				08074780	.15
				303R	.15
				32R	.45
08074850 Bintliff Ditch at Bissonnet Street, Houston	Not computed	--	No storms published	--	--
08074910 Hummingbird Street Ditch at Houston	Not computed	--	July 25-26, 1979	08074910	1.00
			Sept. 1, 1979	08074910	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: Rain gage 1/	Monthly and yearly totals: Weighted-mean precipitation factors 2/	Date of storm	Storm totals: Rain gage 1/	Storm totals: Weighted-mean precipitation factors 2/
08075000 Brays Bayou at Houston	08074910	0.10	Jan. 5-9, 1979	08074910	0.30
	08074850	.10		08074800	.20
	08074800	.10		308R	.10
	08074780	.10		303R	.15
	308R	.05		32R	.25
	303R	.05	April 18-23, 1979	08074910	.20
	39R	.05		08074800	.15
	35S	.10		08074780	.10
	34S	.05		308R	.10
	33R	.05		303R	.10
	32R	.20		39R	.10
	31R	.05		32R	.25
			Sept. 17-24, 1979	08074850	.30
				08074800	.20
				308R	.10
				303R	.15
				32R	.25
08075400 Sims Bayou at Hiram Clarke Street, Houston	08075400	.40	No storms published	--	--
	304R	.60			
08075470 Sims Bayou at Martin Luther King Blvd., Houston	Not computed	--	No storms published	--	--
08075500 Sims Bayou at Houston	08075500	0.05	March 19-20, 1979	08075500	.05
	08075400	.25		08075470	.20
	08075470	.20		305R	.35
	305R	.25		304R	.40
	304R	.20	Sept. 17-23, 1979	08075470	.45
	42S	.05		08075400	.35
				304R	.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: Rain gage 1/	Monthly and yearly totals: Weighted-mean precipitation factors 2/	Date of storm	Storm totals: Rain gage 1/	Storm totals: Weighted-mean precipitation factors 2/
08075550 Berry Bayou at Gilpin Street, Houston	Not computed	--	July 25-27, 1979	08075550	0.95
				402R	.05
			Sept. 1-2, 1979	08075550	.95
				402R	.05
			Sept. 18-21, 1979	402R	.45
				401R	.55
08075650 Berry Bayou at Forest Oaks Street, Houston	Not computed	--	July 25-27, 1979	08075650	.40
				401R	.60
			Sept. 1-2, 1979	08075650	.25
				402R	.30
				401R	.45
			Sept. 18-21, 1979	402R	.45
				401R	.55
08075730 Vince Bayou at Pasadena	08075650	.25	Mar. 19-20, 1979 a/	08075650	.33
	401R	.75		403R	.67
			July 24-27, 1979	08075650	.20
				401R	.80
			Sept. 17-21, 1971 b/	--	--
08075760 Hunting Bayou at Falls Street, Houston	Not computed	--	Sept. 1-2, 1979	08075760	1.00
			Sept. 17-21, 1979	08075760	1.00
08075770 Hunting Bayou at Interstate Highway 610, Houston	08075770	.15	April 18-22, 1979	08075770	.15
	08075760	.65		08075760	.65
	101R	.20		101R	.20
			Sept. 17-22, 1979	08075760	.65
				101R	.35
08075780 Greens Bayou at Cutten Road near Houston	Not computed	--	July 7-9, 1979	08075780	.60
				29R	.40

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: Rain gage 1/	Monthly and yearly totals: Weighted-mean precipitation factors 2/	Date of storm	Storm totals: Rain gage 1/	Storm totals: Weighted-mean precipitation factors 2/
08075900 Greens Bayou at U.S. Highway 75, Houston	08075900	0.20	April 18-24, 1979	08075900	0.45
	08075780	.33		08075780	.40
	204R	.02		29R	.15
	203R	.30	Sept. 17-23, 1979	08075900	.25
	29R	.15		203R	.40
				29R	.35
08076000 Greens Bayou near Houston	08076200	.05	April 18-24, 1979	08076000	.15
	08076000	.15		08075900	.45
	08075900	.30		08075780	.20
	08075780	.15		29R	.10
	203R	.15		20R	.10
	29R	.10	July 25-26, 1979	08076000	.15
	20R	.10		08075900	.45
				203R	.20
				29R	.20
			Sept. 17-24, 1979	08076000	.15
				08075900	.45
				203R	.20
				20R	.20
08076200 Halls Bayou at Deertrail Street near Houston	Not computed	--	April 18-23, 1979	08076200	.55
				08075900	.05
				204R	.40
08076500 Halls Bayou at Houston	08076200	.40	April 18-23, 1979	08076200	.60
	08076000	.20		08076000	.30
	08075760	.05		204R	.10
	204R	.15	Sept. 17-23, 1979	08076000	.45
	13S	.20		08075900	.20
				204R	.35
08076700 Greens Bayou at Ley Road, Houston	Not computed	--	April 18-24, 1979	08076200	.15
				08076000	.50
				08075900	.20
				08075780	.10
				08075770	.05

1/ See table 12 for locations of stations other than stream-gaging stations.
2/ See section on "Precipitation Data" for explanation of use of weighted-mean precipitation factors.
a/ Total storm rainfall amount adjusted.
b/ Adequate rainfall data not available for this storm at this basin.

Eight storms occurring during the 1979 water year produced rainfall totals of over 3.0 inches. Several other storms produced rainfall greater than 2.0 inches. The three major storms occurred on April 17-19, July 25-26, and September 17-20. The storm of April 17-19 produced rainfall amounts ranging from about 7.0 inches in the Hunting Bayou drainage basin to more than 3.0 inches in the upper Brays Bayou drainage basin. This storm produced a maximum recorded rainfall of 15.1 inches on April 18 at the NWS rain gage in Conroe, approximately 40 miles north of downtown Houston. The storm of July 25-26, Tropical Storm Claudette, was primarily confined to the southeast portion of the study area. Rainfall totals exceeded 10 inches for the Sims, Berry, and Vince Bayou drainage basins for July 25-26. Tropical Storm Claudette produced a maximum recorded rainfall of 25.75 inches on July 26 at the NWS rain gage in Alvin. The storm of September 17-20 consistently produced rainfall amounts of over 8.0 inches for the entire study area. The greatest rainfall totals, in excess of 11.0 inches, were reported from the Berry and Vince Bayou drainage basins for this storm.

The storms of April 17-19 and September 17-20 were analyzed for all stations except those where rainfall distribution was uneven, where the quality of recorded data was poor, or where the stage-discharge relationships were poorly defined. The storm of July 25-26 was analyzed for the Berry Bayou and Vince Bayou drainage basins, and for several other sites in the study area. Other less significant storms were artibrarily selected for analyses based on discharge, quality of recorded data, 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, 15 flood-hydrograph partial-record stations, and 2 reservoir-content stations.

Annual records of either daily discharge or maximum gage height at continuous-record stream-gaging stations, maximum discharge at flood-hydrograph partial-record stations, and daily contents of reservoirs 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 1979 water year and the average runoff for the period 1953-70. The average 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 the significant increase in runoff for the current year as compared to the 1953-70 period. Note that the drainage basins in the southern portion of the study area, Sims Bayou and Brays Bayou, exhibited the greatest increase in runoff compared to the averaging period. Figure 3 also shows the significant effect of the September 17-20 storm on all basins.

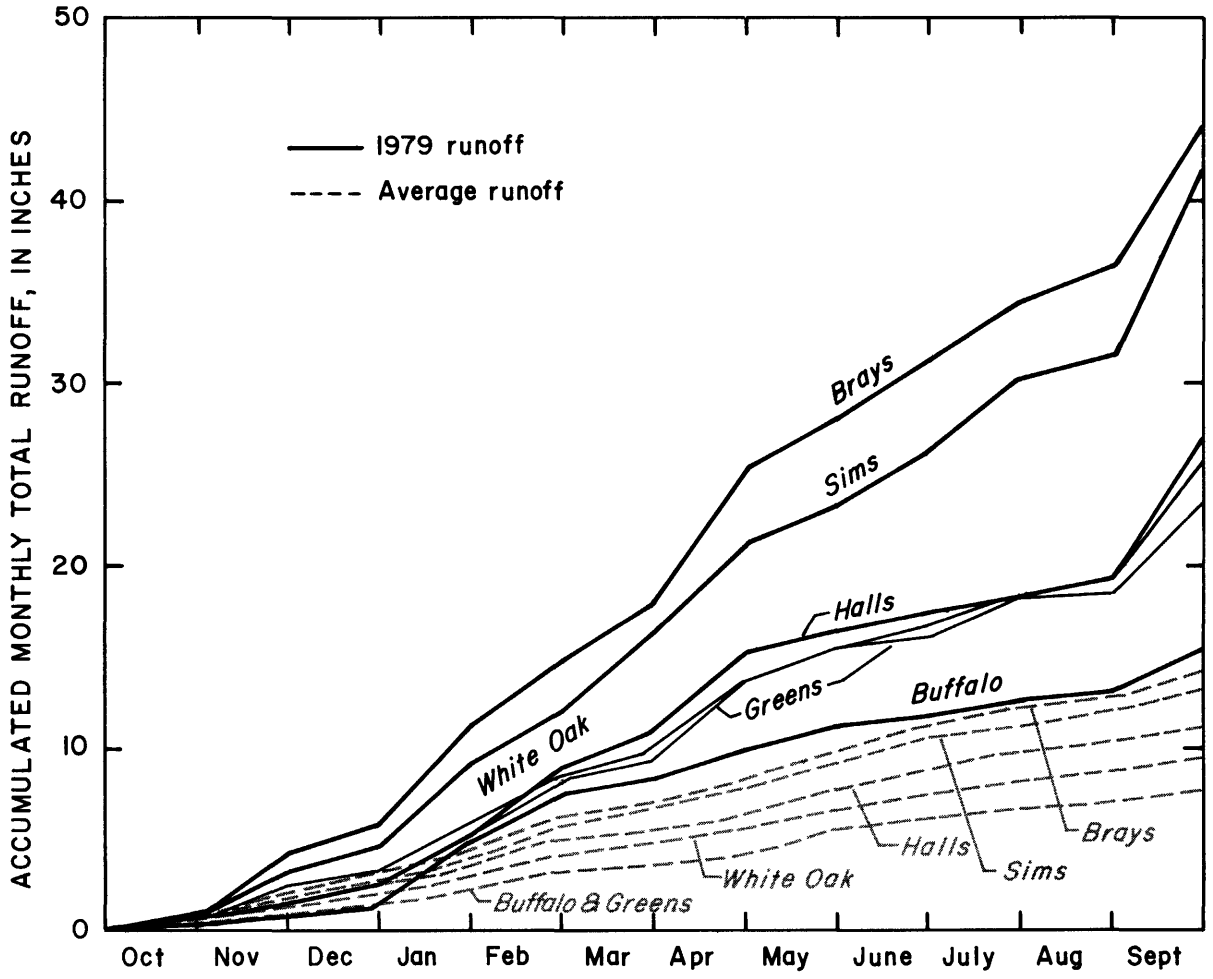

FIGURE 3.-Runoff from six drainage basins in the Houston metropolitan area, 1979 water year, and average runoff for the period 1953-70

The storms of April 17-19, July 25-26, and September 17-20, 1979 were analyzed for the 1979 water year. Data published in the section "Compilation of data" show computed storm runoffs in excess of 4.0 inches from the storm of April 17-19 in the Brays Bayou, Halls Bayou, and Hunting Bayou drainage basins. These data also show computed runoff greater than 9.0 inches from the storm of July 25-26 in the Berry Bayou and Vince Bayou drainage basins, and runoff greater than 10.0 inches from the storm of September 17-20 in these two basins.

The ratio of runoff to rainfall was determined for all storms selected for analysis. The maximum value of this ratio exceeded 0.8 for the storm of April 17-19 for only one streamflow station while it exceeded 0.9 for the storms of July 25-26 and September 17-20 in the Berry Bayou and Vince Bayou drainage basins. 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, the accuracy of this ratio 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 and the ratio of runoff to rainfall and other pertinent data for all storms analyzed in the 1979 water year are given in tables 3-17.

Water-Quality Data

Water-quality data were collected at 18 locations in the study area during the 1979 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."

Water-quality data are collected from a wide range of discharge representing various flow and seasonal conditions, and includes 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, phosphorus, and MBAS (methylene blue active substance). Chemical analyses of trace substances include phenols, 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-quality samples were also collected during major storms to determine the water 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
08074500	Whiteoak Bayou at Houston, Tex.	January 5-9, 1979
08074540	Little Whiteoak Bayou at Houston, Tex.	August 15-16, 1979
08074800	Keegans Bayou at Roark Rd. near Houston, Tex.	January 5-9, 1979
08074800	Keegans Bayou at Roark Rd. near Houston, Tex.	April 3-5, 1979
08075000	Brays Bayou at Houston, Tex.	January 5-9, 1979
08075730	Vince Bayou at Pasadena, Tex.	March 19-20, 1979
08075760	Hunting Bayou at Falls Street, Houston, Tex.	January 26-27, 1979
08075760	Hunting Bayou at Falls Street, Houston, Tex.	September 17-21, 1979
08075770	Hunting Bayou at Interstate Highway 610, Houston, Tex.	January 26-27, 1979
08075770	Hunting Bayou at Interstate Highway 610, Houston, Tex.	August 22-23, 1979
08076000	Greens Bayou near Houston, Tex.	April 18-24, 1979
08076500	Halls Bayou at Houston, Tex.	April 18-23, 1979
08076500	Halls Bayou at Houston, Tex.	July 7-8, 1979

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COMPILATION OF DATA

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 mi² (759 km²), 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. Floodflow 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 hm³) Extreme low flow is sustained by drainage from irrigated lands.

AVERAGE DISCHARGE.--34 years, 205 ft³/s (5.806 m³/s), 148,500 acre-ft/yr (183 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/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) downstreem, on basis of slope of flood of Aug. 29, 1945, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,810 ft³/s (79.6 m³/s) Sept. 19, gage height, 68.15 ft (20.772 m); minimum daily, 9.4 ft³/s (0.27 m³/s) Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	9.6	802	759	556	34	86	573	132	24	192	131
2	41	12	552	839	167	33	103	408	267	23	193	118
3	43	13	743	1040	286	50	591	390	377	21	177	79
4	95	13	795	980	497	42	669	989	419	20	138	61
5	75	12	618	915	838	35	839	977	405	32	91	128
6	44	160	225	1140	1240	31	764	931	393	32	81	117
7	35	162	388	1240	1110	28	691	854	347	335	109	162
8	34	72	574	1060	1010	27	622	784	139	282	101	266
9	33	43	627	972	981	28	414	831	83	354	200	228
10	29	31	411	914	997	32	168	873	45	757	211	138
11	31	28	157	932	967	32	50	532	30	949	144	85
12	28	30	66	987	944	28	47	34	26	781	101	64
13	26	25	39	1060	920	24	38	29	25	384	78	51
14	26	22	42	990	891	26	34	250	25	250	65	44
15	23	22	47	936	846	27	30	550	25	97	68	40
16	19	19	47	970	799	30	28	76	30	91	110	37
17	19	23	41	973	800	29	26	33	26	74	98	65
18	23	24	35	932	778	27	90	32	40	89	74	600
19	22	47	29	853	734	138	630	34	30	102	73	1740
20	21	177	167	1090	662	565	575	33	23	124	146	1590
21	20	176	104	1040	460	746	337	34	20	112	92	443
22	18	83	30	1020	108	879	306	232	18	119	62	414
23	15	49	27	990	100	857	599	522	18	141	58	522
24	15	39	25	944	89	777	937	508	21	125	65	628
25	14	30	23	909	75	685	836	188	26	198	50	823
26	13	422	22	891	59	552	779	50	48	273	45	1710
27	15	425	22	859	48	142	746	55	100	322	49	1720
28	13	586	21	830	43	49	710	46	35	346	162	1690
29	12	891	80	791	---	38	759	138	28	359	199	1660
30	11	850	189	773	---	34	682	175	26	299	101	1640
31	9.4	---	322	702	---	103	---	120	---	237	73	---
TOTAL	877.4	4495.6	7270	29331	17005	6128	13186	11281	3227	7352	3406	16994
MEAN	28.3	150	235	946	607	198	440	364	108	237	110	566
MAX	95	891	802	1240	1240	879	937	989	419	949	211	1740
MIN	9.4	9.6	21	702	43	24	26	29	18	20	45	37
AC-FT	1740	8920	14420	58180	33730	12150	26150	22380	6400	14580	6760	33710

CAL YR 1978 TOTAL 74823.6 MEAN 205 MAX 1990 MIN 9.4 AC-FT 148400
WTR YR 1979 TOTAL 120553.0 MEAN 330 MAX 1740 MIN 9.4 AC-FT 239100

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
17...	0830	20	629	6.8	18.0	100	40	5.9	64	11
NOV										
07...	1445	153	523	7.3	17.5	120	200	7.4	80	15
28...	1435	627	135	6.9	15.0	400	200	11.4	116	4.1
29...	1015	946	125	7.2	14.0	280	120	9.0	90	3.5
DEC										
01...	1435	796	141	7.1	16.0	220	100	8.3	86	3.5
04...	0845	814	175	7.3	--	200	80	8.1	79	3.6
13...	1005	37	354	7.1	9.0	240	100	10.9	97	3.6
JAN										
23...	1010	1000	118	7.4	12.0	440	110	9.3	89	5.5
30...	1225	812	152	7.1	7.0	240	85	10.5	89	4.0
FEB										
05...	1435	850	130	7.2	8.0	240	100	9.8	85	4.5
06...	1335	1280	105	7.1	7.5	240	85	10.1	87	3.3
07...	0945	1120	95	7.1	6.5	120	100	10.2	86	3.3
09...	1455	1020	79	7.0	8.0	200	85	11.0	96	2.8
12...	0920	946	80	6.8	8.5	240	60	9.6	85	3.4
16...	1000	773	104	7.5	14.0	200	60	9.6	96	3.6
21...	0905	507	163	6.7	8.5	240	80	9.3	82	4.7
MAR										
12...	1250	27	601	7.5	16.5	30	60	7.8	82	5.8
APR										
11...	1135	50	426	7.3	22.0	150	130	6.4	75	9.6
23...	1355	766	109	6.8	22.0	250	200	7.8	92	3.8
26...	1205	781	108	6.8	23.0	200	140	7.2	86	3.9
MAY										
03...	1200	390	166	6.4	22.5	250	75	7.5	88	9.9
21...	1405	34	921	7.7	25.5	15	25	6.6	82	16
JUN										
27...	0955	135	328	7.2	27.5	80	460	5.9	76	17
SEP										
12...	1045	64	464	7.3	25.5	20	35	7.1	89	5.7
17...	1940	89	330	7.3	24.5	70	75	7.3	89	16
20...	1045	1630	87	6.9	22.5	80	61	6.7	79	3.4
24...	1300	632	102	7.0	24.0	70	41	7.0	81	2.3
26...	0935	1730	95	6.9	23.0	65	--	6.3	72	2.5

DATE	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 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)
OCT										
17...	2700	130	58	130	0	40	6.5	57	2.2	7.3
NOV										
07...	110000	7700	3100	--	--	--	--	--	--	--
28...	32000	8700	3200	33	0	10	2.0	7.9	.6	4.6
29...	32000	5000	3200	32	0	9.5	1.9	7.0	.5	4.9
DEC										
01...	7300	300	450	37	1	11	2.3	9.5	.7	5.6
04...	9700	2000	390	44	0	13	2.7	12	.8	6.1
13...	3000	28	40	86	8	26	5.0	32	1.5	6.0
JAN										
23...	6700	780	850	--	--	--	--	--	--	--
30...	7700	1000	620	42	0	13	2.4	10	.7	3.6
FEB										
05...	38000	7300	7800	36	0	11	2.1	8.6	.6	2.9
06...	11000	2200	6900	32	0	11	1.1	6.2	.5	2.6
07...	25000	1200	6200	31	2	9.3	1.9	5.9	.5	2.5
09...	620000	75000	6000	26	2	7.9	1.5	4.6	.4	2.2
12...	4800	200	370	26	1	7.9	1.5	4.6	.4	2.3
16...	4000	500	180	35	5	11	1.9	6.6	.5	2.4
21...	13000	980	300	49	3	15	2.7	12	.8	2.9
MAR										
12...	14000	580	12	140	0	44	8.1	61	2.2	4.7
APR										
11...	9000	160	190	110	0	35	6.2	37	1.5	4.3
23...	29000	750	1000	38	14	12	1.9	6.8	.5	3.3
26...	14000	130	460	32	4	10	1.8	6.7	.5	3.3
MAY										
03...	13000	600	720	47	0	15	2.4	12	.8	2.9
21...	16000	820	140	190	14	62	9.6	100	3.1	5.9
JUN										
27...	56000	4400	6000	67	0	21	3.5	30	1.6	5.4
SEP										
12...	4000	350	160	--	--	--	--	--	--	--
17...	49000	9300	7600	--	--	--	--	--	--	--
20...	30000	4800	2100	29	0	9.1	1.6	3.9	.3	2.6
24...	12000	600	240	31	0	9.1	2.1	6.6	.5	3.4
26...	7000	320	500	--	--	--	--	--	--	--

08073500 BUFFALO BAYOU NEAR ADDICKS, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
17...	170	0	23	73	.3	21	312	57	16	1.5
NOV										
07...	--	--	--	--	--	--	--	284	156	.87
28...	40	0	6.7	9.8	.1	7.6	68	320	36	.35
29...	42	0	6.7	8.7	.1	7.4	67	164	20	.21
DEC										
01...	44	0	6.1	12	.1	9.9	78	192	24	.20
04...	55	0	9.2	18	.1	18	106	156	72	.11
13...	94	0	27	36	.2	18	197	144	52	.59
JAN										
23...	--	--	--	--	--	--	--	190	24	.08
30...	53	0	6.9	18	.2	7.4	88	136	52	.17
FEB										
05...	46	0	5.5	9.1	.2	7.0	69	208	80	.27
06...	39	0	7.8	6.8	.1	6.4	61	168	12	.22
07...	35	0	6.4	6.2	.1	6.0	56	160	32	.14
09...	29	0	5.4	4.9	.2	4.9	46	36	3	.08
12...	30	0	5.5	5.3	.1	4.5	46	102	14	.07
16...	37	0	11	6.9	.1	5.5	64	86	22	.06
21...	56	0	8.1	19	.2	7.1	95	134	42	.25
MAR										
12...	180	0	36	63	.7	19	325	105	1	1.2
APR										
11...	140	0	16	47	.3	7.1	222	231	38	1.1
23...	29	0	11	9.8	.2	5.9	66	216	40	.16
26...	35	0	9.8	5.9	.2	5.8	61	54	12	.10
MAY										
03...	250	--	17	--	.2	6.7	213	226	44	.27
21...	220	0	36	140	.4	16	478	64	5	.69
JUN										
27...	90	0	17	32	.3	7.8	162	770	108	.59
SEP										
12...	--	--	--	--	--	--	--	86	0	.72
17...	--	--	--	--	--	--	--	184	38	.56
20...	37	0	4.0	3.7	.1	7.6	51	224	3	.04
24...	44	0	5.5	7.0	.1	9.4	65	41	0	.12
26...	--	--	--	--	--	--	--	--	--	.01

DATE	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)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT									
17...	.24	1.7	.59	1.2	1.8	2.6	11	--	--
NOV									
07...	.09	.96	.64	1.5	2.1	1.8	16	--	.00
28...	.01	.36	.07	1.3	1.4	.35	16	--	--
29...	.01	.22	.08	1.2	1.3	.33	15	--	--
DEC									
01...	.03	.23	.08	.84	.92	.42	17	--	--
04...	.02	.13	.11	.89	1.0	.39	27	--	--
13...	.07	.66	.55	1.5	2.0	1.4	14	--	.20
JAN									
23...	.04	.12	.22	1.2	1.4	.30	13	--	--
30...	.04	.21	.30	1.1	1.4	.35	33	--	--
FEB									
05...	.04	.31	.19	1.3	1.5	.33	18	--	--
06...	.04	.26	.12	.88	1.0	.25	12	--	--
07...	.06	.20	.07	.93	1.0	.18	24	--	--
09...	.06	.14	.08	.88	.96	.22	9.4	--	--
12...	.06	.13	.11	.35	.46	.23	11	--	--
16...	.02	.08	.11	.89	1.0	.18	11	--	--
21...	.04	.29	.30	1.2	1.5	.27	14	--	--
MAR									
12...	.51	--	.83	.67	--	1.5	12	10	--
APR									
11...	.40	1.5	.36	1.4	1.8	1.1	18	--	--
23...	.08	.24	.18	2.6	2.8	.21	--	--	--
26...	.04	.14	.13	1.1	1.2	.31	15	--	--
MAY									
03...	.18	.45	.28	1.5	1.8	.45	18	--	--
21...	.41	1.1	.41	.89	1.3	1.4	9.7	--	.20
JUN									
27...	.32	.91	.51	1.1	1.6	.44	12	2	.00
SEP									
12...	.68	1.4	2.3	.60	2.9	3.4	11	--	--
17...	.25	.81	.36	1.0	1.4	1.0	20	--	--
20...	.02	.06	.05	.79	.84	.24	9.7	--	--
24...	.02	.14	.07	.22	.29	.24	8.1	--	--
26...	.00	.01	.01	.94	.95	.19	8.6	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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							
12...	1250	2	100	0	0	0	10
APR							
23...	1355	2	100	1	0	3	600
JUN							
27...	0955	3	100	0	10	1	140
SEP							
20...	1045	2	50	<1	0	0	250
24...	1300	2	50	3	0	0	110

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						
12...	0	0	.0	1	0	20
APR						
23...	0	0	.0	0	0	10
JUN						
27...	0	0	.0	0	0	20
SEP						
20...	2	2	.0	0	0	9
24...	1	<1	.0	0	0	7

DATE	TIME	PCB, 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)
NOV								
28...	1435	.0	.00	.0	.00	.00	.00	.05
FEB								
05...	1435	.0	.00	.0	.00	.00	.00	.02
MAR								
12...	1250	.0	.00	.0	.00	.00	.00	.11
JUN								
27...	0955	.0	.00	.0	.00	.00	.00	.91

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)	METHYL PARA- THION, TOTAL (UG/L)
NOV									
28...	.00	.00	.00	.00	.00	.00	.00	.00	.05
FEB									
05...	.00	.00	.00	.00	.00	.00	.00	.00	.03
MAR									
12...	.00	.00	.00	.00	.00	.01	.00	.00	.00
JUN									
27...	.00	.00	.00	.00	.00	.00	.02	.56	.00

DATE	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)
NOV								
28...	.00	.00	.00	0	.00	.06	.01	.01
FEB								
05...	.00	.00	.00	0	.00	.02	.00	.00
MAR								
12...	.00	.00	.00	0	.00	.03	.00	.00
JUN								
27...	.00	.00	.00	0	.00	.22	.02	.00

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 mi² (795 km²), 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.--Records fair except those for period of no gage-height record, which are poor. 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. The Corps of Engineers has a gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years, 322 ft³/s (9.119 m³/s), 233,300 acre-ft/yr (288 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft³/s (107 m³/s) Mar. 20, 1972, gage height, 62.15 ft (18.943 m); minimum deily, 25 ft³/s (0.71 m³/s) Nov. 21, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,710 ft³/s (105 m³/s) Sept. 19, gage height, 61.28 ft (18.678 m); minimum daily, 41 ft³/s (1.16 m³/s) Oct. 31, Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	41	839	874	593	65	124	585	168	52	217	262
2	71	42	580	837	246	64	143	397	522	50	214	163
3	86	44	741	1030	359	87	794	376	393	48	200	115
4	120	42	829	979	522	73	705	1230	472	48	171	99
5	105	42	669	969	982	61	877	988	450	75	137	159
6	76	301	284	1360	1380	57	807	924	410	60	129	154
7	66	181	393	1380	1130	55	726	839	379	350	157	250
8	63	104	582	1060	1040	54	662	764	213	300	130	296
9	61	72	644	990	978	54	478	782	123	400	209	266
10	57	59	475	929	1010	58	222	848	100	800	235	173
11	59	56	205	981	978	58	72	612	85	1000	187	121
12	56	57	114	972	956	55	68	67	70	900	145	103
13	54	54	66	1060	934	51	57	52	65	500	117	88
14	54	51	88	998	911	50	51	205	60	250	100	79
15	52	53	97	936	872	50	47	557	55	150	109	72
16	49	48	76	969	824	59	45	108	65	120	204	67
17	49	56	67	979	858	56	43	49	55	100	131	138
18	51	52	59	952	828	52	154	48	75	110	107	770
19	49	187	56	894	762	205	748	48	60	142	111	2410
20	50	190	170	1180	691	608	1010	47	50	237	158	2250
21	50	199	161	1040	512	899	367	47	48	161	123	630
22	48	122	56	1020	154	1000	299	287	48	150	101	473
23	47	83	51	1010	216	908	494	510	48	172	98	589
24	46	68	47	941	163	805	904	530	50	150	101	745
25	46	55	45	905	118	709	808	252	55	281	88	838
26	46	702	45	909	97	591	746	86	60	313	83	1570
27	46	592	46	864	79	203	706	89	100	377	100	1670
28	45	560	44	840	75	77	670	79	70	393	234	1640
29	44	975	198	806	---	67	809	150	60	400	254	1620
30	43	860	232	825	---	59	668	200	55	341	130	1600
31	41	---	347	717	---	104	---	151	---	270	107	---
TOTAL	1813	5948	8306	30206	18268	7294	14304	11907	4464	8700	4587	19410
MEAN	58.5	198	268	974	652	235	477	384	149	281	148	647
MAX	120	975	839	1380	1380	1000	1010	1230	522	1000	254	2410
MIN	41	41	44	717	75	50	43	47	48	48	83	67
AC-FT	3600	11800	16470	59910	36230	14470	28370	23620	8850	17260	9100	38500

CAL YR 1978 TOTAL 88089 MEAN 241 MAX 2520 MIN 34 AC-FT 174700
WTR YR 1979 TOTAL 135207 MEAN 370 MAX 2410 MIN 41 AC-FT 268200

NOTE.--No gage-height record June 10 to July 17.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyes: December 1978 to September 1979.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June to September 1979.
WATER TEMPERATURES: June to September 1979.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using tha 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 CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 922 micromhos June 25; minimum daily, 93 micromhos Sept. 20
WATER TEMPERATURES: Maximum daily, 30.5°C July 1

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
DEC												
13...	1055	72	595	7.1	14.5	180	50	8.9	90	7.2	780	60
JAN												
23...	1110	1030	150	7.2	12.0	360	110	9.4	90	5.4	9700	920
MAR												
12...	1135	59	774	7.3	20.0	40	25	6.9	78	15	2800	40
MAY												
11...	1125	774	178	7.1	24.5	--	110	6.9	84	4.9	500	230
JUN												
14...	0935	60	770	7.6	25.0	--	17	6.0	74	4.4	--	2
JUL												
05...	1130	75	740	7.2	27.5	--	6.0	4.6	59	1.4	--	6000
AUG												
28...	1350	142	490	7.0	27.0	40	290	5.8	73	6.8	--	150

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)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC												
13...	4	100	0	32	6.0	75	3.2	6.9	200	0	30	59
JAN												
23...	430	42	0	13	2.4	12	.8	3.7	58	0	12	12
MAR												
12...	6	130	0	40	8.0	95	3.6	7.0	250	0	33	74
MAY												
11...	78	51	0	16	2.6	15	.9	3.4	69	0	10	12
JUN												
14...	10	140	0	41	8.9	89	3.3	7.6	250	0	29	80
JUL												
05...	2500	--	--	--	--	--	--	5.8	270	0	33	77
AUG												
28...	130	110	0	34	5.0	50	2.1	5.5	190	0	22	46

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	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, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
DEC												
13...	.4	22	--	330	69	24	.38	.09	.47	4.3	2.3	6.6
JAN												
23...	.1	7.7	--	92	182	28	.09	.06	.15	.63	1.1	1.7
MAR												
12...	.6	33	--	414	47	37	.40	.54	.94	7.2	1.0	8.2
MAY												
11...	.2	4.4	139	98	--	--	.10	.23	.33	.61	1.3	1.9
JUN												
14...	.4	21	424	400	30	20	.75	.55	1.3	5.2	3.2	8.4
JUL												
05...	.4	12	393	--	15	12	.52	.58	1.1	6.6	.00	5.4
AUG												
28...	.4	16	265	273	568	60	.64	.56	1.2	2.6	1.5	4.1

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 13...	--	1.20	--	15	--	--	--	.80	--	--	--
JAN 23...	--	.330	--	16	--	--	--	.10	--	--	--
MAR 12...	--	4.40	--	8.4	--	--	8	.10	--	--	--
MAY 11...	1.3	.410	.360	--	10	1.7	--	--	81	169	75
JUN 14...	--	6.50	--	14	--	--	--	--	28	4.5	82
JUL 05...	6.1	1.20	.720	7.5	--	--	--	--	20	4.0	90
AUG 28...	.80	.910	.920	--	6.3	3.2	--	--	--	--	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
MAR 12...	1135	--	2	--	--	100	--	--	0	--
MAY 11...	1125	3	2	100	0	100	2	1	1	10
AUG 28...	1350	5	4	0	0	0	0	0	0	20

DATE	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
MAR 12...	--	0	--	--	--	--	--	0	--	--
MAY 11...	10	0	1	1	0	18	11	7	3800	3700
AUG 28...	20	0	4	4	0	7	5	2	6200	6100

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)
MAR 12...	10	--	--	0	--	--	60	--	--	.0
MAY 11...	80	22	22	0	80	70	10	1.0	1.0	.0
AUG 28...	60	30	30	0	160	150	10	.0	.0	.0

DATE	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
MAR 12...	--	--	1	--	--	0	--	--	20
MAY 11...	0	0	0	0	0	0	40	30	10
AUG 28...	1	1	0	0	0	0	30	20	8

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, 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 12...	1135	.0	.00	.0	.00	.00	.00	.66

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)	METHYL PARA-THION, TOTAL (UG/L)
MAR 12...	.01	.00	.00	.00	.00	.00	.03	.11	.00

DATE	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 12...	.00	.00	.00	0	.00	.06	.00	.00

DATE	LENGTH OF EXPO-SURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)
JUL 05...	21	2.68	3.62	.000	.000

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

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE	MAY 11,79	JUN 14,79	JUL 5,79	AUG 28,79
TIME	1125	0935	1130	1335
TOTAL CELLS/ML	4900	3100	19000	4100
DIVERSITY: DIVISION	1.5	0.8	0.2	0.5
.CLASS	1.5	0.8	0.2	0.5
..ORDER	1.7	1.5	0.3	0.6
...FAMILY	2.4	1.6	0.6	0.6
....GENUS	0.0	1.9	0.6	0.6

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	170	4	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	150	3	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	370	8	*	0	--	-	--	-
....DICTYOSPHAERIUM	1800#	37	--	-	--	-	--	-
....KIRCHNERIELLA	58	1	*	0	--	-	--	-
....OOCYSTIS	*	0	--	-	--	-	--	-
....SELENASTRUM	--	-	26	1	--	-	--	-
...SCENEDESMACEAE								
....CRUCIGENIA	--	-	52	2	--	-	--	-
....SCENEDESMUS	270	6	150	5	230	1	--	-
....TETRASTRUM	--	-	52	2	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE	38	1	--	-	--	-	--	-
....MESOSTIGMA	*	0	--	-	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....CLOSTERIUM	*	0	--	-	--	-	--	-
....STAURASTRUM	38	1	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	650	13	100	3	*	0	130	3
....MELOSIRA	96	2	--	-	--	-	--	-
..PENNALES								
...NAVICULACEAE								
....NAVICULA	--	-	--	-	*	0	--	-
...NITZSCHIACEAE								
....NITZSCHIA	120	2	52	2	260	1	390	9
.XANTHOPHYCEAE								
..HETEROCOCCALES								
...CHLOROTHECIACEAE								
....OPHIOCYTIUM	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	440	9	520#	17	100	1	--	-
....ANACYSTIS	480	10	150	5	*	0	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	150	1	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	1900#	63	18000#	92	3600#	88
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	630	3	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	38	1	--	-	--	-	--	-
....PHACUS	--	-	--	-	*	0	--	-
....TRACHELOMONAS	96	2	--	-	--	-	--	-

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

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

MONTHLY AND ANNUAL MEANS AND LOADS FOR WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONTH	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. 1978.....	1813	**	**	**	**	**	**	**	**
NOV. 1978.....	5948	**	**	**	**	**	**	**	**
DEC. 1978.....	8306	**	**	**	**	**	**	**	**
JAN. 1979.....	30206	**	**	**	**	**	**	**	**
FEB. 1979.....	18268	**	**	**	**	**	**	**	**
MAR. 1979.....	7294	**	**	**	**	**	**	**	**
APR. 1979.....	14304	**	**	**	**	**	**	**	**
MAY 1979.....	11907	**	**	**	**	**	**	**	**
JUNE 1979.....	4464	472	260	3130	47	570	21	259	94
JULY 1979.....	8700	347	190	4520	33	785	18	412	76
AUG. 1979.....	4587	456	250	3100	46	565	21	259	92
SEPT 1979.....	19410	171	98	5120	14	712	12	619	50
TOTAL	135207	**	**	**	**	**	**	**	**
WTD.AVG.	370	**	**	**	**	**	**	**	**

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									412	791	374	425
2									261	768	387	485
3									779	799	431	611
4									274	762	470	613
5									267	548	503	597
6									257	642	474	462
7									290	450	424	346
8									407	481	443	335
9									517	205	350	370
10									587	193	327	401
11									583	190	345	462
12									658	220	454	511
13									692	247	459	543
14									722	273	501	587
15									778	478	527	600
16									833	481	450	616
17									840	521	497	580
18									826	534	525	410
19									813	500	516	109
20									897	400	495	93
21									844	510	478	156
22									880	522	547	151
23									909	501	588	152
24									893	490	591	107
25									922	420	600	106
26									889	412	618	109
27									373	402	590	108
28									639	401	500	106
29									704	398	351	110
30									712	369	448	115
31									---	381	524	---
MEAN									649	461	477	346

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									26.5	30.5	28.0	27.0
2									27.5	30.0	29.0	27.5
3									27.0	24.5	27.0	26.0
4									26.0	27.5	30.0	25.0
5									25.0	27.5	29.5	26.5
6									26.0	27.0	26.5	26.0
7									28.0	26.5	27.0	25.0
8									29.0	27.5	27.0	25.0
9									29.0	26.0	26.0	26.0
10									28.0	27.0	27.0	24.5
11									26.5	27.5	28.0	25.5
12									24.5	28.0	27.5	25.5
13									24.5	27.5	27.0	25.0
14									25.0	27.0	27.5	26.0
15									25.5	28.0	28.0	24.5
16									22.5	27.5	27.0	25.0
17									26.0	29.0	26.5	---
18									26.5	27.5	26.5	24.0
19									27.0	---	26.0	23.0
20									28.0	26.0	26.0	22.5
21									27.5	27.0	27.0	24.5
22									27.0	29.5	28.5	23.5
23									27.5	27.5	26.5	24.0
24									29.5	27.5	27.0	25.0
25									27.0	27.0	25.0	25.0
26									28.0	26.5	26.0	24.5
27									25.0	26.0	27.5	25.0
28									26.5	29.0	26.0	24.5
29									28.0	28.0	26.0	23.5
30									28.5	28.0	27.0	22.5
31									---	20.5	28.5	---
MEAN									27.0	27.5	27.0	25.0

BETTINA STREET DITCH DRAINAGE BASIN

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

The flood-hydrograph partial-record and rainfall record station Bettina Street Ditch at Houston Tex. (08073630) was put into operation on November 3, 1978 by the U.S. Geological Survey.

Weighted-mean rainfall for the 1979 water year was not determined.

The storms of July 19-20, and September 17-20 were selected for analysis at station 08073630, Bettin Street Ditch at Houston.

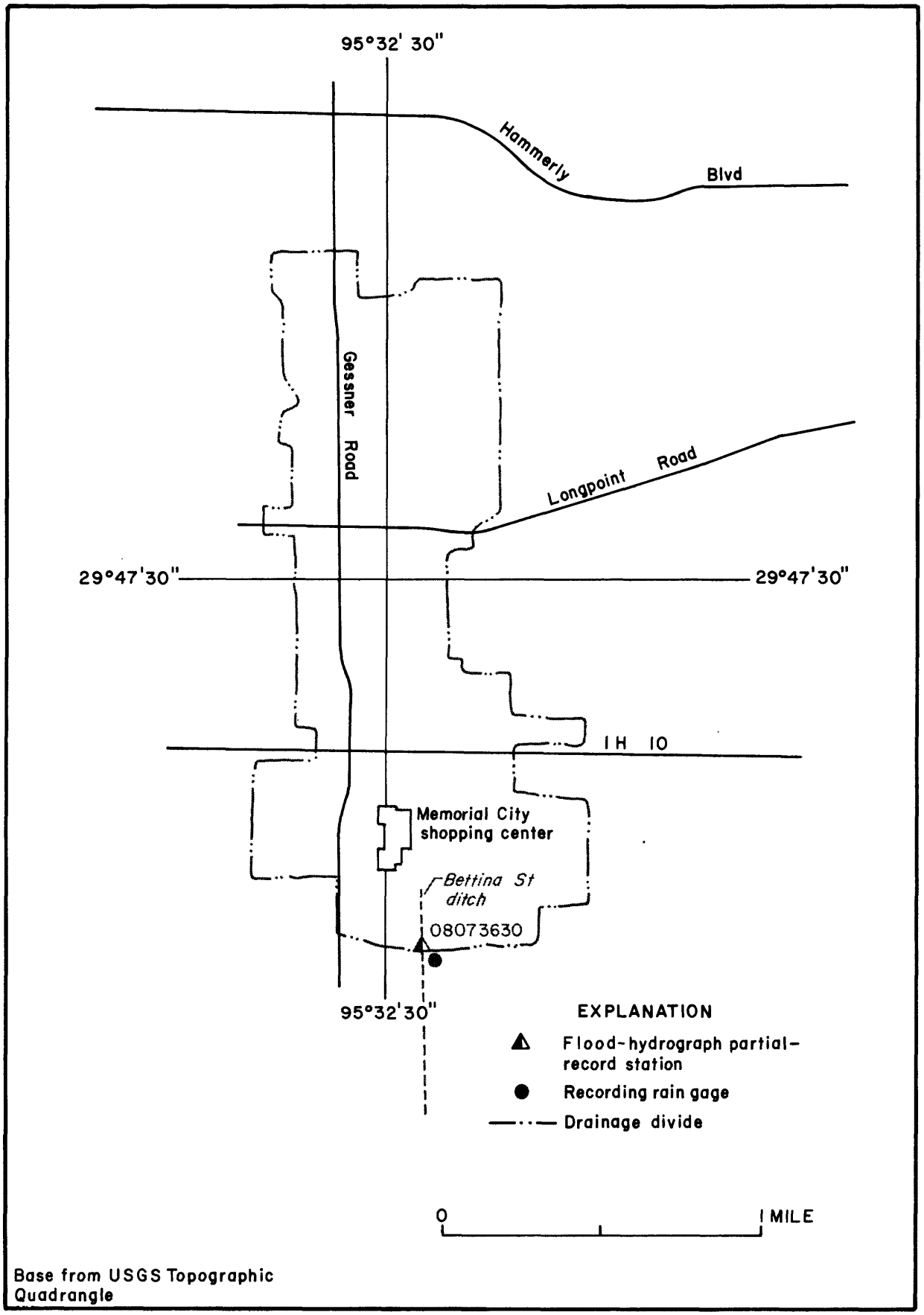


FIGURE 4.-Locations of data-collection sites in and near Bettina Street Ditch drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 3.--Storm rainfall-runoff data, 1979 Water Year, Bettina Street Ditch

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Bettina Street Ditch at Houston, TX. (Drainage area--1.37 mi^2)								
July 19, 1979	0.7	0.60	0.30	0.40	0.50	1.37	0.76	202
July 20, 1979	0.4	1.20	0.70	1.10	1.20			409
Sept. 17, 1979	2.0	0.70	0.40	0.50	0.50	7.05	0.82	110
Sept. 18, 1979	16.9	1.70	0.40	0.50	0.55			207
Sept. 19-20, 1979	17.2	6.20	0.30	0.50	0.80			510 *, ++

* - Annual peak discharge for 1979 water year.
++ - 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^2.

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 510 ft^3/s, Sept. 19, 1979, (gage-height 81.25 ft.); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 200 ft^3/s and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft.)
Nov. 26	1250	386	80.15
Feb. 23	1705	303	79.26
Apr. 19	1900	433	80.59
June 2	unknown	212	77.98
July 19	1900	202	77.79
July 20	1720	409	80.37
Sept. 7	about 1500	210	77.94
Sept. 18	1700	207	77.89
Sept. 19	1125	*510	81.25
Sept. 19	1920	420	80.47

minimum discharge not determined.

STA. NO. 08073630 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BETTINA STREET DITCH AT HOUSTON, TEXAS — STORM OF JULY 19-20, 1979

DATE & TIME	GAGE NUMBER 3630							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 19										
0000	0.0							0.0	0.1	0.0010
1755	0.10							0.10	0.1	0.0020
1815	0.10							0.10	5.0	0.0037
1830	0.20							0.20	95.0	0.0261
1840	0.40							0.40	147.0	0.0469
1845	0.50							0.50	168.0	0.0706
1855	0.60							0.60	193.0	0.0979
1900	0.60							0.60	202.0	0.1360
1915	0.60							0.60	193.0	0.1906
1930	0.60							0.60	174.0	0.2398
1945	0.60							0.60	148.0	0.2816
2000	0.60							0.60	122.0	0.3161
2015	0.60							0.60	94.0	0.3427
2030	0.60							0.60	73.0	0.3633
2045	0.60							0.60	53.0	0.3783
2100	0.60							0.60	39.0	0.4059
2200	0.60							0.60	20.0	0.4285
2300	0.60							0.60	10.0	0.4398
2400	0.60							0.60	5.0	0.4660
JULY 20										
0000	0.60							0.60	5.0	0.4660
1630	0.60							0.60	2.0	0.5081
1635	1.00							1.00	10.0	0.5090
1640	1.10							1.10	84.0	0.5169
1645	1.30							1.30	147.0	0.5308
1650	1.40							1.40	231.0	0.5526
1655	1.60							1.60	304.0	0.5812
1700	1.70							1.70	361.0	0.6493
1715	1.70							1.70	408.0	0.7262
1720	1.80							1.80	409.0	0.7840
1730	1.80							1.80	388.0	0.9303
1800	1.80							1.80	280.0	1.0886
1830	1.80							1.80	196.0	1.1995
1900	1.80							1.80	130.0	1.2730
1930	1.80							1.80	72.0	1.3137
2000	1.80							1.80	36.0	1.3443
2100	1.80							1.80	10.0	1.3556
2200	1.80							1.80	5.0	1.3641
2400	1.80							1.80	2.0	1.3663

STA. NO. 08073630 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BETTINA STREET DITCH AT HOUSTON, TEXAS — STORM OF SEPT. 17-20, 1979

DATE & TIME	GAGE NUMBER 3630	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17				
0000	0.0	0.0	0.1	0.0008
1500	0.0	0.0	0.1	0.0017
1530	0.10	0.10	1.0	0.0025
1620	0.10	0.10	40.0	0.0232
1625	0.20	0.20	75.0	0.0303
1630	0.40	0.40	98.0	0.0395
1635	0.50	0.50	106.0	0.0545
1645	0.50	0.50	110.0	0.0701
1650	0.60	0.60	107.0	0.1054
1720	0.60	0.60	85.0	0.1775
1820	0.70	0.70	39.0	0.2363
2000	0.70	0.70	10.0	0.2683
2400	0.70	0.70	2.0	0.2734
SEP. 18				
0000	0.70	0.70	2.0	0.2734
0055	0.80	0.80	3.0	0.2776
0210	1.00	1.00	10.0	0.2861
0225	1.00	1.00	35.0	0.3916
0730	1.10	1.10	3.0	0.4060
1055	1.20	1.20	10.0	0.4357
1245	1.30	1.30	8.0	0.4467
1320	1.40	1.40	35.0	0.4599
1325	1.40	1.40	47.0	0.5130
1520	1.60	1.60	30.0	0.5653
1630	1.70	1.70	40.0	0.5955
1640	1.80	1.80	64.0	0.6045
1645	1.80	1.80	86.0	0.6127
1650	2.00	2.00	125.0	0.6244
1655	2.20	2.20	157.0	0.6540
1710	2.20	2.20	207.0	0.7613
1750	2.30	2.30	155.0	0.8782
1830	2.30	2.30	88.0	0.9363
1900	2.30	2.30	50.0	0.9646
1930	2.30	2.30	20.0	1.0126
2315	2.40	2.40	10.0	1.0381
2400	2.40	2.40	5.0	1.0423
SEP. 19				
0000	2.40	2.40	5.0	1.0423
0130	2.50	2.50	10.0	1.0605
0250	2.60	2.60	15.0	1.0774
0330	2.60	2.60	39.0	1.1087

STA. NO. 08073630 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BETTINA STREET DITCH AT HOUSTON, TEXAS — STORM OF SEPT. 17-20, 1979

DATE & TIME	GAGE NUMBER 3630							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0415	2.80							2.80	20.0	1.1275
0510	2.90							2.90	47.0	1.1608
0530	3.00							3.00	71.0	1.2544
0730	3.00							3.00	30.0	1.2997
0810	3.10							3.10	15.0	1.3089
0835	3.20							3.20	20.0	1.3145
0840	3.20							3.20	46.0	1.3210
0850	3.40							3.40	81.0	1.3439
0910	3.50							3.50	100.0	1.3722
0920	3.60							3.60	117.0	1.3888
0925	3.70							3.70	140.0	1.4020
0930	3.80							3.80	171.0	1.4422
0950	4.00							4.00	259.0	1.5277
1005	4.10							4.10	287.0	1.5953
1015	4.20							4.20	338.0	1.6431
1020	4.30							4.30	372.0	1.6782
1025	4.40							4.40	416.0	1.7370
1035	4.60							4.60	479.0	1.8273
1045	4.70							4.70	490.0	1.9427
1100	4.80							4.80	483.0	2.0566
1110	4.90							4.90	492.0	2.1261
1115	5.00							5.00	498.0	2.1965
1125	5.00							5.00	510.0	2.2686
1130	5.20							5.20	503.0	2.6716
1250	5.30							5.30	317.0	3.0003
1320	5.40							5.40	276.0	3.2475
1425	5.50							5.50	189.0	3.4256
1500	5.60							5.60	163.0	3.5178
1525	5.80							5.80	172.0	3.5988
1550	5.90							5.90	189.0	3.6879
1615	6.00							6.00	211.0	3.7774
1635	6.10							6.10	223.0	3.8720
1700	6.20							6.20	241.0	3.9629
1715	6.40							6.40	252.0	4.0460
1735	6.50							6.50	282.0	4.1390
1750	6.60							6.60	303.0	4.2104
1800	6.70							6.70	336.0	4.2896
1815	6.80							6.80	364.0	4.3925
1830	7.00							7.00	382.0	4.4825

STA. NO. 08073630 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BETTINA STREET DITCH AT HOUSTON, TEXAS — STORM OF SEPT. 17-20, 1979

DATE & TIME	GAGE NUMBER 3630							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
1840	7.10							7.10	394.0	4.5754
1855	7.20							7.20	412.0	4.6919
1910	7.30							7.30	418.0	4.7904
1920	7.30							7.30	420.0	4.8696
1930	7.40							7.40	413.0	5.0058
1955	7.60							7.60	385.0	5.1691
2015	7.70							7.70	376.0	5.2754
2025	7.80							7.80	394.0	5.3497
2035	7.80							7.80	407.0	5.4264
2045	7.90							7.90	404.0	5.6930
2145	8.00							8.00	280.0	5.9833
2235	8.20							8.20	210.0	6.1318
2300	8.30							8.30	198.0	6.2157
2320	8.40							8.40	222.0	6.3413
2400	8.50							8.50	206.0	6.4772
SEP. 20										
0000	8.50							8.50	206.0	6.4772
0100	8.60							8.60	145.0	6.6995
0200	8.60							8.60	81.0	6.7911
0300	8.60							8.60	52.0	6.8499
0400	8.60							8.60	39.0	6.9161
0600	8.60							8.60	15.0	6.9839
1200	8.60							8.60	5.0	7.0179
1800	8.60							8.60	3.0	7.0382
2400	8.60							8.60	2.0	7.0450

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 mi² (821 km²).

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. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--13 years (water years 1963-76), 265 ft³/s (7.505 m³/s), 192,000 acre-ft/yr (237 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,470 ft³/s (127 m³/s) June 13, 1973, gage height, 54.98 ft (16.758 m); maximum gage height, 55.15 ft (16.810 m) Sept. 19, 1979; minimum daily discharge, 6.0 ft³/s (0.17 m³/s) Dec. 6, 7, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 55.15 ft (16.810 m) Sept. 19; minimum, 32.29 ft (9.842 m) Oct. 31, Nov. 1.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.93	32.68	40.12	41.99	39.11	33.65	34.20	39.06	35.09	---	35.57	40.23
2	33.61	32.74	---	40.63	37.32	33.64	---	38.51	46.23	---	35.22	37.05
3	35.13	32.81	---	41.16	37.74	34.12	43.20	37.31	37.66	---	35.12	34.50
4	34.56	32.80	40.12	41.10	40.77	34.04	41.00	44.76	39.45	---	34.98	34.00
5	34.26	33.74	39.72	42.55	42.57	33.61	40.18	42.22	38.46	---	34.77	---
6	33.88	39.48	36.90	46.38	43.78	33.49	39.96	40.90	37.25	---	34.53	---
7	33.50	35.56	37.66	45.86	42.67	33.35	39.48	40.57	37.18	---	34.97	---
8	33.42	34.68	38.76	41.78	41.42	33.32	39.14	40.08	36.42	---	34.30	---
9	33.36	33.92	38.85	41.05	41.02	33.29	38.64	40.37	34.68	---	35.53	---
10	33.27	33.46	38.77	40.63	---	33.50	36.62	40.41	34.08	39.42	35.63	---
11	33.26	33.36	36.27	41.10	---	33.50	33.97	40.17	33.74	39.47	35.19	34.38
12	33.24	33.35	34.95	41.28	40.50	33.42	33.77	35.52	33.58	39.30	34.70	33.94
13	33.10	33.34	33.84	41.37	40.45	33.19	33.50	33.47	33.40	38.84	34.30	33.77
14	33.17	33.18	35.55	41.24	40.30	33.33	33.30	38.22	33.27	37.25	34.03	33.59
15	33.08	33.15	35.45	40.90	40.10	33.22	33.17	38.75	33.26	35.84	---	33.54
16	32.97	33.77	34.03	40.86	39.85	33.69	33.12	37.62	33.28	34.39	38.22	33.32
17	32.95	33.86	33.90	40.82	---	33.42	33.10	33.38	33.31	34.15	---	37.30
18	33.02	33.18	33.73	40.77	---	33.33	38.08	33.31	33.52	34.20	34.38	45.95
19	33.01	38.82	33.62	40.65	---	40.30	47.78	33.27	33.38	36.60	34.68	55.15
20	32.97	35.76	36.43	43.93	39.20	39.90	47.78	33.22	33.40	39.60	34.69	55.15
21	32.98	35.62	36.38	41.52	38.80	42.60	39.03	33.20	33.30	37.60	34.53	45.13
22	32.94	34.80	33.70	41.02	35.40	43.01	36.78	38.04	33.26	34.75	34.08	38.45
23	32.94	---	33.60	41.19	38.60	41.36	40.38	38.32	33.31	34.90	33.80	39.40
24	32.86	33.55	33.53	40.74	---	---	40.76	38.32	33.45	34.85	33.87	39.61
25	32.80	---	33.45	40.47	---	---	40.49	37.52	---	39.07	33.75	41.60
26	32.94	44.50	33.50	40.57	34.00	---	39.99	---	---	37.35	33.57	45.05
27	32.88	41.40	33.48	40.27	33.85	---	39.71	---	---	37.85	35.18	45.10
28	32.81	39.80	33.46	40.05	33.84	---	39.52	---	---	37.60	38.10	45.10
29	32.79	41.62	38.73	39.87	---	---	41.86	37.63	---	37.08	37.65	44.95
30	32.76	40.80	35.80	40.46	---	33.23	40.37	36.18	---	36.90	34.90	44.80
31	32.69	---	37.63	39.54	---	---	---	35.43	---	36.07	34.38	---
MAX	35.13	---	---	46.38	---	---	---	---	---	---	---	---
MIN	32.69	---	---	39.54	---	---	---	---	---	---	---	---

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 mi² (927 km²), 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. 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 ft³/s (42.5 m³/s). Discharges below 1,000 ft³/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. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years (water years 1936-44) unregulated, 272 ft³/s (7.703 m³/s), 197,100 acre-ft/yr (243 hm³/yr); 26 years (water years 1944-57, 1962-75) regulated, 274 ft³/s (7.760 m³/s), 198,500 acre-ft/yr (245 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s (309 m³/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 ft³/s (0.037 m³/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 ft³/s (1,130 m³/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 ft³/s (538 m³/s), at bridge on Capitol Avenue affected by bridge; furnished by city of Houston.

EXTREMES FOR CURRENT YEAR.--Maxmum discharge, 9,210 ft³/s (261 m³/s) Sept. 19, gage height, 27.59 ft (8.409 m); minimum discharge not determined (affected by tides).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	---	1250	---	---	---	---	---	---		1120
2		---	---	829	---	---	---	---	1870	---		883
3		---	---	---	---	---	1660	---	771	---		---
4		---	---	---	577	---	1210	1780	---	---		---
5		---	---	1160	1450	---	843	1340	---	---		---
6		---	---	2120	1940	---	---	998	---	---		---
7		---	---	2200	1410	---	---	---	---	---		752
8		---	---	1200	1100	---	---	---	---	---		600
9		---	---	1100	949	---	---	---	---	---		---
10		---	---	1000	---	---	---	---	---	---		---
11		---	---	---	---	---	---	---	---	---		---
12		---	---	---	---	---	---	---	---	---		---
13		---	---	---	---	---	---	---	---	---		---
14		---	---	---	---	---	---	---	---	---		---
15		---	---	---	---	---	---	---	---	---		---
16		---	---	---	---	---	---	---	---	---		---
17		---	---	---	---	---	---	---	---	---		---
18		---	---	---	---	---	302	---	---	---		1300
19		---	---	---	---	400	1730	---	---	---		4200
20		---	---	---	---	870	3910	---	---	---		6750
21		---	---	---	---	1320	718	---	---	---		1940
22		---	---	---	---	1610	---	---	---	---		---
23		---	---	---	---	1040	---	---	---	---		---
24		---	---	---	---	850	---	---	---	---		---
25		---	---	---	---	---	---	---	---	576		759
26		1500	---	---	---	---	---	---	---	500		1360
27		1800	---	---	---	---	---	---	---	---		2000
28		509	---	---	---	---	---	---	---	---		1990
29		---	---	---	---	---	1050	---	---	---		1920
30		---	---	---	---	---	923	---	---	---		1860
31		---	285	---	---	---	---	---	---	---		---
TOTAL		---	---	---	---	---	---	---	---	---		---
MEAN		---	---	---	---	---	---	---	---	---		---
MAX		---	---	---	---	---	---	---	---	---		---
MIN		---	---	---	---	---	---	---	---	---		---
AC-FT		---	---	---	---	---	---	---	---	---		---

CAL YR 1978	TOTAL -	MEAN -	MAX -	MIN -	AC-FT -
WTR YR 1979	TOTAL -	MEAN -	MAX -	MIN -	AC-FT -

NOTE.--No gage-height record Sept. 18, 19.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
DEC										
13...	1145	84	428	7.0	11.0	200	60	9.5	89	11
JAN										
23...	1340	1080	174	7.4	12.5	400	120	9.5	92	9.6
MAR										
12...	1015	62	777	7.5	16.5	40	10	5.6	59	14
MAY										
22...	1310	629	600	7.2	24.0	30	150	3.7	45	31
JUL										
16...	1325	118	532	7.3	29.0	30	46	3.2	42	17
SEP										
20...	1210	6710	103	6.8	22.5	60	65	7.1	84	2.9

DATE	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 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)
DEC										
13...	420000	120000	12000	91	0	28	5.2	43	2.0	6.8
JAN										
23...	70000	11000	5100	51	0	16	2.6	14	.9	3.7
MAR										
12...	540000	160000	7700	170	0	54	9.0	92	3.1	6.1
MAY										
22...	1500000	220000	17000	120	0	38	6.2	64	2.5	4.8
JUL										
16...	68000	54000	1000	140	0	47	5.9	53	1.9	4.1
SEP										
20...	440000	100000	49000	37	1	12	1.6	4.8	.3	2.2

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
DEC										
13...	130	0	20	38	.3	17	222	82	23	.56
JAN										
23...	67	0	12	14	.2	8.0	104	248	32	.15
MAR										
12...	260	0	37	78	.5	26	431	21	2	1.2
MAY										
22...	180	0	23	66	.3	11	302	396	66	.43
JUL										
16...	190	0	22	58	.3	18	302	90	17	.80
SEP										
20...	44	0	5.7	3.7	.1	6.0	58	112	5	.13

DATE	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)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
DEC									
13...	.09	.65	2.1	1.4	3.5	1.80	12	--	.20
JAN									
23...	.08	.23	.51	1.2	1.7	.520	14	--	--
MAR									
12...	.68	1.9	3.9	1.5	5.4	2.80	8.2	7	.20
MAY									
22...	.45	.88	1.2	1.5	2.7	1.40	8.2	--	.30
JUL									
16...	.70	1.5	1.1	1.1	2.2	.720	9.5	--	.10
SEP									
20...	.06	.19	.10	.71	.81	.320	9.6	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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							
12...	1015	3	100	0	0	2	0
SEP							
20...	1210	2	50	<1	0	0	230

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						
12...	0	0	6.0	1	0	20
SEP						
20...	1	2	.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)
MAR									
12...	1015	.0	--	.00	.1	.00	.00	.00	.00
SEP									
19...	1145	.2	.00	.00	.0	.00	.00	.00	--
20...	1210	.4	.00	.00	.0	.00	.00	.00	--

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									
12...	.01	.00	.00	.00	.00	.00	.01	.00	--
SEP									
19...	.00	.00	.00	--	.00	.00	.00	--	.00
20...	.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)
MAR									
12...	.00	.00	.00	.00	0	.00	.21	.01	.00
SEP									
19...	--	--	.00	--	0	--	.00	.00	.00
20...	--	--	.00	--	0	--	.00	.00	.00

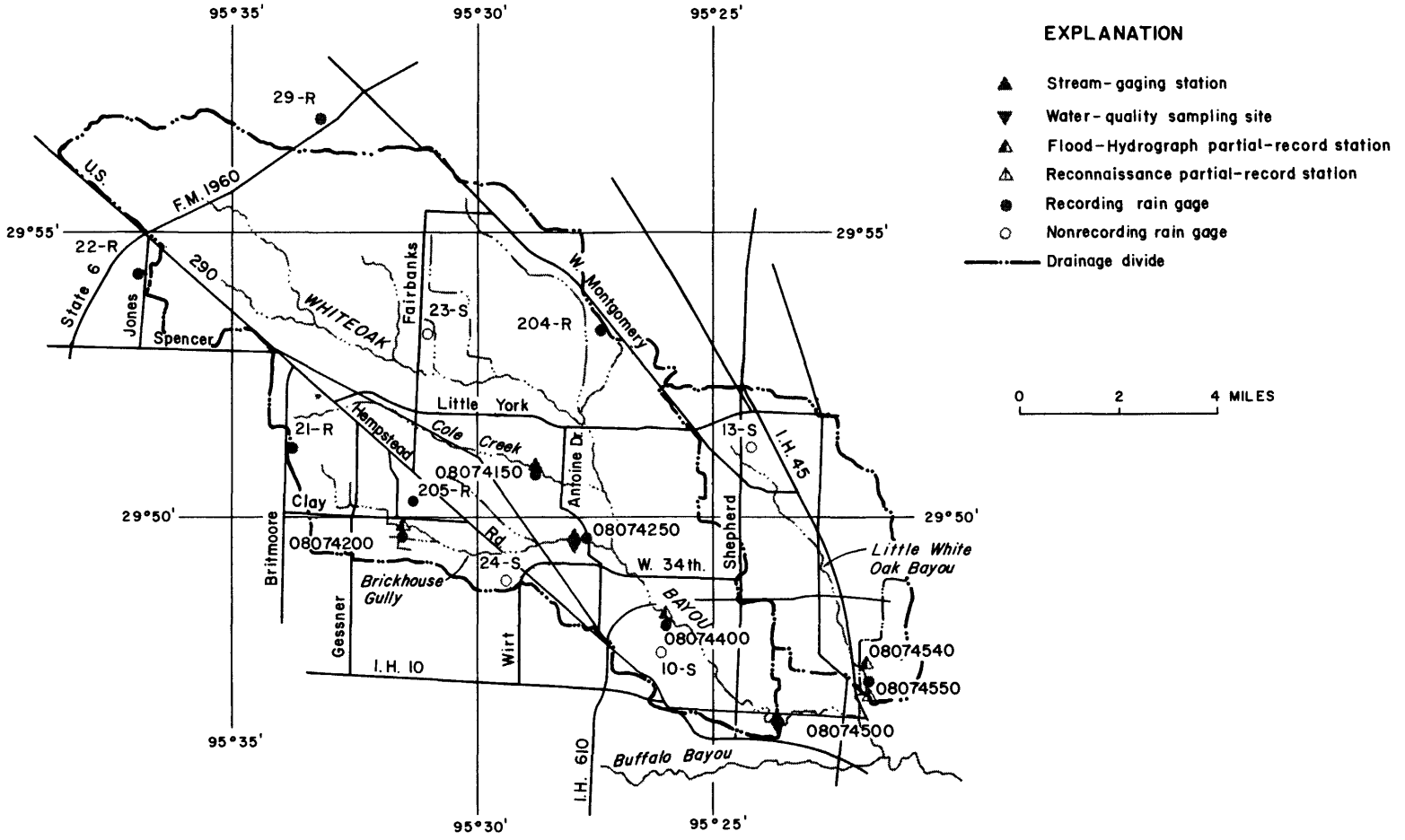
WHITEOAK BAYOU DRAINAGE BASIN

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

Cole Creek, 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 basins, based on thirteen rain gages, for the 1979 water year was 56.92 inches or 8.73 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of Jan. 5-9, and April 18-23, Sept. 17-24 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

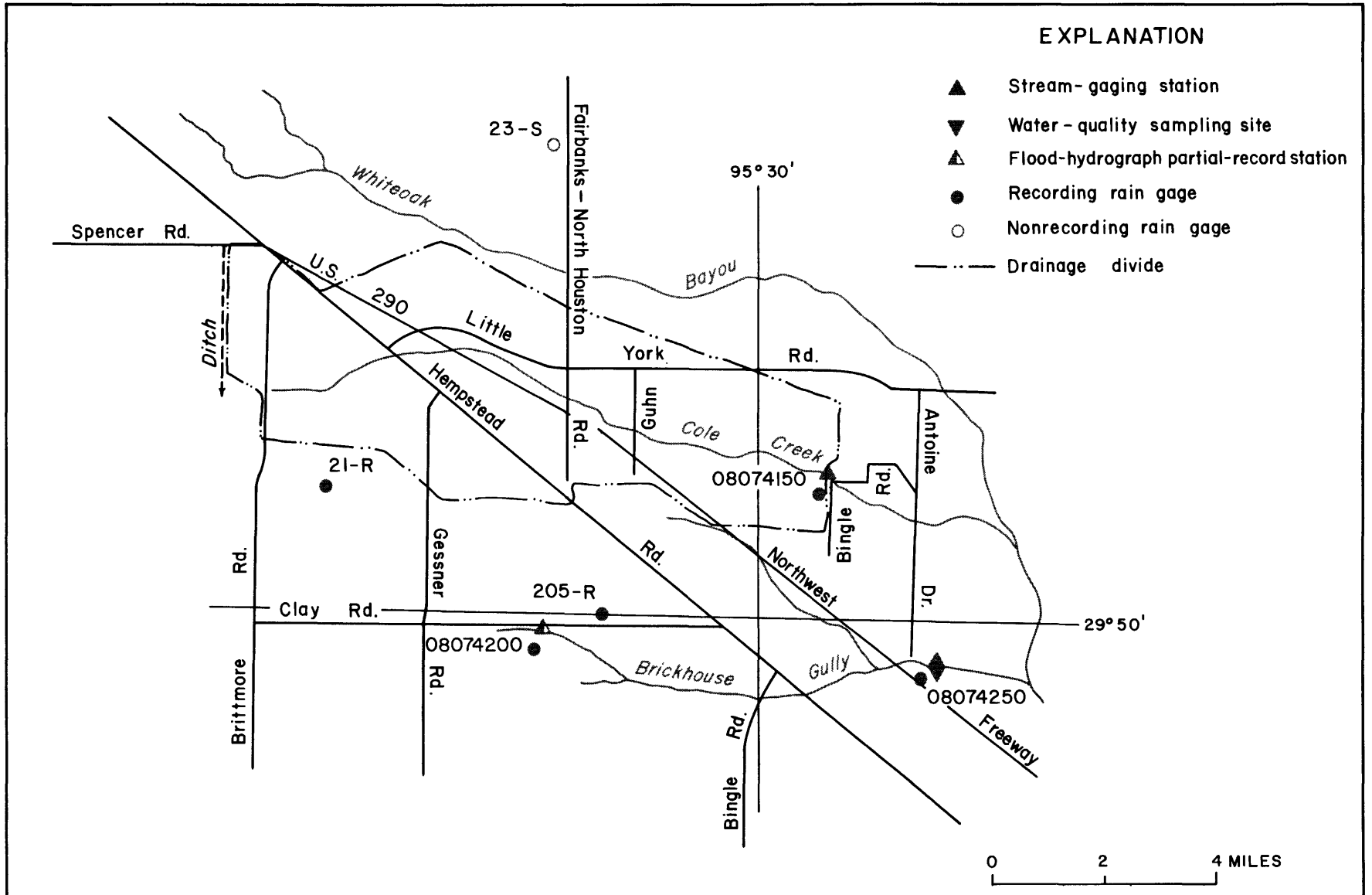
FIGURE 5.—Locations of data-collection sites in and near the Whiteoak Bayou drainage basin

COLE CREEK DRAINAGE BASIN

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

Weighted-mean rainfall in the drainage basins, based on four rain gages, for the 1979 water year was 54.36 inches, or 6.17 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storm of Sept. 17-21 was selected for analysis at station 08074150, Cole Creek at Deihl Road.



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

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

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 4.--Storm rainfall-runoff data, 1979 Water Year, Cole Creek

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Cole Creek at Diehl Road, Houston, TX. (Drainage area--7.33 mi^2)								
Sept. 17-21, 1979	48.0	8.97	0.65	1.14	1.20	4.28	0.48	815 *

* - Annual peak discharge for 1979 water year.

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.--7.33 mi² (18.98 km²). Prior to Oct. 1, 1976, 8.05 mi² (20.85 km²).

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. Datum of gage is National Geodetic Vertical Datum of 1929, 1957 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Records fair. 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.--15 years, 7.70 ft³/s (0.218 m³/s), 5,580 acre-ft/yr (6.88 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,020 ft³/s (57.2 m³/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 ft³/s (11.3 m³/s), and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Elevation (ft)	Elevation (m)
Apr. 19	2030	491	13.9	75.45	22.997
Sept. 19	2030	*815	23.1	77.78	23.707

Minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Oct. 9, 10, 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.06	1.1	46	2.3	1.7	1.3	2.5	4.6	.25	.58	17
2	.07	.06	.68	6.4	4.9	1.6	15	2.0	13	.21	.53	4.1
3	.07	.06	9.0	2.1	17	3.5	45	1.5	2.6	.42	.55	.83
4	.07	.10	5.3	1.3	18	1.7	27	160	2.0	2.5	.60	.56
5	.09	1.5	1.8	12	89	1.6	14	31	2.6	2.2	.51	2.1
6	.10	27	3.7	105	117	1.5	3.0	6.9	3.5	.77	.89	31
7	.09	1.5	3.7	55	31	1.2	1.9	3.0	.98	80	.91	13
8	.07	.38	2.9	8.3	11	1.2	1.7	1.9	.83	50	.52	2.5
9	.04	.23	1.3	3.7	5.4	1.1	1.6	1.4	.65	3.2	.46	.99
10	.04	.17	.90	3.3	3.6	1.2	1.4	1.3	.60	1.2	.49	.56
11	.05	.55	.76	1.4	3.0	1.2	1.2	2.3	.57	.99	.50	.61
12	.05	.97	.69	5.6	4.6	1.4	1.1	2.1	.59	1.2	.48	.55
13	.07	.33	.61	3.3	4.9	1.4	1.0	1.3	.57	1.5	1.5	.52
14	.05	.26	1.3	2.1	2.3	1.5	.88	1.1	.58	1.6	1.1	.47
15	.05	.22	1.7	1.5	2.0	1.3	.83	1.1	.57	.83	10	.45
16	.09	.52	1.0	1.6	1.8	1.8	.79	1.2	.54	.64	2.4	.42
17	.09	.89	.73	1.6	8.9	1.5	.74	1.2	.50	1.2	.97	9.2
18	.05	.44	.61	1.6	14	1.5	47	1.1	.66	.81	.63	65
19	.04	23	.63	4.9	5.4	17	123	1.2	.50	8.7	31	388
20	.04	7.9	.65	34	3.7	26	134	1.2	.47	16	3.8	323
21	.04	1.2	.56	6.4	3.1	67	17	1.2	.46	1.1	.97	54
22	.05	.53	.53	3.4	2.8	90	6.1	13	.43	.55	3.8	9.0
23	.06	.36	.53	3.0	24	26	3.6	2.5	.33	.47	.87	2.8
24	.06	.28	.53	1.9	13	7.3	2.2	1.2	.33	.49	.61	1.4
25	.06	.42	.53	1.8	3.9	3.5	1.6	1.1	.31	32	.56	.99
26	.06	96	.53	4.5	2.3	2.3	1.3	.90	4.1	7.4	1.1	.97
27	.06	42	.53	2.8	1.9	1.8	1.1	1.2	.42	14	13	1.0
28	.05	3.1	.68	1.9	1.7	1.5	.93	.93	.32	9.5	1.1	1.5
29	.06	13	14	2.3	---	1.5	20	26	.31	1.2	1.3	1.1
30	.06	3.4	4.5	6.9	---	1.9	5.2	3.6	.27	.89	.60	1.4
31	.06	---	5.1	3.7	---	1.8	---	2.1	---	.84	.53	---
TOTAL	1.91	226.43	67.08	339.3	402.5	275.5	481.47	279.03	44.19	242.66	82.86	935.02
MEAN	.062	7.55	2.16	10.9	14.4	8.89	16.0	9.00	1.47	7.83	2.67	31.2
MAX	.10	96	14	105	117	90	134	160	13	80	31	388
MIN	.04	.06	.53	1.3	1.7	1.1	.74	.90	.27	.21	.46	.42
AC-FT	3.8	449	133	673	798	546	955	553	88	481	164	1850
(††)	.11	6.34	2.72	5.39	4.17	3.22	5.44	4.09	1.56	7.08	3.53	10.71

CAL YR 1978 TOTAL 2807.44 MEAN 7.69 MAX 354 MIN .04 AC-FT 5570 †† 42.45
WTR YR 1979 TOTAL 3377.95 MEAN 9.25 MAX 388 MIN .04 AC-FT 6700 †† 54.36

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

STA. NO. 08074150 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

COLE CREEK AT DEIHL ROAD, HOUSTON, TEXAS — STORM OF SEP. 17-21, 1979

DATE & TIME	GAGE NUMBER 21R	4150	205R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0	0.0	0.0					0.0	0.4	0.0006
1445	0.0	0.0	0.0					0.0	0.8	0.0019
1500	0.0	0.0	0.10					0.02	0.9	0.0019
1515	0.0	0.12	0.15					0.06	1.0	0.0020
1530	0.15	0.16	0.40					0.19	2.0	0.0021
1545	0.34	0.19	0.45					0.31	5.0	0.0024
1600	0.39	0.21	0.45					0.34	10.0	0.0029
1615	0.42	0.31	0.50					0.40	12.0	0.0035
1630	0.45	0.58	0.69					0.52	13.0	0.0042
1645	0.78	0.66	0.93					0.77	30.0	0.0058
1700	0.99	0.68	0.96					0.89	49.0	0.0084
1715	1.02	0.72	1.01					0.93	48.0	0.0109
1730	1.05	0.72	1.05					0.95	46.0	0.0134
1745	1.10	0.73	1.06					0.98	44.0	0.0157
1800	1.12	0.74	1.07					1.00	42.0	0.0301
2100	1.20	0.76	1.11					1.05	20.0	0.0407
2300	1.21	0.82	1.15					1.08	10.0	0.0433
2330	1.31	0.84	1.18					1.15	20.0	0.0454
2400	1.32	0.84	1.18					1.15	16.0	0.0471
SEP. 18										
0000	1.32	0.84	1.18					1.15	16.0	0.0471
0100	1.34	0.88	1.22					1.18	13.0	0.0500
0130	1.39	0.98	1.34					1.26	24.0	0.0551
0300	1.47	1.08	1.44					1.35	30.0	0.0630
0400	1.50	1.09	1.46					1.37	31.0	0.0794
0800	1.63	1.20	1.55					1.49	19.0	0.0935
1100	1.74	1.28	1.65					1.59	18.0	0.1011
1200	1.77	1.32	1.69					1.62	19.0	0.1051
1300	1.84	1.38	1.80					1.70	23.0	0.1124
1500	2.11	1.46	2.09					1.91	35.0	0.1235
1600	2.20	1.56	2.13					2.00	50.0	0.1314
1630	2.22	1.58	2.17					2.02	48.0	0.1352
1645	2.23	1.60	2.30					2.05	75.0	0.1392
1700	2.28	1.92	2.73					2.24	106.0	0.1448
1715	2.77	2.08	3.03					2.60	130.0	0.1517
1730	3.42	2.33	3.03					3.03	174.0	0.1655
1800	3.47	2.34	3.03					3.06	200.0	0.2183
2000	3.48	2.34	3.05					3.07	167.0	0.3066
2300	3.52	2.38	3.10					3.11	128.0	0.3607
2400	3.54	2.39	3.14					3.13	115.0	0.3850
SEP. 19										

STA. NO. 08074150 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

COLE CREEK AT DEIHL ROAD, HOUSTON, TEXAS — STORM OF SEP. 17-21, 1979

DATE & TIME	GAGE NUMBER 21R	4150	205R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0000	3.54	2.39	3.14					3.13	115.0	0.3850
0200	3.65	2.50	3.25					3.24	99.0	0.4390
0400	3.80	2.61	3.39					3.38	94.0	0.4688
0500	3.86	2.66	3.49					3.44	90.0	0.4878
0600	4.07	2.78	3.69					3.63	101.0	0.5306
0900	4.24	2.92	3.82					3.78	91.0	0.5642
0930	4.35	3.10	4.07					3.93	112.0	0.5731
0945	4.54	3.21	4.22					4.09	128.0	0.5799
1000	4.71	3.24	4.30					4.21	152.0	0.5879
1015	4.84	3.33	4.41					4.32	180.0	0.5974
1030	4.98	3.50	4.65					4.49	220.0	0.6090
1045	5.24	3.76	4.86					4.74	280.0	0.6238
1100	5.45	3.92	5.01					4.92	351.0	0.6424
1115	5.59	4.12	5.15					5.06	394.0	0.6632
1130	5.70	4.19	5.29					5.19	437.0	0.6863
1145	5.84	4.42	5.57					5.37	495.0	0.7125
1200	6.06	4.68	5.61					5.58	565.0	0.7871
1300	6.16	4.91	5.80					5.73	569.0	0.8623
1315	6.30	5.00	5.86					5.84	568.0	0.8923
1330	6.32	5.02	5.92					5.87	567.0	0.9672
1430	6.46	5.10	6.01					5.98	500.0	1.0465
1500	6.54	5.16	6.09					6.06	482.0	1.0975
1530	6.65	5.30	6.24					6.18	495.0	1.1498
1600	6.79	5.42	6.36					6.31	510.0	1.2037
1630	6.97	5.56	6.51					6.48	527.0	1.2594
1700	7.14	5.71	6.66					6.64	551.0	1.3031
1715	7.21	5.71	6.74					6.69	566.0	1.3330
1730	7.32	5.88	6.80					6.81	583.0	1.3638
1745	7.39	5.93	6.90					6.88	605.0	1.3958
1800	7.51	6.08	7.03					7.01	630.0	1.4291
1815	7.64	6.28	7.22					7.17	680.0	1.4650
1830	7.86	6.39	7.33					7.34	729.0	1.5035
1845	7.94	6.48	7.43					7.43	730.0	1.5421
1900	8.02	6.60	7.51					7.52	732.0	1.6001
1930	8.28	6.78	7.69					7.74	751.0	1.6597
1945	8.34	6.88	7.76					7.81	756.0	1.6996
2000	8.42	6.94	7.85					7.89	762.0	1.7399
2015	8.48	7.02	7.94					7.96	788.0	1.7816
2030	8.58	7.21	8.08					8.09	815.0	1.8246

STA. NO. 08074150 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

COLE CREEK AT DEIHL ROAD, HOUSTON, TEXAS — STORM OF SEP. 17-21, 1979

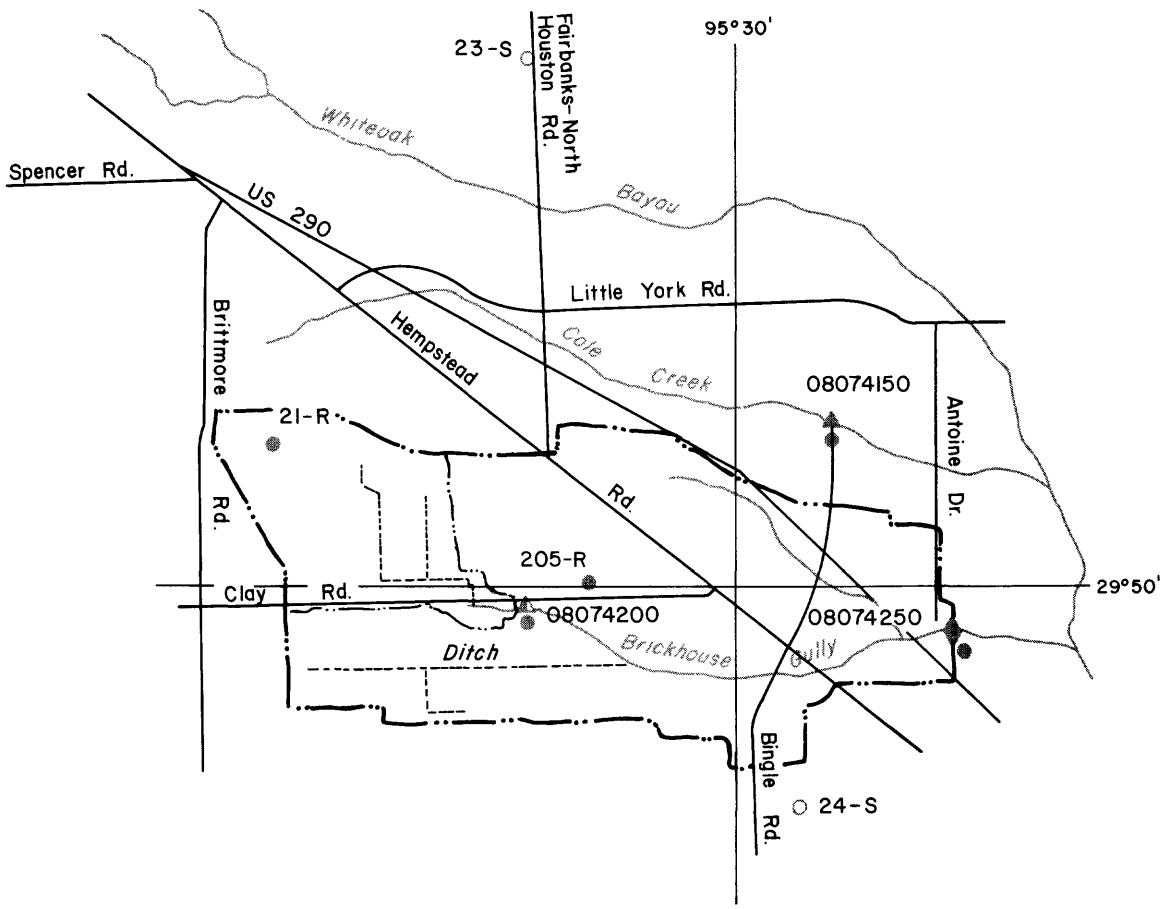
DATE & TIME	GAGE NUMBER 21R	4150	205R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
2045	8.81	7.32	8.16					8.27	810.0	1.8674
2100	8.87	7.37	8.19					8.32	801.0	1.9309
2130	8.94	7.42	8.27					8.38	753.0	2.0105
2200	8.99	7.54	8.32					8.45	737.0	2.1274
2300	9.06	7.62	8.46					8.54	677.0	2.2705
2400	9.26	7.85	8.65					8.75	690.0	2.3799
SEP. 20										
0000	9.26	7.85	8.65					8.75	690.0	2.3799
0100	9.31	7.96	8.70					8.81	611.0	2.5455
0200	9.35	7.98	8.73					8.85	551.0	2.6620
0300	9.53	7.99	8.75					8.95	512.0	2.7703
0400	9.56	7.99	8.75					8.97	473.0	2.9202
0600	9.56	7.99	8.75					8.97	424.0	3.1443
0900	9.56	7.99	8.75					8.97	351.0	3.3669
1200	9.56	7.99	8.75					8.97	295.0	3.6476
1800	9.56	7.99	8.75					8.97	209.0	3.9127
2400	9.56	7.99	8.75					8.97	129.0	4.0354
SEP. 21										
0000	9.56	7.99	8.75					8.97	129.0	4.0354
0600	9.56	7.99	8.75					8.97	76.0	4.1727
1200	9.56	7.99	8.75					8.97	46.0	4.2310
1800	9.56	7.99	8.75					8.97	27.0	4.2653
2400	9.56	7.99	8.75					8.97	17.0	4.2761

BRICKHOUSE GULLY DRAINAGE BASIN

The location of data-collection sites in and near the Brickhouse Gully drainage basin are shown in figure 7.

Weighted-mean rainfall in the drainage basin based on six rain gages for the 1979 water year was 58.38 inches or 10.19 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of April 18-21 and Sept. 17-21 were selected for analysis at station 08074200, Brickhouse Gully at Clarblak Street, and 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 and Public Transportation General Highway Map

FIGURE 7.-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 5.--Storm rainfall-runoff data, 1979 Water Year, Brickhouse Gully

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Brickhouse Gully at Clarblak St., Houston, TX. (Drainage area--2.56 mi^2)								
April 18, 1979	1.5	1.52	0.40	0.78	1.33	1.54	0.53	240
April 19-20, 1979	3.5	1.36	0.93	1.11	1.32			192
Sept. 17, 1979	12.2	1.70	0.33	0.54	0.61	6.75	0.73	104
Sept. 18-21, 1979	28.5	7.57	0.65	1.14	1.20			296 *
Brickhouse Gully at Costa Rica St., Houston, TX. (Drainage Area--11.4 mi^2)								
April 18, 1979	1.8	1.59	0.70	1.29	1.62	2.57	0.70	1700
April 19-21, 1979	0.4	2.08	1.11	1.93	2.52			3090 *
Sept. 17-21, 1979	52.0	8.83	0.65	1.14	1.20	5.88	0.67	2780

*-Annual peak discharge for 1979 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^2. 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, 296 ft^3/s, Sept. 19, 1979 (elevation 87.94 ft) after concrete lining of channel. Maximum discharge, 399 ft^3/s March 20, 1972 (elevation 94.28 ft) prior to concrete lining (July 1976).

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

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Apr. 18	1700	240	87.08
July 7	1530	278	87.66
Aug. 15	1515	227	86.88
Sept. 19	1930	*296	87.94

Minimum discharge not determined.

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STA. NO. 08074200 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT CLARBLAK STREET, HOUSTON, TEXAS — STORM OF APRIL 18-20, 1979

DATE & TIME	GAGE NUMBER 21R	205R						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 18										
0000	0.0	0.0						0.0	1.0	0.0020
0630	0.10	0.0						0.08	1.0	0.0062
1400	0.10	0.10						0.10	1.0	0.0088
1500	0.10	0.10						0.10	1.0	0.0092
1515	0.10	0.48						0.18	2.0	0.0095
1530	0.40	0.88						0.50	5.0	0.0102
1545	0.75	1.18						0.84	15.0	0.0125
1600	1.03	1.43						1.11	46.0	0.0194
1615	1.28	1.47						1.32	87.0	0.0326
1630	1.38	1.49						1.40	108.0	0.0571
1700	1.45	1.50						1.46	240.0	0.1479
1745	1.50	1.58						1.52	178.0	0.2018
1800	1.50	1.59						1.52	152.0	0.3053
2000	1.50	1.59						1.52	69.0	0.4306
2400	1.50	1.59						1.52	15.0	0.4760
APR. 19										
0000	1.50	1.59						1.52	15.0	0.4760
1200	1.53	1.59						1.54	2.0	0.5135
1700	1.53	1.66						1.56	2.0	0.5167
1715	1.53	1.84						1.59	2.0	0.5170
1730	1.53	2.77						1.78	3.0	0.5175
1745	1.59	2.92						1.86	10.0	0.5190
1800	1.70	2.98						1.96	46.0	0.5259
1815	1.74	3.08						2.01	70.0	0.5365
1830	1.80	3.18						2.08	97.0	0.5512
1845	1.85	3.25						2.13	104.0	0.5669
1900	1.89	3.62						2.24	100.0	0.5821
1915	2.11	3.67						2.42	111.0	0.5989
1930	2.21	3.71						2.51	123.0	0.6268
2000	2.29	3.81						2.59	161.0	0.6633
2015	2.33	3.83						2.63	176.0	0.6900
2030	2.40	3.93						2.71	192.0	0.7190
2045	2.40	3.93						2.71	190.0	0.7478
2100	2.40	3.93						2.71	180.0	0.7886
2130	2.40	3.93						2.71	154.0	0.8819
2300	2.52	4.05						2.83	117.0	0.9704
2400	2.52	4.05						2.83	115.0	1.2140
APR. 20										
0000	2.52	4.05						2.83	115.0	1.2140
1200	2.59	4.05						2.88	15.0	1.5318
2400	2.59	4.05						2.88	1.0	1.5354

STA. NO. 08074200 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT CLARBLAK STREET , HOUSTON , TEXAS — STORM OF SEPT. 17-21 , 1979

DATE & TIME	GAGE NUMBER 21R	4200						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0	0.0						0.0	1.0	0.0046
1515	0.0	0.0						0.0	1.0	0.0093
1530	0.15	0.10						0.13	10.0	0.0108
1545	0.34	0.20						0.30	20.0	0.0154
1615	0.42	0.20						0.35	35.0	0.0233
1630	0.45	0.40						0.43	49.0	0.0307
1645	0.78	0.70						0.76	72.0	0.0416
1700	0.99	0.80						0.93	79.0	0.0536
1715	1.02	0.80						0.95	91.0	0.0673
1730	1.05	1.00						1.03	86.0	0.0804
1745	1.10	1.00						1.07	98.0	0.0952
1800	1.12	1.00						1.08	104.0	0.1345
1900	1.20	1.00						1.14	82.0	0.1718
1930	1.20	1.00						1.14	69.0	0.2031
2030	1.20	1.00						1.14	52.0	0.2503
2230	1.21	1.00						1.15	20.0	0.2669
2315	1.31	1.10						1.25	18.0	0.2751
2400	1.32	1.10						1.25	10.0	0.2789
SEP. 18										
0000	1.32	1.10						1.25	10.0	0.2789
0100	1.34	1.10						1.27	52.0	0.3001
0115	1.34	1.20						1.30	54.0	0.3083
0130	1.39	1.20						1.33	63.0	0.3321
0230	1.42	1.30						1.38	61.0	0.3690
0330	1.50	1.30						1.44	61.0	0.4152
0500	1.52	1.30						1.45	59.0	0.4598
0600	1.52	1.40						1.48	56.0	0.4937
0700	1.52	1.40						1.48	51.0	0.5400
0900	1.70	1.40						1.61	30.0	0.5672
1000	1.70	1.40						1.61	15.0	0.5775
1115	1.74	1.60						1.70	10.0	0.5820
1130	1.80	1.60						1.74	15.0	0.5899
1300	1.84	1.60						1.77	50.0	0.6164
1315	1.90	1.80						1.87	58.0	0.6252
1330	2.00	1.90						1.97	89.0	0.6723
1500	2.11	1.90						2.05	96.0	0.7377
1545	2.22	1.90						2.12	86.0	0.7703
1615	2.22	2.00						2.15	80.0	0.7884
1630	2.22	2.00						2.15	77.0	0.8059
1700	2.28	2.20						2.26	82.0	0.8245

STA. NO. 08074200 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT CLARBLAK STREET , HOUSTON , TEXAS — STORM OF SEPT. 17-21 , 1979

DATE & TIME	GAGE NUMBER 218	GAGE NUMBER 4200						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18										
1715	2.77	2.50						2.69	134.0	0.8448
1730	3.42	2.60						3.17	168.0	0.8829
1800	3.47	2.60						3.21	231.0	0.9528
1830	3.47	2.60						3.21	204.0	1.0146
1900	3.47	2.60						3.21	169.0	1.1424
2100	3.48	2.60						3.22	109.0	1.2414
2200	3.50	2.60						3.23	100.0	1.3171
2330	3.52	2.80						3.30	92.0	1.3728
2400	3.54	2.80						3.32	90.0	1.4136
SEP. 19										
0000	3.54	2.80						3.32	90.0	1.4136
0200	3.65	2.90						3.42	85.0	1.4987
0215	3.70	2.90						3.46	86.0	1.5248
0300	3.70	2.90						3.46	91.0	1.5592
0330	3.80	3.00						3.56	94.0	1.6090
0445	3.86	3.00						3.60	95.0	1.6593
0515	3.86	3.10						3.63	94.0	1.6806
0530	3.86	3.20						3.66	104.0	1.6964
0545	4.07	3.20						3.81	110.0	1.7297
0630	4.07	3.20						3.81	118.0	1.8011
0745	4.07	3.40						3.87	104.0	1.8640
0830	4.10	3.40						3.89	99.0	1.9015
0900	4.24	3.50						4.02	101.0	1.9321
0930	4.35	3.70						4.15	117.0	1.9586
0945	4.54	4.00						4.38	150.0	1.9813
1000	4.71	4.00						4.50	168.0	2.0067
1015	4.84	4.20						4.65	203.0	2.0374
1030	4.98	4.40						4.81	228.0	2.0720
1045	5.24	4.60						5.05	251.0	2.1099
1100	5.45	4.70						5.22	265.0	2.1500
1115	5.59	4.80						5.35	274.0	2.1915
1130	5.70	4.90						5.46	277.0	2.2334
1145	5.84	5.30						5.68	285.0	2.2765
1200	6.06	5.30						5.83	284.0	2.3840
1300	6.16	5.50						5.96	247.0	2.4774
1315	6.30	5.50						6.06	246.0	2.5147
1330	6.32	5.50						6.07	243.0	2.5698
1400	6.32	5.60						6.10	234.0	2.6583
1445	6.32	5.80						6.16	222.0	2.7255
1500	6.54	5.80						6.32	221.0	2.7590

STA. NO. 08074200 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT CLARBLAK STREET • HOUSTON • TEXAS — STORM OF SEPT. 17-21 • 1979

DATE & TIME	GAGE NUMBER 21R	GAGE NUMBER 4200						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
1515	6.54	5.90						6.35	222.0	2.7926
1530	6.65	5.90						6.42	224.0	2.8265
1545	6.79	6.00						6.55	230.0	2.8613
1600	6.79	6.00						6.55	231.0	2.8962
1615	6.79	6.10						6.58	236.0	2.9319
1630	6.97	6.20						6.74	239.0	2.9681
1645	7.02	6.40						6.83	243.0	3.0049
1700	7.14	6.40						6.92	247.0	3.0422
1715	7.21	6.50						7.00	249.0	3.0799
1730	7.32	6.50						7.07	252.0	3.1181
1745	7.39	6.60						7.15	254.0	3.1565
1800	7.51	6.70						7.27	259.0	3.1957
1815	7.64	7.00						7.45	270.0	3.2365
1830	7.86	7.00						7.60	280.0	3.2789
1845	7.94	7.10						7.69	287.0	3.3224
1900	8.02	7.20						7.77	293.0	3.3667
1915	8.02	7.30						7.80	295.0	3.4113
1930	8.28	7.40						8.02	296.0	3.4561
1945	8.34	7.60						8.12	293.0	3.5005
2000	8.42	7.70						8.20	289.0	3.5442
2015	8.48	7.70						8.25	286.0	3.5875
2030	8.58	7.80						8.35	287.0	3.6309
2045	8.81	7.90						8.54	289.0	3.6746
2100	8.87	8.00						8.61	292.0	3.7630
2145	8.90	8.20						8.69	273.0	3.8456
2200	8.99	8.20						8.75	268.0	3.9470
2300	9.06	8.30						8.83	241.0	4.0564
2330	9.10	8.40						8.89	241.0	4.1111
2345	9.18	8.40						8.95	246.0	4.1484
2400	9.26	8.50						9.03	246.0	4.2414
SEP. 20										
0000	9.26	8.50						9.03	246.0	4.2414
0200	9.36	8.60						9.13	209.0	4.5689
0400	9.56	8.60						9.27	185.0	5.1288
1200	9.56	8.60						9.27	113.0	5.8128
2400	9.56	8.60						9.27	82.0	6.2595
SEP. 21										
0000	9.56	8.60						9.27	82.0	6.2595
1200	9.56	8.60						9.27	44.0	6.7280
2400	9.56	8.60						9.27	5.0	6.7462

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 mi² (29.5 km²). Prior to Oct. 1, 1973, 11.6 mi² (30.0 km²).

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.--15 years, 13.8 ft³/s (0.391 m³/s), 10,000 acre-ft/yr (12.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft³/s (164 m³/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 ft³/s (42.5 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	1300	1,810	51.3	62.04	18.910	aJuly 5	1330	62	1.76	54.17	16.511
aJan. 23	0630	26	0.74	53.72	16.374	aAug. 15	1530	984	27.9	59.61	18.169
Feb. 23	1815	2,090	59.2	62.74	19.123	Aug. 19	1500	1,880	53.2	62.22	18.965
aApr. 19	1900	*3,090	87.5	64.92	19.788	Sept. 19	1100	2,780	78.7	64.29	19.596

a Water-quality samples were obtained on this date.

Minimum daily discharge, 1.3 ft³/s (0.037 m³/s) Oct. 8, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	1.8	3.0	105	5.6	4.8	3.7	11	24	5.2	2.6	19
2	3.7	3.3	2.4	6.3	23	5.2	41	6.5	51	5.6	2.4	4.0
3	3.2	4.9	30	4.9	43	12	103	4.9	113	5.1	12	3.2
4	2.3	3.4	17	3.8	42	9.4	21	224	64	15	2.5	2.8
5	1.6	13	4.5	59	136	9.9	7.4	23	11	13	1.7	20
6	1.6	110	11	271	146	4.6	6.4	11	21	3.2	4.1	79
7	1.4	7.0	6.9	54	33	3.8	5.5	6.6	4.2	176	2.5	56
8	1.3	5.1	11	18	16	6.5	4.9	5.0	3.4	53	1.6	5.8
9	1.8	3.7	3.1	8.4	11	3.8	4.7	4.6	3.2	9.3	1.7	2.4
10	2.9	2.7	2.5	14	8.5	4.1	6.2	4.3	3.2	5.2	2.1	2.9
11	3.2	8.9	2.3	34	6.8	3.8	4.9	12	3.4	4.2	2.1	2.7
12	1.8	2.3	2.2	9.4	6.7	3.7	4.7	5.7	3.9	2.8	2.0	1.5
13	2.2	1.9	1.8	6.8	6.7	4.3	4.3	3.7	2.9	8.6	23	1.6
14	2.3	2.8	9.3	5.9	6.5	3.6	3.6	3.5	2.9	2.7	11	1.7
15	1.7	2.3	8.3	5.3	8.7	3.6	4.0	3.7	2.3	2.4	127	1.9
16	1.5	4.4	3.7	6.4	5.8	6.6	16	3.7	14	3.5	10	1.4
17	1.6	5.5	2.9	5.1	32	4.3	20	3.8	9.5	16	2.8	46
18	3.6	3.3	2.8	4.5	19	5.7	196	3.9	2.6	4.5	2.5	196
19	4.0	81	2.8	22	7.8	64	423	3.9	2.3	27	184	1200
20	2.5	7.7	3.2	97	5.9	22	131	4.2	2.6	57	17	283
21	2.5	3.6	3.0	6.3	5.6	108	26	4.2	2.1	5.8	4.0	40
22	2.5	2.8	3.0	3.7	5.7	107	13	44	2.1	2.5	13	18
23	3.2	2.3	3.0	9.1	160	23	9.7	5.5	2.5	3.3	3.2	9.4
24	2.2	1.6	2.3	3.1	65	9.1	7.6	4.2	2.0	3.2	2.3	5.6
25	1.9	3.6	2.6	4.0	12	5.6	6.8	2.9	19	100	1.6	3.9
26	3.1	253	2.7	16	8.9	6.2	6.1	2.6	20	14	1.3	3.0
27	2.9	39	2.3	4.3	8.3	5.2	5.2	3.4	2.7	32	18	2.9
28	2.1	5.4	2.0	3.4	7.2	4.5	4.8	4.4	2.7	11	26	2.4
29	2.2	41	56	4.8	---	4.8	71	62	3.0	4.4	9.0	2.5
30	1.6	5.2	8.0	28	---	5.2	8.7	18	5.5	3.0	3.5	2.4
31	2.6	---	20	5.7	---	4.4	---	15	---	3.4	5.3	---
TOTAL	74.7	632.5	235.6	829.2	842.7	468.7	1170.2	515.2	406.0	601.9	501.8	2021.0
MEAN	2.41	21.1	7.60	26.7	30.1	15.1	39.0	16.6	13.5	19.4	16.2	67.4
MAX	4.0	253	56	271	160	108	423	224	113	176	184	1200
MIN	1.3	1.6	1.8	3.1	5.6	3.6	3.6	2.6	2.0	2.4	1.3	1.4
AC-FT	148	1250	467	1640	1670	930	2320	1020	805	1190	995	4010
(††)	.04	6.64	2.85	5.83	4.17	3.09	6.37	3.80	2.66	7.06	5.23	10.64

CAL YR 1978 TOTAL 5508.70 MEAN 15.1 MAX 501 MIN .92 AC-FT 10930 †† 44.25
WTR YR 1979 TOTAL 8299.50 MEAN 22.7 MAX 1200 MIN 1.3 AC-FT 16460 †† 58.38

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
18...	1330	3.7	769	7.6	24.5	20	10	15.9	194	5.8
DEC										
26...	1050	2.6	863	8.2	16.0	20	5.0	13.5	141	16
JAN										
23...	0910	14	550	7.7	14.0	70	40	9.1	91	10
FEB										
28...	1025	5.9	780	7.6	17.0	40	10	16.5	176	6.3
MAR										
13...	0900	4.2	940	7.8	17.0	20	6.0	12.1	129	4.5
APR										
18...	1025	17	683	7.5	22.5	8	13	6.2	73	9.9
20...	0825	123	186	7.2	21.0	130	190	7.1	82	32
MAY										
21...	1310	4.4	791	8.9	29.0	5	1.0	20.0	263	5.0
JUN										
25...	1155	2.6	861	8.3	33.0	5	1.0	19.5	271	3.7
JUL										
05...	1340	52	183	7.3	28.5	25	22	7.2	94	1.2
AUG										
15...	1615	875	131	7.5	25.0	100	310	7.3	90	41
16...	1105	6.8	329	7.3	28.5	60	52	13.5	175	6.7

DATE	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 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)
OCT										
18...	100000	6700	190	--	--	--	--	--	--	--
DEC										
26...	220000	10000	2000	--	--	--	--	--	--	--
JAN										
23...	140000	13000	5300	170	0	53	8.6	46	1.5	2.7
FEB										
28...	310000	48000	4900	240	0	74	13	77	2.2	2.3
MAR										
13...	130000	11000	550	300	0	92	17	83	2.1	2.4
APR										
18...	420000	31000	6400	--	--	--	--	--	--	--
20...	580000	38000	10000	68	0	22	3.1	9.2	.5	2.4
MAY										
21...	29000	800	200	--	--	--	--	--	--	--
JUN										
25...	7000	620	250	220	0	59	17	88	2.6	2.0
JUL										
05...	760000	74000	7700	56	4	18	2.7	--	--	2.1
AUG										
15...	220000	160000	4700	--	--	--	--	--	--	--
16...	1300000	140000	6900	--	--	--	--	--	--	--

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
18...	--	--	--	--	--	--	--	17	9	.00
DEC										
26...	--	--	--	--	--	--	--	13	11	.00
JAN										
23...	240	0	19	48	.2	13	309	80	16	.26
FEB										
28...	340	0	17	77	.5	17	445	14	11	.07
MAR										
13...	400	0	24	82	.4	12	511	11	11	.01
APR										
18...	--	--	--	--	--	--	--	17	15	.03
20...	84	0	9.8	6.3	.2	4.5	99	113	23	.11
MAY										
21...	--	--	--	--	--	--	--	0	0	.04
JUN										
25...	300	0	22	110	.5	22	469	0	0	.03
JUL										
05...	64	0	12	11	.2	1.9	80	184	51	.21
AUG										
15...	--	--	--	--	--	--	--	29	102	.56
16...	--	--	--	--	--	--	--	58	15	.14

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
18...	.01	.01	.07	.53	.60	.13	5.9	--	.20
DEC									
26...	.01	.01	.01	.46	.47	.16	3.0	--	.20
JAN									
23...	.14	.40	.03	.62	.65	.22	11	--	.30
FEB									
28...	.02	.09	.06	.62	.68	.09	--	--	--
MAR									
13...	.02	.03	.07	.45	.52	.09	7.8	4	.10
APR									
18...	.02	.05	.02	.31	.33	.16	4.6	--	.10
20...	.02	.13	.15	1.3	1.4	.47	30	--	.10
MAY									
21...	.02	.06	.03	.13	.16	.13	11	1	.20
JUN									
25...	.04	.07	.04	.52	.56	.43	4.9	8	.10
JUL									
05...	.14	.35	.17	.93	1.1	.34	19	15	--
AUG									
15...	.08	.64	.12	2.3	2.4	.31	31	--	.00
16...	.10	.24	.20	1.1	1.3	.47	15	--	.10

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
MAR							
13...	0900	3	600	0	0	0	10
MAY							
21...	1310	8	500	0	0	0	10
JUN							
25...	1155	6	600	<1	0	0	10
JUL							
05...	1340	13	100	0	10	4	10

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
MAR						
13...	0	70	.0	0	0	20
MAY						
21...	5	0	.1	0	0	10
JUN						
25...	0	<1	.0	0	0	<3
JUL						
05...	8	20	.0	0	0	9

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)
MAR									
13...	0900	.0	--	.00	.0	.00	.00	.00	.10
MAY									
21...	1310	.3	.00	.00	.0	.00	.00	.00	.06
JUN									
25...	1155	.0	--	.00	.0	.00	.00	.00	.05

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
MAR									
13...	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY									
21...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN									
25...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR								
13...	.00	.00	.00	0	.00	.02	.01	.00
MAY								
21...	.00	.00	.00	0	.00	.02	.00	.00
JUN								
25...	.00	.00	.00	0	.00	.02	.00	.00

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STA. NO. 08074250 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TEXAS — STORM OF APRIL 18-21, 1979

DATE & TIME	GAGE NUMBER 21R	205R	4250	4150				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 18										
0000	0.0	0.0	0.0	0.0				0.0	20.0	0.0204
1500	0.10	0.10	0.10	0.10				0.10	20.0	0.0411
1515	0.10	0.48	0.10	0.10				0.31	20.0	0.0418
1530	0.40	0.88	0.10	0.10				0.60	20.0	0.0425
1545	0.75	1.18	0.30	0.10				0.89	24.0	0.0433
1600	1.03	1.43	1.00	0.46				1.22	132.0	0.0478
1615	1.28	1.47	1.59	0.82				1.41	705.0	0.0717
1630	1.38	1.49	1.72	1.10				1.48	1550.0	0.1244
1645	1.42	1.50	1.75	1.20				1.50	1700.0	0.1822
1700	1.45	1.50	1.76	1.22				1.51	1680.0	0.2393
1715	1.45	1.54	1.76	1.24				1.54	1590.0	0.2933
1730	1.48	1.58	1.80	1.25				1.57	1460.0	0.3429
1745	1.50	1.58	1.80	1.28				1.58	1260.0	0.3857
1800	1.50	1.59	1.80	1.31				1.58	1060.0	0.4758
1900	1.50	1.59	1.80	1.34				1.59	530.0	0.5478
2000	1.50	1.59	1.80	1.34				1.59	285.0	0.5866
2100	1.50	1.59	1.80	1.34				1.59	192.0	0.6127
2200	1.50	1.59	1.80	1.34				1.59	135.0	0.6402
2400	1.50	1.59	1.80	1.34				1.59	80.0	0.6674
APR. 19										
0000	1.50	1.59	1.80	1.34				1.59	80.0	0.6674
0600	1.52	1.59	1.80	1.34				1.59	41.0	0.7171
1200	1.53	1.59	1.80	1.34				1.59	31.0	0.7403
1700	1.53	1.66	1.80	1.34				1.63	29.0	0.7506
1715	1.53	1.84	1.80	1.34				1.73	25.0	0.7515
1730	1.53	2.77	1.80	1.39				2.25	20.0	0.7522
1745	1.59	2.92	1.80	1.40				2.34	19.0	0.7528
1800	1.70	2.98	1.90	1.50				2.42	102.0	0.7563
1815	1.74	3.08	2.72	1.96				2.63	657.0	0.7786
1830	1.80	3.18	3.83	2.07				2.88	1760.0	0.8384
1845	1.85	3.25	4.32	2.13				3.00	2860.0	0.9356
1900	1.89	3.62	4.32	2.39				3.23	3090.0	1.0406
1915	2.11	3.67	4.32	2.42				3.31	3000.0	1.1426
1930	2.21	3.71	4.32	2.58				3.37	2780.0	1.2370
1945	2.25	3.77	4.32	2.62				3.41	2550.0	1.3237
2000	2.29	3.81	4.32	2.64				3.45	2490.0	1.4083
2015	2.32	3.82	4.32	2.68				3.46	2300.0	1.5255
2045	2.34	3.84	4.32	2.76				3.48	1880.0	1.6853
2130	2.40	3.93	4.32	2.78				3.55	1230.0	1.8107
2215	2.48	4.03	4.32	2.85				3.63	997.0	1.8784

STA. NO. 08074250 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT COSTA RICA STREET, HOUSTON, TEXAS — STORM OF APRIL 18-21, 1979

DATE & TIME	GAGE NUMBER 21R	205R	4250	4150				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 19										
2230	2.50	4.05	4.32	2.88				3.64	822.0	1.9203
2300	2.52	4.05	4.32	2.96				3.65	767.0	1.9985
2400	2.52	4.05	4.32	2.98				3.65	626.0	2.0836
APR. 20										
0000	2.52	4.05	4.32	2.98				3.65	626.0	2.0836
0200	2.52	4.05	4.32	2.98				3.65	320.0	2.1914
0300	2.52	4.05	4.32	2.98				3.65	272.0	2.2284
0400	2.59	4.05	4.32	2.98				3.67	226.0	2.2744
0600	2.59	4.05	4.32	2.98				3.67	170.0	2.3207
0800	2.59	4.05	4.32	2.98				3.67	132.0	2.3745
1200	2.59	4.05	4.32	2.98				3.67	76.0	2.4158
1600	2.59	4.05	4.32	2.98				3.67	55.0	2.4457
2000	2.59	4.05	4.32	2.98				3.67	42.0	2.4685
2400	2.59	4.05	4.32	2.98				3.67	35.0	2.4852
APR. 21										
0000	2.59	4.05	4.32	2.98				3.67	35.0	2.4852
0600	2.59	4.05	4.32	2.98				3.67	30.0	2.5168
1200	2.59	4.05	4.32	2.98				3.67	26.0	2.5380
1800	2.59	4.05	4.32	2.98				3.67	25.0	2.5584
2400	2.59	4.05	4.32	2.98				3.67	20.0	2.5665

STA. NO. 08074250 STORM RAINFALL AND RUNOFF RECORD 1979 WATER YEAR

BRICKHOUSE GULLY AT COSTA RICA STREET , HOUSTON , TEXAS STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 21R	4200	205R	4250	4150			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0	0.0	0.0	0.0	0.0			0.0	2.0	0.0020
1500	0.0	0.0	0.10	0.0	0.0			0.03	59.0	0.0632
1515	0.0	0.0	0.15	0.0	0.12			0.05	86.0	0.0661
1530	0.15	0.10	0.40	0.30	0.16			0.23	62.0	0.0682
1545	0.34	0.20	0.45	0.32	0.19			0.32	49.0	0.0699
1600	0.39	0.20	0.45	0.32	0.21			0.33	127.0	0.0742
1615	0.42	0.20	0.50	0.39	0.31			0.37	281.0	0.0837
1630	0.45	0.40	0.69	0.62	0.58			0.54	327.0	0.0949
1645	0.78	0.70	0.93	0.81	0.66			0.80	312.0	0.1055
1700	0.99	0.80	0.96	0.82	0.68			0.88	286.0	0.1200
1730	1.05	1.00	1.05	0.92	0.72			1.00	206.0	0.1340
1800	1.12	1.00	1.07	0.92	0.74			1.02	172.0	0.1516
1900	1.20	1.00	1.10	0.92	0.74			1.04	128.0	0.1951
2300	1.21	1.00	1.18	1.09	0.82			1.10	69.0	0.2185
2400	1.32	1.10	1.18	1.12	0.84			1.16	57.0	0.2243
SEP. 18										
0000	1.32	1.10	1.18	1.12	0.84			1.16	57.0	0.2243
0100	1.34	1.10	1.22	1.18	0.88			1.18	113.0	0.2378
0130	1.39	1.20	1.34	1.28	0.98			1.28	120.0	0.2459
0200	1.39	1.30	1.40	1.30	0.98			1.33	115.0	0.2616
0330	1.47	1.30	1.45	1.36	1.08			1.38	83.0	0.2785
0500	1.50	1.40	1.47	1.41	1.09			1.43	72.0	0.3005
0800	1.63	1.40	1.55	1.48	1.20			1.49	53.0	0.3149
0900	1.63	1.40	1.56	1.49	1.20			1.50	55.0	0.3261
1100	1.74	1.40	1.65	1.53	1.28			1.56	56.0	0.3357
1130	1.77	1.60	1.65	1.58	1.28			1.63	56.0	0.3395
1200	1.77	1.60	1.69	1.62	1.32			1.65	66.0	0.3440
1230	1.77	1.60	1.69	1.65	1.32			1.65	71.0	0.3476
1245	1.77	1.60	1.69	1.65	1.32			1.65	319.0	0.3584
1300	1.84	1.60	1.80	1.76	1.38			1.72	453.0	0.3738
1315	1.90	1.80	1.80	2.13	1.38			1.85	418.0	0.3880
1330	2.00	1.90	1.80	2.13	1.38			1.90	347.0	0.4057
1400	2.00	1.90	1.80	2.14	1.38			1.90	276.0	0.4338
1500	2.11	1.90	2.09	2.16	1.46			2.02	207.0	0.4620
1600	2.20	1.90	2.13	2.18	1.56			2.05	156.0	0.4779
1630	2.22	2.00	2.17	2.22	1.58			2.11	398.0	0.4982
1645	2.23	2.00	2.30	2.32	1.60			2.16	680.0	0.5213
1700	2.28	2.20	2.73	2.52	1.92			2.41	812.0	0.5489
1715	2.77	2.50	3.03	2.56	2.08			2.70	834.0	0.5772
1730	3.42	2.60	3.03	2.56	2.33			2.87	819.0	0.6190

STA. NO. 08074250 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT COSTA RICA STREET , HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 21R	4200	205R	4250	4150			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18										
1800	3.47	2.60	3.03	2.56	2.34			2.88	753.0	0.6957
1900	3.47	2.60	3.04	2.56	2.34			2.89	464.0	0.7588
2000	3.48	2.60	3.05	2.56	2.34			2.89	278.0	0.8060
2130	3.48	2.60	3.10	2.56	2.34			2.91	176.0	0.8539
2400	3.54	2.80	3.14	2.62	2.39			3.00	122.0	0.8787
SEP. 19										
0000	3.54	2.80	3.14	2.62	2.39			3.00	122.0	0.8787
0100	3.54	2.80	3.14	2.68	2.39			3.01	119.0	0.8950
0130	3.54	2.80	3.20	2.72	2.39			3.04	125.0	0.9035
0200	3.65	2.90	3.25	2.74	2.50			3.11	133.0	0.9103
0215	3.65	2.90	3.25	2.78	2.50			3.12	141.0	0.9151
0230	3.65	2.90	3.25	2.80	2.50			3.12	146.0	0.9225
0300	3.65	2.90	3.25	2.82	2.50			3.12	162.0	0.9335
0330	3.80	3.00	3.25	2.84	2.50			3.19	155.0	0.9493
0430	3.80	3.00	3.39	2.92	2.61			3.25	170.0	0.9638
0445	3.80	3.00	3.49	2.92	2.61			3.28	211.0	0.9710
0500	3.86	3.00	3.49	2.98	2.66			3.30	265.0	0.9800
0515	3.86	3.10	3.49	3.05	2.66			3.34	294.0	0.9900
0530	3.86	3.20	3.49	3.06	2.66			3.37	307.0	1.0004
0545	4.07	3.20	3.52	3.08	2.66			3.42	307.0	1.0108
0600	4.07	3.20	3.69	3.11	2.78			3.49	302.0	1.0365
0700	4.07	3.20	3.69	3.12	2.78			3.49	245.0	1.0698
0800	4.10	3.40	3.69	3.16	2.90			3.57	221.0	1.0923
0830	4.10	3.40	3.69	3.22	2.90			3.57	252.0	1.1051
0845	4.10	3.40	3.69	3.23	2.90			3.58	389.0	1.1184
0900	4.24	3.50	3.82	3.29	2.92			3.68	594.0	1.1386
0915	4.28	3.50	3.90	3.48	2.92			3.74	739.0	1.1637
0930	4.35	3.70	4.07	3.58	3.10			3.89	863.0	1.1930
0945	4.54	4.00	4.22	3.62	3.21			4.08	1120.0	1.2310
1000	4.71	4.00	4.30	3.72	3.24			4.15	1530.0	1.2830
1015	4.84	4.20	4.41	3.83	3.33			4.29	1850.0	1.3459
1030	4.98	4.40	4.65	4.16	3.50			4.51	2050.0	1.4156
1045	5.24	4.60	4.86	4.28	3.76			4.72	2240.0	1.4917
1100	5.45	4.70	5.01	4.42	3.92			4.86	2780.0	1.5862
1115	5.59	4.80	5.15	4.48	4.12			4.98	2720.0	1.6786
1130	5.60	4.90	5.29	5.04	4.19			5.14	2600.0	1.7669
1145	5.84	5.30	5.57	5.14	4.42			5.42	2350.0	1.8468
1200	6.06	5.30	5.61	5.18	4.68			5.50	2170.0	1.9574
1230	6.09	5.30	5.61	5.26	4.80			5.52	1950.0	2.0568
1245	6.13	5.30	5.61	5.39	4.91			5.55	1840.0	2.1193

STA. NO. 08074250 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT COSTA RICA STREET , HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 21R	4200	205R	4250	4150			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
1300	6.16	5.50	5.80	5.42	4.91			5.68	1720.0	2.2070
1330	6.32	5.50	5.92	5.52	5.02			5.77	1470.0	2.2819
1345	6.32	5.60	5.92	5.52	5.02			5.80	1380.0	2.3288
1400	6.32	5.60	5.92	5.52	5.10			5.80	1300.0	2.3730
1415	6.32	5.60	5.92	5.58	5.10			5.81	1220.0	2.4145
1430	6.46	5.60	6.01	5.59	5.10			5.87	1180.0	2.4546
1445	6.46	5.80	6.04	5.62	5.10			5.94	1220.0	2.4960
1500	6.54	5.80	6.09	5.69	5.16			5.99	1260.0	2.5388
1515	6.54	5.90	6.15	5.76	5.30			6.05	1290.0	2.5827
1530	6.65	5.90	6.24	5.84	5.30			6.11	1310.0	2.6272
1545	6.65	6.00	6.24	5.92	5.30			6.15	1360.0	2.6734
1600	6.79	6.00	6.36	5.98	5.42			6.23	1400.0	2.7210
1615	6.79	6.10	6.40	6.05	5.45			6.29	1480.0	2.7713
1630	6.97	6.20	6.51	6.14	5.56			6.41	1500.0	2.8223
1645	7.00	6.40	6.51	6.22	5.70			6.49	1510.0	2.8736
1700	7.14	6.40	6.66	6.28	5.71			6.57	1540.0	2.9259
1715	7.21	6.50	6.74	6.32	5.71			6.65	1740.0	2.9850
1730	7.32	6.50	6.80	6.42	5.88			6.71	2050.0	3.0547
1745	7.39	6.60	6.90	6.58	5.93			6.81	2180.0	3.1288
1800	7.51	6.70	7.03	6.82	6.08			6.95	2250.0	3.2052
1815	7.64	7.00	7.22	6.92	6.28			7.15	2280.0	3.2827
1830	7.86	7.00	7.33	7.02	6.39			7.24	2410.0	3.3646
1845	7.94	7.10	7.43	7.12	6.48			7.34	2460.0	3.4482
1900	8.02	7.20	7.51	7.23	6.60			7.43	2490.0	3.5328
1915	8.10	7.30	7.51	7.33	6.60			7.49	2390.0	3.6140
1930	8.28	7.40	7.69	7.43	6.78			7.64	2400.0	3.6956
1945	8.34	7.60	7.76	7.48	6.88			7.74	2500.0	3.7805
2000	8.42	7.70	7.85	7.56	6.94			7.83	2530.0	3.8665
2015	8.48	7.70	7.94	7.72	7.02			7.90	2430.0	3.9491
2030	8.58	7.80	8.08	7.86	7.21			8.02	2350.0	4.0290
2045	8.81	7.90	8.16	7.90	7.32			8.13	2350.0	4.1088
2100	8.87	8.00	8.19	7.94	7.37			8.19	2080.0	4.1795
2115	8.87	8.20	8.20	7.98	7.37			8.26	1990.0	4.2471
2130	8.94	8.20	8.27	8.08	7.42			8.31	1880.0	4.3110
2145	8.94	8.20	8.27	8.18	7.42			8.33	1770.0	4.3712
2200	8.99	8.20	8.32	8.18	7.54			8.36	1650.0	4.4272
2215	8.99	8.20	8.32	8.21	7.54			8.36	1560.0	4.4802
2230	8.99	8.20	8.32	8.23	7.60			8.37	1590.0	4.5613
2300	9.06	8.30	8.46	8.46	7.62			8.49	1590.0	4.6693

STA. NO. 08074250 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRICKHOUSE GULLY AT COSTA RICA STREET , HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 21R	4200	205R	4250	4150			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
2330	9.06	8.40	8.46	8.56	7.80			8.54	1450.0	4.7679
2400	9.26	8.50	8.65	8.59	7.85			8.68	1290.0	4.8556
SEP. 20										
0000	9.26	8.50	8.65	8.59	7.85			8.68	1290.0	4.8556
0100	9.31	8.50	8.70	8.68	7.96			8.72	1040.0	5.0054
0130	9.31	8.60	8.70	8.69	7.96			8.75	928.0	5.0685
0200	9.35	8.60	8.73	8.69	7.98			8.77	810.0	5.1235
0230	9.53	8.60	8.74	8.69	7.98			8.81	716.0	5.1965
0330	9.56	8.60	8.75	8.70	7.99			8.82	568.0	5.2930
0500	9.56	8.60	8.75	8.75	7.99			8.83	408.0	5.3762
0630	9.56	8.60	8.75	8.75	7.99			8.83	304.0	5.4382
0800	9.56	8.60	8.75	8.75	7.99			8.83	250.0	5.4977
1000	9.56	8.60	8.75	8.75	7.99			8.83	197.0	5.5512
1200	9.56	8.60	8.75	8.75	7.99			8.83	162.0	5.6063
1500	9.56	8.60	8.75	8.75	7.99			8.83	123.0	5.6565
1800	9.56	8.60	8.75	8.75	7.99			8.83	97.0	5.7158
2400	9.56	8.60	8.75	8.75	7.99			8.83	65.0	5.7555
SEP. 21										
0000	9.56	8.60	8.75	8.75	7.99			8.83	65.0	5.7555
0600	9.56	8.60	8.75	8.75	7.99			8.83	50.0	5.8096
1200	9.56	8.60	8.75	8.75	7.99			8.83	38.0	5.8406
1800	9.56	8.60	8.75	8.75	7.99			8.83	32.0	5.8667
2400	9.56	8.60	8.75	8.75	7.99			8.83	24.0	5.8764

LAZYBROOK STREET STORM SEWER DRAINAGE BASIN

The locations of data-collection sites in the Lazybrook Street Storm Sewer drainage basin are shown in figure 8.

Flood-hydrograph partial-record and rainfall record station 08074400, Lazybrook Street Storm Sewer at Houston, Tex. was put into operation on Oct. 4, 1978 by the U.S. Geological Survey.

Weighted-mean rainfall for the 1979 water year was not determined.

The storms of April 18-20 and August 19 were selected for analysis at station 08074400, Lazybrook Street Storm Sewer at Houston.

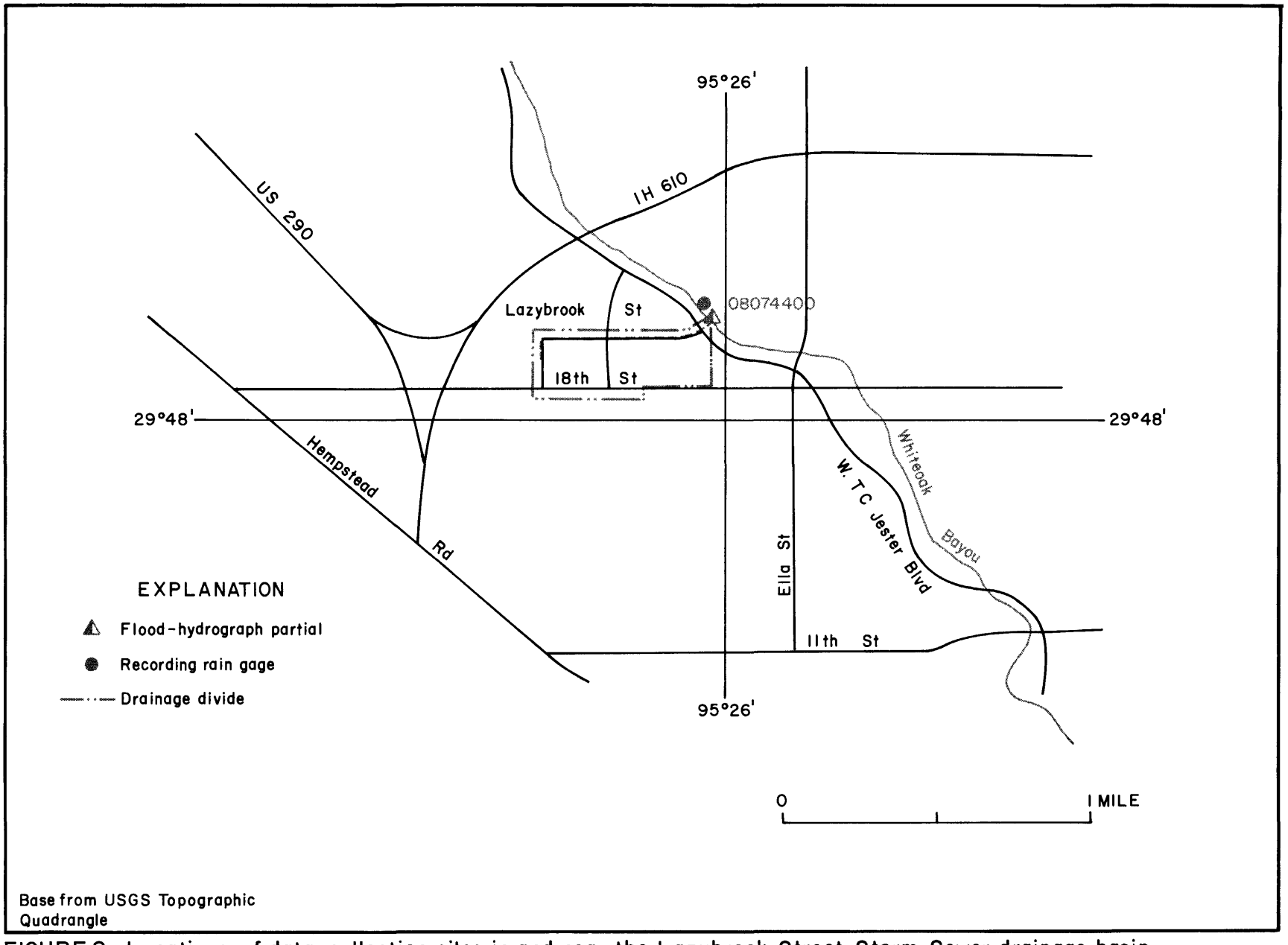


FIGURE 8.-Locations of data-collection sites in and near the Lazybrook Street Storm Sewer drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 6.--Storm rainfall-runoff data, 1979 Water Year, Lazybrook Street Storm Sewer

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Lazybrook Street Storm Sewer at Houston, TX. (Drainage area--0.13 mi^2)								
April 18, 1979	9.8	1.61	0.54	0.98	1.22	3.42	0.60	80.0
April 19-20, 1979	3.6	4.10	0.62	1.16	1.98			119 *, ++
Aug. 19, 1979	0.5	2.18	1.27	2.00	2.12	0.92	0.42	119 *, ++

*-Annual peak discharge for 1979 water year.
++-Peak discharge for period of record.

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

LOCATION.--Lat 29°48'15", long 95°26'04", Harris County, Hydrologic Unit 12040104, over 54-inch diameter storm sewer near the intersection of Lazybrook Street and West T. C. Jester Boulevard in northwest Houston.

DRAINAGE AREA.--0.13 mi^2.

PERIOD OF RECORD.--Oct. 4, 1978 to current year.

GAGE.--Digital water-stage recorder and graphic water-stage and rainfall recorder. Datum of gage is National Geodetic Vertical Datum of 1929, 1973 adjustment, unadjusted for land-surface subsidence.

REMARKS.--Records good, except for periods of missing record which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 119 ft^3/s, April 19, 1979 and August 19, 1979, (gage-height 58.09 ft.); no flow many days.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 55 ft^3/s and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Apr. 18	1610	80	57.39
Apr. 19	1820	*119	58.09
May 29	0950	100	57.76
July 7	1410	78	57.35
Aug. 19	1420	*119	58.09
Aug. 22	1030	117	58.05

No flow many days.

STA. NO. 08074400 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

LAZYBROOK STREET STORM SEWER , HOUSTON , TEXAS — STORM OF APRIL 18-20 , 1979

DATE & TIME	GAGE NUMBER 4400						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 18									
0000	0.0						0.0	0.1	0.0025
0415	0.0						0.0	0.1	0.0052
0430	0.16						0.16	3.2	0.0195
0500	0.18						0.18	1.0	0.0285
0600	0.20						0.20	0.2	0.0311
0715	0.20						0.20	0.2	0.0329
0730	0.31						0.31	3.0	0.0404
0740	0.31						0.31	3.8	0.0517
0800	0.31						0.31	1.2	0.0648
0930	0.31						0.31	0.2	0.0738
1530	0.31						0.31	0.1	0.0775
1545	0.38						0.38	0.3	0.0784
1600	0.92						0.92	41.0	0.1802
1610	1.26						1.26	80.0	0.2994
1615	1.36						1.36	70.0	0.4385
1630	1.53						1.53	41.0	0.5606
1645	1.56						1.56	20.0	0.6202
1700	1.56						1.56	9.2	0.6614
1730	1.61						1.61	2.8	0.7198
2030	1.61						1.61	0.2	0.7275
2400	1.61						1.61	0.1	0.7344
APR. 19									
0000	1.61						1.61	0.1	0.7344
1600	1.61						1.61	0.1	0.7493
1700	1.66						1.66	0.2	0.7511
1730	1.80						1.80	17.0	0.8270
1745	2.27						2.27	25.0	0.8767
1750	2.32						2.32	84.0	1.0019
1800	2.62						2.62	64.0	1.1608
1815	3.16						3.16	118.0	1.3952
1820	3.32						3.32	119.0	1.5725
1830	3.78						3.78	107.0	1.8382
1845	3.88						3.88	61.0	2.0200
1900	3.94						3.94	25.0	2.0821
1910	4.10						4.10	40.0	2.1616
1920	4.16						4.16	31.0	2.2232
1930	4.62						4.62	84.0	2.3483
1935	4.70						4.70	104.0	2.5033
1945	4.96						4.96	60.0	2.6523
2000	5.03						5.03	34.0	2.7536

STA. NO. 08074400 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

LAZYBROOK STREET STORM SEWER , HOUSTON , TEXAS — STORM OF APRIL 18-20 , 1979

DATE & TIME	GAGE NUMBER 4400							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 19										
2015	5.07							5.07	18.0	2.8341
2045	5.18							5.18	7.8	2.8689
2100	5.22							5.22	17.0	2.9111
2110	5.30							5.30	12.0	2.9290
2115	5.34							5.34	20.0	2.9588
2125	5.45							5.45	33.0	3.0080
2130	5.49							5.49	32.0	3.0716
2145	5.58							5.58	19.0	3.1848
2230	5.66							5.66	8.8	3.2372
2245	5.68							5.68	8.5	3.2626
2300	5.71							5.71	6.6	3.2921
2330	5.71							5.71	3.4	3.3123
2400	5.71							5.71	1.9	3.3520
APR. 20										
0000	5.71							5.71	1.9	3.3520
0600	5.71							5.71	0.2	3.4002
1200	5.71							5.71	0.1	3.4110
2400	5.71							5.71	0.1	3.4181

STA. NO. 08074400 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

LAZYBROOK STREET STORM SEWER • HOUSTON • TEXAS — STORM OF AUG. 19 , 1979

DATE & TIME	GAGE NUMBER 4400						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
AUG. 19									
0000	0.0						0.0	0.1	0.0083
1400	0.0						0.0	0.1	0.0168
1410	0.34						0.34	14.0	0.0376
1415	0.94						0.94	85.0	0.1221
1420	1.44						1.44	119.0	0.2994
1430	2.00						2.00	100.0	0.5477
1445	2.08						2.08	65.0	0.7414
1500	2.12						2.12	17.0	0.8681
1600	2.13						2.13	1.9	0.9020
1800	2.18						2.18	0.4	0.9211
2400	2.18						2.18	0.1	0.9247

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 7.--Storm rainfall-runoff data, 1979 Water Year, Whiteoak Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Whiteoak Bayou at Houston, TX. (Drainage area--86.3 mi^2)								
Jan. 5-9, 1979	27.5	2.21	0.30	0.40	0.60	1.24	0.56	4,030
April 18, 1979	2.6	1.86	0.70	1.29	1.62	2.57	0.70	3,740
April 19-23, 1979	4.8	1.83	1.11	1.93	2.52			11,100
Sept. 17-24, 1979	48.0	8.25	0.65	1.14	1.24	5.03	0.61	11,800 *

*-Annual peak discharge for 1979 water year.

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 Reilroad 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 mi² (223.5 km²). Prior to Oct. 1, 1976, 84.7 mi² (219.4 km²).

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.--43 years, 78.8 ft³/s (2.232 m³/s), 57,090 acre-ft/yr (70.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s (490 m³/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 ft³/s (418 m³/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 ft³/s (265 m³/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 ft³/s (113 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	1500	5,400	153	28.82	8.784	aJune 26	1500	1,130	32.0	20.81	6.343
aJan. 6	1830	4,030	114	26.64	8.120	Sept. 1	1830	5,410	153	28.84	8.790
aMar. 22	1130	1,680	47.6	22.13	6.745	Sept. 20	0030	*11,800	334	37.18	11.332
Apr. 19	2200	11,100	314	36.39	11.092						

a Water-quality samples were obtained on this date.

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	15	44	775	51	36	49	80	78	22	20	977
2	21	18	32	196	89	36	212	62	431	23	25	237
3	22	21	246	76	309	88	1030	49	270	27	61	36
4	22	18	176	45	313	53	344	1170	296	64	56	28
5	19	19	54	273	1020	51	155	365	97	86	24	67
6	19	475	64	1540	1190	39	77	154	92	46	20	189
7	16	79	110	718	428	37	64	89	45	684	60	343
8	15	30	134	222	198	38	57	64	32	595	26	88
9	16	22	69	114	134	42	49	53	31	140	22	26
10	15	20	33	104	102	42	46	54	25	42	20	36
11	16	104	28	273	84	41	43	90	23	31	20	19
12	18	33	26	122	54	41	44	66	25	31	19	17
13	20	21	24	63	49	38	41	39	24	106	117	16
14	21	21	67	41	40	34	33	36	24	45	49	17
15	19	19	68	34	42	32	32	35	26	31	280	13
16	18	24	30	35	36	40	43	34	37	25	90	13
17	17	52	25	29	186	31	57	35	39	124	30	201
18	16	26	24	30	236	29	758	35	22	25	28	796
19	16	341	26	154	101	262	2550	36	24	76	1000	4880
20	15	218	24	612	62	277	1970	46	22	277	200	4420
21	15	60	23	141	53	646	381	36	22	69	50	706
22	14	42	21	51	50	791	193	393	22	24	100	276
23	15	36	22	85	425	334	137	115	23	21	35	164
24	14	22	19	33	381	129	91	40	23	22	25	103
25	14	31	18	32	114	69	71	29	54	577	20	69
26	15	1510	19	144	55	54	62	28	205	174	18	50
27	15	667	19	50	44	46	38	27	39	195	70	46
28	16	145	18	32	40	43	35	29	20	164	178	43
29	17	380	250	38	---	40	384	393	19	43	80	34
30	17	123	141	183	---	47	130	228	21	24	40	32
31	17	---	156	132	---	63	---	135	---	22	25	---
TOTAL	530	4592	2010	6377	5886	3549	9176	4045	2111	3835	2808	13942
MEAN	17.1	153	64.8	206	210	114	306	130	70.4	124	90.6	465
MAX	22	1510	250	1540	1190	791	2550	1170	431	684	1000	4880
MIN	14	15	18	29	36	29	32	27	19	21	18	13
AC-FT	1050	9110	3990	12650	11670	7040	18200	8020	4190	7610	5570	27650
(††)	.22	7.01	2.82	5.93	3.94	3.00	6.60	4.31	2.13	6.47	4.03	10.46

CAL YR 1978 TOTAL 34813 MEAN 95.4 MAX 2920 MIN 14 AC-FT 69050 †† 42.86
WTR YR 1979 TOTAL 58861 MEAN 161 MAX 4880 MIN 13 AC-FT 116800 †† 56.92

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
23...	0920	12	917	7.1	22.5	40	5.0	6.4	75	8.4
DEC										
26...	0915	19	967	7.4	16.0	40	10	7.6	79	24
JAN										
05...	0840	121	475	7.6	14.0	50	100	9.1	91	17
05...	0920	[illegible]	490	6.5	14.0	60	100	8.9	89	17
06...	1055	643	241	7.8	10.0	200	120	9.7	89	12
07...	1100	6[illegible]7	172	7.8	8.0	240	95	10.3	90	5.0
08...	1430	210	316	7.2	9.5	200	55	11.8	106	8.1
FEB										
28...	0925	36	954	7.4	16.5	40	10	7.4	78	15
MAR										
22...	1010	1270	233	7.7	19.0	80	300	7.8	87	14
22...	1510	1280	260	7.4	20.5	100	320	7.7	88	14
MAY										
21...	1115	34	1050	8.0	26.0	10	4.9	12.7	148	40
JUN										
27...	1155	32	719	7.5	30.0	--	84	7.3	97	17

DATE	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 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)
OCT										
23...	1600000	500000	9000	--	--	--	--	--	--	--
DEC										
26...	310000	18000	5200	--	--	--	--	--	--	--
JAN										
05...	160000	28000	52000	110	0	34	5.1	45	1.9	4.7
05...	230000	25000	24000	--	--	--	--	--	--	--
06...	400000	44000	52000	66	0	21	3.3	16	.9	4.9
07...	20000	2000	2800	--	--	--	--	--	--	--
08...	6700	750	20	--	--	--	--	--	--	--
FEB										
28...	1500000	190000	13000	--	--	--	--	--	--	--
MAR										
22...	780000	160000	55000	130	28	47	2.3	8.2	.3	2.8
22...	700000	130000	44000	--	--	--	--	--	--	--
MAY										
21...	1600000	120000	7300	--	--	--	--	--	--	--
JUN										
27...	1000000	310000	10000	--	--	--	--	--	--	--

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT										
23...	--	--	--	--	--	--	--	12	5	1.5
DEC										
26...	--	--	--	--	--	--	--	15	8	1.3
JAN										
05...	150	0	20	47	.4	11	241	408	86	.62
05...	--	--	--	--	--	--	--	418	82	.62
06...	83	0	9.9	21	.2	8.6	126	316	60	.54
07...	--	--	--	--	--	--	--	194	28	.30
08...	--	--	--	--	--	--	--	118	26	.35
FEB										
28...	--	--	--	--	--	--	--	14	14	.23
MAR										
22...	120	0	16	6.9	.2	.2	143	1740	980	.37
22...	--	--	--	--	--	--	--	1330	124	.37
MAY										
21...	--	--	--	--	--	--	--	15	15	.58
JUN										
27...	--	--	--	--	--	--	--	144	40	.81

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
23...	.43	1.9	5.1	1.5	6.6	5.7	6.8	--	1.2
DEC									
26...	1.0	2.3	5.0	3.2	8.2	4.5	12	--	1.3
JAN									
05...	.31	.93	1.7	2.3	4.0	1.9	33	16	--
05...	.34	.96	1.9	1.8	3.7	2.0	27	--	.20
06...	.12	.66	.45	1.3	1.7	.82	16	1	.00
07...	.05	.38	.30	.90	1.2	.54	13	--	.00
08...	.16	.51	1.0	1.0	2.0	.82	16	--	--
FEB									
28...	.51	.74	2.2	2.6	4.8	.68	11	--	.70
MAR									
22...	.14	.51	.57	.30	.87	.65	64	2	.00
22...	.12	.49	.75	.55	1.3	.65	30	--	.00
MAY									
21...	.62	1.2	4.1	3.3	7.4	3.4	20	--	.30
JUN									
27...	.69	1.5	4.3	1.2	5.5	1.3	12	3	.20

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
JAN							
05...	0840	5	90	<1	0	8	10
06...	1055	6	80	<1	0	4	60
MAR							
22...	1010	5	100	1	0	2	10
JUN							
27...	1155	20	200	<1	0	1	10

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
JAN						
05...	0	4	.0	0	1	60
06...	0	<1	.0	0	0	10
MAR						
22...	0	0	.0	0	0	20
JUN						
27...	0	<1	.1	0	0	6

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, 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)
JAN								
05...	0840	.2	.00	.3	.00	.00	.03	.45
06...	1055	.0	.00	.0	.00	.00	.00	.08
MAR								
22...	1010	.0	.00	1.3	.00	.04	.14	.32
JUN								
27...	1155	.0	.00	.1	.00	.00	.00	.61

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)	METHYL PARA-THION, TOTAL (UG/L)
JAN									
05...	.01	.00	.00	.00	.00	.00	.00	.02	.00
06...	.00	.00	.00	.00	.00	.00	.02	.01	.00
MAR									
22...	.13	.00	.00	.00	.07	.04	.00	.04	.00
JUN									
27...	.00	.00	.00	.00	.00	.00	.05	.24	.00

DATE	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)
JAN								
05...	.00	.00	.01	0	.00	.00	.00	.00
06...	.00	.00	.00	0	.00	.06	.03	.00
MAR								
22...	.00	.00	.00	0	.00	.22	.01	.00
JUN								
27...	.00	.00	.00	0	.00	.03	.01	.00

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 29R	21R	4150	4250	4400	4200		ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN 5										
0000	0.0	0.0	0.0	0.0	0.0	0.0		0.0	43.0	0.0008
0200	0.0	0.02	0.0	0.0	0.0	0.0		0.00	44.0	0.0020
0300	0.0	0.03	0.0	0.0	0.0	0.0		0.00	46.0	0.0028
0400	0.02	0.05	0.0	0.0	0.0	0.10		0.02	46.0	0.0036
0500	0.05	0.05	0.0	0.0	0.0	0.10		0.03	48.0	0.0047
0630	0.08	0.05	0.0	0.0	0.0	0.10		0.04	49.0	0.0055
0645	0.08	0.12	0.0	0.0	0.0	0.10		0.05	50.0	0.0057
0700	0.10	0.19	0.0	0.0	0.0	0.10		0.06	51.0	0.0061
0745	0.15	0.21	0.0	0.0	0.01	0.10		0.08	59.0	0.0067
0800	0.18	0.21	0.06	0.06	0.01	0.20		0.12	61.0	0.0074
0900	0.18	0.21	0.16	0.14	0.05	0.20		0.16	165.0	0.0103
1000	0.18	0.21	0.16	0.14	0.05	0.20		0.16	160.0	0.0132
1100	0.20	0.21	0.16	0.14	0.05	0.20		0.16	172.0	0.0163
1200	0.21	0.21	0.16	0.14	0.06	0.20		0.17	177.0	0.0187
1230	0.21	0.23	0.16	0.14	0.06	0.20		0.17	180.0	0.0203
1300	0.22	0.27	0.16	0.14	0.06	0.20		0.18	197.0	0.0220
1330	0.22	0.31	0.16	0.14	0.06	0.40		0.20	214.0	0.0240
1400	0.27	0.35	0.20	0.16	0.10	0.40		0.24	208.0	0.0258
1430	0.29	0.37	0.25	0.21	0.14	0.40		0.27	208.0	0.0272
1445	0.33	0.43	0.26	0.21	0.16	0.40		0.30	208.0	0.0282
1500	0.35	0.45	0.27	0.22	0.17	0.40		0.31	208.0	0.0296
1530	0.36	0.47	0.27	0.23	0.18	0.40		0.32	233.0	0.0311
1545	0.40	0.47	0.29	0.23	0.18	0.50		0.34	231.0	0.0322
1600	0.46	0.47	0.31	0.25	0.20	0.50		0.37	228.0	0.0332
1615	0.48	0.51	0.32	0.27	0.24	0.50		0.39	239.0	0.0353
1700	0.52	0.53	0.33	0.29	0.26	0.50		0.41	260.0	0.0383
1730	0.56	0.56	0.35	0.30	0.27	0.50		0.43	305.0	0.0410
1800	0.58	0.56	0.38	0.35	0.30	0.50		0.45	350.0	0.0441
1830	0.59	0.61	0.39	0.36	0.31	0.50		0.47	359.0	0.0466
1845	0.64	0.68	0.40	0.36	0.31	0.60		0.50	364.0	0.0482
1900	0.65	0.78	0.40	0.36	0.31	0.60		0.52	369.0	0.0507
1930	0.70	0.80	0.45	0.37	0.31	0.60		0.55	385.0	0.0541
2000	0.82	0.84	0.55	0.46	0.38	0.70		0.64	402.0	0.0568
2015	0.85	0.85	0.61	0.55	0.53	0.80		0.71	451.0	0.0589
2030	0.86	0.85	0.68	0.59	0.55	0.80		0.73	500.0	0.0622
2100	0.89	0.88	0.71	0.63	0.63	0.80		0.77	599.0	0.0676
2130	0.90	0.90	0.74	0.67	0.67	0.80		0.79	800.0	0.0748
2200	0.92	0.95	0.75	0.71	0.68	0.80		0.81	1000.0	0.0815
2215	0.94	0.97	0.75	0.71	0.70	1.00		0.84	1030.0	0.0885

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 29R	21R	4150	4250	4400	4200		ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN 5										
2245	0.96	1.01	0.77	0.73	0.71	1.00		0.86	1090.0	0.0958
2300	0.97	1.03	0.79	0.76	0.73	1.00		0.88	1120.0	0.1033
2330	1.02	1.05	0.82	0.80	0.78	1.00		0.91	1120.0	0.1134
2400	1.12	1.06	0.84	0.85	0.82	1.10		0.97	1120.0	0.1235
JAN 6										
0000	1.12	1.06	0.84	0.85	0.82	1.10		0.97	1120.0	0.1235
0100	1.14	1.08	0.87	0.93	0.88	1.10		1.00	1210.0	0.1502
0200	1.12	1.11	0.90	0.95	0.93	1.10		1.02	1270.0	0.2557
1015	1.17	1.11	0.90	0.95	0.93	1.10		1.03	672.0	0.3070
1030	1.17	1.14	0.90	0.95	0.93	1.10		1.03	660.0	0.3144
1130	1.17	1.14	0.90	0.98	0.93	1.10		1.04	620.0	0.3227
1200	1.23	1.17	0.91	0.99	0.93	1.10		1.06	596.0	0.3281
1230	1.25	1.17	0.91	1.00	0.93	1.10		1.06	579.0	0.3333
1300	1.27	1.22	0.93	1.03	0.98	1.10		1.09	562.0	0.3370
1315	1.31	1.44	0.94	1.03	1.05	1.20		1.16	622.0	0.3398
1330	1.33	1.55	0.94	1.06	1.10	1.20		1.19	682.0	0.3429
1345	1.34	1.60	0.96	1.09	1.11	1.20		1.21	742.0	0.3462
1400	1.35	1.68	1.01	1.16	1.17	1.20		1.25	801.0	0.3498
1415	1.38	1.66	1.06	1.22	1.22	1.30		1.30	834.0	0.3536
1430	1.49	1.69	1.24	1.32	1.25	1.60		1.42	868.0	0.3575
1445	1.58	1.72	1.36	1.41	1.29	1.70		1.50	902.0	0.3615
1500	1.73	1.79	1.47	1.52	1.32	1.80		1.60	936.0	0.3657
1515	1.75	1.86	1.48	1.53	1.45	1.80		1.64	1050.0	0.3704
1530	1.77	1.97	1.49	1.55	1.51	1.80		1.67	1170.0	0.3757
1545	1.83	2.04	1.53	1.56	1.51	1.80		1.71	1280.0	0.3814
1600	1.89	2.09	1.56	1.57	1.63	1.90		1.77	1400.0	0.3877
1615	1.92	2.11	1.63	1.77	1.63	1.90		1.82	1690.0	0.3953
1630	1.96	2.13	1.81	1.80	1.64	2.00		1.89	1980.0	0.4042
1645	1.97	2.14	1.88	2.00	1.92	2.00		1.97	2265.0	0.4144
1700	2.02	2.16	2.01	2.08	2.02	2.30		2.07	2550.0	0.4258
1715	2.04	2.19	2.03	2.10	2.18	2.30		2.11	2890.0	0.4388
1730	2.05	2.21	2.04	2.11	2.20	2.30		2.12	3320.0	0.4537
1745	2.06	2.23	2.05	2.13	2.22	2.30		2.14	3660.0	0.4701
1800	2.08	2.23	2.06	2.18	2.23	2.30		2.15	3940.0	0.4878
1815	2.13	2.23	2.09	2.19	2.24	2.30		2.17	4000.0	0.5057
1830	2.15	2.23	2.09	2.19	2.25	2.30		2.18	4030.0	0.5329
1900	2.18	2.23	2.09	2.20	2.29	2.40		2.21	3870.0	0.5589
1915	2.18	2.23	2.09	2.20	2.29	2.40		2.21	3770.0	0.5759
1930	2.18	2.23	2.09	2.20	2.29	2.40		2.21	3590.0	0.6000
2000	2.18	2.24	2.09	2.20	2.29	2.40		2.21	3370.0	0.6757

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON • TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 29R	21R	4150	4250	4400	4200		ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN 6										
2200	2.18	2.24	2.09	2.20	2.29	2.40		2.21	2290.0	0.7579
2400	2.18	2.26	2.09	2.20	2.29	2.40		2.21	1660.0	0.8101
JAN 7										
0000	2.18	2.26	2.09	2.20	2.29	2.40		2.21	1660.0	0.8101
0300	2.18	2.26	2.09	2.20	2.29	2.40		2.21	1180.0	0.8960
0600	2.18	2.26	2.09	2.20	2.29	2.40		2.21	958.0	0.9476
0900	2.18	2.26	2.09	2.20	2.29	2.40		2.21	730.0	0.9869
1200	2.18	2.26	2.09	2.20	2.29	2.40		2.21	593.0	1.0189
1500	2.18	2.26	2.09	2.20	2.29	2.40		2.21	508.0	1.0462
1800	2.18	2.26	2.09	2.20	2.29	2.40		2.21	440.0	1.0699
2100	2.18	2.26	2.09	2.20	2.29	2.40		2.21	382.0	1.0905
2400	2.18	2.26	2.09	2.20	2.29	2.40		2.21	329.0	1.1082
JAN 8										
0000	2.18	2.26	2.09	2.20	2.29	2.40		2.21	329.0	1.1082
0600	2.18	2.26	2.09	2.20	2.29	2.40		2.21	262.0	1.1336
0700	2.18	2.26	2.09	2.20	2.29	2.40		2.21	264.0	1.1383
0800	2.18	2.26	2.09	2.20	2.29	2.40		2.21	251.0	1.1451
1000	2.18	2.26	2.09	2.20	2.29	2.40		2.21	224.0	1.1531
1200	2.18	2.26	2.09	2.20	2.29	2.40		2.21	212.0	1.1607
1400	2.18	2.26	2.09	2.20	2.29	2.40		2.21	208.0	1.1663
1500	2.18	2.26	2.09	2.20	2.29	2.40		2.21	202.0	1.1736
1800	2.18	2.26	2.09	2.20	2.29	2.40		2.21	182.0	1.1834
2100	2.18	2.26	2.09	2.20	2.29	2.40		2.21	166.0	1.1923
2400	2.18	2.26	2.09	2.20	2.29	2.40		2.21	161.0	1.1988
JAN 9										
0000	2.18	2.26	2.09	2.20	2.29	2.40		2.21	161.0	1.1988
0300	2.18	2.26	2.09	2.20	2.29	2.40		2.21	152.0	1.2092
0600	2.18	2.26	2.09	2.20	2.29	2.40		2.21	133.0	1.2163
0900	2.18	2.26	2.09	2.20	2.29	2.40		2.21	119.0	1.2227
1200	2.18	2.26	2.09	2.20	2.29	2.40		2.21	101.0	1.2309
1800	2.18	2.26	2.09	2.20	2.29	2.40		2.21	78.0	1.2372
2100	2.18	2.26	2.09	2.20	2.29	2.40		2.21	75.0	1.2412
2400	2.18	2.26	2.09	2.20	2.29	2.40		2.21	75.0	1.2433

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF APRIL 18-23 , 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18										
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.0	0.0024
0400	0.05	0.05	0.01	0.0	0.0	0.0	0.0	0.02	62.0	0.0047
0415	0.13	0.06	0.02	0.01	0.0	0.0	0.0	0.03	62.0	0.0049
0430	0.21	0.10	0.04	0.02	0.0	0.0	0.17	0.08	63.0	0.0050
0445	0.29	0.13	0.04	0.04	0.0	0.0	0.18	0.10	69.0	0.0052
0500	0.38	0.13	0.04	0.05	0.0	0.0	0.19	0.12	90.0	0.0070
0700	0.38	0.13	0.07	0.06	0.0	0.0	0.19	0.12	156.0	0.0077
0730	0.38	0.13	0.07	0.11	0.02	0.03	0.32	0.16	163.0	0.0165
1300	0.38	0.13	0.08	0.11	0.04	0.05	0.32	0.16	78.0	0.0210
1400	0.48	0.17	0.08	0.11	0.05	0.05	0.32	0.19	74.0	0.0219
1415	0.61	0.67	0.08	0.12	0.05	0.06	0.32	0.28	73.0	0.0222
1430	0.74	1.22	0.10	0.12	0.10	0.08	0.32	0.40	72.0	0.0225
1445	0.87	1.72	0.10	0.12	0.10	0.09	0.32	0.49	72.0	0.0228
1500	1.00	1.98	0.10	0.12	0.10	0.10	0.32	0.55	72.0	0.0231
1515	1.19	2.12	0.10	0.34	0.10	0.10	0.32	0.64	72.0	0.0235
1530	1.38	2.40	0.40	0.80	0.10	0.10	0.32	0.82	72.0	0.0238
1545	1.57	2.44	0.75	1.16	0.10	0.30	0.38	0.99	72.0	0.0241
1600	1.76	2.48	1.03	1.55	0.46	1.00	0.90	1.33	72.0	0.0244
1615	1.80	2.51	1.28	1.76	0.82	1.59	1.35	1.59	92.0	0.0246
1630	1.84	2.57	1.38	2.00	1.10	1.72	1.55	1.74	210.0	0.0251
1645	1.88	2.60	1.42	2.07	1.20	1.75	1.60	1.79	680.0	0.0282
1700	1.92	2.61	1.45	2.10	1.22	1.76	1.61	1.81	1340.0	0.0372
1730	1.94	2.61	1.48	2.14	1.25	1.82	1.61	1.84	2540.0	0.0600
1800	1.96	2.61	1.50	2.16	1.31	1.82	1.61	1.85	3740.0	0.1104
1900	1.96	2.62	1.50	2.16	1.34	1.82	1.61	1.86	3120.0	0.1664
2000	1.96	2.62	1.50	2.16	1.34	1.82	1.61	1.86	2420.0	0.2316
2200	1.96	2.62	1.50	2.16	1.34	1.82	1.61	1.86	1610.0	0.2894
2400	1.96	2.62	1.50	2.16	1.34	1.82	1.61	1.86	1210.0	0.3328
APR 19										
0000	1.96	2.62	1.50	2.16	1.34	1.82	1.61	1.86	1210.0	0.3328
0400	1.96	2.62	1.50	2.16	1.34	1.82	1.61	1.86	987.0	0.4255
0800	1.96	2.62	1.53	2.16	1.34	1.82	1.61	1.86	667.0	0.4734
1200	1.98	2.62	1.53	2.16	1.34	1.82	1.61	1.87	496.0	0.4956
1300	1.98	2.62	1.53	2.16	1.34	1.82	1.61	1.87	459.0	0.4997
1400	2.05	2.62	1.53	2.16	1.34	1.82	1.61	1.88	434.0	0.5036
1500	2.06	2.62	1.53	2.16	1.34	1.82	1.61	1.88	426.0	0.5113
1600	2.09	2.65	1.53	2.20	1.34	1.82	1.61	1.89	390.0	0.5148
1700	2.16	2.66	1.55	2.24	1.34	1.82	1.63	1.92	364.0	0.5181
1715	2.16	2.67	1.56	2.62	1.34	1.82	1.63	1.98	345.0	0.5204
1730	2.19	2.68	1.57	2.85	1.39	1.82	1.79	2.05	342.0	0.5227

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF APRIL 18-23 , 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 19										
1745	2.20	2.70	1.59	2.92	1.40	1.82	2.25	2.14	359.0	0.5251
1800	2.22	2.85	1.70	2.96	1.50	1.92	2.58	2.26	387.0	0.5277
1815	2.27	2.90	1.74	3.06	1.96	2.74	3.15	2.54	960.0	0.5363
1830	2.33	2.95	1.80	3.10	2.07	3.85	3.77	2.79	1510.0	0.5431
1845	2.38	3.00	1.85	3.15	2.13	4.34	3.87	2.89	2060.0	0.5616
1900	2.44	3.05	1.89	3.16	2.39	4.34	3.90	2.96	2610.0	0.6085
1915	2.49	3.09	2.11	3.19	2.42	4.34	4.15	3.05	3990.0	0.9398
1930	2.55	3.13	2.21	3.24	2.58	4.34	4.53	3.17	5370.0	1.3496
1945	2.61	3.19	2.25	3.25	2.62	4.34	4.96	3.27	6750.0	1.4254
2000	2.67	3.24	2.29	3.29	2.64	4.34	5.02	3.31	8150.0	1.5351
2015	2.68	3.27	2.32	3.30	2.68	4.34	5.05	3.33	8850.0	1.6146
2030	2.70	3.28	2.33	3.31	2.72	4.34	5.06	3.34	9550.0	1.7003
2045	2.71	3.28	2.33	3.32	2.76	4.34	5.16	3.37	10200.0	1.7690
2100	2.72	3.30	2.34	3.34	2.76	4.34	5.22	3.39	10900.0	1.8179
2115	2.75	3.34	2.35	3.36	2.76	4.34	5.36	3.42	11000.0	1.8673
2130	2.77	3.36	2.40	3.39	2.78	4.34	5.53	3.47	11000.0	1.9167
2145	2.79	3.38	2.42	3.43	2.78	4.34	5.59	3.49	11100.0	1.9665
2200	2.82	3.40	2.45	3.47	2.78	4.34	5.63	3.52	11100.0	2.0163
2215	2.82	3.42	2.48	3.51	2.85	4.34	5.67	3.55	11000.0	2.0657
2230	2.82	3.42	2.50	3.52	2.88	4.34	5.68	3.56	10900.0	2.1146
2300	2.82	3.42	2.52	3.52	2.98	4.34	5.69	3.58	10400.0	2.1613
2400	2.82	3.42	2.52	3.52	2.98	4.34	5.70	3.58	8890.0	2.2212
APR 20										
0000	2.82	3.42	2.52	3.52	2.98	4.34	5.71	3.58	8890.0	2.2212
0200	2.82	3.42	2.52	3.52	2.98	4.34	5.72	3.58	5790.0	2.2671
0300	2.82	3.42	2.57	3.52	2.98	4.34	5.72	3.59	4400.0	2.2869
1000	2.82	3.42	2.57	3.53	2.98	4.34	5.72	3.59	1300.0	2.2927
1100	2.82	3.43	2.57	3.55	2.98	4.36	5.72	3.60	1220.0	2.2982
1200	2.82	3.43	2.57	3.56	2.98	4.36	5.72	3.60	1120.0	2.3032
1300	2.82	3.43	2.57	3.57	2.98	4.36	5.72	3.60	1020.0	2.3078
1330	2.82	3.43	2.57	3.57	2.98	4.36	5.72	3.60	980.0	2.3122
1345	2.82	3.43	2.57	3.70	2.98	4.36	5.72	3.62	960.0	2.3165
1400	2.82	3.43	2.57	3.72	2.98	4.36	5.72	3.62	940.0	2.3207
1445	2.82	3.43	2.57	3.72	2.98	4.36	5.72	3.62	900.0	2.3248
1500	2.82	3.54	2.57	3.72	2.98	4.36	5.72	3.64	890.0	2.3288
1515	2.82	3.58	2.57	3.72	2.99	4.36	5.72	3.65	882.0	2.3347
1530	2.82	3.78	2.57	3.72	3.00	4.36	5.72	3.68	875.0	2.3406
1600	2.87	3.78	2.57	3.72	3.01	4.36	5.72	3.69	859.0	2.3444
1615	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	845.0	2.3501
1800	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	750.0	2.3670

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF APRIL 18-23 , 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 20										
2100	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	664.0	2.3908
2400	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	619.0	2.4103
APR 21										
0000	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	619.0	2.4103
0300	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	550.0	2.4482
0600	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	455.0	2.4727
1200	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	364.0	2.4923
1800	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	270.0	2.5069
2400	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	206.0	2.5235
APR 22										
0000	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	206.0	2.5235
0600	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	202.0	2.5400
1200	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	191.0	2.5451
2400	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	156.0	2.5584
APR 23										
0000	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	156.0	2.5584
1200	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	137.0	2.5658
2400	2.89	3.78	2.59	3.72	3.01	4.36	5.72	3.69	118.0	2.5689

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-24, 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0026
1445	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0076
1500	0.34	0.0	0.04	0.15	0.0	0.0	0.0	0.08	37.0	0.0078
1515	0.36	0.0	0.07	0.20	0.12	0.0	0.32	0.16	58.0	0.0081
1530	0.37	0.01	0.15	0.36	0.16	0.30	0.38	0.24	80.0	0.0084
1545	0.39	0.06	0.34	0.49	0.19	0.32	0.38	0.31	101.0	0.0089
1600	0.40	0.15	0.39	0.54	0.21	0.32	0.38	0.34	122.0	0.0094
1615	0.47	0.36	0.42	0.60	0.31	0.39	0.46	0.43	186.0	0.0103
1630	0.54	0.42	0.45	0.73	0.58	0.62	0.77	0.59	250.0	0.0114
1645	0.61	0.47	0.78	0.83	0.66	0.81	0.81	0.70	314.0	0.0128
1700	0.69	0.55	0.99	0.84	0.68	0.82	0.86	0.77	379.0	0.0145
1715	0.70	0.58	1.02	0.89	0.70	0.87	0.90	0.81	520.0	0.0168
1730	0.71	0.63	1.05	0.93	0.72	0.92	0.90	0.83	661.0	0.0198
1745	0.72	0.65	1.10	0.94	0.73	0.92	0.90	0.85	802.0	0.0234
1800	0.74	0.72	1.12	0.95	0.74	0.92	0.90	0.87	943.0	0.0340
1900	0.75	0.74	1.16	0.95	0.74	0.92	0.90	0.88	1020.0	0.0523
2000	0.77	0.75	1.18	0.95	0.74	0.92	0.90	0.89	670.0	0.0703
2200	0.79	0.78	1.20	0.95	0.74	0.92	0.91	0.90	445.0	0.0823
2300	0.85	0.79	1.21	0.95	0.82	1.09	1.00	0.95	392.0	0.0867
2315	0.85	0.81	1.28	1.05	0.82	1.09	1.00	0.98	383.0	0.0884
2330	0.86	0.86	1.31	1.20	0.83	1.10	1.00	1.02	373.0	0.0901
2345	0.86	0.92	1.31	1.21	0.83	1.11	1.00	1.03	363.0	0.0917
2400	0.87	0.95	1.32	1.22	0.84	1.12	1.01	1.04	354.0	0.0933
SEP. 18										
0000	0.87	0.95	1.32	1.22	0.84	1.12	1.01	1.04	354.0	0.0933
0030	0.91	0.97	1.33	1.23	0.86	1.15	1.03	1.06	364.0	0.0966
0045	0.93	0.98	1.33	1.24	0.87	1.16	1.07	1.08	369.0	0.0982
0100	0.95	0.99	1.34	1.25	0.88	1.18	1.27	1.12	374.0	0.0999
0115	0.96	1.01	1.35	1.27	0.93	1.23	1.29	1.14	402.0	0.1017
0130	0.97	1.06	1.39	1.31	0.98	1.28	1.31	1.18	430.0	0.1036
0145	0.98	1.09	1.41	1.34	0.98	1.29	1.32	1.20	458.0	0.1057
0200	0.99	1.11	1.43	1.35	0.98	1.30	1.32	1.21	487.0	0.1090
0230	1.02	1.13	1.45	1.37	1.01	1.32	1.33	1.23	594.0	0.1143
0300	1.05	1.13	1.47	1.39	1.05	1.34	1.34	1.25	701.0	0.1206
0330	1.08	1.16	1.49	1.39	1.08	1.36	1.35	1.27	708.0	0.1270
0400	1.10	1.21	1.50	1.43	1.08	1.38	1.36	1.29	714.0	0.1366
0500	1.14	1.26	1.56	1.48	1.09	1.41	1.40	1.33	655.0	0.1483
0600	1.15	1.33	1.60	1.50	1.13	1.43	1.42	1.36	604.0	0.1592
0700	1.15	1.34	1.63	1.50	1.16	1.45	1.43	1.38	562.0	0.1693
0800	1.16	1.35	1.63	1.50	1.20	1.48	1.46	1.39	520.0	0.1786

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-24, 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18										
0900	1.21	1.40	1.67	1.51	1.20	1.49	1.49	1.42	462.0	0.1848
0930	1.22	1.45	1.71	1.53	1.22	1.50	1.51	1.45	455.0	0.1889
1000	1.23	1.50	1.73	1.59	1.24	1.51	1.51	1.47	448.0	0.1929
1030	1.24	1.50	1.74	1.59	1.26	1.52	1.51	1.48	451.0	0.1970
1100	1.25	1.52	1.74	1.59	1.28	1.53	1.55	1.49	454.0	0.2011
1130	1.28	1.52	1.75	1.63	1.28	1.58	1.57	1.51	461.0	0.2052
1200	1.30	1.56	1.77	1.65	1.32	1.62	1.60	1.54	468.0	0.2094
1230	1.32	1.58	1.80	1.69	1.32	1.65	1.64	1.57	530.0	0.2130
1245	1.33	1.60	1.81	1.70	1.32	1.65	1.87	1.61	561.0	0.2155
1300	1.34	1.61	1.84	1.72	1.38	1.76	2.12	1.68	593.0	0.2182
1315	1.34	1.62	1.86	1.73	1.38	2.13	2.13	1.72	758.0	0.2216
1330	1.34	1.63	2.04	1.74	1.38	2.13	2.14	1.75	923.0	0.2278
1400	1.35	1.63	2.09	1.75	1.38	2.14	2.15	1.77	1250.0	0.2446
1500	1.36	1.63	2.11	1.77	1.46	2.16	2.22	1.80	1360.0	0.2629
1530	1.38	1.72	2.14	1.79	1.51	2.17	2.22	1.83	1210.0	0.2738
1600	1.41	1.72	2.20	1.79	1.56	2.18	2.22	1.85	1060.0	0.2833
1630	1.60	1.72	2.22	1.79	1.58	2.22	2.24	1.89	950.0	0.2897
1645	1.70	1.74	2.23	1.85	1.60	2.32	2.25	1.94	894.0	0.2937
1700	1.80	1.77	2.28	1.90	1.92	2.52	2.26	2.04	838.0	0.2975
1715	1.85	1.97	2.77	1.99	2.08	2.56	2.26	2.19	824.0	0.3012
1730	1.90	2.46	3.42	2.04	2.33	2.56	2.26	2.42	810.0	0.3048
1745	1.95	2.60	3.47	2.05	2.33	2.56	2.26	2.45	796.0	0.3084
1800	2.01	2.61	3.47	2.05	2.34	2.56	2.27	2.47	782.0	0.3172
1900	2.01	2.61	3.48	2.05	2.34	2.56	2.27	2.47	1520.0	0.3444
2000	2.01	2.61	3.48	2.05	2.34	2.56	2.28	2.47	1440.0	0.3703
2100	2.02	2.61	3.48	2.05	2.34	2.56	2.30	2.48	1220.0	0.3922
2200	2.03	2.61	3.51	2.05	2.36	2.58	2.32	2.49	1060.0	0.4112
2300	2.05	2.61	3.52	2.07	2.38	2.60	2.40	2.51	915.0	0.4277
2400	2.07	2.63	3.54	2.08	2.39	2.62	2.47	2.54	856.0	0.4392
SEP. 19										
0000	2.07	2.63	3.54	2.08	2.39	2.62	2.47	2.54	856.0	0.4392
0100	2.10	2.65	3.58	2.10	2.39	2.68	2.53	2.57	828.0	0.4542
0130	2.14	2.67	3.59	2.11	2.39	2.72	2.56	2.59	831.0	0.4617
0200	2.18	2.73	3.63	2.13	2.50	2.74	2.59	2.64	835.0	0.4673
0215	2.20	2.74	3.66	2.15	2.50	2.78	2.60	2.66	841.0	0.4711
0230	2.22	2.77	3.69	2.17	2.50	2.80	2.62	2.68	847.0	0.4768
0300	2.25	2.82	3.73	2.21	2.50	2.82	2.67	2.71	859.0	0.4845
0330	2.26	2.82	3.77	2.22	2.50	2.84	2.70	2.72	906.0	0.4926
0400	2.27	2.82	3.80	2.22	2.55	2.88	2.71	2.74	954.0	0.5012
0430	2.31	2.84	3.82	2.26	2.61	2.92	2.76	2.78	970.0	0.5099

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-24, 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0500	2.35	2.86	3.86	2.26	2.66	2.98	2.81	2.82	987.0	0.5165
0515	2.39	2.88	3.86	2.29	2.66	3.05	2.83	2.84	1000.0	0.5210
0530	2.43	2.95	3.91	2.37	2.66	3.06	2.86	2.88	1020.0	0.5256
0545	2.47	2.99	4.05	2.39	2.66	3.08	2.87	2.92	1040.0	0.5303
0600	2.51	3.01	4.07	2.41	2.78	3.11	2.88	2.96	1060.0	0.5374
0630	2.54	3.04	4.10	2.43	2.78	3.11	2.92	2.98	1120.0	0.5474
0700	2.56	3.07	4.12	2.43	2.78	3.12	2.92	2.99	1190.0	0.5635
0800	2.62	3.12	4.17	2.47	2.90	3.16	2.94	3.05	1180.0	0.5767
0815	2.64	3.14	4.18	2.47	2.90	3.19	3.01	3.07	1170.0	0.5820
0830	2.66	3.17	4.20	2.48	2.90	3.22	3.05	3.09	1160.0	0.5872
0845	2.68	3.21	4.22	2.51	2.90	3.23	3.12	3.12	1150.0	0.5923
0900	2.71	3.23	4.24	2.51	2.92	3.29	3.18	3.15	1140.0	0.5975
0915	2.79	3.24	4.27	2.52	2.92	3.48	3.32	3.21	1210.0	0.6029
0930	2.86	3.25	4.35	2.53	3.10	3.58	3.45	3.29	1290.0	0.6087
0945	2.94	3.28	4.54	2.57	3.21	3.62	3.54	3.37	1370.0	0.6148
1000	3.02	3.33	4.71	2.62	3.24	3.72	3.58	3.45	1450.0	0.6213
1015	3.20	3.39	4.84	2.67	3.33	3.83	3.85	3.57	1840.0	0.6296
1030	3.38	3.57	4.98	2.85	3.50	4.16	3.98	3.75	2220.0	0.6396
1045	3.56	3.74	5.24	2.97	3.76	4.28	4.18	3.95	2600.0	0.6512
1100	3.75	3.85	5.45	3.11	3.92	4.42	4.29	4.10	2990.0	0.6647
1115	3.92	4.08	5.59	3.23	4.12	4.48	4.49	4.26	3560.0	0.6806
1130	4.10	4.17	5.70	3.36	4.19	5.04	4.87	4.46	4120.0	0.6991
1145	4.28	4.47	5.84	3.71	4.42	5.14	4.93	4.66	4680.0	0.7201
1200	4.45	4.87	6.06	3.90	4.68	5.18	4.95	4.85	5250.0	0.7437
1215	4.53	4.90	6.09	3.94	4.74	5.22	4.98	4.90	5580.0	0.7688
1230	4.61	4.92	6.10	3.98	4.80	5.26	5.06	4.95	5910.0	0.7953
1245	4.69	4.94	6.12	4.03	4.91	5.39	5.12	5.01	6230.0	0.8232
1300	4.78	5.08	6.16	4.26	4.91	5.42	5.17	5.10	6560.0	0.8527
1315	4.82	5.19	6.30	4.40	4.96	5.47	5.20	5.18	6620.0	0.8824
1330	4.87	5.22	6.32	4.52	5.02	5.52	5.20	5.22	6670.0	0.9124
1345	4.92	5.25	6.34	4.52	5.02	5.52	5.22	5.24	6730.0	0.9426
1400	4.97	5.27	6.37	4.53	5.10	5.52	5.25	5.28	6790.0	0.9730
1415	5.04	5.30	6.40	4.56	5.10	5.58	5.27	5.31	6750.0	1.0033
1430	5.11	5.36	6.46	4.59	5.10	5.59	5.29	5.35	6710.0	1.0335
1445	5.18	5.39	6.49	4.61	5.10	5.62	5.33	5.38	6670.0	1.0634
1500	5.25	5.44	6.54	4.64	5.16	5.69	5.41	5.43	6630.0	1.0932
1515	5.33	5.51	6.59	4.71	5.30	5.76	5.48	5.51	6570.0	1.1227
1530	5.41	5.55	6.65	4.77	5.30	5.84	5.55	5.57	6510.0	1.1519
1545	5.49	5.60	6.74	4.86	5.30	5.92	5.61	5.63	6450.0	1.1808

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-24, 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
1600	5.57	5.66	6.79	4.91	5.42	5.98	5.66	5.70	6390.0	1.2095
1615	5.66	5.75	6.89	4.98	5.45	6.05	5.75	5.78	6440.0	1.2384
1630	5.76	5.80	6.97	5.06	5.56	6.14	5.83	5.86	6500.0	1.2676
1645	5.85	5.89	7.04	5.15	5.70	6.22	5.90	5.95	6550.0	1.2970
1700	5.94	5.97	7.14	5.23	5.71	6.28	5.97	6.02	6600.0	1.3266
1715	6.03	6.04	7.21	5.31	5.71	6.32	6.04	6.08	6740.0	1.3569
1730	6.13	6.13	7.32	5.38	5.88	6.42	6.16	6.19	6890.0	1.3878
1745	6.23	6.21	7.39	5.43	5.93	6.58	6.43	6.30	7040.0	1.4194
1800	6.33	6.30	7.51	5.51	6.08	6.82	6.54	6.42	7180.0	1.4517
1815	6.43	6.50	7.64	5.66	6.28	6.92	6.64	6.56	7510.0	1.4854
1830	6.54	6.59	7.86	5.79	6.39	7.02	6.74	6.69	7850.0	1.5206
1845	6.65	6.69	7.94	5.83	6.48	7.12	6.80	6.77	8180.0	1.5573
1900	6.76	6.80	8.02	5.92	6.60	7.23	6.93	6.88	8510.0	1.5955
1915	6.85	6.95	8.18	6.01	6.60	7.33	7.01	6.97	8820.0	1.6351
1930	6.93	7.03	8.28	6.08	6.78	7.43	7.06	7.07	9140.0	1.6761
1945	7.02	7.13	8.34	6.13	6.88	7.48	7.12	7.14	9450.0	1.7186
2000	7.10	7.19	8.42	6.18	6.94	7.56	7.22	7.21	9760.0	1.7624
2015	7.13	7.31	8.48	6.22	7.02	7.72	7.39	7.30	10000.0	1.8073
2030	7.15	7.48	8.58	6.28	7.21	7.86	7.50	7.42	10300.0	1.8535
2045	7.18	7.58	8.71	6.38	7.32	7.90	7.51	7.49	10500.0	1.9006
2100	7.21	7.62	8.87	6.46	7.37	7.94	7.58	7.56	10800.0	1.9491
2115	7.23	7.63	8.92	6.48	7.37	7.98	7.60	7.58	11000.0	1.9985
2130	7.24	7.65	8.94	6.50	7.42	8.08	7.60	7.61	11100.0	2.0483
2145	7.26	7.69	8.97	6.52	7.42	8.18	7.60	7.64	11200.0	2.0986
2200	7.28	7.74	8.99	6.59	7.54	8.18	7.80	7.71	11400.0	2.1498
2215	7.33	7.75	9.01	6.61	7.54	8.21	8.18	7.78	11400.0	2.2009
2230	7.37	7.79	9.02	6.61	7.60	8.23	8.21	7.81	11400.0	2.2521
2245	7.42	7.82	9.04	6.62	7.61	8.35	8.22	7.84	11500.0	2.3037
2300	7.46	7.83	9.06	6.63	7.62	8.46	8.22	7.87	11500.0	2.3554
2315	7.51	7.86	9.07	6.67	7.71	8.51	8.23	7.91	11600.0	2.4074
2330	7.56	7.93	9.15	6.75	7.80	8.56	8.23	7.97	11600.0	2.4595
2345	7.61	8.01	9.24	6.81	7.82	8.58	8.24	8.02	11700.0	2.5120
2400	7.66	8.13	9.26	6.84	7.85	8.59	8.26	8.06	11800.0	2.5517
SEP. 20										
0000	7.66	8.13	9.26	6.84	7.85	8.59	8.26	8.06	11800.0	2.5517
0015	7.67	8.18	9.26	6.86	7.87	8.61	8.28	8.08	11700.0	2.6175
0030	7.69	8.21	9.28	6.88	7.90	8.64	8.29	8.10	11700.0	2.6700
0045	7.71	8.23	9.30	6.90	7.93	8.66	8.30	8.12	11600.0	2.7221
0100	7.73	8.26	9.31	6.95	7.96	8.68	8.32	8.15	11600.0	2.7742
0115	7.73	8.28	9.34	6.97	7.96	8.68	8.36	8.16	11500.0	2.8258

STA. NO. 08074500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-24, 1979

DATE & TIME	GAGE NUMBER 22R	29R	21R	204R	4150	4250	4400	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 20										
0130	7.74	8.29	9.34	7.00	7.96	8.69	8.41	8.18	11300.0	2.8765
0145	7.74	8.31	9.35	7.01	7.97	8.69	8.41	8.19	11100.0	2.9263
0200	7.75	8.32	9.35	7.02	7.98	8.69	8.41	8.19	10900.0	2.9753
0215	7.75	8.33	9.38	7.02	7.98	8.69	8.41	8.20	10700.0	3.0233
0230	7.75	8.33	9.47	7.03	7.98	8.69	8.41	8.21	10400.0	3.0700
0245	7.75	8.33	9.51	7.03	7.98	8.69	8.41	8.22	10200.0	3.1158
0300	7.76	8.33	9.53	7.04	7.99	8.70	8.41	8.23	9980.0	3.1830
0330	7.76	8.34	9.56	7.04	7.99	8.75	8.41	8.24	9930.0	3.3613
0500	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	7920.0	3.6101
0700	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	5920.0	3.8759
1000	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	3770.0	4.1128
1400	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	2200.0	4.2906
1900	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	1460.0	4.4217
2400	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	1110.0	4.5014
SEP. 21										
0000	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	1110.0	4.5014
0600	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	866.0	4.6246
1200	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	676.0	4.6974
1800	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	545.0	4.7561
2400	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	423.0	4.8017
SEP. 22										
0000	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	423.0	4.8017
1200	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	246.0	4.8775
2400	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	224.0	4.9137
SEP. 23										
0000	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	224.0	4.9137
1200	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	173.0	4.9630
2400	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	148.0	4.9869
SEP. 24										
0000	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	148.0	4.9869
1200	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	117.0	5.0201
2400	7.78	8.35	9.56	7.06	7.99	8.75	8.41	8.25	92.0	5.0300

LITTLE WHITEOAK BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Little Whiteoak Bayou drainage basin are shown in figure 9.

Flood-hydrograph partial-record and rainfall record station Little Whiteoak Bayou at Houston, Tex. (08074540) was put into operation on June 22, 1979 by the U.S. Geological Survey.

Weighted-mean rainfall for the 1979 water year was not determined.

The storm of Sept. 17-21 was selected for analysis at station 08074540, Little Whiteoak Bayou at Houston.

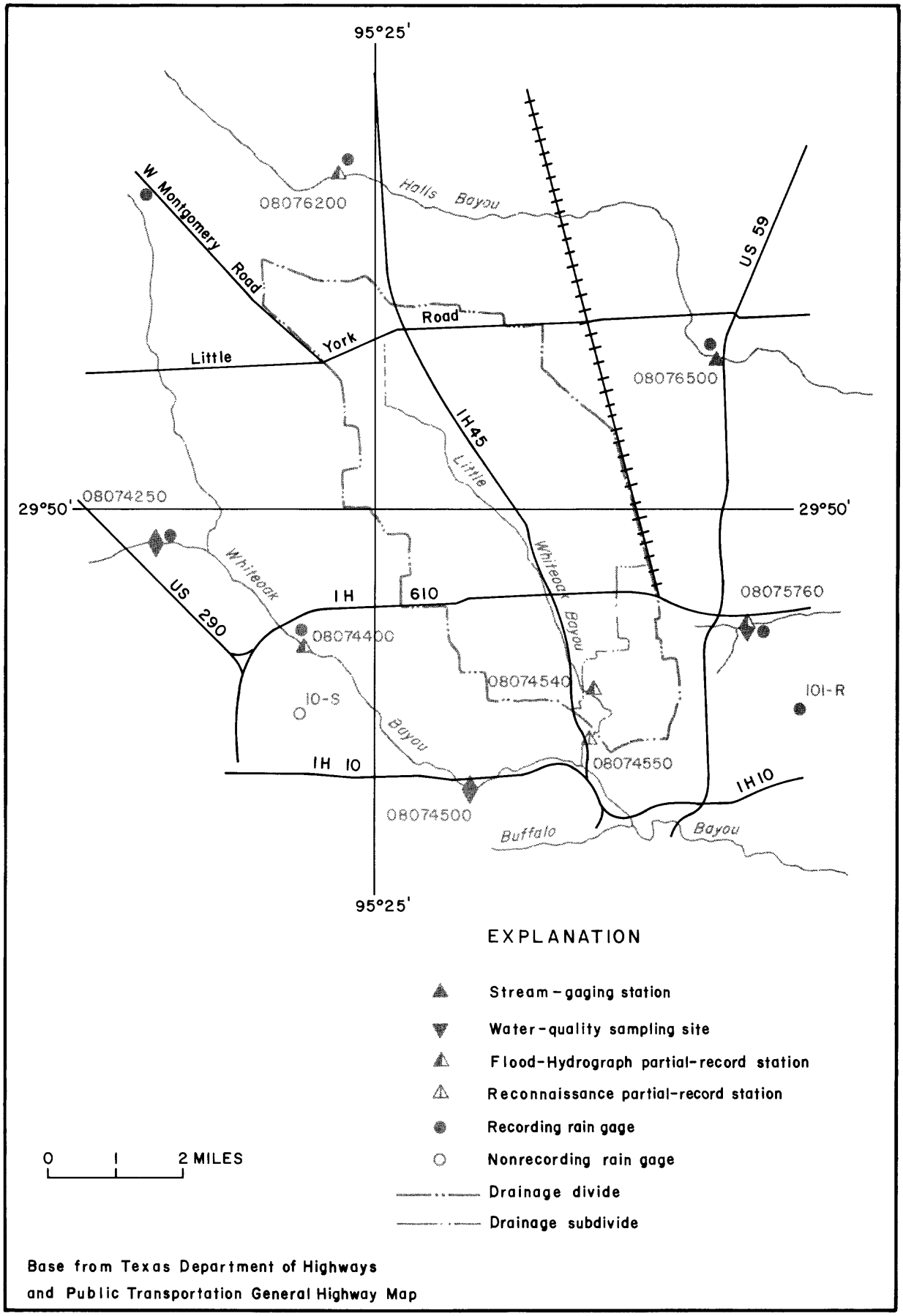


FIGURE 9.-Locations of data-collection sites in and near the Little Whiteoak Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 8.--Storm rainfall-runoff data, 1979 Water Year, Little Whiteoak Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/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^2)								
Sept. 17-21, 1979	48.4	8.69	0.60	0.90	1.50	7.30	0.84	4,750*,++

*-Annual peak discharge for 1979 water year.
++-Peak discharge for period of record.

08074540 LITTLE WHITEOAK BAYOU 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 mi² (46.6 km²). Area at site used prior to June 22, 1979, 20.9 mi² (54.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to September 1979. May 1971 to June 22, 1979, operated as low-flow partial-record station at site 6,200 ft (1,890 m) downstream.

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 at site 6,200 ft (1,890 m) downstream at North Main Street bridge.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft³/s (135 m³/s) Sept. 19, 1979, elevation, 37.76 ft (11.509 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges for period June to September above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
July 7	1530	1,220	34.6	29.32	8.937	Sept. 1	unknown	b3,000	85.0	unknown	--
aJuly 25	1600	1,230	34.8	29.33	8.940	aSept. 6	2330	303	8.58	24.36	7.425
aAug. 15	1500	832	23.6	27.54	8.394	aSept. 19	2400	*4,750	135	37.76	11.509
Aug. 19	1530	2,670	75.6	34.33	10.464						

a Water-quality samples were made on this date.
b About.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: May 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
25...	1115	4.5	746	7.3	24.0	40	5.0	4.5	55	14
DEC										
27...	0915	4.5	808	7.6	15.0	40	20	4.9	50	5.6
MAR										
13...	1030	7.6	962	7.8	18.5	30	5.0	5.1	56	9.6
21...	1350	315	293	7.6	19.0	120	120	8.0	89	10
22...	0915	26	538	7.3	19.5	110	45	5.0	56	12
JUL										
17...	1115	3.5	663	7.5	30.0	40	.60	4.3	57	13
25...	1715	944	181	7.4	26.0	70	290	5.7	71	13
AUG										
15...	1550	588	178	7.0	26.0	120	--	7.3	91	35
15...	1745	194	230	7.1	26.5	60	130	6.4	81	44
16...	1320	9.2	347	6.9	28.0	50	3.2	2.3	29	30
SEP										
07...	1625	147	292	6.9	27.0	40	11	5.0	63	23
08...	1930	11	433	6.9	28.0	40	4.5	2.5	32	14
19...	0905	355	268	7.0	23.5	55	53	6.4	77	6.3

DATE	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 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)
OCT										
25...	1100000	260000	1300	--	--	--	--	--	--	--
DEC										
27...	460000	160000	18000	180	0	55	11	96	3.1	4.1
MAR										
13...	420000	58000	1000	230	0	69	15	110	3.1	3.7
21...	1100000	180000	86000	110	0	39	3.6	14	.6	3.7
22...	3000000	280000	26000	--	--	--	--	--	--	--
JUL										
17...	300000	240000	1000	--	--	--	--	--	--	--
25...	840000	160000	9700	72	5	25	2.4	7.4	.4	2.1
AUG										
15...	1200000	120000	12000	--	--	--	--	--	--	--
15...	740000	290000	15000	--	--	--	--	--	--	--
16...	1200000	360000	2000	--	--	--	--	--	--	--
SEP										
07...	1000000	350000	49000	--	--	--	--	--	--	--
08...	1000000	340000	4200	--	--	--	--	--	--	--
19...	860000	150000	30000	--	--	--	--	--	--	--

08074540 LITTLE WHITEOAK BAYOU AT HOUSTON TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT										
25...	--	--	--	--	--	--	--	12	6	.12
DEC										
27...	320	0	25	76	.5	16	441	27	8	.10
MAR										
13...	390	0	37	88	.7	14	530	10	0	.11
21...	140	0	24	13	.4	.4	167	296	20	.72
22...	--	--	--	--	--	--	--	87	8	.42
JUL										
17...	--	--	--	--	--	--	--	0	16	.00
25...	82	0	12	4.7	.1	3.9	98	121	88	.28
AUG										
15...	--	--	--	--	--	--	--	--	--	.74
15...	--	--	--	--	--	--	--	53	38	.39
16...	--	--	--	--	--	--	--	20	7	.41
SEP										
07...	--	--	--	--	--	--	--	57	12	.33
08...	--	--	--	--	--	--	--	40	0	.14
19...	--	--	--	--	--	--	--	266	30	.20

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
25...	.19	.31	1.6	1.4	3.0	1.5	5.6	--	.40
DEC									
27...	.10	.20	2.4	1.3	3.7	1.0	6.6	--	.30
MAR									
13...	.11	.22	2.0	1.0	3.0	1.1	7.3	11	.20
21...	.14	.86	.64	.86	1.5	.69	25	23	.10
22...	.30	.72	1.7	1.2	2.9	1.0	15	--	.10
JUL									
17...	.06	.03	2.0	1.1	3.1	.44	8.9	--	.20
25...	.08	.36	.35	1.8	2.1	.68	22	10	.20
AUG									
15...	.10	.84	.30	2.1	2.4	.41	27	12	.20
15...	.08	.47	.17	1.5	1.7	.65	23	--	.10
16...	.25	.66	.53	1.1	1.6	.45	.2	--	.20
SEP									
07...	.10	.43	.87	.43	1.3	.59	14	--	--
08...	.16	.30	1.3	.60	1.9	.80	17	--	--
19...	.08	.28	.36	1.1	1.5	.46	16	--	--

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
MAR							
13...	1030	3	200	0	0	0	20
21...	1350	6	100	1	0	8	40
JUL							
25...	1715	9	0	0	10	4	20
AUG							
15...	1525	2	0	1	0	6	60

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
MAR						
13...	0	300	.0	1	0	30
21...	0	0	.0	0	0	20
JUL						
25...	0	20	2.8	0	0	4
AUG						
15...	9	50	.0	0	0	10

08074540 LITTLE WHITEOAK BAYOU AT HOUSTON TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)
MAR									
13...	1030	.0	--	.00	.0	.00	.00	.00	.24
21...	1350	.1	--	.00	.2	.00	.00	.01	.54
JUL									
25...	1715	.2	.00	.00	.4	.00	.00	.15	.36
AUG									
15...	1550	1.1	.00	.00	.2	.00	.00	.05	.06

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
MAR									
13...	.00	.00	.00	.00	.00	.00	.00	.09	.00
21...	.01	.00	.00	.00	.01	.01	.02	1.4	.00
JUL									
25...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG									
15...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR								
13...	.00	.00	.00	0	.00	.03	.00	.01
21...	.00	.00	.00	0	.00	.12	.03	.01
JUL								
25...	.00	.00	.00	0	.00	.05	.04	.01
AUG								
15...	.00	.00	.00	0	.00	.00	.00	.00

STA. NO. 08074540 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

LITTLE WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 204R	4400	5760					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0	0.0	0.0					0.0	6.0	0.0035
1330	0.0	0.0	0.0					0.0	6.0	0.0070
1345	0.0	0.0	0.10					0.04	6.0	0.0074
1445	0.0	0.0	0.10					0.04	6.0	0.0077
1500	0.15	0.0	0.40					0.16	8.0	0.0079
1515	0.20	0.32	0.50					0.36	12.0	0.0081
1530	0.36	0.38	0.60					0.45	30.0	0.0088
1545	0.49	0.38	0.70					0.51	89.0	0.0107
1600	0.54	0.38	0.70					0.52	122.0	0.0133
1615	0.60	0.46	1.00					0.67	176.0	0.0171
1630	0.73	0.78	1.10					0.88	229.0	0.0220
1645	0.83	0.83	1.10					0.92	398.0	0.0306
1700	0.84	0.88	1.10					0.95	566.0	0.0428
1715	0.89	0.93	1.20					1.02	615.0	0.0560
1730	0.93	0.93	1.20					1.02	664.0	0.0703
1745	0.94	0.93	1.20					1.03	652.0	0.0843
1800	0.95	0.93	1.20					1.03	640.0	0.1050
1830	0.95	0.93	1.20					1.03	570.0	0.1295
1900	0.95	0.95	1.20					1.04	500.0	0.1510
1930	0.95	0.95	1.20					1.04	430.0	0.1696
2000	0.95	0.95	1.20					1.04	355.0	0.1848
2030	0.95	0.95	1.20					1.04	287.0	0.1972
2100	0.95	0.95	1.20					1.04	231.0	0.2071
2130	0.95	0.95	1.20					1.04	188.0	0.2152
2200	0.95	0.95	1.20					1.04	157.0	0.2220
2230	0.95	0.98	1.20					1.05	132.0	0.2262
2245	0.95	1.08	1.30					1.14	122.0	0.2289
2300	0.95	1.07	1.40					1.17	112.0	0.2313
2315	1.05	1.08	1.40					1.19	104.0	0.2335
2330	1.20	1.08	1.40					1.21	97.0	0.2366
2400	1.22	1.08	1.40					1.21	94.0	0.2397
SEP. 18										
0000	1.22	1.08	1.40					1.21	94.0	0.2397
0030	1.23	1.09	1.40					1.22	134.0	0.2450
0045	1.24	1.16	1.60					1.33	170.0	0.2487
0100	1.25	1.33	1.60					1.41	207.0	0.2554
0130	1.31	1.37	1.60					1.44	273.0	0.2642
0145	1.34	1.37	1.60					1.45	298.0	0.2706
0200	1.35	1.38	1.70					1.49	322.0	0.2810
0230	1.37	1.38	1.70					1.49	337.0	0.2955

STA. NO. 08074540 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

LITTLE WHITEOAK BAYOU AT HOUSTON • TEXAS — STORM OF SEP . 17-21 . 1979

DATE & TIME	GAGE NUMBER 2048	4400	5760					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18										
0300	1.39	1.38	1.70					1.49	330.0	0.3097
0330	1.39	1.38	1.70					1.49	306.0	0.3229
0400	1.43	1.38	1.70					1.50	281.0	0.3350
0430	1.46	1.38	1.70					1.50	255.0	0.3459
0500	1.48	1.43	1.70					1.53	239.0	0.3562
0530	1.50	1.47	1.70					1.55	229.0	0.3661
0600	1.50	1.47	1.70					1.55	207.0	0.3750
0630	1.50	1.48	1.70					1.56	187.0	0.3810
0645	1.50	1.49	1.80					1.60	178.0	0.3849
0700	1.50	1.49	1.80					1.60	169.0	0.3903
0730	1.50	1.50	1.80					1.60	155.0	0.3970
0800	1.50	1.50	1.80					1.60	139.0	0.4030
0830	1.50	1.50	1.80					1.60	128.0	0.4071
0845	1.50	1.53	1.80					1.62	122.0	0.4097
0900	1.51	1.53	1.80					1.62	116.0	0.4135
0930	1.53	1.53	1.80					1.62	110.0	0.4170
0945	1.54	1.56	1.80					1.64	109.0	0.4194
1000	1.59	1.56	1.80					1.65	108.0	0.4229
1030	1.59	1.58	1.80					1.66	104.0	0.4262
1045	1.59	1.58	1.90					1.69	101.0	0.4284
1100	1.59	1.60	1.90					1.70	98.0	0.4315
1130	1.63	1.63	1.90					1.72	96.0	0.4357
1200	1.65	1.66	1.90					1.74	101.0	0.4389
1215	1.68	1.68	2.00					1.79	108.0	0.4413
1230	1.69	1.69	2.00					1.80	115.0	0.4437
1245	1.70	1.92	2.00					1.91	124.0	0.4464
1300	1.72	2.18	2.00					2.05	133.0	0.4507
1330	1.74	2.21	2.00					2.07	202.0	0.4594
1400	1.75	2.22	2.00					2.07	217.0	0.4664
1415	1.75	2.24	2.00					2.08	210.0	0.4709
1430	1.76	2.27	2.00					2.10	203.0	0.4775
1500	1.77	2.27	2.00					2.10	189.0	0.4856
1530	1.79	2.27	2.00					2.10	176.0	0.4932
1600	1.79	2.27	2.20					2.17	160.0	0.5001
1630	1.79	2.27	2.20					2.17	148.0	0.5064
1700	1.90	2.32	2.20					2.21	134.0	0.5108
1715	1.99	2.32	2.20					2.23	130.0	0.5136
1730	2.04	2.32	2.20					2.24	127.0	0.5177
1800	2.05	2.32	2.20					2.24	138.0	0.5236

STA. NO. 08074540 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

LITTLE WHITEOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 204R	4400	5760					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18										
1830	2.05	2.33	2.20					2.24	163.0	0.5306
1900	2.05	2.34	2.20					2.25	192.0	0.5389
1930	2.05	2.34	2.20					2.25	215.0	0.5481
2000	2.05	2.34	2.20					2.25	225.0	0.5627
2100	2.05	2.36	2.20					2.26	206.0	0.5804
2200	2.05	2.38	2.20					2.27	169.0	0.5913
2230	2.06	2.39	2.20					2.27	155.0	0.5963
2245	2.06	2.40	2.30					2.31	148.0	0.5995
2300	2.07	2.42	2.30					2.33	142.0	0.6041
2330	2.08	2.44	2.30					2.34	136.0	0.6099
2400	2.08	2.46	2.30					2.35	132.0	0.6142
SEP. 19										
0000	2.08	2.46	2.30					2.35	132.0	0.6142
0030	2.09	2.52	2.30					2.38	132.0	0.6213
0100	2.10	2.54	2.30					2.39	133.0	0.6270
0130	2.11	2.57	2.40					2.44	133.0	0.6328
0200	2.13	2.59	2.40					2.45	133.0	0.6385
0230	2.17	2.66	2.40					2.50	136.0	0.6429
0245	2.20	2.67	2.40					2.50	142.0	0.6459
0300	2.21	2.68	2.40					2.51	147.0	0.6491
0315	2.22	2.72	2.50					2.57	164.0	0.6562
0400	2.22	2.72	2.50					2.57	182.0	0.6699
0500	2.26	2.82	2.60					2.66	193.0	0.6823
0530	2.37	2.88	2.60					2.71	234.0	0.6924
0600	2.41	2.91	2.60					2.73	305.0	0.7055
0630	2.43	2.96	2.80					2.82	341.0	0.7202
0700	2.43	2.96	2.80					2.82	360.0	0.7434
0800	2.47	2.96	2.80					2.83	342.0	0.7618
0815	2.47	3.02	2.90					2.90	336.0	0.7691
0830	2.48	3.07	2.90					2.92	330.0	0.7797
0900	2.51	3.10	3.10					3.01	345.0	0.7946
0930	2.53	3.47	3.10					3.20	459.0	0.8094
0945	2.57	3.56	3.20					3.29	560.0	0.8215
1000	2.62	3.62	3.20					3.32	660.0	0.8357
1015	2.67	3.86	3.50					3.56	739.0	0.8516
1030	2.85	3.98	3.70					3.71	829.0	0.8694
1045	2.97	4.22	4.00					3.96	1044.0	0.8919
1100	3.11	4.31	4.20					4.09	1270.0	0.9192
1115	3.23	4.62	4.40					4.33	1610.0	0.9539
1130	3.36	4.90	4.60					4.56	1850.0	0.9937

STA. NO. 08074540 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

LITTLE WHITFOAK BAYOU AT HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 204R	4400	5760					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
1145	3.71	4.95	4.60					4.64	2170.0	1.0404
1200	3.90	4.98	4.70					4.72	2490.0	1.0940
1215	3.94	5.01	4.70					4.74	2660.0	1.1512
1230	3.98	5.11	4.90					4.87	2820.0	1.2119
1245	4.03	5.12	4.90					4.88	2900.0	1.2743
1300	4.26	5.22	5.00					5.00	2990.0	1.3387
1315	4.40	5.20	5.00					5.01	3000.0	1.4032
1330	4.52	5.24	5.00					5.05	3110.0	1.4702
1345	4.52	5.26	5.00					5.06	3080.0	1.5365
1400	4.53	5.30	5.00					5.08	3050.0	1.6021
1415	4.56	5.32	5.20					5.16	2980.0	1.6662
1430	4.59	5.36	5.20					5.19	2900.0	1.7286
1445	4.61	5.40	5.20					5.21	2800.0	1.7889
1500	4.64	5.48	5.30					5.29	2700.0	1.8470
1515	4.71	5.56	5.30					5.34	2620.0	1.9034
1530	4.77	5.60	5.40					5.41	2530.0	1.9578
1545	4.86	5.62	5.40					5.43	2480.0	2.0112
1600	4.91	5.73	5.40					5.49	2430.0	2.0635
1615	4.98	5.81	5.50					5.58	2400.0	2.1152
1630	5.06	5.89	5.60					5.66	2370.0	2.1662
1645	5.15	5.97	5.60					5.72	2380.0	2.2174
1700	5.23	6.02	5.80					5.82	2380.0	2.2686
1715	5.31	6.10	5.90					5.91	2420.0	2.3207
1730	5.38	6.22	5.90					5.98	2460.0	2.3736
1745	5.43	6.52	6.10					6.21	2520.0	2.4279
1800	5.51	6.62	6.20					6.31	2570.0	2.4832
1815	5.66	6.71	6.40					6.44	2710.0	2.5415
1830	5.79	6.81	6.50					6.55	2910.0	2.6041
1845	5.83	6.88	6.50					6.59	3040.0	2.6696
1900	5.92	7.00	6.60					6.70	3180.0	2.7380
1915	6.01	7.10	6.70					6.80	3280.0	2.8086
1930	6.08	7.15	6.80					6.87	3380.0	2.8814
1945	6.13	7.22	6.80					6.91	3460.0	2.9558
2000	6.18	7.32	7.18					7.10	3530.0	3.0318
2015	6.22	7.50	7.20					7.20	3590.0	3.1091
2030	6.28	7.60	7.30					7.30	3650.0	3.1876
2045	6.38	7.62	7.40					7.36	3760.0	3.2685
2100	6.46	7.68	7.60					7.47	3870.0	3.3518
2115	6.48	7.70	7.60					7.48	3900.0	3.4358

STA. NO. 08074540 STORM RAINFALL AND RUNOFF RECORD 1979 WATER YEAR

LITTLE WHITEOAK BAYOU AT HOUSTON , TEXAS STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 204R	4400	5760				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19									
2130	6.50	7.71	7.70				7.52	3930.0	3.5203
2145	6.52	7.71	7.80				7.56	3960.0	3.6056
2200	6.59	7.92	7.80				7.68	3980.0	3.6912
2215	6.61	8.18	7.90				7.85	3980.0	3.7769
2230	6.61	8.29	8.20				8.01	3980.0	3.8625
2245	6.62	8.30	8.50				8.12	4020.0	3.9491
2300	6.63	8.30	9.10				8.33	4050.0	4.0362
2315	6.67	8.30	9.40				8.44	4300.0	4.1288
2330	6.75	8.31	9.40				8.46	4550.0	4.2267
2345	6.81	8.31	9.50				8.50	4650.0	4.3268
2400	6.84	8.31	9.60				8.54	4750.0	4.4290
SEP. 20									
0000	6.84	8.31	9.60				8.54	4750.0	4.4290
0030	6.88	8.31	9.60				8.55	4680.0	4.6312
0045	6.90	8.31	9.70				8.58	4580.0	4.7298
0100	6.95	8.38	9.70				8.63	4470.0	4.8741
0130	7.00	8.40	9.70				8.64	4200.0	5.0549
0200	7.02	8.41	9.70				8.65	3880.0	5.3054
0300	7.04	8.41	9.70				8.66	3260.0	5.5860
0400	7.05	8.41	9.70				8.66	2720.0	5.8202
0500	7.06	8.41	9.80				8.69	2330.0	6.0208
0600	7.06	8.41	9.80				8.69	2080.0	6.2894
0800	7.06	8.41	9.80				8.69	1510.0	6.5493
1000	7.06	8.41	9.80				8.69	1060.0	6.7318
1200	7.06	8.41	9.80				8.69	750.0	6.8933
1500	7.06	8.41	9.80				8.69	480.0	7.0172
1800	7.06	8.41	9.80				8.69	317.0	7.0991
2100	7.06	8.41	9.80				8.69	214.0	7.1544
2400	7.06	8.41	9.80				8.69	152.0	7.2002
SEP. 21									
0000	7.06	8.41	9.80				8.69	152.0	7.2002
0800	7.06	8.41	9.80				8.69	63.0	7.2697
1600	7.06	8.41	9.80				8.69	30.0	7.2904
2400	7.06	8.41	9.80				8.69	20.0	7.2973

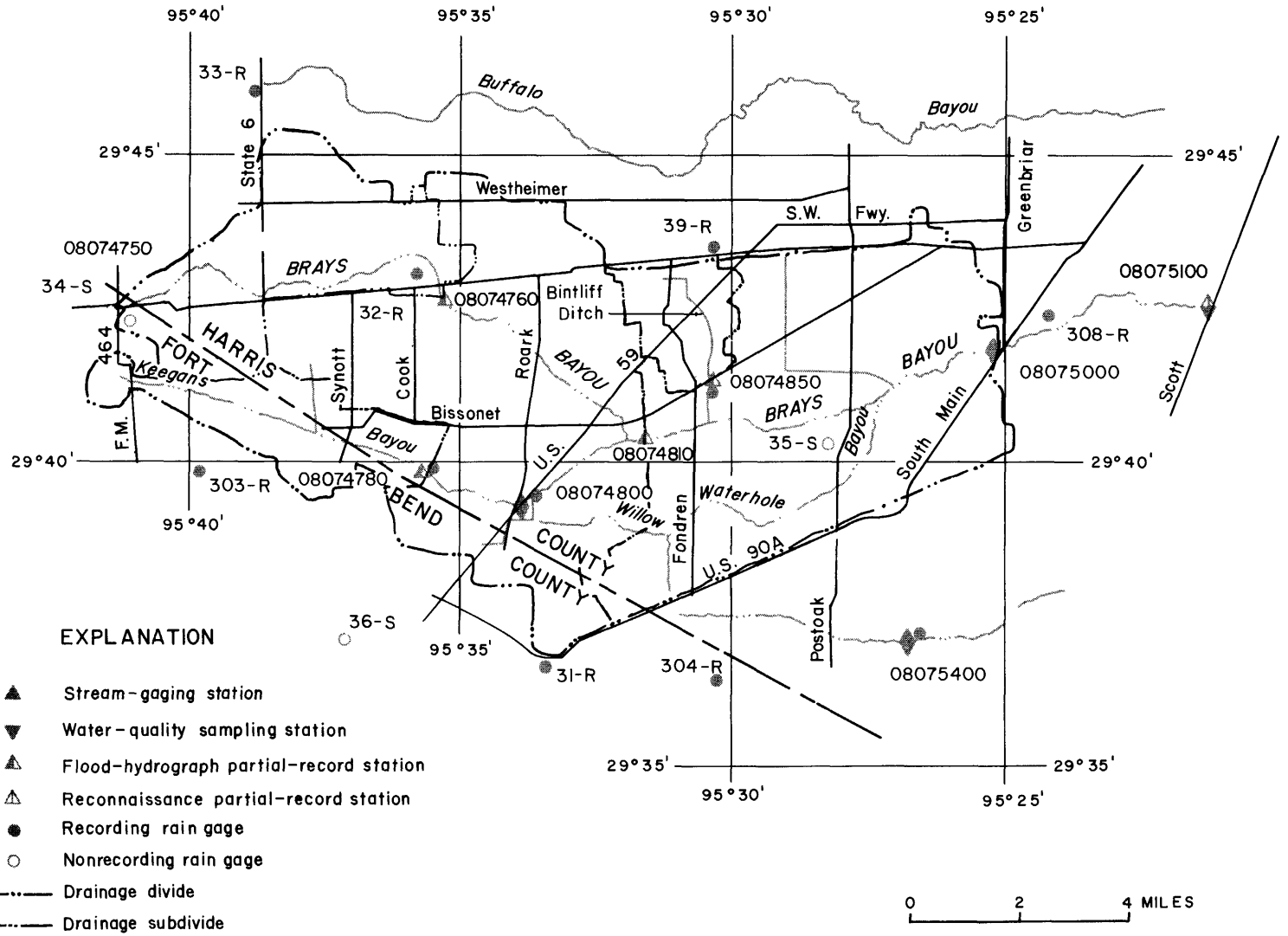
BRAYS BAYOU DRAINAGE BASIN

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

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 1979 water year based on twelve rain gages was 63.24 inches or 15.05 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of Jan. 5-9, April 18-23, and Sept. 17-24 were selected for analysis for the 1979 water year at station 08075000, Brays Bayou at Houston. The storms of April 19-22 and Sept. 17-23 were selected for analysis at station 08074760, Brays Bayou at Alief, Tex., and the storms of April 18-24 and Sept. 17-23 were selected for analysis at station 08074810, Brays Bayou at Gessner Drive, Houston, Tex.



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

FIGURE 10.- 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 9 .--Storm rainfall-runoff data, 1979 Water Year, Brays Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Brays Bayou at Alief, TX. (Drainage area--14.1 mi^2)								
April 19-22, 1979	5.0	3.02	1.55	2.25	2.90	2.27	0.75	1,640
Sept. 17-23, 1979	33.2	9.66	1.12	1.85	2.78	9.48	0.98	3,120 *,++
Brays Bayou at Gessner Drive, Houston, TX. (Drainage area--53.2 mi^2)								
April 18-24, 1979	47.0	4.15	1.54	2.24	2.89	3.31	0.80	8,700
Sept. 17-23, 1979	39.0	9.21	1.00	1.70	2.78	7.60	0.83	11,300 *,++

*-Annual peak discharge for 1979 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 9 .--Storm rainfall-runoff data, 1979 Water Year, Brays Bayou.--Continued

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Brays Bayou at Houston, TX. (Drainage area--94.9 mi^2)								
Jan. 5-9, 1979	28.2	2.84	0.44	0.88	1.12	2.42	0.85	8,480
April 18-23, 1979	30.0	5.36	1.54	2.24	2.96	4.98	0.93	25,500*
Sept. 17-24, 1979	42.2	9.16	0.90	1.54	2.78	7.66	0.84	19,000

*-Annual peak discharge for 1979 water year.

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 (revised).--14.1 mi^2 effective Jan. 1, 1978. 12.9 mi^2 effective Feb. 3, 1977 to Dec. 31, 1977.

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

GAGE.--Digital 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 3,270 ft^3/s, Sept. 19, 1979. (Gage-height 17.15 ft). Minimum discharge not determined.

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

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Nov. 26	1900	849	10.92
Jan. 6	2000	952	11.18
Jan. 20	0730	402	9.49
Feb. 6	0500	417	9.55
Mar. 22	1400	328	9.35
Apr. 3	1730	520	10.15
Apr. 19	2300	1,640	12.97
May 4	0930	628	10.80
June 26	1430	500	10.56
July 7	2100	480	10.64
July 20	1930	477	10.67
Sept. 7	2300	324	9.98
Sept. 19	2130	*3,270	17.15

Minimum discharge not determined.

STA. NO. 08074760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT ALIEF , TEXAS — STORM OF APRIL 19-22 , 1979

DATE & TIME	GAGE NUMBER 303R	33R	32R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 19										
0000	0.0	0.0	0.0					0.0	3.0	0.0025
1500	0.0	0.0	0.0					0.0	3.0	0.0051
1600	0.04	0.0	0.0					0.01	3.0	0.0054
1630	0.06	0.04	0.06					0.06	3.0	0.0055
1645	0.08	0.06	0.09					0.08	4.0	0.0056
1700	0.14	0.09	0.15					0.13	5.0	0.0058
1730	0.16	0.39	0.17					0.21	6.0	0.0060
1745	0.20	0.54	0.21					0.27	8.0	0.0063
1800	0.40	0.69	0.25					0.38	10.0	0.0065
1815	0.80	0.85	0.57					0.69	12.0	0.0069
1830	1.05	1.01	0.89					0.96	14.0	0.0073
1845	2.60	1.17	1.21					1.62	20.0	0.0078
1900	3.30	1.33	1.53					2.02	50.0	0.0099
1930	3.44	1.50	1.72					2.19	156.0	0.0184
2000	3.50	1.66	1.90					2.33	295.0	0.0306
2015	3.55	1.69	1.94					2.37	410.0	0.0419
2030	3.66	1.72	1.98					2.43	510.0	0.0559
2045	3.79	1.75	2.02					2.50	780.0	0.0773
2100	3.82	1.76	2.06					2.53	1040.0	0.1202
2130	3.88	1.83	2.12					2.59	1350.0	0.1758
2145	3.93	1.86	2.16					2.63	1440.0	0.2154
2200	3.96	1.88	2.18					2.65	1520.0	0.2780
2230	4.00	1.90	2.20					2.68	1620.0	0.3670
2300	4.02	1.92	2.22					2.70	1640.0	0.4571
2330	4.02	1.92	2.23					2.70	1560.0	0.5429
2400	4.02	1.92	2.23					2.70	1460.0	0.8237
APR. 20										
0000	4.02	1.92	2.23					2.70	1460.0	0.8237
0600	4.02	1.92	2.23					2.70	540.0	1.4204
1200	4.03	1.92	2.23					2.71	260.0	1.5490
1500	4.05	1.92	2.31					2.75	205.0	1.5884
1530	4.05	1.96	2.47					2.84	198.0	1.5966
1545	4.25	2.00	2.50					2.92	200.0	1.6021
1600	4.32	2.08	2.57					3.00	205.0	1.6162
1700	4.34	2.08	2.59					3.01	302.0	1.6493
1800	4.34	2.08	2.59					3.01	358.0	1.6788
1830	4.34	2.08	2.59					3.01	370.0	1.6992
1900	4.34	2.08	2.59					3.01	365.0	1.8095
2400	4.34	2.08	2.60					3.02	239.0	1.9146
APR. 21										
0000	4.34	2.08	2.60					3.02	239.0	1.9146

STA. NO. 08074760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT ALIEF , TEXAS — STORM OF APRIL 19-22 , 1979

DATE & TIME	GAGE NUMBER 303R	33R	32R				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 21									
0600	4.34	2.08	2.60				3.02	148.0	2.0515
1200	4.34	2.08	2.60				3.02	105.0	2.1035
1500	4.34	2.08	2.60				3.02	92.0	2.1338
1800	4.34	2.08	2.60				3.02	83.0	2.1749
2400	4.34	2.08	2.60				3.02	56.0	2.2025
APR. 22									
0000	4.34	2.08	2.60				3.02	56.0	2.2025
0600	4.34	2.08	2.60				3.02	41.0	2.2388
1200	4.34	2.08	2.60				3.02	25.0	2.2553
1800	4.34	2.08	2.60				3.02	18.0	2.2672
2400	4.34	2.08	2.60				3.02	15.0	2.2721

STA. NO. 08074760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT ALIEF , TEXAS — STORM OF SEP . 17-23, 1979

DATE & TIME	GAGE NUMBER 303R	33R	32R				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17									
0000	0.0	0.0	0.0				0.0	7.0	0.0050
1300	0.0	0.0	0.05				0.02	7.0	0.0104
1400	0.0	0.04	0.25				0.13	7.0	0.0112
1500	0.12	0.27	0.34				0.26	7.0	0.0117
1530	0.30	0.34	0.40				0.36	7.0	0.0121
1600	0.30	0.41	0.60				0.47	7.0	0.0126
1645	0.48	0.48	0.65				0.56	8.0	0.0130
1700	0.55	0.55	0.65				0.60	10.0	0.0159
2200	0.60	0.60	0.65				0.62	43.0	0.0325
2400	0.65	0.65	0.73				0.69	55.0	0.0400
SEP. 18									
0000	0.65	0.65	0.73				0.69	55.0	0.0400
0100	0.72	0.73	0.80				0.76	57.0	0.0509
0300	0.94	0.95	1.06				1.00	59.0	0.0671
0600	1.06	1.01	1.12				1.08	86.0	0.0955
0900	1.12	1.15	1.18				1.16	117.0	0.1276
1100	1.15	1.21	1.27				1.22	118.0	0.1536
1300	1.28	1.30	1.42				1.35	105.0	0.1738
1430	1.39	1.38	1.52				1.45	102.0	0.1836
1445	1.45	1.42	2.18				1.81	102.0	0.1864
1500	1.52	1.47	2.84				2.17	102.0	0.1892
1515	1.61	1.58	3.21				2.40	102.0	0.1920
1530	1.81	1.65	3.50				2.62	103.0	0.1948
1545	2.45	2.38	3.90				3.16	105.0	0.1977
1600	3.35	3.50	4.29				3.85	108.0	0.2007
1615	3.99	3.63	4.39				4.12	142.0	0.2046
1630	4.59	3.75	4.48				4.37	176.0	0.2094
1645	4.63	3.88	4.49				4.41	315.0	0.2181
1700	4.66	4.00	4.50				4.45	454.0	0.2305
1715	4.68	4.07	4.54				4.49	593.0	0.2468
1730	4.70	4.14	4.54				4.51	732.0	0.2669
1745	4.71	4.21	4.54				4.52	931.0	0.2925
1800	4.72	4.27	4.54				4.54	1130.0	0.3701
1900	4.74	4.27	4.54				4.55	2000.0	0.5899
2000	4.77	4.27	4.54				4.55	2230.0	0.8350
2100	4.79	4.29	4.55				4.57	2120.0	1.3010
2400	4.95	4.42	4.67				4.70	1420.0	1.5838
SEP. 19									
0000	4.95	4.42	4.67				4.70	1420.0	1.5838
0115	5.04	4.50	4.75				4.79	1240.0	1.7689
0200	5.14	4.60	4.83				4.88	1150.0	1.8795

STA. NO. 08074760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT ALIEF , TEXAS — STORM OF SEP . 17-23, 1979

DATE & TIME	GAGE NUMBER 303R	33R	32R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0300	5.24	4.65	5.09					5.05	1050.0	1.9949
0400	5.49	4.80	5.24					5.23	994.0	2.1041
0500	5.69	4.98	5.32					5.36	998.0	2.2138
0600	5.84	5.03	5.37					5.44	1010.0	2.3803
0800	5.93	5.38	5.74					5.72	968.0	2.5265
0845	6.05	5.60	5.83					5.85	952.0	2.5789
0900	6.35	6.02	6.07					6.14	936.0	2.6046
0915	6.52	6.25	6.15					6.28	952.0	2.6569
1000	6.71	6.50	6.24					6.43	1040.0	2.7569
1100	6.95	6.68	6.30					6.57	1290.0	2.8987
1200	7.03	6.85	6.52					6.74	1450.0	3.0182
1230	7.08	6.87	6.54					6.77	1480.0	3.0792
1245	7.24	6.93	6.61					6.86	1490.0	3.1201
1300	7.36	6.98	6.67					6.94	1490.0	3.2225
1400	7.54	7.20	6.90					7.15	1510.0	3.3884
1500	7.87	7.50	7.12					7.42	1510.0	3.5544
1600	8.27	7.82	7.37					7.73	1580.0	3.7063
1645	8.65	8.11	7.63					8.03	1680.0	3.7986
1700	8.83	8.25	7.76					8.18	1710.0	3.9161
1800	9.41	8.65	8.20					8.65	2040.0	4.1403
1900	9.89	9.02	8.55					9.05	2480.0	4.4128
2000	10.30	9.40	8.70					9.32	2870.0	4.6099
2015	10.39	9.44	8.74					9.37	2940.0	4.6907
2030	10.41	9.45	8.74					9.38	3020.0	4.8152
2100	10.48	9.47	8.74					9.41	3120.0	4.9866
2130	10.50	9.50	8.84					9.47	3120.0	5.1581
2200	10.51	9.52	8.90					9.51	3060.0	5.5784
2400	10.55	9.80	8.92					9.58	2650.0	6.3065
SEP. 20										
0000	10.55	9.80	8.92					9.58	2650.0	6.3065
0600	10.60	9.90	9.00					9.66	1340.0	8.0688
1800	10.60	9.90	9.00					9.66	511.0	8.5742
2400	10.60	9.90	9.00					9.66	354.0	8.8076
SEP. 21										
0000	10.60	9.90	9.00					9.66	354.0	8.8076
1200	10.60	9.90	9.00					9.66	184.0	9.1670
2400	10.60	9.90	9.00					9.66	100.0	9.2989
SEP. 22										
0000	10.60	9.90	9.00					9.66	100.0	9.2989
2400	10.60	9.90	9.00					9.66	52.0	9.3991
SEP. 23										
0000	10.60	9.90	9.00					9.66	52.0	9.3991
2400	10.60	9.90	9.00					9.66	25.0	9.4753

KEEGANS BAYOU DRAINAGE BASIN

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

Weighted-mean rainfall in the drainage basin, based on four rain gages for the 1979 water year was 64.80 inches or 16.61 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of April 3-5, April 19-22, and Sept. 18-23 were selected for analysis at stations 08074780, Keegans Bayou at Keegan Road near Houston. The storms of Jan. 5-9, April 3-5, April 18-22, and Sept. 17-23 were selected for analysis at station 08074800, Kegans Bayou at Roark Road near Houston.

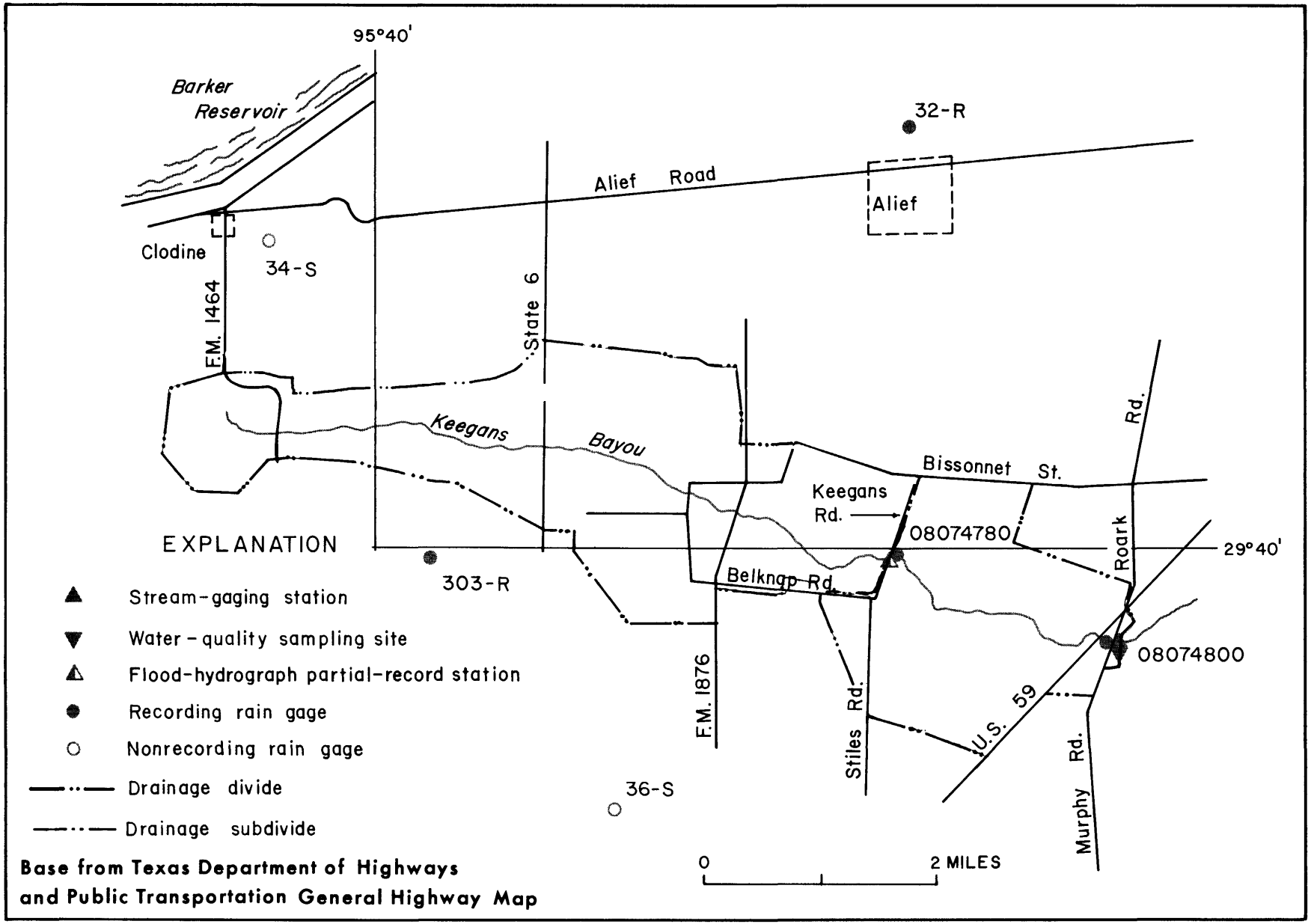


FIGURE 11.- Locations of data-collection sites in and near the Keegans Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 10.--Storm rainfall-runoff data, 1979 Water Year, Keegans Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Keegans Bayou at Keegan Road, Houston, TX. (Drainage area--7.47 mi^2)								
April 3-5, 1979	5.3	2.17	0.44	0.62	1.14	1.19	0.55	403
April 19-22, 1979	6.5	4.05	1.54	2.24	2.89	2.76	0.68	549
Sept. 18-23, 1979	28.5	9.44	1.00	1.70	2.78	7.08	0.75	748*,++
Keegans Bayou at Roark Road, Houston, TX. (Drainage area--11.5 mi^2)								
Jan. 5-9, 1979	26.5	3.27	0.42	0.82	1.14	2.53	0.77	881
April 3-5, 1979	5.5	2.18	0.52	0.90	1.09	1.41	0.65	743
April 18-22, 1979	41.0	4.79	1.54	2.24	2.89	3.17	0.66	1,070

*-Annual peak discharge for 1979 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 10--Storm rainfall-runoff data, 1979 Water Year, Keegans Bayou--continued

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Keegans Bayou at Roark Road, Houston, TX.---continued (Drainage area--11.5 mi^2)								
Sept. 17-23, 1979	38.6	9.98	1.00	1.70	2.78	9.54	0.96	1,640 *,++

*-Annual peak discharge for 1979 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^2. Prior to Jan. 1, 1978, 7.87 mi^2.
Prior to Oct. 1, 1973, 6.93 mi^2.

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 fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 748 ft^3/s, Sept. 19, 1979. (Gage height 78.97 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^3/s, and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Nov. 26	1530	251	77.03
Apr. 3	1515	403	74.89
Apr. 19	2100	549	76.43
Apr. 20	1645	391	74.76
May 4	0745	270	73.49
June 26	0445	282	74.36
July 25	2200	322	75.27
Sept. 7	1630	375	75.09
Sept. 18	1745	599	77.44
Sept. 19	2030	*748	78.97

Minimum discharge not determined.

STA. NO. 08074780 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT KEEGAN ROAD , HOUSTON , TEXAS — STORM OF APRIL 3-5 , 1979

DATE & TIME	GAGE NUMBER 303R	4780						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 3										
0000	0.0	0.0						0.0	3.0	0.0025
0800	0.0	0.0						0.0	3.0	0.0051
0815	0.05	0.0						0.03	4.0	0.0053
0830	0.13	0.10						0.12	10.0	0.0058
0845	0.16	0.40						0.24	12.0	0.0064
0900	0.45	0.50						0.47	31.0	0.0080
0915	0.56	0.60						0.57	50.0	0.0106
0930	0.57	0.80						0.65	84.0	0.0150
0945	0.63	0.80						0.69	121.0	0.0212
1000	0.63	0.80						0.69	121.0	0.0275
1015	0.70	0.80						0.73	118.0	0.0336
1030	0.70	0.80						0.73	112.0	0.0394
1045	0.76	0.80						0.77	105.0	0.0585
1215	0.78	0.80						0.79	63.0	0.0699
1230	0.90	0.80						0.86	59.0	0.0730
1245	1.30	1.00						1.19	56.0	0.0759
1300	1.48	1.30						1.42	114.0	0.0818
1315	1.92	1.40						1.74	182.0	0.0912
1330	1.98	1.60						1.85	206.0	0.1019
1345	2.00	1.80						1.93	233.0	0.1140
1400	2.15	1.90						2.06	288.0	0.1290
1415	2.15	2.20						2.17	325.0	0.1627
1500	2.15	2.20						2.17	401.0	0.2043
1515	2.15	2.20						2.17	403.0	0.2252
1530	2.15	2.20						2.17	396.0	0.3381
1800	2.15	2.20						2.17	247.0	0.4534
2000	2.15	2.20						2.17	163.0	0.5548
2400	2.15	2.20						2.17	103.0	0.6082
APR. 4										
0000	2.15	2.20						2.17	103.0	0.6082
0200	2.15	2.20						2.17	94.0	0.7359
1200	2.15	2.20						2.17	77.0	0.8637
1800	2.15	2.20						2.17	67.0	0.9471
2400	2.15	2.20						2.17	59.0	1.0022
APR. 5										
0000	2.15	2.20						2.17	59.0	1.0022
0600	2.15	2.20						2.17	49.0	1.0815
1200	2.15	2.20						2.17	41.0	1.1326
1800	2.15	2.20						2.17	33.0	1.1736
2400	2.15	2.20						2.17	26.0	1.1898

STA. NO. 08074780 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT KEEGAN ROAD • HOUSTON • TEXAS — STORM OF APRIL 19-22 • 1979

DATE & TIME	GAGE NUMBER 3038	GAGE NUMBER 4780						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 19										
0000	0.0	0.0						0.0	8.0	0.0081
0945	0.0	0.20						0.07	8.0	0.0205
1500	0.0	0.20						0.07	8.0	0.0257
1600	0.05	0.20						0.10	8.0	0.0272
1645	0.09	0.20						0.13	8.0	0.0280
1700	0.15	0.30						0.20	8.0	0.0286
1730	0.18	0.30						0.22	8.0	0.0292
1745	0.21	0.30						0.24	8.0	0.0297
1800	0.41	0.40						0.41	10.0	0.0302
1815	0.81	0.40						0.67	11.0	0.0308
1830	1.06	0.60						0.90	12.0	0.0314
1845	2.60	1.10						2.07	129.0	0.0381
1900	3.30	1.70						2.74	248.0	0.0509
1915	3.40	2.10						2.94	342.0	0.0687
1930	3.44	2.10						2.97	411.0	0.0900
1945	3.46	2.20						3.02	472.0	0.1145
2000	3.50	2.20						3.04	516.0	0.1412
2015	3.55	2.30						3.11	536.0	0.1690
2030	3.66	2.30						3.18	544.0	0.1972
2045	3.79	2.40						3.30	547.0	0.2256
2100	3.82	2.40						3.32	549.0	0.2541
2115	3.86	2.60						3.42	548.0	0.2825
2130	3.88	2.60						3.43	541.0	0.3105
2145	3.93	2.60						3.46	531.0	0.3381
2200	3.96	2.70						3.52	522.0	0.3787
2230	4.00	2.70						3.54	498.0	0.4303
2300	4.02	2.70						3.56	469.0	0.5033
2400	4.02	2.70						3.56	406.0	0.6086
APR. 20										
0000	4.02	2.70						3.56	406.0	0.6086
0300	4.02	2.70						3.56	265.0	0.7817
0400	4.02	2.70						3.56	241.0	0.8567
0600	4.02	2.70						3.56	217.0	1.0367
1200	4.02	2.70						3.56	202.0	1.2044
1400	4.02	2.70						3.56	196.0	1.2552
1430	4.02	2.70						3.56	194.0	1.2703
1445	4.05	2.70						3.58	193.0	1.2803
1500	4.05	2.90						3.65	198.0	1.2905
1515	4.05	3.00						3.68	219.0	1.3019
1530	4.05	3.40						3.82	291.0	1.3170

STA. NO. 08074780 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT KEEGAN ROAD • HOUSTON • TEXAS — STORM OF APRIL 19-22 • 1979

DATE & TIME	GAGE NUMBER 3038	4780						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 20										
1545	4.25	3.40						3.95	346.0	1.3349
1600	4.32	3.40						4.00	365.0	1.3539
1615	4.33	3.50						4.04	384.0	1.3738
1630	4.34	3.50						4.05	390.0	1.3940
1645	4.34	3.50						4.05	391.0	1.4143
1700	4.34	3.50						4.05	384.0	1.4641
1800	4.34	3.50						4.05	344.0	1.6068
2100	4.34	3.50						4.05	246.0	1.7599
2400	4.34	3.50						4.05	200.0	1.9466
APR. 21										
0000	4.34	3.50						4.05	200.0	1.9466
1200	4.34	3.50						4.05	118.0	2.2913
1800	4.34	3.50						4.05	95.0	2.4096
2400	4.34	3.50						4.05	79.0	2.5079
APR. 22										
0000	4.34	3.50						4.05	79.0	2.5079
1200	4.34	3.50						4.05	60.0	2.6691
1800	4.34	3.50						4.05	52.0	2.7338
2400	4.34	3.50						4.05	46.0	2.7624

STA. NO. 08074780 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT KEEGAN ROAD , HOUSTON , TEXAS — STORM OF SEP . 18-23 , 1979

DATE & TIME	GAGE NUMBER 303R	GAGE NUMBER 4780					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18									
0000	0.0	0.0					0.0	3.0	0.0003
0100	0.07	0.10					0.08	3.0	0.0009
0200	0.17	0.20					0.18	3.0	0.0019
0400	0.32	0.20					0.28	3.0	0.0028
0500	0.41	0.40					0.41	3.0	0.0034
0600	0.41	0.40					0.41	3.0	0.0044
0800	0.41	0.40					0.41	6.0	0.0062
0900	0.47	0.40					0.45	7.0	0.0091
1200	0.57	0.50					0.55	31.0	0.0252
1400	0.67	0.60					0.65	45.0	0.0392
1500	0.87	0.70					0.81	56.0	0.0465
1515	1.02	0.70					0.91	66.0	0.0499
1530	1.16	0.80					1.03	77.0	0.0539
1545	1.80	0.80					1.45	97.0	0.0589
1600	2.70	1.00					2.10	193.0	0.0689
1615	3.34	1.30					2.63	351.0	0.0871
1630	3.94	2.00					3.26	449.0	0.1104
1645	3.98	3.00					3.64	518.0	0.1373
1700	4.01	3.20					3.73	558.0	0.1662
1715	4.03	3.40					3.81	585.0	0.1966
1730	4.05	3.40					3.82	597.0	0.2275
1745	4.09	3.40					3.85	599.0	0.2586
1800	4.09	3.40					3.85	597.0	0.3360
1900	4.09	3.40					3.85	561.0	0.4524
2000	4.12	3.50					3.90	510.0	0.5581
2100	4.14	3.50					3.92	455.0	0.6525
2200	4.24	3.60					4.02	398.0	0.7351
2300	4.24	3.60					4.02	352.0	0.8081
2400	4.30	3.60					4.05	316.0	0.8573
SEP. 19									
0000	4.30	3.60					4.05	316.0	0.8573
0100	4.36	3.70					4.13	289.0	0.9411
0215	4.49	3.80					4.25	267.0	1.0034
0315	4.62	4.00					4.40	270.0	1.0384
0330	4.73	4.00					4.47	269.0	1.0594
0400	4.84	4.10					4.58	272.0	1.0805
0415	4.86	4.20					4.63	291.0	1.1107
0500	5.04	4.30					4.78	316.0	1.1517
0530	5.14	4.40					4.88	335.0	1.1864
0600	5.19	4.40					4.91	344.0	1.2399

STA. NO. 08074780 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT KEEGAN ROAD , HOUSTON , TEXAS — STORM OF SEP . 18-23 , 1979

DATE & TIME	GAGE NUMBER 3038	GAGE NUMBER 4780						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0700	5.26	4.50						4.99	344.0	1.3113
0800	5.28	4.50						5.01	331.0	1.3714
0845	5.40	4.50						5.08	326.0	1.4052
0900	5.70	4.50						5.28	326.0	1.4221
0915	5.87	4.60						5.43	347.0	1.4401
0930	5.91	4.80						5.52	388.0	1.4602
0945	5.97	4.90						5.60	406.0	1.4813
1000	6.06	5.00						5.69	419.0	1.5030
1015	6.12	5.00						5.73	436.0	1.5256
1030	6.17	5.20						5.83	456.0	1.5492
1045	6.22	5.40						5.93	469.0	1.6222
1200	6.38	5.50						6.07	488.0	1.7108
1230	6.43	5.60						6.14	480.0	1.7481
1245	6.59	5.60						6.24	477.0	1.7729
1300	6.71	5.60						6.32	477.0	1.8100
1330	6.79	5.80						6.44	494.0	1.8612
1400	6.89	5.90						6.54	497.0	1.9128
1430	7.05	5.90						6.65	497.0	1.9643
1500	7.22	6.00						6.79	500.0	2.0032
1515	7.32	6.00						6.86	511.0	2.0297
1530	7.43	6.10						6.96	518.0	2.0566
1545	7.52	6.20						7.06	525.0	2.0838
1600	7.62	6.20						7.12	536.0	2.1116
1615	7.73	6.40						7.26	548.0	2.1400
1630	7.85	6.50						7.38	558.0	2.1689
1645	8.00	6.50						7.47	571.0	2.1986
1700	8.18	6.60						7.63	583.0	2.2288
1715	8.31	6.70						7.75	596.0	2.2597
1730	8.45	6.80						7.87	606.0	2.2911
1745	8.61	6.80						7.98	623.0	2.3234
1800	8.76	7.00						8.14	649.0	2.3571
1815	8.86	7.20						8.28	671.0	2.3919
1830	8.96	7.30						8.38	683.0	2.4273
1845	9.13	7.40						8.52	692.0	2.4632
1900	9.24	7.50						8.63	701.0	2.4995
1915	9.33	7.60						8.72	717.0	2.5367
1930	9.42	7.70						8.82	723.0	2.5742
1945	9.53	7.80						8.92	729.0	2.6120
2000	9.65	7.80						9.00	733.0	2.6500

STA. NO. 08074780 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT KEEGAN ROAD , HOUSTON , TEXAS — STORM OF SEP . 18-23 , 1979

DATE & TIME	GAGE NUMBER 303R	4780					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19									
2015	9.65	7.80					9.00	742.0	2.6885
2030	9.76	8.00					9.14	748.0	2.7273
2045	9.76	8.00					9.14	747.0	2.7661
2100	9.83	8.20					9.26	738.0	2.8617
2200	9.86	8.20					9.28	696.0	3.0061
2300	9.90	8.30					9.34	664.0	3.1439
2400	9.90	8.40					9.37	648.0	3.3119
SEP. 20									
0000	9.90	8.40					9.37	648.0	3.3119
0300	9.95	8.50					9.44	552.0	3.6703
0430	9.95	8.50					9.44	520.0	3.8321
0600	9.95	8.50					9.44	498.0	4.2195
1200	9.95	8.50					9.44	416.0	4.7373
1800	9.95	8.50					9.44	362.0	5.1879
2400	9.95	8.50					9.44	308.0	5.5073
SEP. 21									
0000	9.95	8.50					9.44	308.0	5.5073
0800	9.95	8.50					9.44	238.0	6.0301
1600	9.95	8.50					9.44	171.0	6.3139
2400	9.95	8.50					9.44	121.0	6.4645
SEP. 22									
0000	9.95	8.50					9.44	121.0	6.4645
0800	9.95	8.50					9.44	92.0	6.6673
1600	9.95	8.50					9.44	74.0	6.7901
2400	9.95	8.50					9.44	60.0	6.8773
SEP. 23									
0000	9.95	8.50					9.44	60.0	6.8773
1200	9.95	8.50					9.44	45.0	7.0266
2400	9.95	8.50					9.44	41.0	7.0777

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 mi² (29.8 km²). Oct. 1, 1976, to Dec. 31, 1977, 12.0 mi² (31.1 km²); August 1964 to Sept. 30, 1976, 11.6 mi² (30.0 km²). 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. Recording rain gage at station.

AVERAGE DISCHARGE.--15 years, 12.0 ft³/s (0.340 m³/s), 8,690 acre-ft/yr (10.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft³/s (46.4 m³/s) July 19, 1979, elevation, 74.54 ft (22.720 m); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Elevation (ft)	Elevation (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Elevation (ft)	Elevation (m)
Nov. 26	1430	894	25.3	70.36	21.446	May 7	0900	470	13.3	68.39	20.845
aJan. 6	1730	881	24.9	70.31	21.430	June 2	0900	624	17.7	69.50	21.184
Jan. 20	0500	419	11.9	67.70	20.635	June 26	1500	406	11.5	67.82	20.672
aFeb. 6	0400	361	10.2	67.24	20.495	July 26	0230	726	20.6	70.04	21.348
aApr. 3	1530	743	21.0	69.70	21.245	Sept. 7	1730	825	23.4	70.60	21.519
Apr. 19	2300	1,070	30.3	70.98	21.635	Sept. 19	2100	*1,640	46.4	74.54	22.720

a Water-quality samples were obtained on this date.

Minimum daily discharge, 2.3 ft³/s (0.065 m³/s) July 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.2	13	131	8.4	3.1	3.9	15	5.4	4.0	6.2	48
2	4.7	2.8	9.7	29	13	7.1	6.9	12	196	4.2	5.6	12
3	5.6	3.4	27	11	33	6.5	251	9.7	9.4	3.8	5.6	5.3
4	4.2	3.2	21	5.7	48	3.5	131	238	7.9	2.3	5.5	5.2
5	16	3.2	9.0	40	203	5.6	41	69	6.9	23	9.3	5.4
6	5.3	64	6.9	378	262	3.4	13	28	5.7	8.0	19	5.3
7	3.3	12	6.5	233	108	5.7	8.9	14	5.2	5.6	8.6	214
8	3.1	6.0	8.8	94	43	5.7	7.0	9.0	5.0	21	5.6	68
9	3.8	4.5	5.5	30	16	4.2	6.4	7.6	4.6	8.5	5.2	12
10	4.0	4.0	5.2	16	11	3.9	5.9	7.0	4.5	4.8	5.5	9.5
11	3.8	7.0	5.2	40	9.0	3.9	5.6	12	4.5	4.2	7.8	7.5
12	3.7	4.5	3.7	17	8.2	4.1	4.3	8.6	4.3	11	7.8	6.5
13	3.8	4.1	4.2	10	7.7	3.7	4.4	5.7	4.1	11	8.0	5.7
14	3.8	3.9	11	7.4	6.6	3.5	4.3	6.0	4.2	5.6	5.4	4.9
15	3.9	4.1	11	6.0	6.3	3.6	4.4	6.9	4.2	4.8	4.8	4.5
16	4.3	4.1	5.4	5.2	5.9	3.7	4.5	6.1	4.2	4.4	77	4.6
17	4.1	4.7	5.0	4.8	9.7	4.5	4.9	6.0	4.4	4.4	28	37
18	3.8	3.7	4.1	5.0	9.5	5.2	31	6.6	5.2	3.9	8.6	374
19	3.9	45	3.9	21	6.9	82	158	6.0	4.6	53	6.4	1100
20	3.7	16	3.5	205	6.3	41	497	5.0	4.4	84	6.3	900
21	3.5	5.0	4.0	74	6.1	92	215	5.8	4.6	33	5.4	379
22	3.8	4.1	3.2	25	6.1	102	68	21	4.3	21	6.3	129
23	4.3	3.7	2.7	14	13	46	22	7.1	4.2	9.8	5.1	44
24	3.7	3.3	2.7	8.7	14	15	12	5.9	4.3	9.3	4.8	14
25	3.4	3.1	2.7	7.2	7.2	7.9	8.9	5.5	4.6	141	5.2	9.9
26	3.2	300	2.6	16	5.5	6.2	7.3	5.3	108	318	5.4	8.4
27	3.1	104	3.1	9.8	4.7	5.2	6.4	5.1	14	59	5.6	7.8
28	3.1	17	9.3	7.6	3.4	4.8	6.0	5.5	4.7	35	6.7	7.3
29	3.2	72	34	7.0	---	4.8	41	33	4.5	20	6.1	7.1
30	3.3	23	36	41	---	4.1	14	8.8	4.2	9.7	4.2	6.9
31	3.2	---	16	12	---	5.2	---	8.3	---	6.8	4.6	---
TOTAL	131.1	738.6	285.9	1511.4	881.5	497.1	1594.0	589.5	452.1	934.1	295.6	3442.8
MEAN	4.23	24.6	9.22	48.8	31.5	16.0	53.1	19.0	15.1	30.1	9.54	115
MAX	16	300	36	378	262	102	497	238	196	318	77	1100
MIN	3.1	2.8	2.6	4.8	3.4	3.1	3.9	5.0	4.1	2.3	4.2	4.5
AC-FT	260	1470	567	3000	1750	986	3160	1170	897	1850	586	6830
(††)	.44	7.57	2.59	6.99	3.61	3.56	8.11	4.63	3.07	7.08	3.95	13.20

CAL YR 1978 TOTAL 4591.3 MEAN 12.6 MAX 300 MIN 1.8 AC-FT 9110 †† 67.35
WTR YR 1979 TOTAL 11353.7 MEAN 31.1 MAX 1100 MIN 2.3 - AC-FT 22520 †† 64.80

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

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 1975 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
23...	1110	4.9	971	7.4	23.5	40	10	5.1	61	8.4
DEC										
26...	0955	2.6	886	7.2	14.5	30	10	6.8	69	11
JAN										
06...	1610	762	188	8.2	8.5	240	250	10.0	88	6.0
07...	0925	231	139	7.4	6.5	240	100	9.8	82	4.4
08...	1125	95	159	7.6	5.5	240	75	10.9	89	4.9
FEB										
06...	1015	245	178	7.6	8.0	160	100	10.4	90	13
28...	1145	3.7	845	7.2	19.5	40	10	8.2	92	12
MAR										
19...	1205	4.4	774	7.4	22.5	20	30	8.8	104	4.5
APR										
03...	1000	221	239	6.6	15.5	40	690	8.6	89	5.8
03...	1235	226	243	7.7	16.0	45	440	8.3	86	11
03...	1420	611	190	7.1	15.5	50	570	9.1	94	8.1
JUN										
25...	1105	4.7	840	7.4	28.5	5	3.6	6.1	79	7.0

DATE	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 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)
OCT										
23...	6700	150	130	--	--	--	--	--	--	--
DEC										
26...	3000	20	20	--	--	--	--	--	--	--
JAN										
06...	69000	29000	23000	61	0	19	3.3	9.3	.5	3.7
07...	5000	720	3500	--	--	--	--	--	--	--
08...	28000	980	920	--	--	--	--	--	--	--
FEB										
06...	400000	36000	12000	66	2	20	3.8	9.3	.5	2.7
28...	1000	40	140	--	--	--	--	--	--	--
MAR										
19...	1000	42	30	210	0	63	13	75	2.2	8.2
APR										
03...	140000	14000	10000	79	13	26	3.5	15	.7	3.8
03...	190000	16000	12000	--	--	--	--	--	--	--
03...	220000	15000	13000	72	9	24	2.8	7.9	.4	3.2
JUN										
25...	6700	210	130	--	--	--	--	--	--	--

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
23...	--	--	--	--	--	--	--	19	8	3.0
DEC										
26...	--	--	--	--	--	--	--	14	5	.93
JAN										
06...	78	0	7.4	9.1	.2	6.4	97	744	76	.60
07...	--	--	--	--	--	--	--	264	36	.60
08...	--	--	--	--	--	--	--	146	26	--
FEB										
06...	77	0	8.6	7.7	.2	8.7	99	352	88	.35
28...	--	--	--	--	--	--	--	15	12	6.8
MAR										
19...	280	0	36	82	.4	41	457	57	16	3.4
APR										
03...	81	0	16	12	.2	6.4	123	1180	55	1.1
03...	--	--	--	--	--	--	--	706	124	1.4
03...	76	0	12	6.6	.2	1.2	96	1090	124	.84
JUN										
25...	--	--	--	--	--	--	--	35	27	5.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
23...	.66	3.7	4.0	1.7	5.7	11	13	--	.60
DEC									
26...	.47	1.4	5.2	2.7	7.9	6.3	8.5	--	1.1
JAN									
06...	.08	.68	.26	1.3	1.6	.66	19	3	.00
07...	.06	.66	.14	.79	.93	.34	13	--	.00
08...	--	--	--	--	--	--	--	--	--
FEB									
06...	.10	.45	.40	3.4	3.8	1.5	16	--	.00
28...	.85	7.6	1.1	6.5	7.6	3.1	--	--	.30
MAR									
19...	.38	3.8	.54	.86	1.4	6.0	6.1	1	.10
APR									
03...	.14	1.2	.62	1.7	2.3	1.3	22	1	.00
03...	.18	1.6	1.1	1.5	2.6	1.7	15	--	.00
03...	.10	.94	.59	1.7	2.3	.74	19	4	.00
JUN									
25...	.74	5.7	2.2	1.4	3.6	3.1	6.2	--	.20

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
JAN							
06...	1610	2	40	<1	10	2	40
MAR							
19...	1205	4	100	0	0	0	0
APR							
03...	1000	3	0	1	0	1	20
03...	1420	3	100	1	0	2	10

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
JAN						
06...	0	<1	.0	0	0	3
MAR						
19...	0	0	.0	2	0	20
APR						
03...	0	10	.0	0	0	10
03...	0	0	.0	1	0	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PCB, 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								
19...	1205	.0	.00	.0	.00	.00	.00	.12
APR								
03...	1000	--	--	--	--	--	--	2.7
03...	1420	.0	.00	.2	.00	.00	.00	1.5
JUN								
25...	1105	.0	.00	.1	.00	.00	.00	.51

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)	METHYL PARA-THION, TOTAL (UG/L)
MAR									
19...	.00	.00	.00	.00	.00	.00	.02	.01	.00
APR									
03...	--	--	--	.00	--	--	--	.00	.00
03...	.01	.00	.00	.00	.00	.01	.00	.01	.00
JUN									
25...	.01	.00	.00	.00	.00	.01	.03	.06	.00

DATE	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								
19...	.00	.00	.00	0	.00	.00	.00	.00
APR								
03...	.00	--	.00	--	.00	.53	.03	.00
03...	.00	.00	.00	0	.00	.38	.03	.01
JUN								
25...	.00	.00	.00	0	.00	.00	.00	.00

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT POARK ROAD , HOUSTON , TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 3038	GAGE NUMBER 4800					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN. 5									
0000	0.0	0.0					0.0	5.4	0.0013
0330	0.08	0.0					0.05	3.2	0.0021
0400	0.10	0.0					0.06	5.1	0.0025
0430	0.10	0.0					0.06	4.3	0.0031
0600	0.10	0.0					0.06	3.7	0.0037
0700	0.13	0.0					0.08	3.4	0.0041
0800	0.15	0.0					0.09	7.4	0.0049
0830	0.15	0.02					0.10	10.0	0.0056
0900	0.15	0.02					0.10	15.0	0.0066
0930	0.15	0.02					0.10	16.0	0.0077
1000	0.20	0.02					0.13	16.0	0.0087
1030	0.23	0.02					0.15	13.0	0.0094
1045	0.23	0.14					0.19	29.0	0.0104
1100	0.23	0.34					0.27	65.0	0.0136
1130	0.23	0.34					0.27	60.0	0.0177
1200	0.23	0.36					0.28	57.0	0.0234
1300	0.23	0.36					0.28	46.0	0.0281
1330	0.34	0.36					0.35	46.0	0.0312
1400	0.38	0.38					0.38	46.0	0.0343
1430	0.39	0.39					0.39	44.0	0.0373
1500	0.48	0.39					0.44	42.0	0.0401
1530	0.50	0.39					0.46	42.0	0.0429
1600	0.52	0.39					0.47	42.0	0.0457
1630	0.52	0.39					0.47	42.0	0.0486
1700	0.58	0.39					0.50	42.0	0.0514
1730	0.58	0.42					0.52	45.0	0.0544
1800	0.60	0.42					0.53	50.0	0.0612
1930	0.75	0.42					0.62	51.0	0.0672
1945	0.79	0.52					0.68	56.0	0.0691
2000	0.80	0.58					0.71	62.0	0.0722
2030	0.85	0.62					0.76	81.0	0.0804
2130	0.92	0.68					0.82	102.0	0.0907
2200	0.94	0.68					0.84	109.0	0.1017
2300	1.06	0.68					0.91	124.0	0.1143
2330	1.06	0.72					0.92	141.0	0.1238
2400	1.19	0.76					1.02	151.0	0.1390
JAN. 6									
0000	1.19	0.76					1.02	151.0	0.1390
0200	1.30	0.84					1.12	180.0	0.1795
0230	1.30	0.84					1.12	182.0	0.1918

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT POARK ROAD , HOUSTON , TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 3038	GAGE NUMBER 4800					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN. 5									
0300	1.33	0.84					1.13	182.0	0.2071
0345	1.33	0.84					1.13	180.0	0.2192
0400	1.33	0.84					1.13	175.0	0.2340
0500	1.33	0.84					1.13	176.0	0.2577
0600	1.33	0.84					1.13	167.0	0.3027
0900	1.33	0.84					1.13	124.0	0.3424
1045	1.33	0.84					1.13	103.0	0.3562
1100	1.40	0.84					1.18	100.0	0.3647
1200	1.43	0.84					1.19	93.0	0.3725
1215	1.58	0.84					1.28	97.0	0.3758
1230	1.64	0.84					1.32	95.0	0.3790
1245	1.71	1.10					1.47	150.0	0.3840
1300	1.79	1.50					1.67	255.0	0.3926
1315	1.93	1.92					1.93	332.0	0.4038
1330	2.02	1.98					2.00	475.0	0.4198
1345	2.33	2.12					2.25	520.0	0.4373
1400	2.44	2.18					2.34	597.0	0.4574
1415	2.52	2.26					2.42	618.0	0.4782
1430	2.59	2.28					2.47	652.0	0.5112
1500	2.62	2.32					2.50	691.0	0.5577
1530	2.69	2.41					2.58	709.0	0.5936
1545	2.89	2.52					2.74	724.0	0.6180
1600	2.96	2.59					2.81	754.0	0.6434
1615	2.97	2.62					2.83	762.0	0.6690
1630	3.08	2.62					2.90	790.0	0.6956
1645	3.16	2.94					3.07	810.0	0.7229
1700	3.18	3.00					3.11	820.0	0.7644
1730	3.24	3.08					3.18	881.0	0.8237
1800	3.27	3.08					3.19	873.0	0.8825
1830	3.30	3.08					3.21	820.0	0.9654
1930	3.36	3.13					3.27	760.0	1.0422
2000	3.36	3.13					3.27	741.0	1.1171
2100	3.36	3.13					3.27	609.0	1.2402
2300	3.36	3.13					3.27	473.0	1.3358
2400	3.36	3.13					3.27	410.0	1.4048
JAN. 7									
0000	3.36	3.13					3.27	410.0	1.4048
0300	3.36	3.13					3.27	331.0	1.5801
0600	3.36	3.13					3.27	288.0	1.6965
0900	3.36	3.13					3.27	234.0	1.7517

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT ROARK ROAD , HOUSTON , TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 3038	GAGE NUMBER 4800					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN. 7									
0930	3.36	3.13					3.27	231.0	1.7633
0945	3.36	3.13					3.27	229.0	1.7711
1000	3.36	3.13					3.27	227.0	1.8513
1500	3.36	3.13					3.27	199.0	2.0391
2400	3.36	3.13					3.27	147.0	2.1579
JAN. 8									
0000	3.36	3.13					3.27	147.0	2.1579
0600	3.36	3.13					3.27	115.0	2.2806
1200	3.36	3.13					3.27	93.0	2.3558
1800	3.36	3.13					3.27	72.0	2.4140
2400	3.36	3.13					3.27	47.0	2.4425
JAN. 9									
0000	3.36	3.13					3.27	47.0	2.4425
0600	3.36	3.13					3.27	39.0	2.4835
1200	3.36	3.13					3.27	27.0	2.5053
1800	3.36	3.13					3.27	18.0	2.5199
2400	3.36	3.13					3.27	15.0	2.5260

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT ROARK ROAD , HOUSTON , TEXAS — STORM OF APRIL 3-5 , 1979

DATE & TIME	GAGE NUMBER 303R	4780	4800					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 3										
0000	0.0	0.0	0.0					0.0	8.0	0.0043
0800	0.0	0.0	0.0					0.0	5.4	0.0074
0830	0.13	0.10	0.0					0.10	5.1	0.0077
0845	0.16	0.40	0.38					0.29	6.2	0.0079
0900	0.45	0.50	0.90					0.52	170.0	0.0136
0915	0.56	0.60	0.97					0.62	208.0	0.0206
0930	0.57	0.80	0.99					0.72	220.0	0.0280
0945	0.63	0.80	1.03					0.75	221.0	0.0355
1000	0.63	0.80	1.08					0.75	221.0	0.0429
1015	0.70	0.80	1.08					0.78	223.0	0.0504
1030	0.70	0.80	1.08					0.78	232.0	0.0582
1045	0.76	0.80	1.08					0.81	235.0	0.0820
1200	0.76	0.80	1.08					0.81	245.0	0.1109
1230	0.90	0.80	1.08					0.87	230.0	0.1225
1245	1.30	1.00	1.08					1.14	215.0	0.1297
1300	1.48	1.30	1.08					1.36	212.0	0.1369
1315	1.92	1.40	1.24					1.62	240.0	0.1450
1330	1.98	1.60	1.35					1.75	319.0	0.1557
1345	2.00	1.80	1.35					1.84	350.0	0.1675
1400	2.15	1.90	1.55					1.98	389.0	0.1806
1415	2.15	2.20	1.85					2.14	528.0	0.1984
1430	2.15	2.20	1.98					2.16	616.0	0.2191
1445	2.15	2.20	2.02					2.16	626.0	0.2402
1500	2.15	2.20	2.21					2.18	693.0	0.2752
1530	2.15	2.20	2.21					2.18	743.0	0.3253
1600	2.15	2.20	2.21					2.18	731.0	0.4238
1730	2.15	2.20	2.21					2.18	696.0	0.5176
1800	2.15	2.20	2.25					2.18	545.0	0.6461
2100	2.15	2.20	2.25					2.18	334.0	0.7586
2300	2.15	2.20	2.25					2.18	257.0	0.8106
2400	2.15	2.20	2.25					2.18	233.0	0.9204
APR. 4										
0000	2.15	2.20	2.25					2.18	233.0	0.9204
1200	2.15	2.20	2.25					2.18	124.0	1.2151
2400	2.15	2.20	2.25					2.18	77.0	1.3085
APR. 5										
0000	2.15	2.20	2.25					2.18	77.0	1.3085
1200	2.15	2.20	2.25					2.18	34.0	1.3946
2400	2.15	2.20	2.25					2.18	18.0	1.4092

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT ROARK ROAD , HOUSTON , TEXAS — STORM OF APRIL 18-22 , 1979

DATE & TIME	GAGE NUMBER 303R	4780	4800					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 18										
0000	0.0	0.0	0.0					0.0	5.1	0.0021
0600	0.0	0.0	0.02					0.00	4.7	0.0041
0630	0.05	0.0	0.02					0.03	4.7	0.0044
0700	0.10	0.20	0.14					0.15	4.7	0.0048
0730	0.10	0.20	0.14					0.15	4.7	0.0051
0800	0.10	0.20	0.14					0.15	13.0	0.0064
0900	0.10	0.20	0.14					0.15	14.0	0.0102
1200	0.10	0.20	0.15					0.15	12.0	0.0150
1500	0.10	0.20	0.15					0.15	7.6	0.0171
1600	0.10	0.20	0.15					0.15	7.1	0.0177
1615	0.20	0.20	0.15					0.20	6.9	0.0179
1630	0.28	0.50	0.26					0.38	6.7	0.0181
1645	0.46	0.50	0.26					0.46	6.5	0.0183
1700	0.68	0.60	0.50					0.63	6.5	0.0185
1715	0.88	0.70	0.50					0.76	6.4	0.0188
1730	0.88	0.80	0.62					0.82	22.0	0.0199
1800	0.88	0.80	0.80					0.84	74.0	0.0274
1900	0.88	0.80	0.80					0.84	112.0	0.0424
2000	0.88	0.80	0.80					0.84	119.0	0.0665
2200	0.88	0.80	0.80					0.84	100.0	0.0934
2400	0.88	0.80	0.80					0.84	55.0	0.1120
APR. 19										
0000	0.88	0.80	0.80					0.84	55.0	0.1120
0600	0.88	0.80	0.80					0.84	18.0	0.1352
1000	0.88	1.00	0.80					0.93	13.0	0.1405
1200	0.88	1.00	0.85					0.93	10.0	0.1445
1600	0.93	1.00	0.87					0.96	10.0	0.1477
1645	0.97	1.00	0.89					0.98	9.4	0.1484
1700	1.03	1.10	0.93					1.05	9.4	0.1490
1745	1.09	1.10	0.97					1.08	13.0	0.1499
1800	1.29	1.20	1.05					1.23	14.0	0.1503
1815	1.69	1.20	1.05					1.41	17.0	0.1509
1830	1.94	1.40	1.13					1.62	20.0	0.1516
1845	3.48	1.90	1.13					2.53	22.0	0.1523
1900	4.18	2.50	1.38					3.14	29.0	0.1533
1915	4.28	2.90	1.74					3.40	33.0	0.1544
1930	4.32	2.90	1.88					3.44	59.0	0.1564
1945	4.34	3.00	1.94					3.50	109.0	0.1601
2000	4.38	3.00	1.96					3.52	199.0	0.1668
2015	4.43	3.10	2.16					3.61	265.0	0.1757

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT POARK ROAD , HOUSTON , TEXAS — STORM OF APRIL 18-22 , 1979

DATE & TIME	GAGE NUMBER 3038	4780	4800					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 19										
2030	4.54	3.10	2.25					3.66	433.0	0.1903
2045	4.67	3.20	2.36					3.78	688.0	0.2135
2100	4.70	3.20	2.36					3.79	717.0	0.2376
2115	4.74	3.40	2.52					3.91	781.0	0.2639
2130	4.76	3.40	2.58					3.93	865.0	0.2931
2145	4.81	3.40	2.62					3.96	905.0	0.3235
2200	4.84	3.50	2.65					4.02	992.0	0.3737
2230	4.88	3.50	2.69					4.04	1039.0	0.4437
2300	4.90	3.50	2.71					4.05	1070.0	0.5158
2330	4.90	3.50	2.73					4.05	1020.0	0.5845
2400	4.90	3.50	2.75					4.05	938.0	0.6477
APR. 20										
0000	4.90	3.50	2.75					4.05	938.0	0.6477
0100	4.90	3.50	2.77					4.06	767.0	0.7826
0200	4.90	3.50	2.77					4.06	642.0	0.9989
0600	4.90	3.50	2.77					4.06	380.0	1.2549
1200	4.90	3.50	2.77					4.06	303.0	1.4335
1445	4.93	3.50	2.77					4.07	295.0	1.4932
1500	4.93	3.70	2.77					4.16	287.0	1.5028
1515	4.93	3.80	2.99					4.23	287.0	1.5125
1530	4.93	4.20	3.85					4.49	287.0	1.5222
1545	5.13	4.20	4.69					4.67	287.0	1.5318
1600	5.20	4.20	4.81					4.71	317.0	1.5425
1615	5.21	4.30	5.04					4.78	460.0	1.5580
1630	5.22	4.30	5.05					4.79	752.0	1.5960
1700	5.22	4.30	5.05					4.79	1040.0	1.6661
1730	5.22	4.30	5.05					4.79	1040.0	1.7361
1800	5.22	4.30	5.05					4.79	960.0	1.8332
1900	5.22	4.30	5.05					4.79	767.0	1.9882
2100	5.22	4.30	5.05					4.79	534.0	2.1681
2400	5.22	4.30	5.05					4.79	386.0	2.2981
APR. 21										
0000	5.22	4.30	5.05					4.79	386.0	2.2981
0400	5.22	4.30	5.05					4.79	293.0	2.5673
1100	5.22	4.30	5.05					4.79	210.0	2.7936
2000	5.22	4.30	5.05					4.79	140.0	2.9162
2400	5.22	4.30	5.05					4.79	116.0	2.9944
APR. 22										
0000	5.22	4.30	5.05					4.79	116.0	2.9944
1200	5.22	4.30	5.05					4.79	62.0	3.1415
2400	5.22	4.30	5.05					4.79	35.0	3.1698

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT POARK ROAD , HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 3038	4780	4800				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17									
0000	0.0	0.0	0.0				0.0	5.0	0.0046
1345	0.0	0.0	0.0				0.0	5.0	0.0093
1400	0.0	0.10	0.0				0.05	5.0	0.0097
1445	0.0	0.10	0.0				0.05	7.0	0.0102
1500	0.12	0.10	0.08				0.11	10.0	0.0105
1515	0.24	0.10	0.34				0.19	31.0	0.0115
1530	0.30	0.10	0.36				0.22	60.0	0.0136
1545	0.30	0.40	0.36				0.35	56.0	0.0154
1600	0.30	0.50	0.38				0.40	46.0	0.0170
1615	0.32	0.50	0.52				0.42	43.0	0.0184
1630	0.40	0.50	0.63				0.47	60.0	0.0205
1645	0.48	0.50	0.72				0.51	97.0	0.0237
1700	0.55	0.80	0.76				0.68	104.0	0.0272
1715	0.56	1.00	0.82				0.78	111.0	0.0310
1730	0.58	1.10	0.82				0.84	112.0	0.0366
1800	0.58	1.20	0.84				0.88	112.0	0.0442
1830	0.58	1.20	0.84				0.88	113.0	0.0556
1930	0.60	1.20	0.84				0.89	130.0	0.0775
2100	0.60	1.20	0.88				0.90	109.0	0.1105
2400	0.65	1.20	0.88				0.92	48.0	0.1219
SEP. 18									
0000	0.65	1.20	0.88				0.92	48.0	0.1219
0100	0.72	1.30	0.92				1.00	40.0	0.1289
0200	0.82	1.40	1.02				1.10	50.0	0.1390
0400	0.97	1.40	1.09				1.18	48.0	0.1487
0500	1.06	1.60	1.18				1.31	50.0	0.1554
0600	1.06	1.60	1.19				1.32	63.0	0.1681
0800	1.06	1.60	1.20				1.32	50.0	0.1783
0900	1.12	1.70	1.27				1.40	52.0	0.1923
1200	1.22	1.70	1.37				1.45	53.0	0.2101
1400	1.32	1.90	1.46				1.59	68.0	0.2239
1500	1.52	1.90	1.58				1.70	88.0	0.2328
1530	1.81	2.00	1.71				1.89	132.0	0.2394
1545	2.45	2.10	2.02				2.25	175.0	0.2453
1600	3.35	2.20	2.32				2.73	333.0	0.2565
1615	3.99	2.50	2.42				3.16	475.0	0.2725
1630	4.59	3.20	2.72				3.78	637.0	0.2940
1645	4.63	4.20	2.78				4.25	807.0	0.3212
1700	4.66	4.40	2.79				4.36	972.0	0.3539
1715	4.68	4.60	2.80				4.46	1030.0	0.3886

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT BOARK ROAD , HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 3038	4780	4800					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18										
1730	4.70	4.60	2.81					4.47	1090.0	0.4804
1830	4.74	4.60	2.83					4.49	1250.0	0.6067
1900	4.74	4.60	2.84					4.49	1230.0	0.7311
2000	4.77	4.70	2.84					4.55	1160.0	0.8874
2100	4.79	4.80	2.88					4.60	900.0	1.0693
2300	4.89	4.80	2.92					4.65	862.0	1.2435
2400	4.95	4.80	3.00					4.69	798.0	1.3241
SEP. 19										
0000	4.95	4.80	3.00					4.69	798.0	1.3241
0100	5.01	4.90	3.02					4.76	737.0	1.4503
0200	5.14	5.00	3.11					4.87	688.0	1.5546
0315	5.27	5.20	3.22					5.03	656.0	1.6209
0330	5.38	5.20	3.28					5.09	663.0	1.6544
0400	5.49	5.30	3.42					5.20	679.0	1.6887
0415	5.51	5.40	3.45					5.25	698.0	1.7358
0500	5.69	5.50	3.62					5.40	737.0	1.7978
0530	5.79	5.60	3.72					5.50	777.0	1.8502
0600	5.84	5.60	3.76					5.52	795.0	1.9305
0700	5.91	5.80	3.79					5.65	796.0	2.0378
0800	5.93	5.80	3.83					5.66	771.0	2.1287
0845	6.05	5.80	3.89					5.72	758.0	2.1797
0900	6.35	5.80	3.93					5.86	757.0	2.2052
0915	6.52	5.90	4.22					6.01	851.0	2.2339
0930	6.56	6.10	4.33					6.13	918.0	2.2648
0945	6.62	6.20	4.40					6.21	940.0	2.2965
1000	6.71	6.40	4.48					6.35	945.0	2.3283
1015	6.77	6.40	4.62					6.39	1010.0	2.3794
1045	6.87	6.60	4.78					6.54	1080.0	2.5067
1200	7.03	6.80	4.86					6.71	1130.0	2.6399
1230	7.08	6.80	4.92					6.74	1120.0	2.6965
1245	7.24	6.80	4.93					6.81	1120.0	2.7342
1300	7.36	6.80	5.08					6.88	1110.0	2.7903
1330	7.44	7.00	5.18					7.02	1160.0	2.8685
1400	7.54	7.10	5.28					7.12	1160.0	2.9466
1430	7.70	7.10	5.32					7.19	1160.0	3.0248
1500	7.87	7.20	5.48					7.33	1160.0	3.0834
1515	7.97	7.20	5.48					7.37	1160.0	3.1225
1530	8.08	7.30	5.62					7.48	1180.0	3.1622
1545	8.17	7.40	5.71					7.58	1200.0	3.2027
1600	8.27	7.50	5.83					7.68	1280.0	3.2673

STA. NO. 08074800 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

KEEGANS BAYOU AT BOARK ROAD , HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 303R	4780	4800				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19									
1630	8.50	7.70	6.01				7.89	1290.0	3.3325
1645	8.65	7.70	6.06				7.96	1320.0	3.3770
1700	8.83	7.80	6.12				8.10	1340.0	3.4221
1715	8.96	7.90	6.26				8.21	1360.0	3.4679
1730	9.10	8.00	6.35				8.33	1390.0	3.5148
1745	9.28	8.10	6.56				8.48	1420.0	3.5626
1800	9.41	8.20	6.72				8.60	1460.0	3.6118
1815	9.51	8.40	6.82				8.74	1470.0	3.6613
1830	9.61	8.50	6.89				8.84	1500.0	3.7118
1845	9.78	8.60	7.04				8.97	1530.0	3.7634
1900	9.89	8.70	7.12				9.08	1570.0	3.8163
1915	9.98	8.80	7.26				9.18	1580.0	3.8695
1930	10.07	8.90	7.33				9.27	1600.0	3.9234
1945	10.18	9.00	7.47				9.38	1610.0	3.9776
2000	10.30	9.00	7.56				9.44	1630.0	4.0600
2030	10.41	9.20	7.68				9.59	1630.0	4.1698
2100	10.48	9.40	7.71				9.72	1640.0	4.3355
2200	10.51	9.40	7.78				9.74	1620.0	4.5538
2300	10.55	9.50	8.11				9.83	1570.0	4.7654
2400	10.55	9.60	8.15				9.88	1530.0	5.0231
SEP. 20									
0000	10.55	9.60	8.15				9.88	1530.0	5.0231
0300	10.60	9.70	8.26				9.96	1260.0	5.5597
0430	10.60	9.70	8.33				9.97	1150.0	5.7921
0600	10.60	9.70	8.44				9.98	1080.0	6.3379
1200	10.60	9.70	8.46				9.98	825.0	7.0049
1800	10.60	9.70	8.46				9.98	678.0	7.5530
2400	10.60	9.70	8.46				9.98	563.0	7.9323
SEP. 21									
0000	10.60	9.70	8.46				9.98	563.0	7.9323
0800	10.60	9.70	8.46				9.98	429.0	8.5465
1600	10.60	9.70	8.46				9.98	307.0	8.8774
2400	10.60	9.70	8.46				9.98	200.0	9.0391
SEP. 22									
0000	10.60	9.70	8.46				9.98	200.0	9.0391
0800	10.60	9.70	8.46				9.98	140.0	9.2439
1600	10.60	9.70	8.46				9.98	105.0	9.3571
2400	10.60	9.70	8.46				9.98	74.0	9.4269
SEP 23									
0000	10.60	9.70	8.46				9.98	74.0	9.4269
1200	10.60	9.70	8.46				9.98	40.0	9.5215
2400	10.60	9.70	8.46				9.98	22.0	9.5393

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 (revised).--53.2 mi^2. Prior to Jan. 1, 1978, 51.7 mi^2.

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 11,300 ft^3/s, Sept. 19, 1979 (elevation 59.21 ft); minimum discharge not determined.

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

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Nov. 26	1445	4,200	53.00
Jan. 6	1745	4,040	52.79
Jan. 20	0500	2,620	50.61
Apr. 3	1530	3,860	52.54
Apr. 19	2230	8,700	57.38
May 4	0900	2,220	49.88
June 2	0930	6,160	55.25
June 26	1500	3,600	52.16
Aug. 16	1830	2,480	50.35
Sept. 1	1800	3,300	51.71
Sept. 18	2130	4,160	52.94
Sept. 19	2115	*11,300	59.21

Minimum dischrge not determined.

STA. NO. 08074810 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT GESSNER DRIVE , HOUSTON , TEXAS — STORM OF APRIL 18-24 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4780				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18										
0000	0.0	0.0	0.0	0.0				0.0	16.0	0.0014
0600	0.0	0.02	0.02	0.0				0.01	21.0	0.0034
0630	0.06	0.04	0.02	0.0				0.03	20.0	0.0037
0700	0.10	0.05	0.14	0.20				0.10	19.0	0.0041
0800	0.10	0.05	0.14	0.20				0.10	29.0	0.0054
1000	0.10	0.05	0.14	0.20				0.10	63.0	0.0090
1200	0.10	0.05	0.15	0.20				0.10	54.0	0.0130
1500	0.10	0.05	0.15	0.20				0.10	36.0	0.0151
1600	0.10	0.05	0.16	0.20				0.11	30.0	0.0156
1615	0.20	0.15	0.16	0.20				0.17	33.0	0.0158
1630	0.28	0.25	0.26	0.50				0.29	36.0	0.0161
1645	0.46	0.34	0.26	0.50				0.36	72.0	0.0166
1700	0.68	0.46	0.50	0.60				0.52	108.0	0.0174
1715	0.88	0.50	0.50	0.70				0.59	140.0	0.0184
1730	0.88	0.53	0.62	0.80				0.65	199.0	0.0206
1800	0.88	0.65	0.80	0.80				0.74	327.0	0.0278
1900	0.88	0.65	0.80	0.80				0.74	423.0	0.0401
2000	0.88	0.65	0.80	0.80				0.74	402.0	0.0576
2200	0.88	0.65	0.80	0.80				0.74	313.0	0.0759
2400	0.88	0.65	0.80	0.80				0.74	239.0	0.0933
APR 19										
0000	0.88	0.65	0.80	0.80				0.74	239.0	0.0933
0600	0.88	0.65	0.80	0.80				0.74	105.0	0.1190
1000	0.88	0.65	0.80	1.00				0.77	80.0	0.1260
1200	0.88	0.65	0.85	1.00				0.79	71.0	0.1322
1600	0.93	0.71	0.87	1.00				0.83	58.0	0.1364
1700	1.03	0.80	0.93	1.20				0.93	58.0	0.1379
1745	1.09	0.88	0.97	1.20				0.98	80.0	0.1391
1800	1.29	0.90	1.05	1.30				1.06	108.0	0.1399
1815	1.69	1.20	1.05	1.30				1.25	200.0	0.1413
1830	1.94	1.50	1.13	1.40				1.46	287.0	0.1434
1845	3.48	1.80	1.13	1.90				1.90	387.0	0.1462
1900	4.18	2.18	1.38	2.50				2.33	487.0	0.1498
1915	4.28	2.30	1.74	2.90				2.55	850.0	0.1560
1930	4.32	2.40	1.88	2.90				2.63	1230.0	0.1649
1945	4.34	2.50	1.94	3.00				2.71	1800.0	0.1780
2000	4.38	2.55	1.96	3.00				2.74	2550.0	0.1966
2015	4.43	2.58	2.18	3.10				2.84	3400.0	0.2214
2030	4.54	2.60	2.25	3.10				2.88	4400.0	0.2534
2045	4.67	2.65	2.36	3.20				2.96	5250.0	0.2916

STA. NO. 08074810 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT GESSNER DRIVE , HOUSTON , TEXAS — STORM OF APRIL 18-24 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4780				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 19										
2100	4.70	2.71	2.36	3.20				2.99	6150.0	0.3364
2115	4.74	2.73	2.52	3.30				3.06	6850.0	0.3863
2130	4.76	2.76	2.58	3.30				3.10	7570.0	0.4414
2145	4.81	2.79	2.62	3.30				3.13	8090.0	0.5003
2200	4.84	2.83	2.65	3.40				3.17	8620.0	0.5945
2230	4.88	2.85	2.69	3.40				3.20	8700.0	0.7212
2300	4.90	2.87	2.71	3.40				3.21	8340.0	0.8426
2330	4.90	2.88	2.73	3.40				3.22	7700.0	0.9548
2400	4.90	2.88	2.75	3.40				3.23	7160.0	1.0591
APR 20										
0000	4.90	2.88	2.75	3.40				3.23	7160.0	1.0591
0100	4.90	2.90	2.77	3.40				3.24	5420.0	1.2691
0200	4.90	2.90	2.77	3.40				3.24	3990.0	1.5596
0600	4.90	2.90	2.77	3.40				3.24	1670.0	1.8028
1200	4.90	2.90	2.77	3.40				3.24	924.0	1.9206
1445	4.93	2.90	2.77	3.40				3.25	780.0	1.9547
1500	4.93	2.98	2.77	3.60				3.31	769.0	1.9603
1515	4.93	2.98	2.99	3.70				3.38	780.0	1.9659
1530	4.93	3.10	3.85	4.10				3.71	792.0	1.9717
1545	5.13	3.18	4.69	4.10				3.99	1150.0	1.9801
1600	5.20	3.24	4.81	4.10				4.06	1560.0	1.9914
1615	5.21	3.24	5.04	4.20				4.13	2000.0	2.0060
1630	5.22	3.24	5.05	4.20				4.13	2590.0	2.0343
1700	5.22	3.26	5.05	4.20				4.14	3450.0	2.0845
1730	5.22	3.26	5.05	4.20				4.14	3730.0	2.1389
1800	5.22	3.26	5.05	4.20				4.14	3650.0	2.2186
1900	5.22	3.27	5.05	4.20				4.15	3300.0	2.3628
2100	5.22	3.27	5.05	4.20				4.15	2040.0	2.5113
2400	5.22	3.27	5.05	4.20				4.15	1290.0	2.6804
APR 21										
0000	5.22	3.27	5.05	4.20				4.15	1290.0	2.6804
1200	5.22	3.27	5.05	4.20				4.15	529.0	2.9780
2400	5.22	3.27	5.05	4.20				4.15	341.0	3.0674
APR 22										
0000	5.22	3.27	5.05	4.20				4.15	341.0	3.0674
1200	5.22	3.27	5.05	4.20				4.15	203.0	3.1682
2400	5.22	3.27	5.05	4.20				4.15	127.0	3.2126
APR. 23										
0000	5.22	3.27	5.05	4.20				4.15	127.0	3.2126
2400	5.22	3.27	5.05	4.20				4.15	67.0	3.2465
APR 24										
0000	5.22	3.27	5.05	4.20				4.15	67.0	3.2465
2400	5.22	3.27	5.05	4.20				4.15	41.0	3.2874

STA. NO. 08074810 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT GESSNER DRIVE, HOUSTON, TEXAS — STORM OF SEP. 17-23, 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4780				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0	0.0	0.0	0.0				0.0	16.0	0.0030
1300	0.0	0.05	0.0	0.0				0.02	18.0	0.0067
1400	0.0	0.25	0.0	0.10				0.13	20.0	0.0073
1500	0.12	0.34	0.08	0.10				0.21	23.0	0.0077
1515	0.24	0.38	0.34	0.10				0.31	28.0	0.0079
1530	0.30	0.40	0.36	0.10				0.33	31.0	0.0081
1545	0.30	0.50	0.36	0.40				0.42	36.0	0.0084
1600	0.30	0.60	0.38	0.50				0.48	41.0	0.0087
1615	0.32	0.60	0.52	0.50				0.52	55.0	0.0091
1630	0.40	0.65	0.63	0.50				0.58	77.0	0.0097
1645	0.48	0.65	0.72	0.50				0.62	110.0	0.0105
1700	0.55	0.65	0.76	0.80				0.68	154.0	0.0116
1715	0.56	0.65	0.82	1.00				0.73	200.0	0.0130
1730	0.58	0.65	0.82	1.10				0.75	254.0	0.0149
1745	0.58	0.65	0.84	1.10				0.75	330.0	0.0197
1830	0.58	0.65	0.84	1.20				0.77	384.0	0.0295
1930	0.60	0.65	0.84	1.20				0.77	372.0	0.0430
2100	0.60	0.65	0.88	1.20				0.78	365.0	0.0669
2400	0.65	0.73	0.88	1.20				0.83	271.0	0.0808
SEP. 18										
0000	0.65	0.73	0.88	1.20				0.83	271.0	0.0808
0100	0.72	0.80	0.92	1.30				0.89	247.0	0.0899
0200	0.82	1.05	1.02	1.40				1.06	256.0	0.1011
0400	0.97	1.11	1.09	1.40				1.13	418.0	0.1194
0500	1.06	1.12	1.18	1.60				1.20	450.0	0.1325
0600	1.06	1.12	1.19	1.60				1.20	439.0	0.1517
0800	1.06	1.15	1.20	1.60				1.22	370.0	0.1678
0900	1.12	1.18	1.27	1.60				1.26	341.0	0.1877
1200	1.22	1.37	1.37	1.70				1.40	350.0	0.2132
1400	1.32	1.52	1.46	1.80				1.52	410.0	0.2311
1500	1.52	2.84	1.58	1.90				2.19	455.0	0.2410
1530	1.81	3.50	1.71	2.00				2.57	513.0	0.2466
1545	2.45	3.90	2.02	2.10				2.94	576.0	0.2508
1600	3.35	4.29	2.32	2.20				3.34	653.0	0.2556
1615	3.99	4.35	2.42	2.50				3.54	930.0	0.2624
1630	4.59	4.40	2.72	3.20				3.83	1220.0	0.2712
1645	4.63	4.45	2.78	4.20				4.02	1590.0	0.2828
1700	4.66	4.50	2.79	4.40				4.08	1970.0	0.2972
1715	4.68	4.50	2.80	4.60				4.12	2390.0	0.3146
1730	4.70	4.50	2.81	4.60				4.12	2820.0	0.3659

STA. NO. 08074810 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT GESSNER DRIVE, HOUSTON, TEXAS — STORM OF SEP. 17-23, 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4780				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18										
1830	4.74	4.54	2.83	4.60				4.15	3840.0	0.4498
1900	4.74	4.54	2.84	4.60				4.15	4000.0	0.5372
2000	4.77	4.54	2.84	4.70				4.17	4150.0	0.6580
2100	4.79	4.55	2.88	4.70				4.19	4040.0	0.8346
2300	4.89	4.61	2.92	4.80				4.26	3380.0	0.9822
2400	4.95	4.67	3.00	4.80				4.31	3070.0	1.0493
SEP. 19										
0000	4.95	4.67	3.00	4.80				4.31	3070.0	1.0493
0100	5.01	4.75	3.02	4.90				4.38	2790.0	1.1529
0200	5.14	4.83	3.11	5.00				4.47	2550.0	1.2365
0315	5.27	5.09	3.22	5.20				4.67	2460.0	1.2902
0330	5.38	5.16	3.28	5.20				4.73	2370.0	1.3161
0400	5.49	5.24	3.42	5.30				4.83	2400.0	1.3423
0415	5.51	5.28	3.45	5.40				4.87	2510.0	1.3789
0500	5.69	5.32	3.62	5.50				4.98	2620.0	1.4266
0530	5.79	5.35	3.72	5.60				5.05	2770.0	1.4669
0600	5.84	5.37	3.76	5.60				5.07	2910.0	1.5305
0700	5.91	5.41	3.79	5.80				5.14	2900.0	1.6150
0800	5.93	5.74	3.83	5.80				5.30	2730.0	1.6845
0845	6.05	5.98	3.89	5.80				5.44	2650.0	1.7231
0900	6.35	6.07	3.93	5.80				5.54	2570.0	1.7418
0915	6.52	6.11	4.22	5.90				5.67	2700.0	1.7615
0930	6.56	6.16	4.33	6.10				5.75	2830.0	1.7821
0945	6.62	6.20	4.40	6.20				5.81	2970.0	1.8037
1000	6.71	6.24	4.48	6.40				5.89	3120.0	1.8265
1015	6.77	6.26	4.62	6.40				5.95	3390.0	1.8511
1030	6.82	6.28	4.68	6.50				5.99	3670.0	1.8779
1045	6.87	6.30	4.78	6.60				6.05	4280.0	1.9714
1200	7.03	6.52	4.86	6.80				6.22	4890.0	2.0960
1230	7.08	6.60	4.92	6.80				6.28	4850.0	2.1490
1245	7.24	6.63	4.93	6.80				6.32	4800.0	2.1839
1300	7.36	6.67	5.08	6.80				6.40	4740.0	2.2357
1330	7.44	6.78	5.18	7.00				6.51	4730.0	2.3046
1400	7.54	6.90	5.28	7.10				6.62	4720.0	2.3733
1430	7.70	7.01	5.32	7.10				6.70	4650.0	2.4410
1500	7.87	7.12	5.48	7.20				6.83	4540.0	2.4906
1515	7.97	7.18	5.48	7.20				6.88	4570.0	2.5239
1530	8.08	7.25	5.62	7.30				6.97	4600.0	2.5574
1545	8.17	7.31	5.71	7.40				7.05	4700.0	2.5916
1600	8.27	7.37	5.83	7.50				7.14	4790.0	2.6265

STA. NO. 08074810 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT GESSNER DRIVE, HOUSTON, TEXAS — STORM OF SEP. 17-23, 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4780				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
1615	8.38	7.47	5.91	7.60				7.24	4940.0	2.6625
1630	8.50	7.56	6.01	7.70				7.33	5100.0	2.6996
1645	8.65	7.66	6.06	7.70				7.41	5300.0	2.7382
1700	8.83	7.76	6.12	7.80				7.52	5530.0	2.7785
1715	8.96	7.87	6.26	7.90				7.64	5800.0	2.8207
1730	9.10	7.98	6.35	8.00				7.74	6060.0	2.8648
1745	9.28	8.09	6.56	8.10				7.89	6380.0	2.9113
1800	9.41	8.20	6.72	8.20				8.01	6720.0	2.9602
1815	9.51	8.28	6.82	8.40				8.12	7100.0	3.0119
1830	9.61	8.37	6.89	8.50				8.21	7510.0	3.0666
1845	9.78	8.46	7.04	8.60				8.32	8000.0	3.1249
1900	9.89	8.55	7.12	8.70				8.42	8540.0	3.1871
1915	9.98	8.59	7.26	8.80				8.50	8750.0	3.2508
1930	10.07	8.63	7.33	8.90				8.56	9400.0	3.3192
1945	10.18	8.66	7.47	9.00				8.64	9800.0	3.3906
2000	10.30	8.70	7.56	9.00				8.70	10200.0	3.5020
2030	10.41	8.72	7.68	9.20				8.79	11000.0	3.6622
2100	10.48	8.74	7.71	9.40				8.84	11300.0	3.9091
2200	10.51	8.90	7.78	9.40				8.94	11000.0	4.2295
2300	10.55	8.92	8.11	9.50				9.05	10600.0	4.5382
2400	10.55	8.92	8.15	9.60				9.07	10400.0	4.9169
SEP. 20										
0000	10.55	8.92	8.15	9.60				9.07	10400.0	4.9169
0300	10.60	9.00	8.26	9.70				9.16	6250.0	5.5537
0430	10.60	9.00	8.33	9.70				9.18	4840.0	5.7651
0600	10.60	9.00	8.44	9.70				9.20	3960.0	6.1977
1200	10.60	9.00	8.46	9.70				9.21	2080.0	6.5612
1800	10.60	9.00	8.46	9.70				9.21	1380.0	6.8024
2400	10.60	9.00	8.46	9.70				9.21	999.0	6.9479
SEP. 21										
0000	10.60	9.00	8.46	9.70				9.21	999.0	6.9479
0800	10.60	9.00	8.46	9.70				9.21	722.0	7.1743
1600	10.60	9.00	8.46	9.70				9.21	565.0	7.3060
2400	10.60	9.00	8.46	9.70				9.21	395.0	7.3750
SEP. 22										
0000	10.60	9.00	8.46	9.70				9.21	395.0	7.3750
0800	10.60	9.00	8.46	9.70				9.21	271.0	7.4611
1600	10.60	9.00	8.46	9.70				9.21	214.0	7.5110
2400	10.60	9.00	8.46	9.70				9.21	156.0	7.5428
SEP. 23										
0000	10.60	9.00	8.46	9.70				9.21	156.0	7.5428
1200	10.60	9.00	8.46	9.70				9.21	99.0	7.5910
2400	10.60	9.00	8.46	9.70				9.21	71.0	7.6035

BINTLIFF DITCH DRAINAGE BASIN

The location of data-collection sites in and near the Bintliff Ditch drainage basin are shown in figure 12.

Weighted-mean rainfall for the 1979 water year was not determined.

No storms were analyzed for the 1979 water year.

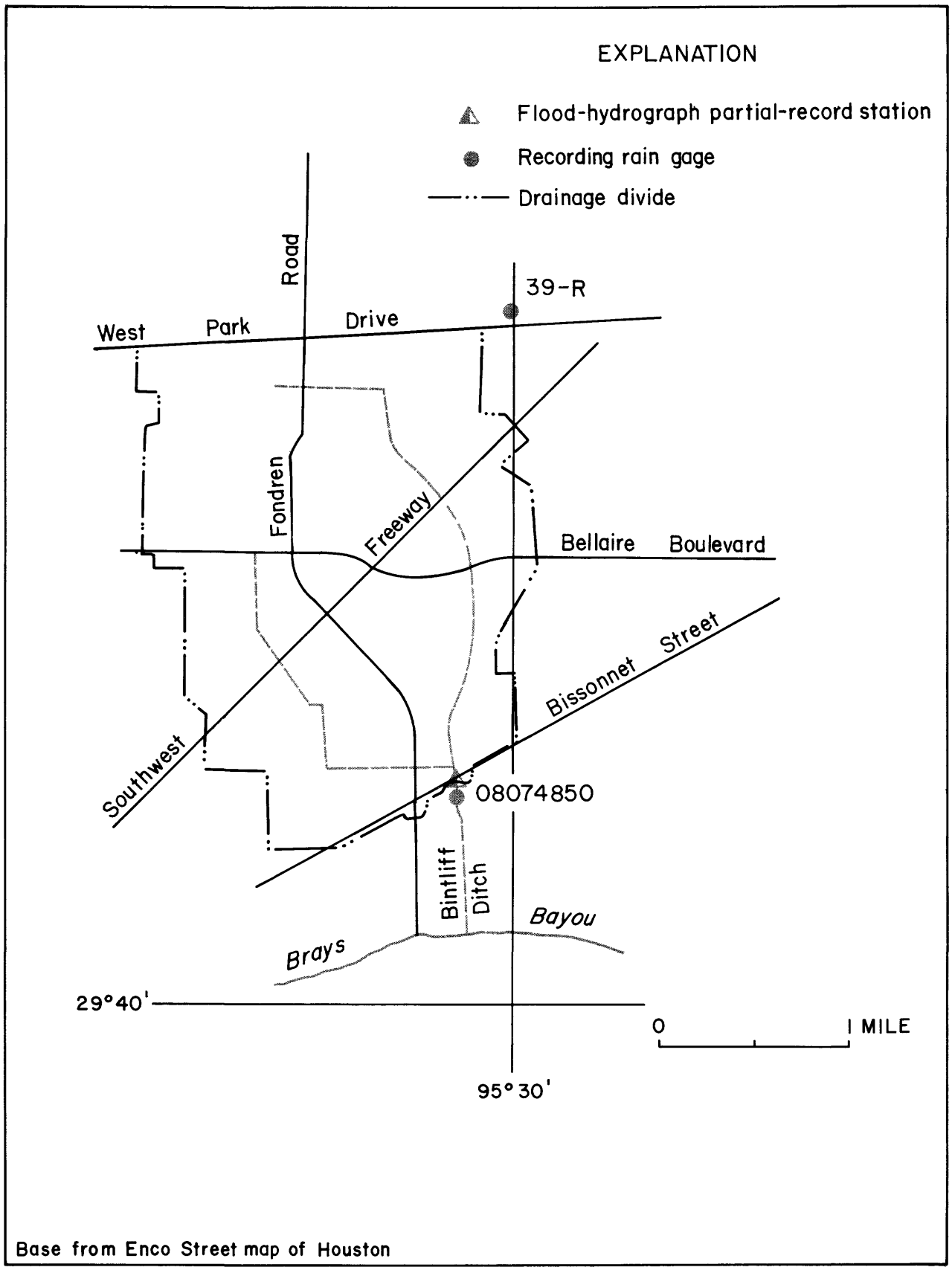


FIGURE 12.—Locations of data-collection sites in and near the Bintliff Ditch drainage basin

08074850 Bintliff Ditch at Bissonnet Street, Houston, Tex.
(Flood-hydrograph 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^2. Prior to October 1, 1973, 4.29 mi^2.

PERIOD OF RECORD.--August 1968 to current year.

GAGE.--Digital flood-hydrograph and rainfall recorders and crest-stage gage. Prior to Mar. 29, 1978 flood-hydrograph and rainfall recorder (type SR) 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 1,280 ft^3/s, (revised), June 15, 1976 (elevation 63.19 ft). Minimum not determined.

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

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Nov. 26	unknown	1,100	62.01
Jan. 6	1605	937	60.83
Jan. 20	0325	910	60.63
Mar. 19	unknown	914	60.66
Apr. 3	1415	1,030	61.48
Apr. 19	0855	1,200	62.69
June 2	unknown	*1,250	62.99
July 4	unknown	934	60.81
Sept. 1	1900	1,030	61.49
Sept. 18	1700	985	61.18
Sept. 19	unknown	*1,250	62.99

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 13.

Flood-hydrograph partial-record and rainfall-record station Hummingbird Street Ditch at Houston, Tex. (08074910) was put into operation Nov. 3, 1978 by the U.S. Geological Survey.

Weighted-mean rainfall for the 1979 water year was not determined.

The storms of July 25-26 and Sept. 1 were selected for analysis at station 08074910, Hummingbird Street Ditch at Houston.

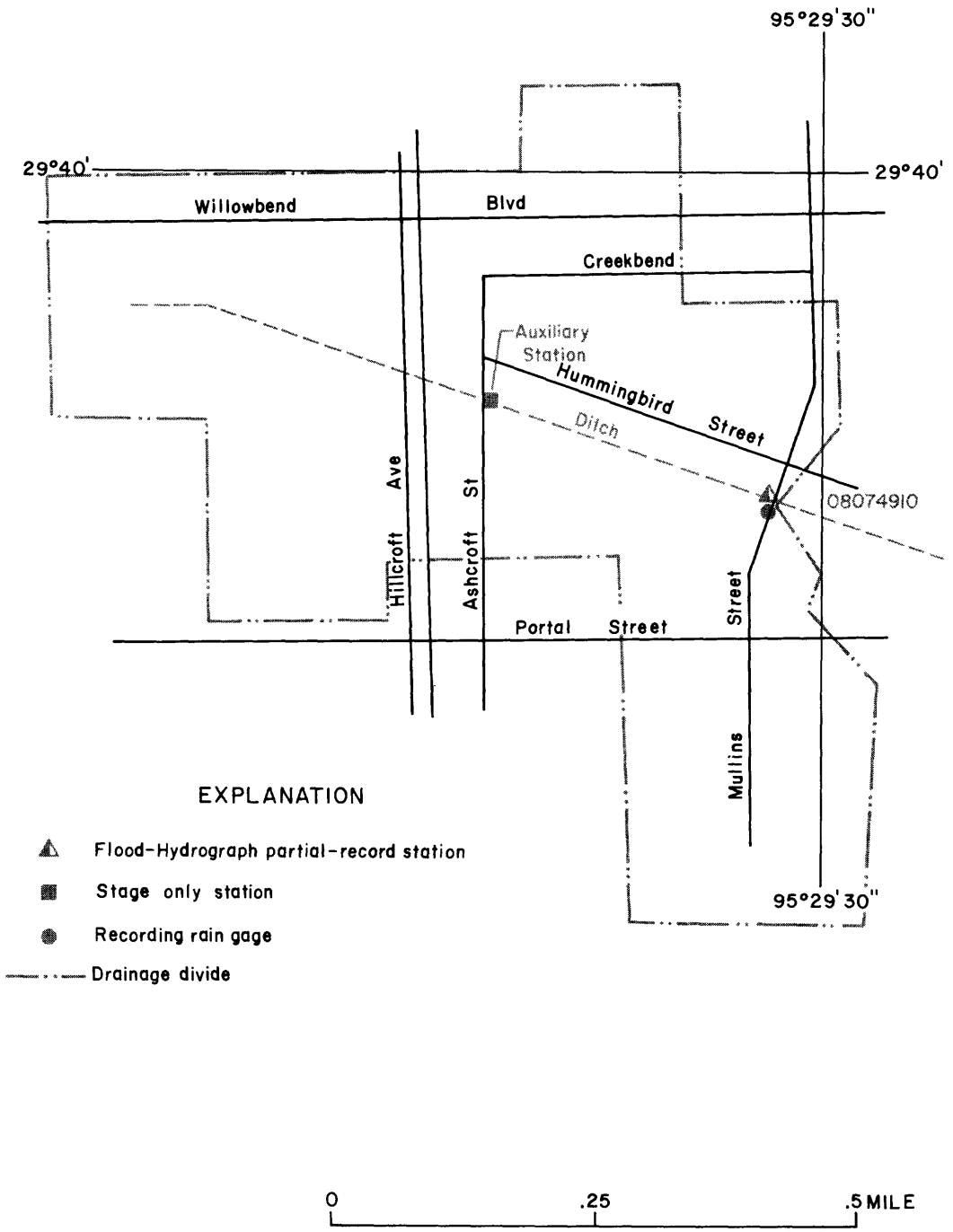


FIGURE 13.-Locations of data-collection sites in and near the Hummingbird Street Ditch drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 11--Storm rainfall-runoff data, 1979 Water Year, Hummingbird St. Ditch

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Hummingbird St. Ditch at Houston, TX. (Drainage area--0.32 mi^2)								
July 25, 1979	6.5	2.90	0.63	0.92	1.08	1.69	0.41	79.0
July 26, 1979	4.4	1.20	0.40	0.60	0.70			38.0
Sept. 1, 1979	0.8	2.60	1.00	1.70	2.40	1.41	0.54	138

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^2.

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 poor. Heavy vegetal growth makes a stage-discharge relationship difficult to define.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 149 ft^3/s Apr. 19, 1979; maximum gage-height, 59.31 ft, June 2, 1979; no flow for many days.

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

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Nov. 26	1405	109	57.71
Jan. 6	1350	93	57.20
Mar. 19	unknown	97	57.34
Mar. 22	0955	83	56.89
Apr. 19	unknown	*149	58.81
June 2	unknown	119	59.31
July 25	2105	79	58.05
Sept. 1	1720	138	58.55
Sept. 19	1045	85	56.97
Sept. 19	1915	105	57.57
Sept. 19	2255	111	57.77

No flow for many days.

STA. NO. 08074910 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUMMINGBIRD STREET DITCH AT HOUSTON , TEXAS — STORM OF JULY 25-26 , 1979

DATE & TIME	GAGE NUMBER 4910						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 25									
0000	0.0						0.0	0.5	0.0145
1200	0.0						0.0	0.5	0.0300
1245	0.10						0.10	0.6	0.0318
1315	0.20						0.20	1.0	0.0350
1405	0.40						0.40	2.6	0.0424
1425	0.60						0.60	3.8	0.0462
1430	0.70						0.70	4.7	0.0490
1440	0.80						0.80	8.9	0.0544
1445	1.00						1.00	12.0	0.0617
1455	1.10						1.10	20.0	0.0778
1505	1.30						1.30	29.0	0.1012
1515	1.40						1.40	35.0	0.1295
1525	1.40						1.40	41.0	0.1626
1535	1.40						1.40	44.0	0.1981
1545	1.40						1.40	43.0	0.2501
1605	1.50						1.50	33.0	0.2967
1620	1.50						1.50	27.0	0.3458
1650	1.70						1.70	21.0	0.4051
1730	1.70						1.70	13.0	0.4523
1820	1.70						1.70	6.4	0.4794
1915	1.80						1.80	3.3	0.4887
1930	1.80						1.80	3.0	0.4930
1950	1.90						1.90	3.7	0.4990
2010	2.00						2.00	5.9	0.5073
2025	2.40						2.40	9.0	0.5146
2030	2.60						2.60	11.0	0.5190
2035	2.90						2.90	16.0	0.5287
2045	2.90						2.90	41.0	0.5618
2055	2.90						2.90	72.0	0.6053
2100	2.90						2.90	78.0	0.6368
2105	2.90						2.90	79.0	0.6687
2110	2.90						2.90	77.0	0.7153
2120	2.90						2.90	70.0	0.7718
2130	2.90						2.90	61.0	0.8333
2145	2.90						2.90	50.0	0.9040
2205	3.00						3.00	38.0	0.9730
2230	3.00						3.00	26.0	1.0307
2300	3.00						3.00	18.0	1.0743
2330	3.00						3.00	12.0	1.1033

STA. NO. 08074910 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUMMINGBIRD STREET DITCH AT HOUSTON , TEXAS — STORM OF JULY 25-26 , 1979

DATE & TIME	GAGE NUMBER 4910							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 25										
2400	3.00							3.00	8.0	1.1195
JULY 26										
0000	3.00							3.00	8.0	1.1195
0040	3.00							3.00	4.7	1.1411
0120	3.00							3.00	3.2	1.1475
0130	3.10							3.10	2.7	1.1503
0145	3.50							3.50	2.5	1.1523
0150	3.60							3.60	3.3	1.1543
0200	3.70							3.70	11.0	1.1654
0215	3.70							3.70	34.0	1.1997
0225	3.80							3.80	38.0	1.2303
0235	3.80							3.80	38.0	1.2687
0250	3.80							3.80	38.0	1.3070
0300	3.80							3.80	36.0	1.3506
0320	3.80							3.80	31.0	1.4006
0340	3.80							3.80	25.0	1.4410
0400	3.80							3.80	20.0	1.4813
0430	3.80							3.80	13.0	1.5128
0500	3.80							3.80	8.5	1.5334
0530	3.80							3.80	5.5	1.5434
0545	4.00							4.00	4.6	1.5499
0605	4.00							4.00	4.3	1.5560
0620	4.00							4.00	6.4	1.5637
0635	4.00							4.00	7.8	1.5747
0655	4.00							4.00	8.0	1.5892
0720	4.00							4.00	6.7	1.6068
0800	4.00							4.00	4.7	1.6258
0900	4.00							4.00	2.2	1.6338
0930	4.10							4.10	1.7	1.6379
1000	4.10							4.10	1.3	1.6426
1100	4.10							4.10	1.0	1.6475
1200	4.10							4.10	0.8	1.6610
1800	4.10							4.10	0.6	1.6784
2400	4.10							4.10	0.5	1.6857

STA. NO. 08074910 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUMMINGBIRD STREET DITCH AT HOUSTON , TEXAS — STORM OF SEP . 1 , 1979

DATE & TIME	GAGE NUMBER 4910							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP 1										
0000	0.0							0.0	0.0	0.0
1610	0.0							0.0	0.0	0.0
1615	0.10							0.10	0.0	0.0
1620	0.40							0.40	0.5	0.0002
1625	0.60							0.60	5.0	0.0022
1630	1.10							1.10	22.0	0.0111
1635	1.40							1.40	60.0	0.0353
1640	1.60							1.60	90.0	0.0716
1645	1.80							1.80	102.0	0.1128
1650	1.90							1.90	111.0	0.1576
1655	2.00							2.00	119.0	0.2056
1700	2.20							2.20	124.0	0.2556
1705	2.30							2.30	130.0	0.3081
1710	2.40							2.40	134.0	0.3622
1715	2.50							2.50	137.0	0.4175
1720	2.50							2.50	138.0	0.4731
1725	2.60							2.60	137.0	0.5284
1730	2.60							2.60	135.0	0.6101
1740	2.60							2.60	128.0	0.7651
1800	2.60							2.60	111.0	0.9891
1830	2.60							2.60	79.0	1.1804
1900	2.60							2.60	46.0	1.2917
1930	2.60							2.60	24.0	1.3498
2000	2.60							2.60	11.0	1.3765
2030	2.60							2.60	5.9	1.3908
2100	2.60							2.60	3.5	1.3992
2130	2.60							2.60	2.0	1.4041
2200	2.60							2.60	1.2	1.4070
2230	2.60							2.60	0.7	1.4087
2300	2.60							2.60	0.4	1.4101
2400	2.60							2.60	0.2	1.4106

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 Buffelo Bayou.

DRAINAGE AREA.--94.9 mi² (245.8 km²). Prior to October 1976, 88.4 mi² (229.0 km²). Changes due to drainage ditch relocation..

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) Nationel 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 detum.

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

AVERAGE DISCHARGE.--43 years, 115 ft³/s (3.257 m³/s), 83,320 acre-ft/yr (103 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft³/s (821 m³/s) June 15, 1976, gage height, 52.13 ft (15.889 m); minimum daily, 0.1 ft³/s (0.003 m³/s) Oct. 11, 12, 1937, Mar. 14, Apr. 1. 1958.
Maximum discharge, that of June 15, 1976.

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 ft³/s (170 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
aNov. 6	0645	1,640	46.4	29.95	9.129	Apr. 19	2230	*25,500	722	50.36	15.350
Nov. 26	1515	9,720	275	39.31	11.982	aMay 22	0730	1,050	29.7	28.92	8.815
eJan. 6	1730	8,480	240	38.15	11.628	June 2	0945	15,400	436	43.94	13.393
aFeb. 6	0345	3,370	95.4	32.50	9.906	Sept. 1	1830	11,300	320	40.68	12.399
Mar. 9	1930	8,800	249	38.46	11.723	aSept. 7	1800	3,100	87.8	32.12	9.790
Apr. 3	1600	7,860	223	37.55	11.445	Sept. 19	2315	19,000	538	46.44	14.155

a Water-quality samples were obtained on this date.

Minimum daily discharge, 65 ft³/s (1.84 m³/s) May 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	76	123	1240	122	95	95	211	99	77	89	2060
2	77	75	100	275	149	107	219	167	3820	79	88	446
3	90	78	423	149	484	143	2380	106	414	82	85	122
4	82	77	327	119	598	95	789	2220	318	208	83	105
5	132	76	142	659	1890	97	262	492	184	243	226	366
6	92	727	121	3580	2090	90	152	212	150	149	145	216
7	74	155	131	1280	588	92	127	144	100	101	136	794
8	73	91	229	377	273	89	110	111	88	383	112	535
9	72	86	112	203	169	89	104	99	82	137	92	167
10	73	85	95	190	132	89	105	92	78	93	87	122
11	73	171	95	481	114	86	103	152	79	82	175	107
12	72	104	92	204	107	88	94	134	74	150	160	99
13	72	86	87	146	104	84	90	82	74	223	118	102
14	70	81	176	116	98	82	85	82	73	122	85	103
15	72	80	225	107	96	82	87	76	72	89	89	94
16	72	77	108	108	93	86	95	77	73	102	1100	90
17	73	102	91	105	166	85	98	76	72	148	453	372
18	72	80	87	101	185	88	397	75	94	89	140	2180
19	74	485	84	198	119	1470	5020	73	80	244	288	9620
20	74	233	83	1640	107	762	5480	65	78	605	117	5580
21	74	97	82	329	106	1320	1100	85	74	438	102	945
22	74	88	81	179	101	1560	358	369	73	245	107	393
23	77	92	76	252	145	469	188	109	72	133	98	224
24	79	78	74	136	213	191	134	81	74	98	87	159
25	78	73	71	111	114	125	111	78	82	1130	84	130
26	80	3030	75	305	97	117	103	71	1040	1550	85	116
27	82	845	77	152	92	103	93	70	314	485	107	108
28	77	200	84	113	91	98	84	72	114	362	100	111
29	77	737	406	108	---	97	614	546	91	167	115	119
30	77	226	225	527	---	91	199	359	80	117	89	127
31	82	---	166	182	---	131	---	296	---	101	119	---
TOTAL	2422	8491	4348	13672	8643	8201	18876	6882	8116	8232	4961	25712
MEAN	78.1	283	140	441	309	265	629	222	271	266	160	857
MAX	132	3030	423	3580	2090	1560	5480	2220	3820	1550	1100	9620
MIN	70	73	71	101	91	82	84	65	72	77	83	90
AC-FT	4800	16840	8620	27120	17140	16270	37440	13650	16100	16330	9840	51000
(††)	.50	7.39	2.65	6.49	3.35	3.68	8.25	4.10	4.50	6.35	3.31	12.49

CAL YR 1978 TOTAL 59214 MEAN 162 MAX 3030 MIN 68 AC-FT 117500 †† 39.54
WTR YR 1979 TOTAL 118556 MEAN 325 MAX 9620 MIN 65 AC-FT 235200 †† 63.24

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
23...	1215	79	771	7.8	27.0	40	5.0	11.6	147	10
NOV										
06...	1115	830	298	7.1	20.5	60	100	6.9	78	18
JAN										
06...	1430	7910	196	8.0	9.5	120	140	9.9	89	9.6
07...	1015	1160	213	7.8	8.0	180	140	10.0	87	5.6
08...	1220	361	339	7.2	9.0	180	65	13.2	118	5.2
FEB										
06...	1500	2170	214	7.9	8.5	120	120	5.3	47	5.6
MAR										
19...	1100	92	795	7.4	22.5	25	40	9.7	114	20
MAY										
22...	1150	512	449	7.6	24.0	35	290	5.8	71	11
JUN										
25...	1000	66	887	7.9	29.5	5	15	10.4	137	21
SEP										
07...	1815	3020	204	7.0	25.0	45	110	8.6	106	14
09...	1640	150	588	7.6	29.5	30	42	10.8	142	7.8
25...	1055	122	702	7.0	25.0	25	21	8.6	102	11

DATE	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 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)
OCT										
23...	13000	180	190	--	--	--	--	--	--	--
NOV										
06...	100000	12000	5800	83	13	27	3.7	24	1.1	5.4
JAN										
06...	160000	40000	30000	66	0	22	2.6	7.4	.4	3.1
07...	25000	4100	2700	--	--	--	--	--	--	--
08...	920	140	70	--	--	--	--	--	--	--
FEB										
06...	190000	20000	6000	74	0	23	3.9	13	.7	2.5
MAR										
19...	480000	61000	4700	160	0	48	9.2	98	3.4	6.7
MAY										
22...	340000	69000	6700	110	0	34	5.3	46	1.9	4.8
JUN										
25...	25000	2400	170	--	--	--	--	--	--	--
SEP										
07...	400000	150000	8600	78	9	27	2.5	5.8	.3	2.9
09...	35000	32000	110	--	--	--	--	--	--	--
25...	240000	26000	880	--	--	--	--	--	--	--

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
23...	--	--	--	--	--	--	--	150	2	2.2
NOV										
06...	85	0	24	24	.2	7.7	158	264	76	1.0
JAN										
06...	86	0	6.4	7.2	.1	5.8	97	916	120	.38
07...	--	--	--	--	--	--	--	380	48	.48
08...	--	--	--	--	--	--	--	134	36	3.0
FEB										
06...	91	0	14	8.7	.2	8.4	119	276	36	.35
MAR										
19...	280	0	41	79	.4	30	450	131	34	.76
MAY										
22...	170	0	27	29	.3	3.5	234	472	114	.32
JUN										
25...	--	--	--	--	--	--	--	41	32	1.1
SEP										
07...	84	0	15	8.0	.1	5.2	108	80	26	.60
09...	--	--	--	--	--	--	--	73	2	1.5
25...	--	--	--	--	--	--	--	35	13	1.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
23...	.48	2.7	2.8	1.7	4.5	4.1	7.9	--	.60
NOV									
06...	.08	1.1	1.2	1.8	3.0	1.4	16	2	.30
JAN									
06...	.08	.46	.42	1.6	2.0	.63	25	4	.00
07...	.12	.60	.37	1.0	1.4	.47	13	--	--
08...	.14	3.1	.12	5.5	5.6	.64	11	--	.10
FEB									
06...	.12	.47	.41	.89	1.3	.45	12	--	.00
MAR									
19...	.64	1.4	6.4	.70	7.1	3.2	12	4	.20
MAY									
22...	.19	.51	2.1	6.3	8.4	1.7	37	--	.20
JUN									
25...	.57	1.7	4.9	1.8	6.7	1.8	6.9	10	.30
SEP									
07...	.12	.72	.66	.84	1.5	.46	19	--	--
09...	.65	2.1	2.3	.50	2.8	.84	11	--	--
25...	.55	1.6	1.9	1.0	2.9	2.4	9.2	--	--

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV							
06...	1115	20	0	1	10	4	30
JAN							
06...	1430	5	50	<1	0	3	50
MAR							
19...	1100	3	100	0	0	1	0
JUN							
25...	1000	6	100	1	0	2	0

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
NOV						
06...	21	0	.0	1	0	30
JAN						
06...	0	<1	.0	0	0	5
MAR						
19...	0	0	.0	1	0	20
JUN						
25...	0	0	.0	1	0	30

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)	DIAZINON, TOTAL (UG/L)
NOV									
06...	1115	.0	.00	.00	.1	.00	.00	.00	.75
MAR									
19...	1100	.0	--	.00	.1	.00	.00	.00	.58
JUN									
25...	1000	.0	--	.00	.2	.00	.00	.00	.87
SEP									
07...	1815	.0	.00	.00	.3	.00	.00	.00	.65

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)
NOV									
06...	.01	.00	.00	.00	.00	.00	.00	.84	--
MAR									
19...	.01	.00	.00	.00	.00	.00	.04	.04	--
JUN									
25...	.02	.00	.00	.00	.00	.01	.10	.08	--
SEP									
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)
NOV									
06...	.00	.00	.00	.03	0	.00	2.9	.10	.00
MAR									
19...	.00	.00	.00	.00	0	.00	.03	.00	.00
JUN									
25...	.00	.00	.00	.00	0	.00	.03	.00	.00
SEP									
07...	.00	.00	.00	.00	0	.00	.37	.05	.00

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON , TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	308R	4910			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN 5										
0000	0.0	0.0	0.0	0.0	0.0			0.0	122.0	0.0040
0400	0.10	0.05	0.0	0.02	0.10			0.06	120.0	0.0108
0700	0.10	0.05	0.0	0.07	0.10			0.06	113.0	0.0145
0800	0.15	0.10	0.0	0.12	0.20			0.12	142.0	0.0180
1000	0.20	0.11	0.06	0.14	0.20			0.14	825.0	0.0348
1030	0.23	0.14	0.06	0.17	0.40			0.22	804.0	0.0414
1100	0.23	0.14	0.34	0.20	0.50			0.31	830.0	0.0516
1200	0.23	0.15	0.38	0.23	0.50			0.32	1250.0	0.0643
1215	0.23	0.15	0.38	0.23	0.50			0.32	1280.0	0.0696
1230	0.23	0.15	0.38	0.23	0.50			0.32	1270.0	0.0773
1300	0.29	0.15	0.38	0.23	0.50			0.33	1170.0	0.0917
1400	0.38	0.22	0.41	0.29	0.50			0.37	1040.0	0.1086
1500	0.48	0.24	0.43	0.31	0.50			0.40	949.0	0.1203
1530	0.52	0.30	0.43	0.40	0.60			0.46	909.0	0.1277
1600	0.52	0.31	0.46	0.42	0.60			0.47	954.0	0.1355
1630	0.52	0.32	0.48	0.43	0.60			0.48	985.0	0.1435
1700	0.57	0.34	0.48	0.44	0.60			0.49	974.0	0.1554
1800	0.60	0.35	0.50	0.45	0.60			0.50	919.0	0.1705
1900	0.69	0.36	0.50	0.45	0.60			0.52	874.0	0.1847
2000	0.80	0.48	0.58	0.47	0.70			0.61	809.0	0.1979
2100	0.90	0.56	0.66	0.51	0.70			0.67	857.0	0.2119
2200	0.98	0.59	0.67	0.57	0.70			0.70	1130.0	0.2304
2300	1.06	0.64	0.68	0.61	0.80			0.76	1260.0	0.2458
2330	1.19	0.70	0.72	0.65	0.80			0.80	1310.0	0.2565
2400	1.19	0.72	0.76	0.69	1.00			0.88	1420.0	0.2681
JAN 6										
0000	1.19	0.72	0.76	0.69	1.00			0.88	1420.0	0.2681
0100	1.28	0.76	0.80	0.76	1.00			0.92	1680.0	0.2945
0130	1.29	0.78	0.82	0.77	1.00			0.93	1680.0	0.3082
0200	1.30	0.79	0.83	0.77	1.00			0.94	1640.0	0.3216
0230	1.30	0.79	0.83	0.77	1.00			0.94	1600.0	0.3346
0300	1.33	0.80	0.83	0.77	1.00			0.94	1550.0	0.3536
0400	1.33	0.80	0.83	0.77	1.00			0.94	1440.0	0.3889
0600	1.33	0.80	0.83	0.77	1.00			0.94	1170.0	0.4271
0800	1.33	0.80	0.83	0.77	1.00			0.94	1010.0	0.4601
1000	1.33	0.80	0.83	0.77	1.00			0.94	885.0	0.4800
1045	1.33	0.80	0.83	0.77	1.00			0.94	836.0	0.4868
1100	1.40	0.80	0.83	0.77	1.00			0.95	825.0	0.4952
1200	1.43	0.81	0.83	0.77	1.00			0.96	772.0	0.5031
1215	1.58	0.87	0.83	0.77	1.00			1.00	762.0	0.5062

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON , TEXAS — STORM OF JAN. 5-9 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	308R	4910			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JAN 6										
1230	1.64	0.93	0.83	0.77	1.10			1.05	767.0	0.5093
1245	1.71	1.00	0.98	0.80	1.30			1.17	879.0	0.5147
1315	1.93	1.17	1.86	1.40	1.90			1.66	3250.0	0.5346
1330	2.02	1.20	1.94	1.50	2.00			1.74	5160.0	0.5557
1345	2.33	1.30	2.10	1.65	2.20			1.92	6650.0	0.5828
1400	2.44	1.41	2.19	1.83	2.30			2.03	7520.0	0.6289
1430	2.59	1.54	2.28	1.92	2.30			2.11	7950.0	0.6938
1500	2.62	1.58	2.31	1.95	2.40			2.16	8030.0	0.7593
1530	2.69	1.65	2.39	2.00	2.50			2.24	7800.0	0.8071
1545	2.89	1.88	2.52	2.05	2.50			2.36	7610.0	0.8381
1600	2.98	1.92	2.56	2.07	2.50			2.40	7460.0	0.8686
1615	2.99	1.94	2.58	2.10	2.60			2.44	7340.0	0.8986
1630	3.08	2.00	2.87	2.20	2.60			2.54	7520.0	0.9293
1645	3.16	2.10	2.87	2.25	2.80			2.64	7860.0	0.9613
1700	3.18	2.17	2.98	2.33	2.90			2.72	8200.0	0.9948
1715	3.21	2.20	3.01	2.34	2.90			2.74	8400.0	1.0291
1730	3.24	2.22	3.04	2.35	2.90			2.75	8480.0	1.0637
1745	3.26	2.23	3.06	2.36	2.90			2.76	8440.0	1.0982
1800	3.27	2.24	3.08	2.37	2.90			2.77	8370.0	1.1494
1830	3.30	2.25	3.09	2.38	2.90			2.78	8070.0	1.2153
1900	3.34	2.26	3.10	2.39	3.00			2.82	7560.0	1.3079
2000	3.36	2.27	3.13	2.40	3.00			2.84	6550.0	1.4683
2200	3.36	2.27	3.13	2.41	3.00			2.84	4580.0	1.6179
2400	3.36	2.27	3.13	2.41	3.00			2.84	3260.0	1.7111
JAN 7										
0000	3.36	2.27	3.13	2.41	3.00			2.84	3260.0	1.7111
0300	3.36	2.27	3.13	2.41	3.00			2.84	2180.0	1.8578
0600	3.36	2.27	3.13	2.41	3.00			2.84	1620.0	1.9768
1200	3.36	2.27	3.13	2.41	3.00			2.84	1050.0	2.0797
1800	3.36	2.27	3.13	2.41	3.00			2.84	762.0	2.1543
2400	3.36	2.27	3.13	2.41	3.00			2.84	560.0	2.2092
JAN 8										
0000	3.36	2.27	3.13	2.41	3.00			2.84	560.0	2.2092
1200	3.36	2.27	3.13	2.41	3.00			2.84	364.0	2.3079
2400	3.36	2.27	3.13	2.41	3.00			2.84	267.0	2.3472
JAN 9										
0000	3.36	2.27	3.13	2.41	3.00			2.84	267.0	2.3472
1200	3.36	2.27	3.13	2.41	3.00			2.84	202.0	2.3998
2400	3.36	2.27	3.13	2.41	3.00			2.84	167.0	2.4162

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON, TEXAS — STORM OF APR 18-23, 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	308R	4780	39R	4910	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18										
0000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.0	0.0050
0600	0.0	0.02	0.02	0.01	0.0	0.03	0.10	0.03	103.0	0.0105
0630	0.06	0.04	0.02	0.01	0.0	0.03	0.10	0.04	127.0	0.0115
0700	0.10	0.05	0.14	0.02	0.20	0.04	0.20	0.11	161.0	0.0129
0730	0.10	0.05	0.14	0.05	0.20	0.13	0.20	0.12	181.0	0.0143
0800	0.10	0.05	0.14	0.08	0.20	0.13	0.20	0.12	188.0	0.0182
1000	0.10	0.05	0.14	0.08	0.20	0.13	0.20	0.12	183.0	0.0242
1200	0.10	0.05	0.15	0.09	0.20	0.13	0.20	0.13	193.0	0.0320
1500	0.10	0.05	0.15	0.09	0.20	0.13	0.20	0.13	181.0	0.0379
1600	0.10	0.05	0.16	0.10	0.20	0.13	0.20	0.13	167.0	0.0396
1615	0.20	0.15	0.16	0.20	0.20	0.40	0.40	0.24	165.0	0.0403
1630	0.28	0.20	0.26	0.40	0.50	0.60	0.50	0.37	183.0	0.0411
1645	0.46	0.34	0.26	0.60	0.50	0.69	0.50	0.45	333.0	0.0424
1700	0.68	0.46	0.50	0.87	0.60	0.73	0.50	0.58	655.0	0.0451
1715	0.88	0.50	0.50	0.88	0.70	0.74	0.60	0.64	924.0	0.0489
1730	0.88	0.53	0.62	0.89	0.80	0.75	0.60	0.68	954.0	0.0547
1800	0.88	0.65	0.80	0.90	0.80	0.80	0.60	0.74	1050.0	0.0697
1915	0.88	0.65	0.80	0.91	0.80	0.80	0.60	0.74	1310.0	0.0911
2000	0.88	0.65	0.80	0.91	0.80	0.80	0.60	0.74	1250.0	0.1192
2200	0.88	0.65	0.80	0.91	0.80	0.80	0.60	0.74	820.0	0.1460
2400	0.88	0.65	0.80	0.91	0.80	0.80	0.60	0.74	574.0	0.1694
APR 19										
0000	0.88	0.65	0.80	0.91	0.80	0.80	0.60	0.74	574.0	0.1694
0600	0.88	0.65	0.80	0.91	0.80	0.80	0.60	0.74	247.0	0.2036
1000	0.88	0.65	0.80	0.91	1.00	0.80	0.60	0.76	205.0	0.2136
1200	0.88	0.65	0.85	1.05	1.00	0.84	0.80	0.83	207.0	0.2238
1600	0.93	0.71	0.87	1.10	1.00	0.87	0.80	0.86	313.0	0.2366
1700	1.03	0.80	0.93	1.22	1.10	0.92	1.10	0.99	310.0	0.2397
1715	1.04	0.83	0.94	1.36	1.10	1.06	1.20	1.04	336.0	0.2411
1730	1.07	0.86	0.96	1.49	1.10	1.56	1.20	1.12	425.0	0.2428
1745	1.09	0.88	0.97	1.62	1.10	2.06	1.40	1.23	757.0	0.2459
1800	1.29	0.90	1.05	1.76	1.20	2.07	2.20	1.45	1100.0	0.2504
1815	1.69	1.20	1.05	2.50	1.20	2.10	2.90	1.79	1510.0	0.2566
1830	1.94	1.50	1.13	3.24	1.40	2.21	2.90	2.00	3580.0	0.2712
1845	3.48	1.60	1.13	3.98	1.90	2.30	3.00	2.39	6650.0	0.2983
1900	4.18	2.18	1.38	4.72	2.50	2.41	3.40	2.81	10200.0	0.3400
1915	4.28	2.30	1.74	5.40	2.90	2.47	3.50	3.04	13700.0	0.3959
1930	4.32	2.40	1.88	6.07	2.90	2.96	3.90	3.29	16100.0	0.4616
1945	4.34	2.50	1.94	6.74	3.00	3.25	4.10	3.47	17600.0	0.5335
2000	4.38	2.55	1.96	7.42	3.00	3.32	4.40	3.62	19200.0	0.6119

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON, TEXAS — STORM OF APR 18-23, 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	308R	4780	39R	4910	ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 19										
2015	4.43	2.58	2.18	7.64	3.10	3.34	4.80	3.78	20400.0	0.6951
2030	4.54	2.60	2.25	7.87	3.10	3.44	5.10	3.90	21300.0	0.7821
2045	4.67	2.65	2.36	8.10	3.20	3.96	5.60	4.13	22000.0	0.8719
2100	4.70	2.71	2.36	8.32	3.20	4.04	5.90	4.24	23000.0	0.9658
2115	4.74	2.73	2.52	8.44	3.30	4.28	6.00	4.34	23700.0	1.0625
2130	4.76	2.76	2.58	8.57	3.30	4.39	6.00	4.38	24300.0	1.1617
2145	4.81	2.79	2.62	8.70	3.30	4.51	6.10	4.44	25000.0	1.2638
2200	4.84	2.83	2.65	8.82	3.40	4.60	6.10	4.49	25300.0	1.4187
2230	4.88	2.85	2.69	8.84	3.40	4.66	6.10	4.51	25500.0	1.6269
2300	4.90	2.87	2.71	8.87	3.40	4.70	6.10	4.53	25000.0	1.9330
2400	4.90	2.88	2.75	8.90	3.40	4.71	6.10	4.54	22700.0	2.3964
APR 20										
0000	4.90	2.88	2.75	8.90	3.40	4.71	6.10	4.54	22700.0	2.3964
0300	4.90	2.90	2.75	8.96	3.40	4.71	6.10	4.55	11900.0	3.2573
0600	4.90	2.90	2.75	8.96	3.40	4.82	6.10	4.57	3920.0	3.5453
1200	4.90	2.90	2.75	8.96	3.40	4.85	6.20	4.59	1830.0	3.6761
1445	4.90	2.90	2.75	8.96	3.40	4.85	6.30	4.61	1490.0	3.7125
1500	4.90	2.90	2.75	8.96	3.40	4.86	6.30	4.61	1460.0	3.7185
1515	4.93	2.98	2.99	9.04	3.80	4.86	6.30	4.72	1440.0	3.7244
1530	4.93	3.10	3.85	9.12	4.10	4.86	6.50	4.95	1420.0	3.7302
1545	5.13	3.18	4.69	9.20	4.10	4.86	6.80	5.19	1410.0	3.7359
1600	5.20	3.24	4.81	9.26	4.10	4.86	7.00	5.28	1510.0	3.7421
1615	5.21	3.24	5.04	9.28	4.20	4.88	7.10	5.34	2750.0	3.7533
1630	5.22	3.24	5.05	9.28	4.20	4.94	7.10	5.35	3680.0	3.7759
1700	5.22	3.26	5.05	9.30	4.20	4.96	7.10	5.36	4850.0	3.8155
1730	5.22	3.26	5.05	9.30	4.20	4.96	7.10	5.36	5880.0	3.8635
1800	5.22	3.26	5.05	9.30	4.20	4.96	7.10	5.36	6460.0	3.9426
1900	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	6270.0	4.0961
2100	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	4300.0	4.2717
2400	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	2480.0	4.4134
APR 21										
0000	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	2480.0	4.4134
0800	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	1180.0	4.6485
1600	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	783.0	4.7508
2400	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	541.0	4.8127
APR 22										
0000	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	541.0	4.8127
1200	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	342.0	4.9062
2400	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	267.0	4.9585
APR 23										
0000	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	267.0	4.9585
2400	5.22	3.27	5.05	9.30	4.20	4.96	7.10	5.36	174.0	4.9846

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON, TEXAS — STORM OF SEP. 17-24 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4850	308R			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 17										
0000	0.0	0.0	0.0	0.0	0.0			0.0	104.0	0.0117
1345	0.0	0.05	0.0	0.10	0.0			0.04	100.0	0.0231
1400	0.0	0.25	0.0	0.10	0.04			0.10	116.0	0.0241
1445	0.0	0.29	0.0	0.10	0.16			0.12	135.0	0.0252
1500	0.12	0.34	0.08	0.10	0.21			0.17	142.0	0.0257
1515	0.24	0.38	0.34	0.20	0.26			0.28	165.0	0.0264
1530	0.30	0.40	0.36	0.20	0.31			0.31	188.0	0.0272
1545	0.30	0.50	0.36	0.20	0.36			0.34	200.0	0.0280
1600	0.30	0.60	0.38	0.20	0.41			0.37	202.0	0.0288
1615	0.32	0.60	0.52	0.50	0.44			0.50	212.0	0.0297
1630	0.40	0.65	0.63	0.70	0.48			0.61	436.0	0.0315
1645	0.48	0.65	0.72	0.70	0.52			0.64	627.0	0.0340
1700	0.55	0.65	0.76	0.70	0.55			0.66	814.0	0.0373
1715	0.56	0.65	0.82	0.70	0.55			0.68	924.0	0.0411
1730	0.58	0.65	0.82	0.70	0.55			0.68	1040.0	0.0454
1745	0.58	0.65	0.84	0.70	0.55			0.68	1170.0	0.0549
1830	0.58	0.65	0.84	0.70	0.55			0.68	1350.0	0.0742
1930	0.60	0.65	0.84	0.70	0.55			0.69	1270.0	0.1001
2100	0.60	0.65	0.88	0.70	0.57			0.70	944.0	0.1348
2400	0.65	0.73	0.88	0.80	0.61			0.76	588.0	0.1516
SEPT 18										
0000	0.65	0.73	0.88	0.80	0.61			0.76	588.0	0.1516
0100	0.72	0.80	0.92	0.80	0.68			0.80	553.0	0.1630
0200	0.82	1.05	1.02	0.90	0.78			0.94	553.0	0.1766
0400	0.97	1.11	1.09	1.00	0.81			1.02	596.0	0.1912
0500	1.06	1.12	1.18	1.20	0.88			1.12	772.0	0.2038
0600	1.06	1.12	1.19	1.20	0.90			1.13	879.0	0.2253
0800	1.06	1.15	1.20	1.20	0.94			1.14	798.0	0.2449
0900	1.12	1.18	1.27	1.20	0.98			1.17	732.0	0.2688
1200	1.22	1.37	1.37	1.40	1.17			1.34	737.0	0.2988
1400	1.32	1.52	1.46	1.50	1.84			1.50	1450.0	0.3344
1500	1.52	2.84	1.58	1.60	1.86			1.92	1450.0	0.3521
1530	1.81	3.50	1.71	1.80	1.89			2.22	1460.0	0.3611
1545	2.45	3.90	2.02	1.80	1.90			2.48	1460.0	0.3670
1600	3.35	4.29	2.32	2.00	1.92			2.83	1480.0	0.3731
1615	3.99	4.35	2.42	2.30	1.96			3.06	1520.0	0.3793
1630	4.59	4.40	2.72	2.60	1.98			3.31	1670.0	0.3861
1645	4.63	4.45	2.78	2.60	2.02			3.34	2090.0	0.3946
1700	4.66	4.50	2.79	2.60	2.05			3.37	2550.0	0.4050
1715	4.68	4.50	2.80	2.60	2.05			3.37	3130.0	0.4178

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON, TEXAS — STORM OF SEP. 17-24 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4850	308R			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 18										
1730	4.70	4.50	2.81	2.60	2.06			3.38	3780.0	0.4564
1830	4.74	4.54	2.83	2.60	2.07			3.40	5270.0	0.5209
1900	4.74	4.54	2.84	2.70	2.10			3.43	5630.0	0.5899
2000	4.77	4.54	2.84	2.70	2.12			3.44	5820.0	0.6849
2100	4.79	4.55	2.88	2.70	2.17			3.46	5790.0	0.8267
2300	4.89	4.61	2.92	2.70	2.23			3.50	5110.0	0.9519
2400	4.95	4.67	3.00	2.80	2.30			3.58	4730.0	1.0098
SEPT 19										
0000	4.95	4.67	3.00	2.80	2.30			3.58	4730.0	1.0098
0100	5.01	4.75	3.02	2.90	2.32			3.64	4390.0	1.1008
0200	5.14	4.83	3.11	3.00	2.38			3.74	4040.0	1.1750
0315	5.27	5.09	3.22	3.10	2.50			3.89	3970.0	1.2236
0330	5.38	5.16	3.28	3.10	2.60			3.94	4020.0	1.2482
0400	5.49	5.24	3.42	3.20	2.71			4.05	4280.0	1.2744
0415	5.51	5.28	3.45	3.40	2.73			4.13	4530.0	1.3114
0500	5.69	5.32	3.62	3.50	2.82			4.24	4890.0	1.3613
0530	5.79	5.35	3.72	3.50	2.86			4.29	5180.0	1.4036
0600	5.84	5.37	3.76	3.50	2.91			4.31	5400.0	1.4697
0700	5.91	5.41	3.79	3.60	2.93			4.37	5380.0	1.5576
0800	5.93	5.74	3.83	3.60	2.97			4.47	5050.0	1.6297
0845	6.05	5.90	3.89	3.70	3.10			4.58	5790.0	1.6770
0900	6.35	6.07	3.93	3.80	3.14			4.71	4760.0	1.6964
0915	6.52	6.14	4.22	4.10	3.24			4.91	5100.0	1.7173
0930	6.56	6.16	4.33	4.20	3.34			4.98	5470.0	1.7396
0945	6.62	6.20	4.40	4.20	3.44			5.03	5800.0	1.7633
1000	6.71	6.24	4.48	4.40	3.55			5.14	6280.0	1.7889
1015	6.77	6.26	4.62	4.70	3.80			5.29	7070.0	1.8178
1030	6.82	6.28	4.68	4.80	4.20			5.39	8220.0	1.8513
1045	6.87	6.30	4.78	4.90	4.52			5.48	9170.0	1.9636
1200	7.03	6.52	4.86	5.00	4.67			5.62	11500.0	2.1279
1230	7.08	6.60	4.92	5.00	4.76			5.67	11100.0	2.1959
1245	7.24	6.63	4.93	5.00	4.80			5.71	10900.0	2.2404
1300	7.36	6.67	5.08	5.20	4.85			5.83	10600.0	2.3053
1330	7.44	6.78	5.18	5.20	4.88			5.89	10400.0	2.3902
1400	7.54	6.90	5.28	5.30	4.91			5.99	9810.0	2.4703
1430	7.70	7.01	5.32	5.30	5.00			6.06	9320.0	2.5464
1500	7.87	7.12	5.48	5.40	5.08			6.18	9000.0	2.6015
1515	7.97	7.18	5.48	5.50	5.10			6.25	8970.0	2.6381
1530	8.08	7.25	5.62	5.60	5.22			6.35	8980.0	2.6748
1545	8.17	7.31	5.71	5.60	5.28			6.40	9020.0	2.7116

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON, TEXAS — STORM OF SEP. 17-24 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4850	308R			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 19										
1600	8.27	7.37	5.83	5.80	5.36			6.52	9160.0	2.7490
1615	8.38	7.47	5.91	5.90	5.45			6.62	9330.0	2.7871
1630	8.50	7.56	6.01	5.90	5.55			6.69	9600.0	2.8263
1645	8.65	7.66	6.06	6.00	5.64			6.79	9920.0	2.8668
1700	8.83	7.76	6.12	6.10	5.74			6.89	10300.0	2.9088
1715	8.96	7.87	6.26	6.20	5.88			7.01	10600.0	2.9521
1730	9.10	7.98	6.35	6.40	6.01			7.15	11000.0	2.9970
1745	9.28	8.09	6.56	6.60	6.14			7.32	11400.0	3.0435
1800	9.41	8.20	6.72	6.60	6.28			7.41	12300.0	3.0937
1815	9.51	8.28	6.82	6.70	6.42			7.51	13100.0	3.1472
1830	9.61	8.36	6.89	6.80	6.57			7.61	13700.0	3.2031
1845	9.78	8.48	7.04	7.00	6.72			7.77	14400.0	3.2619
1900	9.89	8.55	7.12	7.20	6.86			7.89	14900.0	3.3227
1915	9.98	8.59	7.26	7.30	6.97			7.98	15600.0	3.3864
1930	10.07	8.63	7.33	7.40	7.08			8.06	16400.0	3.4534
1945	10.18	8.66	7.47	7.60	7.19			8.18	16800.0	3.5219
2000	10.30	8.70	7.56	7.60	7.30			8.24	17100.0	3.6266
2030	10.41	8.72	7.68	7.80	7.52			8.37	17800.0	3.7720
2100	10.48	8.74	7.71	7.90	7.75			8.44	18400.0	3.9973
2200	10.51	8.90	7.78	8.00	8.09			8.57	18400.0	4.1851
2215	10.52	8.90	7.86	8.20	8.27			8.66	18300.0	4.2598
2230	10.53	8.90	7.94	8.30	8.45			8.73	18100.0	4.3337
2245	10.54	8.90	8.02	8.40	8.63			8.79	18300.0	4.4457
2315	10.55	8.92	8.11	8.60	8.81			8.90	19000.0	4.6396
2400	10.55	8.92	8.15	8.60	8.98			8.92	18400.0	4.9776
SEPT 20										
0000	10.55	8.92	8.15	8.60	8.98			8.92	18400.0	4.9776
0300	10.60	9.00	8.26	8.60	9.03			8.97	12200.0	5.6512
0430	10.60	9.00	8.33	8.70	9.20			9.04	9400.0	5.8814
0600	10.60	9.00	8.44	8.80	9.25			9.09	7610.0	6.3474
1200	10.60	9.00	8.46	8.80	9.25			9.10	3520.0	6.6923
1800	10.60	9.00	8.46	8.80	9.25			9.10	2180.0	6.9058
2400	10.60	9.00	8.46	8.80	9.25			9.10	1530.0	7.0307
SEPT 21										
0000	10.60	9.00	8.46	8.80	9.25			9.10	1530.0	7.0307
0800	10.60	9.00	8.46	8.80	9.25			9.10	1030.0	7.2153
1600	10.60	9.00	8.46	8.80	9.25			9.10	747.0	7.3128
2400	10.60	9.00	8.46	8.80	9.25			9.10	579.0	7.3696
SEPT 22										
0000	10.60	9.00	8.46	8.80	9.25			9.10	579.0	7.3696
0800	10.60	9.00	8.46	8.80	9.25			9.10	394.0	7.4399
1600	10.60	9.00	8.46	9.00	9.25			9.16	358.0	7.4867

STA. NO. 08075000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BRAYS BAYOU AT HOUSTON, TEXAS — STORM OF SEP. 17-24 , 1979

DATE & TIME	GAGE NUMBER 303R	32R	4800	4950	308R			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 22										
2400	10.60	9.00	8.46	9.00	9.25			9.16	300.0	7.5210
SEPT 23										
0000	10.60	9.00	8.46	9.00	9.25			9.16	300.0	7.5210
1200	10.60	9.00	8.46	9.00	9.25			9.16	210.0	7.5768
2400	10.60	9.00	8.46	9.00	9.25			9.16	200.0	7.6062
SEPT 24										
0000	10.60	9.00	8.46	9.00	9.25			9.16	200.0	7.6062
1200	10.60	9.00	8.46	9.00	9.25			9.16	155.0	7.6464
2400	10.60	9.00	8.46	9.00	9.25			9.16	144.0	7.6605

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^2 (275 km^2).

PERIOD OF RECORD.--Occasional discharge msasurements and water-quality data: May 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
NOV										
06...	0915	1400	273	7.1	20.5	60	100	7.1	81	23
27...	1110	800	335	6.9	19.0	90	180	8.1	90	16
FEB										
05...	1100	2750	260	7.4	10.0	120	110	10.5	96	10
06...	1350	2500	235	7.4	8.5	120	50	10.2	90	9.9
MAR										
20...	1215	960	404	7.3	21.0	100	150	7.9	91	7.2

DATE	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 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)
NOV										
06...	2000000	220000	35000	73	7	24	3.1	22	1.1	5.3
27...	990000	440000	140000	82	0	25	4.7	27	1.3	4.3
FEB										
05...	460000	120000	26000	90	0	28	4.9	18	.8	3.0
06...	420000	130000	41000	83	0	27	3.8	16	.8	2.5
MAR										
20...	1000000	460000	51000	110	1	33	6.2	34	1.4	4.4

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
NOV										
06...	80	0	20	22	.2	6.7	143	182	48	.81
27...	110	0	22	26	.4	10	174	356	44	.96
FEB										
05...	110	0	14	20	.3	9.8	152	256	80	.49
06...	110	0	8.3	18	.3	8.6	139	210	36	.36
MAR										
20...	130	0	30	31	.3	14	217	624	112	.78

DATE	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)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV									
06...	.08	.89	1.3	1.2	2.5	1.8	15	7	.30
27...	.14	1.1	1.0	1.7	2.7	.94	21	6	.60
FEB									
05...	.14	.63	.45	1.5	1.9	.63	16	7	.00
06...	.12	.48	.50	1.3	1.8	.53	16	--	--
MAR									
20...	.42	1.2	1.8	.70	2.5	1.0	20	--	.00

08075100 BRAYS BAYOU AT SCOTT STREET, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)
NOV												
06...	0915	.0	.00	.00	.0	.00	.00	.00	.60	.01	.00	.00
27...	1110	.0	--	.02	.0	.00	.00	.00	.24	.02	.00	.00
FEB												
05...	1100	.0	--	.00	.1	.00	.00	.00	.12	.02	.00	.00

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV												
06...	.00	.00	.04	1.2	.00	.00	.02	0	.00	2.9	.06	.00
27...	.00	.01	.02	.02	.00	.00	.01	0	.00	.14	.05	.00
FEB												
05...	.00	.01	.01	.00	.00	.00	.00	0	.00	.01	.01	.00

SIMS BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Sims Bayou drainage basin are shown in figure 14.

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

Weighted-mean rainfall in the drainage basin, based on six rain gages, for the 1979 water year was 64.90 inches, or 16.71 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

No storms were analyzed for the 1979 water year at station 08075400, Sims Bayou at Hiram Clarke Street, and station 08075470, Sims Bayou at Martin Luther King Blvd.

The storms of March 19-20 and Sept. 17-23 were selected for analysis at station 08075500, Sims Bayou at Houston.

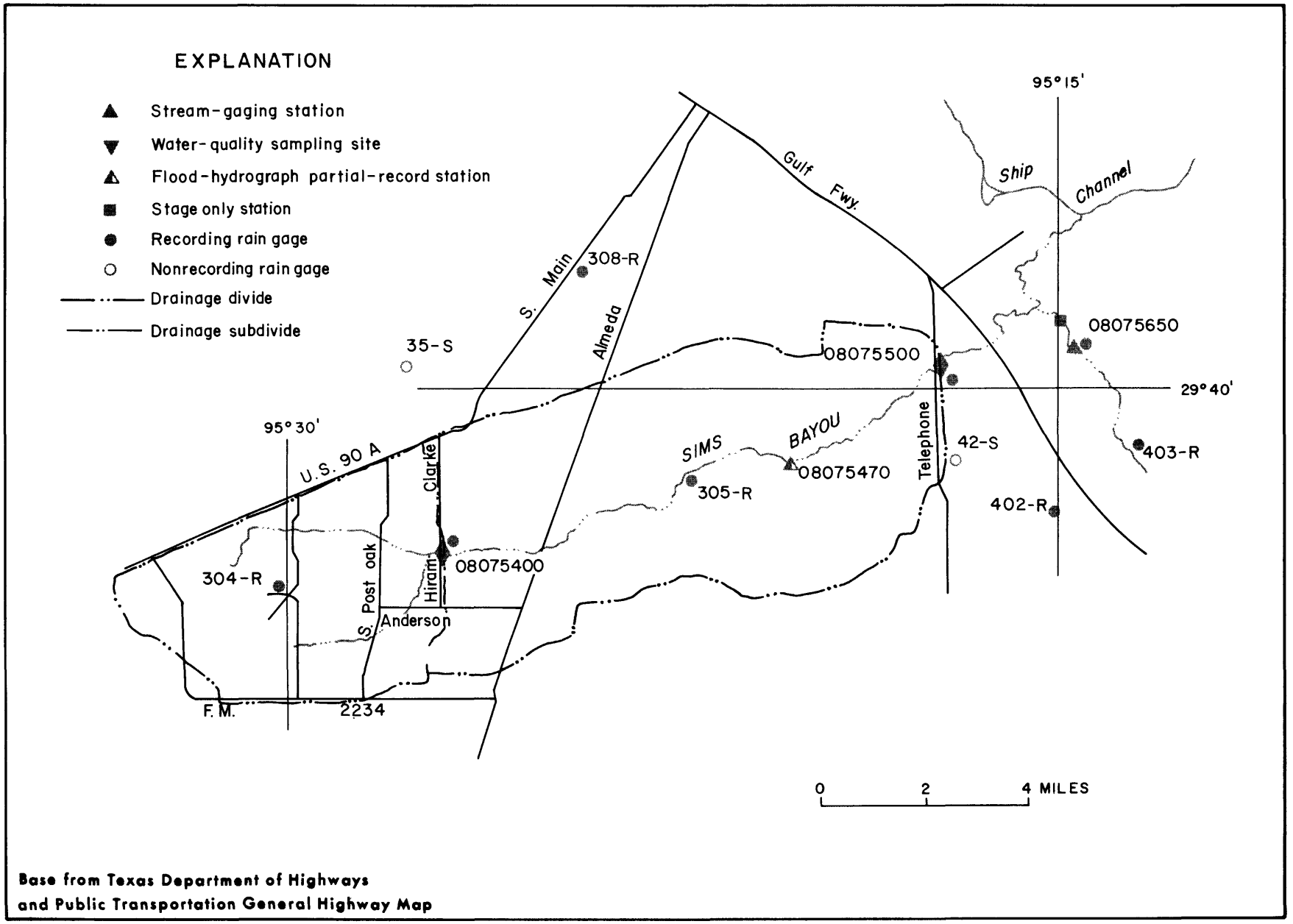


FIGURE 14.- Locations of data-collection sites in and near the Sims Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 12--Storm rainfall-runoff data, 1979 Water Year, Sims Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Sims Bayou at Houston, TX. (Drainage area--63.0 mi^2)								
March 19-20, 1979	2.5	3.53	1.00	1.60	2.80	1.98	0.56	6,100
Sept. 17-23, 1979	40.6	8.44	0.31	0.60	0.80	6.70	0.79	10,900*

*-Annual peak discharge for 1979 water year.

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 mi² (52.3 km²).

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. Datum of gage is National Geodetic Vertical Datum of 1929, 1959 adjustment; unadjusted for land-surface subsidence.

REMARKS.--Water-discharge records fair. No elevation records were collected during most of the year due to channel rectification and bridge construction. 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 610 acre-ft (752,000 m³) of ground water was used for cooling purposes then released to the bayou about 300 ft (90 m) upstream from gage. Recording rain gage located at station.

AVERAGE DISCHARGE.--14 years (water years 1965-78), 26.5 ft³/s (0.750 m³/s), 19,200 acre-ft/yr (23.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 4,500 ft³/s (127 m³/s) June 15, 1976, elevation, 57.12 ft (17.410 m); minimum daily, 1.5 ft³/s (0.042 m³/s) July 26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 650 ft³/s (18.4 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Elevation (ft)	Elevation (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Elevation (ft)	Elevation (m)
Nov. 6	0745	167	4.73	39.31	11.982	Apr. 20	--	b2,000	56.6	--	--
Nov. 26	1830	1,930	54.7	47.94	14.612	June 2	--	b1,000	28.3	--	--
Jan. 6	--	b2,000	56.6	--	--	aJuly 26	b0600	b2,500	70.8	--	--
Feb. 6	--	b800	22.7	--	--	Sept. 19	b2400	*3,400	96.3	52.73	16.072
Mar. 19	--	b2,500	70.8	--	--						

a Water-quality samples were obtained on this date.
b Estimated.

Minimum discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	28		---					---		60
2	13	13	23		---					---		30
3	26	11	34		---					---		20
4	19	13	53		---					---		15
5	13	14	30		---					---		25
6	13	100	---		---					---		50
7	13	21	---		---					---		200
8	13	14	---		---					---		50
9	14	12	---		---					---		25
10	12	13	---		---					---		16
11	11	18	---		---					---		15
12	10	19	15		---					---		14
13	11	15	---		---					---		12
14	11	15	---		17					---		11
15	11	17	---		---					---		10
16	10	16	---		---					11		10
17	10	14	---		---					---		35
18	9.9	14	---		---					---		300
19	9.7	59	---		---					---		1730
20	9.8	44	---		---					---		1650
21	13	16	---		---					---		199
22	13	15	---		---					---		53
23	12	19	---		---					---		30
24	12	13	---		---					---		20
25	11	13	---		---					---		18
26	11	593	---		---					949		17
27	12	261	---		---					---		16
28	12	48	---		---					---		15
29	12	179	---		---					---		15
30	11	47	---		---					---		15
31	12	---	---		---					---		---
TOTAL	382.4	1659	---		---					---		4676
MEAN	12.3	55.3	---		---					---		156
MAX	26	593	---		---					---		1730
MIN	9.7	11	---		---					---		10
AC-FT	758	3290	---		---					---		9270
(††)	.50	7.99	2.10	5.64	3.24	6.10	7.50	4.32	4.09	7.94	2.55	12.06

CAL YR 1978 TOTAL - MEAN - MAX - MIN - AC-FT - †† 38.48
WTR YR 1979 TOTAL - MEAN - MAX - MIN - AC-FT - †† 64.03

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

NOTE.--No elevation record Dec. 6 to Sept. 18.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
NOV										
06...	1200	134	423	7.7	20.5	80	320	6.8	77	20
06...	1915	57	467	7.0	21.0	40	100	5.7	66	42
JUL										
16...	0925	11	845	7.7	28.5	5	48	7.7	100	2.5
26...	1035	1150	160	5.9	24.0	100	170	5.9	72	5.5

DATE	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 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)
NOV										
06...	340000	14000	5500	96	0	30	5.0	47	2.1	6.8
06...	300000	4000	3000	--	--	--	--	--	--	--
JUL										
16...	1000	200	1	150	0	44	9.1	120	4.3	5.8
26...	140000	17000	7800	47	0	15	2.2	12	.8	2.3

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
NOV										
06...	120	0	26	45	.3	8.7	228	756	148	1.5
06...	--	--	--	--	--	--	--	286	126	2.2
JUL										
16...	280	0	35	100	.5	22	474	76	20	.11
26...	62	0	4.9	14	.2	6.1	87	320	16	.24

DATE	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)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV									
06...	.06	1.6	.44	3.2	3.6	2.4	18	5	.00
06...	.02	2.2	.31	9.0	9.3	3.7	45	--	.00
JUL									
16...	.19	.30	.99	1.2	2.2	1.6	8.1	--	.10
26...	.06	.30	.15	.95	1.1	.43	11	6	.00

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)
NOV						
06...	1200	32	200	1	10	5
JUL						
26...	1035	3	40	<1	20	8

DATE	IRON, DIS-SOLVED (UG/L AS FE)	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)
NOV							
06...	40	18	10	.0	1	0	10
JUL							
26...	80	2	4	.0	0	0	8

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)
NOV									
06...	1200	.0	.00	.00	.0	.00	.00	.00	.73
JUL									
26...	1035	.2	.00	.00	.0	.00	.00	.00	.20

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)	METHYL PARA-THION, TOTAL (UG/L)
NOV									
06...	.01	.00	.00	.00	.00	.01	.01	.34	.00
JUL									
26...	.00	.00	.00	.00	.00	.00	.00	.01	.11

DATE	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)
NOV								
06...	.00	.00	.00	0	.00	83	.13	.00
JUL								
26...	.00	.00	.05	0	.00	.00	.00	.00

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 Boulvard (formerly South Park Boulevard), 1.6 miles upstream from Atchison, Topeka, and Santa Fe Railway Co. bridge in south Houston.

DRAINAGE.--48.4 mi^2.

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^3/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 (1952-79) at the gaging station Sims Bayou at Houston (08075500).

EXTREMES FOR CURRENT YEAR.--Only peak gage height published this year The six highest peaks and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Jan. 6	1845	unknown	29.26
Mar. 19	2215	do.	31.71
Apr. 20	0045	do.	32.80
June 2	1345	do.	29.58
July 26	0700	do.	37.31
Sept. 20	0200	do.	*37.49

Minimum discharge not determined.

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 mi² (163.2 km²). Prior to Oct. 1, 1976, 64.0 mi² (165.8 km²).

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. 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 except those above 75 ft³/s (2.12 m³/s) during April, May, and June, which are poor. Low flow is largely sustained by sewage effluent from Houston suburbs and industrial wastes.

AVERAGE DISCHARGE.--27 years, 78.6 ft³/s (2.226 m³/s), 56,950 acre-ft/yr (70.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s (317 m³/s) June 9, 1975, and June 16, 1976; maximum gage height, 33.17 ft (10.110 m) June 9, 1975; minimum daily, 0.9 ft³/s (0.025 m³/s) Aug. 7, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62.3 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
aNov. 6	1100	372	10.5	12.48	3.804	aMay 22	0815	170	4.81	10.70	3.261
aNov. 26	2200	3,390	96.0	22.98	7.004	June 2	1500	3,380	95.7	24.07	7.336
Jan. 6	b2200	4,290	121	24.74	7.541	July 26	b0700	9,080	257	32.94	10.040
aFeb. 6	0700	2,000	56.6	19.70	6.005	aSept. 18	1330	850	24.1	16.00	4.877
Mar. 19	2245	6,100	173	27.85	8.489	Sept. 20	0145	*10,900	309	32.99	10.055
Apr. 20	0215	5,970	169	28.03	8.544						

a Water-quality samples were obtained on this date.
b Estimated.

Minimum discharge, 32 ft³/s (0.91 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	42	75	434	77	47	70	83	111	36	47	158
2	41	41	59	207	72	50	121	105	1890	36	44	156
3	64	41	68	77	135	58	640	69	757	37	46	53
4	73	37	194	67	198	49	492	928	336	37	41	46
5	42	39	91	350	1230	46	131	350	313	45	39	66
6	42	281	56	1600	1570	45	77	120	172	49	55	178
7	40	89	63	1450	501	46	65	75	91	39	65	748
8	40	49	56	242	175	45	61	59	63	43	42	144
9	39	45	60	115	104	44	58	54	53	47	53	64
10	38	45	50	95	78	45	55	51	48	56	50	49
11	37	115	48	304	69	47	56	64	47	61	45	48
12	38	118	46	158	67	46	52	74	45	64	40	42
13	40	51	47	98	64	43	49	54	45	112	38	40
14	45	49	59	73	58	42	48	49	44	88	38	37
15	40	47	83	66	57	41	51	49	43	45	50	32
16	39	52	55	67	57	42	50	49	41	62	102	33
17	38	44	49	65	58	41	52	47	41	169	100	68
18	39	45	48	66	66	49	129	47	40	92	48	519
19	39	135	47	81	54	1230	640	46	42	41	56	3300
20	40	152	46	377	53	2110	3450	43	42	205	61	6400
21	40	64	43	150	55	1020	1130	45	41	103	54	765
22	42	44	41	84	59	1260	231	107	40	158	45	193
23	42	46	42	177	61	543	113	53	40	108	40	91
24	39	47	44	90	56	146	77	44	42	51	35	61
25	38	45	44	68	52	85	63	41	47	1200	33	50
26	37	1020	42	182	51	69	55	41	100	6200	38	46
27	37	1180	41	148	50	61	52	43	87	1090	39	44
28	38	145	40	86	52	57	48	42	43	472	42	42
29	47	485	56	72	---	55	200	186	36	120	60	45
30	44	167	63	162	---	54	148	133	36	68	40	45
31	40	---	50	129	---	100	---	243	---	54	37	---
TOTAL	1298	4760	1806	7340	5179	7616	8464	3394	4776	10988	1523	13563
MEAN	41.9	159	58.3	237	185	246	282	109	159	354	49.1	452
MAX	73	1180	194	1600	1570	2110	3450	928	1890	6200	102	6400
MIN	37	37	40	65	50	41	48	41	36	36	33	32
AC-FT	2570	9440	3580	14560	10270	15110	16790	6730	9470	21790	3020	26900
(††)	.53	7.64	1.81	5.99	3.25	5.95	7.03	4.24	4.71	10.73	2.13	10.89

CAL YR 1978 TOTAL 30218 MEAN 82.8 MAX 1200 MIN 28 AC-FT 59940 †† 35.28
WTR YR 1979 TOTAL 70707 MEAN 194 MAX 6400 MIN 32 AC-FT 140200 †† 64.90

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
NOV										
06...	1520	334	1050	7.4	21.0	80	150	3.5	40	31
07...	1020	77	750	7.1	18.0	80	120	4.2	46	14
27...	0945	1140	363	7.1	19.0	180	200	6.2	69	6.1
DEC										
12...	1040	46	935	7.2	11.5	30	20	6.7	63	16
FEB										
06...	1350	1590	235	8.0	8.0	140	120	10.0	87	4.1
MAR										
14...	0950	42	1450	7.6	20.0	30	20	3.1	35	9.0
MAY										
22...	0955	154	611	2.1	23.0	35	200	2.1	25	25
SEP										
12...	0920	43	1260	7.4	26.0	100	7.2	3.0	38	18
18...	1450	833	285	7.1	24.0	45	85	8.5	104	11
25...	0955	50	899	7.2	23.5	25	9.2	3.0	35	10

DATE	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 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)
NOV										
06...	2400000	180000	15000	120	17	36	6.3	150	6.1	6.4
07...	2000000	34000	2500	--	--	--	--	--	--	--
27...	440000	120000	35000	79	7	25	4.0	38	1.9	3.8
DEC										
12...	290000	11000	1000	130	0	38	8.8	120	4.6	5.9
FEB										
06...	400000	29000	25000	64	0	22	2.3	18	1.0	2.6
MAR										
14...	710000	35000	850	180	0	53	12	240	7.7	5.5
MAY										
22...	1900000	250000	13000	--	--	--	--	--	--	--
SEP										
12...	44000	2100	130	--	--	--	--	--	--	--
18...	220000	160000	100000	70	0	23	3.1	27	1.4	3.5
25...	44000	6700	520	--	--	--	--	--	--	--

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
NOV										
06...	120	0	28	240	.3	7.9	534	416	196	.97
07...	--	--	--	--	--	--	--	408	40	1.1
27...	88	0	26	46	.2	6.9	193	480	60	.66
DEC										
12...	180	0	51	150	.3	14	477	43	15	1.8
FEB										
06...	88	0	10	17	.2	8.4	124	476	72	.30
MAR										
14...	240	0	330	110	.4	23	892	25	6	1.3
MAY										
22...	--	--	--	--	--	--	--	288	74	.09
SEP										
12...	--	--	--	--	--	--	--	25	2	.49
18...	93	0	21	27	.1	6.4	157	212	4	.27
25...	--	--	--	--	--	--	--	43	17	1.3

08075500 SIMS BAYOU AT HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV									
06...	.13	1.1	.94	1.8	2.7	1.9	16	6	.10
07...	.13	1.2	1.4	1.7	3.1	1.8	14	--	.40
27...	.05	.71	.21	1.5	1.7	.59	14	4	.10
DEC									
12...	.20	2.0	1.4	1.2	2.6	2.0	6.5	--	.30
FEB									
06...	.08	.38	.18	1.2	1.4	.43	15	--	--
MAR									
14...	.38	1.7	2.6	1.1	3.7	3.0	6.4	2	.20
MAY									
22...	.18	.27	1.1	2.4	3.5	2.1	18	--	.90
SEP									
12...	.30	.79	.27	1.3	1.6	1.3	16	--	--
18...	.12	.39	.40	1.0	1.4	.80	15	--	--
25...	.37	1.7	2.2	.70	2.9	1.1	10	--	--

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)
NOV						
06...	1520	35	0	0	0	11
27...	0945	7	60	<1	0	9
MAR						
14...	0950	3	100	0	0	0
SEP						
18...	1450	6	50	<1	10	0

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED. (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
NOV							
06...	30	16	10	.0	1	0	30
27...	30	17	<1	.0	0	0	<3
MAR							
14...	20	0	10	.0	0	0	20
SEP							
18...	30	0	1	.4	0	0	20

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)	DIAZINON, TOTAL (UG/L)
NOV									
06...	1520	.0	.00	.00	.2	.00	.00	.00	.29
27...	0945	.0	--	.01	.2	.00	.00	.00	.26
MAR									
14...	0950	.0	--	.00	.1	.00	.00	.00	.00
SEP									
18...	1450	.0	.00	.00	.3	.00	.00	.02	--

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)
NOV									
06...	.01	.00	.00	.00	.00	.00	.06	.15	--
27...	.01	.00	.00	.00	.00	.01	.00	.01	--
MAR									
14...	.01	.00	.00	.00	.00	.00	.01	.00	--
SEP									
18...	.02	.00	.00	--	.01	.00	.00	--	.00

DATE	METHYL PARATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV									
06...	.00	.00	.00	.00	0	.00	11	.08	.07
27...	.00	.00	.00	.00	0	.00	.62	.02	.00
MAR									
14...	.00	.00	.00	.00	0	.00	.05	.00	.00
SEP									
18...	--	--	.00	--	0	--	.00	.00	.00

STA. NO. 08075500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

SIMS BAYOU AT HOUSTON , TEXAS — STORM OF MARCH 19-20 , 1979

DATE & TIME	GAGE NUMBER 304R	305R	5470	5500				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
MAR 19										
0000	0.0	0.0	0.0	0.0				0.0	45.0	0.0089
1600	0.0	0.0	0.0	0.0				0.0	48.0	0.0184
1615	0.10	0.0	0.0	0.0				0.04	48.0	0.0187
1630	0.40	0.0	0.0	0.0				0.16	48.0	0.0190
1645	0.80	0.10	0.10	0.0				0.37	48.0	0.0193
1700	1.20	0.20	0.40	0.20				0.64	51.0	0.0196
1715	1.60	0.70	0.70	0.60				1.05	92.0	0.0202
1730	2.10	1.00	1.30	1.60				1.53	219.0	0.0216
1745	2.40	1.70	1.90	2.20				2.04	460.0	0.0244
1800	2.60	1.90	2.30	2.90				2.31	830.0	0.0295
1815	2.90	2.20	2.70	3.40				2.64	1250.0	0.0372
1830	3.00	2.50	2.90	4.00				2.85	1660.0	0.0474
1845	3.10	2.60	3.00	4.40				2.97	2110.0	0.0604
1900	3.20	2.90	3.20	4.90				3.18	2570.0	0.0762
1915	3.20	2.90	3.50	5.00				3.24	3080.0	0.0951
1930	3.30	3.10	3.50	5.30				3.37	3510.0	0.1275
2000	3.30	3.10	3.60	5.30				3.39	4620.0	0.1843
2030	3.30	3.10	3.60	5.40				3.39	5230.0	0.2808
2130	3.30	3.10	3.70	5.40				3.41	5800.0	0.4056
2215	3.40	3.20	3.70	5.40				3.49	6030.0	0.4983
2245	3.40	3.20	3.70	5.40				3.49	6100.0	0.5733
2315	3.40	3.20	3.70	5.40				3.49	6090.0	0.6482
2345	3.40	3.20	3.70	5.50				3.49	6020.0	0.7037
2400	3.40	3.20	3.70	5.50				3.49	5960.0	0.7587
MAR 20										
0000	3.40	3.20	3.70	5.50				3.49	5960.0	0.7587
0100	3.40	3.20	3.70	5.50				3.49	5620.0	0.9336
0200	3.40	3.20	3.70	5.50				3.49	5200.0	1.1255
0400	3.40	3.20	3.70	5.50				3.49	4180.0	1.3825
0700	3.40	3.20	3.70	5.50				3.49	2770.0	1.5188
0800	3.50	3.20	3.70	5.50				3.53	2400.0	1.6663
1200	3.50	3.20	3.70	5.50				3.53	1440.0	1.8080
1600	3.50	3.20	3.70	5.50				3.53	912.0	1.8977
2000	3.50	3.20	3.70	5.50				3.53	616.0	1.9583
2400	3.50	3.20	3.70	5.50				3.53	441.0	1.9800

STA. NO. 08075500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

SIMS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 304R	5400	5470				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 17									
0000	0.0	0.0	0.0				0.0	31.0	0.0015
0400	0.0	0.0	0.0				0.0	34.0	0.0065
1200	0.0	0.0	0.0				0.0	34.0	0.0102
1245	0.0	0.0	0.10				0.05	39.0	0.0113
1415	0.0	0.0	0.10				0.05	40.0	0.0121
1430	0.0	0.10	0.40				0.21	52.0	0.0125
1445	0.20	0.20	0.40				0.29	64.0	0.0129
1500	0.30	0.20	0.50				0.35	70.0	0.0137
1545	0.30	0.30	0.50				0.39	100.0	0.0149
1600	0.30	0.51	0.60				0.51	110.0	0.0156
1615	0.50	0.61	0.60				0.58	115.0	0.0163
1630	0.60	0.61	0.60				0.60	120.0	0.0182
1730	0.70	0.61	0.60				0.62	132.0	0.0206
1800	0.70	0.61	0.60				0.62	135.0	0.0248
2000	0.70	0.61	0.60				0.62	127.0	0.0326
2300	0.70	0.61	0.60				0.62	99.0	0.0365
2315	0.70	0.71	0.60				0.66	105.0	0.0372
2330	0.80	0.71	0.60				0.68	110.0	0.0378
2345	0.80	0.71	0.70				0.72	115.0	0.0386
2400	0.80	0.71	0.70				0.72	120.0	0.0393
SEPT 18									
0000	0.80	0.71	0.70				0.72	120.0	0.0393
0030	0.80	0.81	0.70				0.76	134.0	0.0409
0045	0.90	0.81	0.80				0.82	142.0	0.0418
0100	1.00	0.81	0.80				0.84	150.0	0.0432
0130	1.00	0.81	0.90				0.89	165.0	0.0452
0200	1.00	0.81	0.90				0.89	180.0	0.0468
0215	1.00	0.91	0.90				0.92	185.0	0.0480
0230	1.10	0.91	0.90				0.94	190.0	0.0521
0400	1.10	0.91	0.90				0.94	210.0	0.0566
0415	1.20	1.01	0.90				1.00	214.0	0.0579
0430	1.20	1.01	1.00				1.04	218.0	0.0653
0700	1.30	1.01	1.00				1.06	265.0	0.0751
0730	1.30	1.01	1.10				1.11	275.0	0.0793
0815	1.30	1.11	1.10				1.14	300.0	0.0857
0915	1.30	1.11	1.20				1.19	330.0	0.0939
1015	1.30	1.21	1.20				1.22	360.0	0.0994
1030	1.40	1.21	1.20				1.24	375.0	0.1040
1115	1.40	1.21	1.30				1.29	490.0	0.1115
1145	1.50	1.21	1.30				1.31	670.0	0.1177

STA. NO. 08075500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

SIMS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 3048	5400	5470					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 18										
1200	1.50	1.31	1.50					1.43	750.0	0.1223
1215	1.50	1.31	1.60					1.48	790.0	0.1296
1245	1.60	1.31	1.60					1.50	840.0	0.1374
1300	1.60	1.31	1.70					1.54	845.0	0.1452
1330	1.60	1.41	1.80					1.62	850.0	0.1608
1430	1.70	1.41	1.80					1.64	840.0	0.1789
1515	1.70	1.41	1.80					1.64	830.0	0.1891
1530	2.00	1.41	1.80					1.70	822.0	0.1942
1545	2.10	1.51	1.80					1.76	806.0	0.1991
1600	2.10	1.61	1.80					1.79	798.0	0.2040
1615	2.30	1.61	1.90					1.88	790.0	0.2089
1630	2.40	1.61	1.90					1.90	782.0	0.2209
1730	2.40	1.71	1.90					1.93	768.0	0.2422
1845	2.40	1.71	2.00					1.98	732.0	0.2737
2100	2.40	1.71	2.00					1.98	690.0	0.3055
2230	2.40	1.81	2.00					2.01	718.0	0.3210
2245	2.50	1.81	2.00					2.03	730.0	0.3299
2330	2.50	1.91	2.00					2.07	770.0	0.3394
2345	2.50	1.91	2.10					2.11	784.0	0.3442
2400	2.50	1.91	2.10					2.11	802.0	0.3504
SEPT 19										
0000	2.50	1.91	2.10					2.11	802.0	0.3504
0045	2.60	1.91	2.10					2.13	851.0	0.3646
0100	2.60	1.91	2.10					2.13	866.0	0.3752
0145	2.60	2.01	2.20					2.21	887.0	0.3861
0200	2.70	2.11	2.20					2.27	906.0	0.3945
0230	2.70	2.11	2.30					2.31	925.0	0.4030
0245	2.80	2.11	2.40					2.38	940.0	0.4088
0300	2.80	2.21	2.40					2.41	978.0	0.4148
0315	2.90	2.31	2.50					2.51	1000.0	0.4209
0330	3.00	2.31	2.50					2.53	1020.0	0.4272
0345	3.00	2.41	2.60					2.61	1040.0	0.4336
0400	3.10	2.41	2.60					2.63	1060.0	0.4401
0415	3.20	2.62	2.70					2.77	1080.0	0.4468
0430	3.30	2.62	2.70					2.79	1090.0	0.4535
0445	3.30	2.72	2.80					2.87	1110.0	0.4637
0515	3.50	2.72	2.90					2.96	1140.0	0.4777
0545	3.50	2.82	2.90					2.99	1180.0	0.4922
0615	3.60	2.82	2.90					3.01	1220.0	0.5222
0745	3.60	2.82	3.00					3.06	1290.0	0.5500

STA. NO. 08075500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

SIMS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 3048	5400	5470					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 19										
0800	3.60	2.92	3.00					3.09	1300.0	0.5580
0815	3.70	2.92	3.00					3.11	1310.0	0.5701
0845	3.70	3.02	3.10					3.19	1340.0	0.5824
0900	3.90	3.12	3.30					3.36	1380.0	0.5909
0915	4.00	3.22	3.30					3.41	1430.0	0.5997
0930	4.10	3.22	3.40					3.48	1480.0	0.6088
0945	4.10	3.32	3.40					3.51	1540.0	0.6183
1000	4.20	3.42	3.70					3.70	1620.0	0.6283
1015	4.30	3.52	4.00					3.89	1740.0	0.6443
1045	4.30	3.72	4.20					4.05	2100.0	0.6637
1100	4.40	3.72	4.40					4.16	2320.0	0.6993
1200	4.40	3.72	4.50					4.21	2840.0	0.7517
1230	4.40	3.82	4.60					4.29	2970.0	0.7791
1245	4.50	3.82	4.60					4.31	3060.0	0.7979
1300	4.60	3.82	4.70					4.37	3130.0	0.8172
1315	4.60	3.92	4.70					4.41	3200.0	0.8565
1400	4.70	3.92	4.70					4.43	3330.0	0.8975
1415	4.70	4.02	4.70					4.46	3370.0	0.9182
1430	4.70	4.02	4.80					4.51	3380.0	0.9390
1445	4.80	4.12	4.80					4.56	3400.0	0.9599
1500	4.90	4.12	4.90					4.63	3450.0	0.9811
1515	5.00	4.22	4.90					4.68	3470.0	1.0025
1530	5.00	4.32	5.00					4.76	3530.0	1.0242
1545	5.10	4.42	5.00					4.82	3570.0	1.0571
1615	5.30	4.62	5.20					5.02	3660.0	1.0909
1630	5.40	4.72	5.40					5.16	3730.0	1.1138
1645	5.50	4.72	5.50					5.23	3850.0	1.1493
1715	5.70	4.92	5.60					5.38	4080.0	1.1869
1730	5.80	5.23	5.80					5.60	4150.0	1.2125
1745	6.10	5.33	6.00					5.79	4260.0	1.2387
1800	6.30	5.43	6.10					5.91	4450.0	1.2660
1815	6.40	5.53	6.30					6.05	4610.0	1.2944
1830	6.50	5.63	6.40					6.15	4780.0	1.3238
1845	6.70	5.84	6.50					6.31	4970.0	1.3543
1900	6.80	6.05	6.70					6.49	5120.0	1.3858
1915	6.90	6.15	6.80					6.59	5320.0	1.4185
1930	7.00	6.15	6.90					6.66	5510.0	1.4524
1945	7.10	6.36	7.00					6.80	5730.0	1.4876
2000	7.20	6.46	7.20					6.94	5930.0	1.5241

STA. NO. 08075500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

SIMS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 3048	5400	5470					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 19										
2015	7.30	6.56	7.30					7.04	6170.0	1.5620
2030	7.30	6.77	7.50					7.20	6470.0	1.6018
2045	7.40	6.77	7.60					7.27	6730.0	1.6432
2100	7.50	6.87	7.70					7.37	6960.0	1.6860
2115	7.50	6.87	7.80					7.41	7210.0	1.7303
2130	7.50	6.87	8.00					7.50	7430.0	1.7760
2145	7.50	6.97	8.00					7.54	7660.0	1.8231
2200	7.60	7.18	8.10					7.68	7890.0	1.8716
2215	7.70	7.28	8.20					7.78	8120.0	1.9216
2230	8.00	7.49	8.40					8.00	8360.0	1.9730
2245	8.10	7.49	8.60					8.11	8630.0	2.0791
2330	8.20	7.49	8.70					8.18	9640.0	2.1977
2345	8.30	7.49	8.80					8.24	9890.0	2.2585
2400	8.30	7.49	8.80					8.24	10100.0	2.3516
SEPT 20										
0000	8.30	7.49	8.80					8.24	10100.0	2.3516
0100	8.50	7.59	8.90					8.36	10800.0	2.6462
0145	8.50	7.59	8.90					8.36	10900.0	2.8137
0215	8.50	7.59	8.90					8.36	10900.0	3.0483
0330	8.50	7.59	8.90					8.36	10700.0	3.4102
0500	8.50	7.59	8.90					8.36	10100.0	3.7828
0630	8.50	7.59	8.90					8.36	9560.0	4.0180
0700	8.50	7.59	9.00					8.41	9330.0	4.4196
1000	8.50	7.59	9.00					8.41	7550.0	4.8839
1200	8.50	7.69	9.00					8.44	6310.0	5.3495
1600	8.50	7.69	9.00					8.44	4130.0	5.7558
2000	8.50	7.69	9.00					8.44	2540.0	6.0057
2400	8.50	7.69	9.00					8.44	1580.0	6.1417
SEPT 21										
0000	8.50	7.69	9.00					8.44	1580.0	6.1417
0600	8.50	7.69	9.00					8.44	940.0	6.3387
1200	8.50	7.69	9.00					8.44	702.0	6.4941
2400	8.50	7.69	9.00					8.44	341.0	6.5696
SEPT 22										
0000	8.50	7.69	9.00					8.44	341.0	6.5696
1200	8.50	7.69	9.00					8.44	178.0	6.6473
2400	8.50	7.69	9.00					8.44	121.0	6.6830
SEPT 23										
0000	8.50	7.69	9.00					8.44	121.0	6.6830
2400	8.50	7.69	9.00					8.44	74.0	6.7009

BERRY BAYOU DRAINAGE BASIN

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

Weighted-mean rainfall over the drainage basin for the 1979 water year was not determined.

The storms of July 25-27, Sept. 1-2, and Sept. 18-21 were selected for analysis at gaging station 08075550, Berry Bayou at Gilpin Street, and station 08075650, Berry Bayou at Forest Oaks Street.

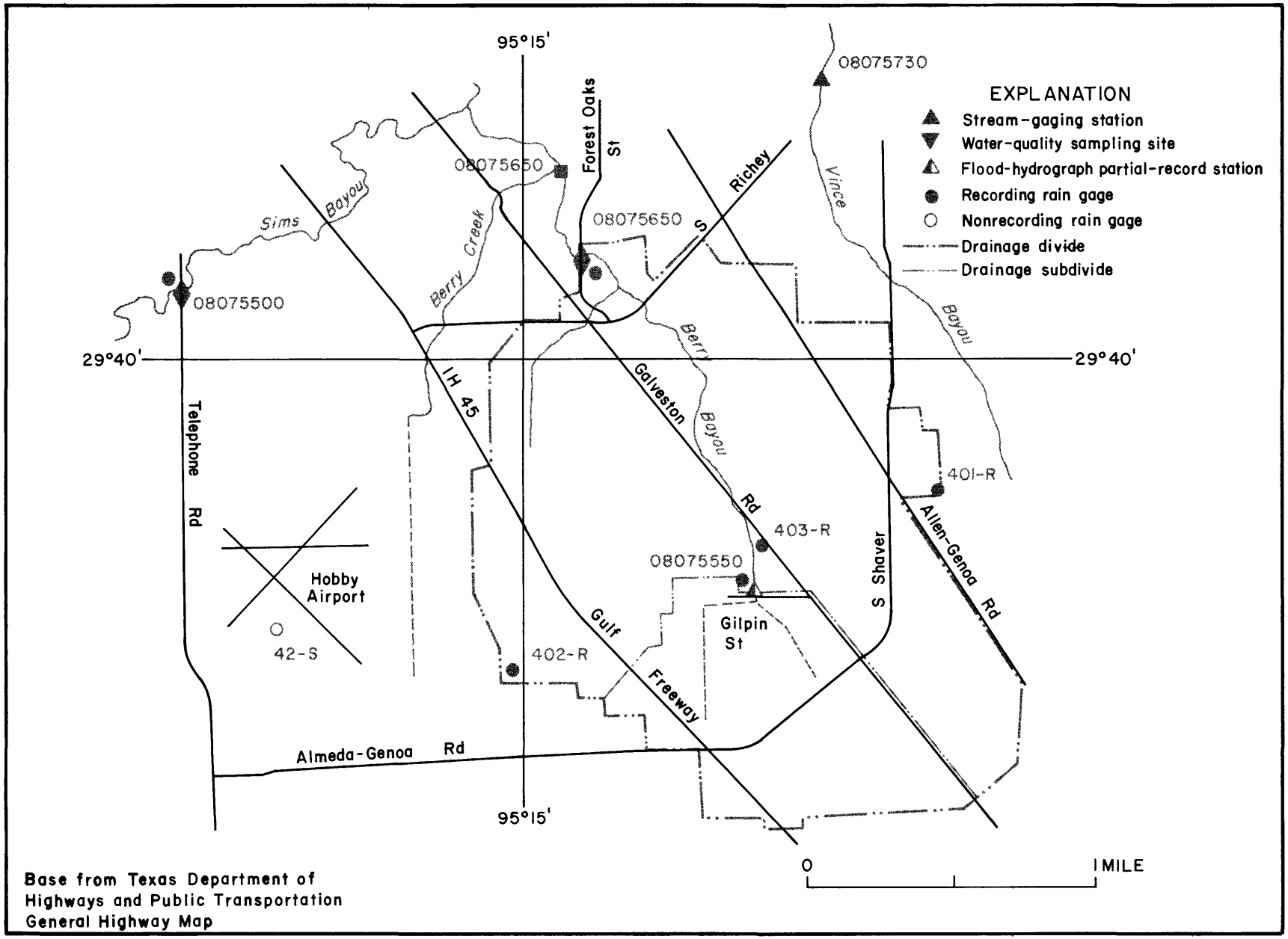


FIGURE 15.-Locations of data-collection sites in and near the Berry Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 13--Storm rainfall-runoff data, 1979 Water Year, Berry Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Berry Bayou at Gilpin St., Houston, TX. (Drainage area--2.56 mi^2)								
July 25-27, 1979	15.3	12.15	0.72	1.30	1.92	9.23	0.76	526
Sept. 1-2, 1979	1.7	4.08	1.10	2.00	3.10	2.76	0.68	421
Sept. 18-21, 1979	36.1	11.13	0.57	1.03	1.66	10.50	0.94	538*
Berry Bayou at Forest Oaks St., Houston, TX. (Drainage area--10.7 mi^2)								
July 25-27, 1979	15.2	10.81	0.78	1.22	1.82	10.22	0.95	4,650*
Sept. 1-2, 1979	1.2	3.02	1.05	1.95	3.06	1.84	0.61	1,960
Sept. 18-21, 1979	36.1	11.13	0.57	1.03	1.66	10.89	0.98	4,350

*-Annual peak discharge for 1979 water year.

STA. NO. 0807550 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT GILPIN STREET , HOUSTON , TEXAS — STORM OF JULY 25-27 , 1979

DATE & TIME	GAGE NUMBER 5550	402R						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 25										
0000	0.0	0.0						0.0	5.0	0.0117
0745	0.0	0.0						0.0	5.0	0.0238
0800	0.10	0.05						0.10	5.0	0.0314
1245	0.10	0.05						0.10	5.0	0.0390
1300	0.40	0.42						0.40	49.0	0.0464
1315	1.10	0.99						1.09	74.0	0.0576
1330	1.70	1.26						1.68	99.0	0.0801
1400	1.90	1.40						1.87	220.0	0.1466
1430	2.20	1.57						2.17	259.0	0.2250
1500	2.40	1.94						2.38	278.0	0.3092
1530	2.90	2.30						2.87	307.0	0.4021
1600	3.20	2.56						3.17	327.0	0.5010
1630	3.40	2.60						3.36	341.0	0.6559
1730	3.40	2.64						3.36	345.0	1.0213
2000	3.40	2.73						3.37	316.0	1.3082
2030	3.60	2.83						3.56	303.0	1.3999
2100	4.00	3.48						3.97	309.0	1.4701
2115	4.20	4.11						4.20	318.0	1.5182
2130	4.70	4.29						4.68	339.0	1.5695
2145	4.90	4.35						4.87	352.0	1.6227
2200	5.00	4.37						4.97	360.0	1.7589
2300	5.30	4.49						5.26	372.0	1.9841
2400	5.80	4.76						5.75	380.0	2.1279
JULY 26										
0000	5.80	4.76						5.75	380.0	2.1279
0030	5.80	4.78						5.75	382.0	2.2433
0045	5.80	5.03						5.76	382.0	2.3011
0100	6.20	5.75						6.18	382.0	2.3879
0130	7.50	6.38						7.44	416.0	2.4823
0145	7.60	6.73						7.56	426.0	2.5467
0200	8.00	7.07						7.95	437.0	2.6129
0215	8.30	7.18						8.24	448.0	2.6807
0230	8.30	7.48						8.26	454.0	2.7494
0245	8.60	8.01						8.57	461.0	2.8191
0300	9.20	8.70						9.17	472.0	2.9263
0330	9.90	9.40						9.87	486.0	3.0366
0345	10.00	9.50						9.97	492.0	3.1110
0400	10.40	9.90						10.37	497.0	3.2239
0430	11.00	10.50						10.97	506.0	3.4536
0530	11.00	10.50						10.97	517.0	3.7665

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^2. Oct. 1, 1973 to Oct. 1, 1978, 2.87 mi^2. Prior to Oct. 1, 1973, 3.26 mi^2.

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 fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 738 ft^3/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^3/s and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	GAGE HEIGHT (ft)
Mar. 19	2015	321	33.73
July 26	0700	526	37.07
Sept. 1	1845	421	35.70
Sept. 18	1345	319	34.50
Sept. 20	0145	*538	36.66

Minimum discharge not determined.

STA. NO. 0807550 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT GILPIN STREET , HOUSTON , TEXAS — STORM OF JULY 25-27 , 1979

DATE & TIME	GAGE NUMBER 5550	402R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 26									
0630	11.20	10.70					11.17	523.0	4.0039
0700	11.20	10.70					11.17	526.0	4.1631
0730	11.20	10.70					11.17	524.0	4.3217
0800	11.20	10.70					11.17	523.0	4.5592
0900	11.30	10.80					11.27	513.0	5.0249
1100	11.40	10.90					11.37	485.0	5.4653
1200	11.60	11.10					11.57	468.0	5.8902
1400	11.70	11.22					11.68	435.0	6.4168
1600	11.70	11.22					11.68	402.0	6.9035
1800	11.70	11.22					11.68	368.0	7.4604
2100	11.70	11.22					11.68	300.0	8.0052
2400	11.70	11.22					11.68	194.0	8.2400
JULY 27									
0000	11.70	11.22					11.68	194.0	8.2400
0200	11.70	11.22					11.68	135.0	8.5030
0500	11.70	11.22					11.68	80.0	8.5999
0600	11.80	11.22					11.77	73.0	8.6330
0630	12.10	11.22					12.06	81.0	8.6698
0730	12.10	11.22					12.06	89.0	8.7102
0800	12.10	11.22					12.06	90.0	8.7511
0900	12.20	11.22					12.15	83.0	8.8515
1200	12.20	11.22					12.15	64.0	8.9871
1600	12.20	11.22					12.15	48.0	9.1033
2000	12.20	11.22					12.15	38.0	9.1953
2400	12.20	11.22					12.15	30.0	9.2317

STA. NO. 08075550 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT GILPIN STREET , HOUSTON , TEXAS — STORM OF SEP . 1-2 , 1979

DATE & TIME	GAGE NUMBER 5550	GAGE NUMBER 402R						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 1										
0000	0.0	0.0						0.0	5.0	0.0068
0430	0.10	0.0						0.09	5.0	0.0288
1430	0.20	0.0						0.19	5.0	0.0462
1600	0.20	0.0						0.19	5.0	0.0488
1615	0.40	0.0						0.38	10.0	0.0503
1630	0.50	0.0						0.47	20.0	0.0533
1645	0.70	0.24						0.68	30.0	0.0579
1700	1.60	0.64						1.55	40.0	0.0639
1715	2.50	0.93						2.42	146.0	0.0860
1730	3.60	1.38						3.49	270.0	0.1269
1745	3.80	1.57						3.69	366.0	0.1823
1800	4.00	1.62						3.88	402.0	0.2431
1815	4.05	1.66						3.93	417.0	0.3062
1830	4.10	1.67						3.98	420.0	0.3698
1845	4.10	1.67						3.98	421.0	0.4335
1900	4.10	1.68						3.98	420.0	0.5288
1930	4.10	1.70						3.98	416.0	0.6547
2000	4.10	1.71						3.98	408.0	0.7782
2030	4.10	1.71						3.98	396.0	0.8980
2100	4.10	1.71						3.98	384.0	1.0724
2200	4.10	1.71						3.98	354.0	1.2867
2300	4.10	1.71						3.98	318.0	1.4791
2400	4.10	1.71						3.98	272.0	1.6026
SEP. 2										
0000	4.10	1.71						3.98	272.0	1.6026
0100	4.10	1.71						3.98	230.0	1.7830
0200	4.10	1.71						3.98	200.0	1.9646
0400	4.10	1.71						3.98	150.0	2.1462
0600	4.10	1.71						3.98	112.0	2.3157
0900	4.10	1.71						3.98	75.0	2.4519
1200	4.20	1.71						4.08	50.0	2.5881
1800	4.20	1.71						4.08	35.0	2.7152
2400	4.20	1.71						4.08	25.0	2.7606

STA. NO. 08075550 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT GILPIN STREET, HOUSTON, TEXAS — STORM OF SEPT. 18-21, 1979

DATE & TIME	GAGE NUMBER 401R	402R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18									
0000	0.0	0.0					0.0	5.0	0.0023
0130	0.16	0.18					0.17	10.0	0.0174
0500	0.31	0.29					0.30	10.0	0.0386
0830	0.41	0.37					0.39	5.0	0.0446
0900	0.47	0.45					0.46	10.0	0.0515
1045	0.58	0.54					0.56	10.0	0.0583
1115	0.80	0.57					0.70	10.0	0.0605
1130	1.03	0.69					0.88	15.0	0.0628
1145	1.24	0.83					1.06	30.0	0.0673
1200	1.55	1.16					1.37	45.0	0.0742
1215	1.67	1.53					1.61	107.0	0.0903
1230	1.92	1.70					1.82	191.0	0.1192
1245	1.94	1.90					1.92	246.0	0.1565
1300	1.97	2.07					2.01	289.0	0.2221
1330	1.97	2.09					2.02	316.0	0.2938
1345	1.97	2.09					2.02	319.0	0.3421
1400	1.97	2.09					2.02	316.0	0.4138
1430	1.97	2.09					2.02	304.0	0.5058
1500	1.97	2.10					2.03	286.0	0.6140
1545	2.00	2.12					2.05	250.0	0.7275
1630	2.04	2.18					2.10	218.0	0.8760
1800	2.08	2.21					2.14	169.0	1.0550
2000	2.11	2.26					2.18	123.0	1.2039
2200	2.15	2.26					2.20	87.0	1.2829
2300	2.19	2.31					2.24	73.0	1.3271
2400	2.24	2.37					2.30	64.0	1.3634
SEP. 19									
0000	2.24	2.37					2.30	64.0	1.3634
0145	2.43	2.42					2.43	59.0	1.4160
0200	2.55	2.49					2.52	60.0	1.4297
0230	2.60	2.52					2.56	64.0	1.4442
0245	2.70	2.64					2.67	73.0	1.4663
0330	2.80	2.76					2.78	103.0	1.5130
0415	2.89	2.95					2.92	133.0	1.5734
0500	2.95	3.02					2.98	156.0	1.6678
0615	3.03	3.17					3.09	173.0	1.8249
0800	3.11	3.22					3.16	154.0	1.9414
0845	3.32	3.26					3.29	146.0	1.9856
0900	3.36	3.46					3.40	152.0	2.0201
0930	3.50	3.53					3.51	169.0	2.0713

STA. NO. 08075550 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT GILPIN STREET, HOUSTON, TEXAS — STORM OF SEPT. 18-21, 1979

DATE & TIME	GAGE NUMBER 401R	402R						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
1000	3.88	3.71						3.80	209.0	2.1662
1100	4.34	4.51						4.42	328.0	2.2902
1115	4.36	4.59						4.46	340.0	2.3674
1145	4.44	4.61						4.52	345.0	2.4457
1200	4.50	4.62						4.55	345.0	2.4979
1215	4.57	4.70						4.63	345.0	2.5762
1245	4.76	4.80						4.78	345.0	2.6807
1315	4.80	4.87						4.83	346.0	2.9163
1500	5.02	5.02						5.02	320.0	3.1342
1530	5.08	5.11						5.09	316.0	3.2537
1615	5.32	5.29						5.31	314.0	3.3725
1645	5.46	5.48						5.47	328.0	3.4718
1715	5.82	5.64						5.74	338.0	3.6252
1815	6.14	6.11						6.13	363.0	3.7900
1845	6.41	6.25						6.34	370.0	4.0700
2045	7.45	7.35						7.40	408.0	4.3478
2100	7.75	7.51						7.64	412.0	4.4102
2115	8.06	7.61						7.86	417.0	4.5048
2145	8.43	8.00						8.24	428.0	4.6344
2215	9.46	8.29						8.93	441.0	4.7345
2230	9.80	8.52						9.22	448.0	4.8023
2245	10.09	9.09						9.64	465.0	4.8726
2300	10.22	9.44						9.87	476.0	4.9807
2330	10.64	9.64						10.19	490.0	5.1290
2400	11.20	10.09						10.70	505.0	5.2245
SEP. 20										
0000	11.20	10.09						10.70	505.0	5.2245
0015	11.22	10.19						10.76	508.0	5.3205
0030	11.30	10.44						10.91	517.0	5.3987
0045	11.35	10.60						11.01	520.0	5.4774
0100	11.40	10.64						11.06	526.0	5.5570
0115	11.40	10.76						11.11	532.0	5.6778
0145	11.40	10.81						11.13	538.0	5.8406
0215	11.40	10.81						11.13	538.0	6.0441
0300	11.40	10.81						11.13	534.0	6.6502
0600	11.40	10.81						11.13	505.0	7.6054
0915	11.40	10.81						11.13	447.0	8.4171
1200	11.40	10.81						11.13	380.0	9.0784
1500	11.40	10.81						11.13	276.0	9.5796
1800	11.40	10.81						11.13	166.0	9.8811

STA. NO. 08075550 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT GILPIN STREET, HOUSTON, TEXAS — STORM OF SEPT. 18-21, 1979

DATE & TIME	GAGE NUMBER 401R	402R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 20									
2100	11.40	10.81					11.13	97.0	10.0572
2400	11.40	10.81					11.13	57.0	10.1607
SEP. 21									
0000	11.40	10.81					11.13	57.0	10.1607
0600	11.40	10.81					11.13	38.0	10.3505
1200	11.40	10.81					11.13	25.0	10.4867
2400	11.40	10.81					11.13	5.0	10.5048

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 mi² (27.7 km²). Prior to Oct. 1, 1973, 11.1 mi² (28.7 km²). Oct. 1, 1976, to Dec. 31, 1977, 10.1 mi² (26.2 km²). 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.

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 ft³/s (144 m³/s), 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 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
aNov. 6	0600	c150	4.25	b6.25	1.905	aJuly 17	1800	486	13.8	8.22	2.505
aNov. 26	0815	490	13.9	b12.13	3.697	July 25	1600	1,700	48.1	b14.65	4.465
aFeb. 6	0400	473	13.4	b10.33	3.149	aJuly 26	0515	*4,650	132	b22.83	6.959
Mar. 19	2000	1,430	40.5	b17.87	5.447	Sept. 1	1830	1,960	55.5	15.49	4.721
aMar. 21	0815	734	20.8	b9.70	2.957	Sept. 18	1415	1,010	28.6	b11.57	3.527
Mar. 22	1200	c1,100	31.2	b10.95	3.338	Sept. 20	0130	4,350	123	b23.85	7.269

a Water-quality samples were made on this date.
b Not at same time as peak discharge.
c About.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: October 1968 to current year. Water temperatures: April 1964 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
NOV										
06...	1415	73	374	7.3	22.0	60	40	5.1	60	13
27...	0820	75	406	7.9	19.5	200	100	5.7	64	8.1
FEB										
06...	1005	295	215	7.2	8.0	140	45	10.0	87	5.9
MAR										
21...	1025	520	229	7.5	18.0	110	100	6.1	66	12
JUL										
17...	1640	416	254	7.3	26.0	160	150	5.0	62	12
26...	1255	2640	92	7.3	24.0	50	34	5.9	72	4.2

DATE	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 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)
NOV										
06...	1200000	140000	25000	--	--	--	--	--	--	--
27...	1200000	200000	40000	100	0	32	5.6	40	1.7	4.6
FEB										
06...	260000	120000	31000	71	3	22	3.9	14	.7	2.6
MAR										
21...	520000	140000	52000	79	6	25	3.9	13	.6	3.1
JUL										
17...	520000	280000	18000	67	0	21	3.5	21	1.1	2.8
26...	180000	100000	10000	33	0	11	1.3	3.3	.3	1.4

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
NOV										
06...	--	--	--	--	--	--	--	63	19	.29
27...	140	0	26	31	.3	11	220	156	20	1.4
FEB										
06...	83	0	7.7	19	.2	8.1	118	95	24	.53
MAR										
21...	88	0	13	13	.3	.4	115	228	20	.57
JUL										
17...	84	0	17	20	.3	4.7	132	976	86	.78
26...	44	0	3.4	3.0	.1	3.7	49	86	11	.10

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV									
06...	.03	.32	.29	1.7	2.0	1.2	14	--	.60
27...	.13	1.5	.42	1.5	1.9	.69	19	--	.20
FEB									
06...	.10	.63	.29	1.6	1.9	.65	--	--	--
MAR									
21...	.21	.78	.35	.75	1.1	.52	22	2	.10
JUL									
17...	.16	.94	.43	1.8	2.2	.67	36	11	.10
26...	.02	.12	.04	.82	.86	.22	6.0	5	.00

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)
MAR						
21...	1025	5	0	1	0	6
JUL						
17...	1640	6	0	0	10	5
26...	1255	2	30	<1	10	4

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
MAR							
21...	100	0	0	.0	0	0	20
JUL							
17...	80	0	20	.0	0	0	20
26...	40	4	1	.0	0	0	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)
MAR									
21...	1025	.0	--	.00	.2	.01	.00	.01	.40
JUL									
17...	1640	3.1	.00	.00	.8	.00	.00	.00	.34
26...	1255	.1	.00	.00	.1	.00	.00	.00	.20

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
MAR									
21...	.02	.00	.00	.00	.02	.04	.00	.03	.00
JUL									
17...	.00	.00	.00	.00	.00	.00	.00	.00	.00
26...	.00	.00	.00	.00	.00	.00	.00	.10	.03

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR								
21...	.00	.00	.00	0	.00	.24	.07	.01
JUL								
17...	.00	.00	.00	0	.00	.79	.00	.00
26...	.00	.00	.04	0	.00	.03	.00	.01

STA. NO. 08075650 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TEXAS — STORM OF JULY 25-27, 1979

DATE & TIME	GAGE NUMBER 401R	5650					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 25									
0000	0.0	0.0					0.0	5.0	0.0025
0700	0.0	0.0					0.0	5.0	0.0056
0830	0.08	0.10					0.09	10.0	0.0092
1200	0.08	0.10					0.09	10.0	0.0119
1215	0.08	0.20					0.13	15.0	0.0128
1245	0.10	0.20					0.14	15.0	0.0136
1300	0.60	0.62					0.61	194.0	0.0206
1315	1.24	0.72					1.03	287.0	0.0310
1330	1.72	0.82					1.36	365.0	0.0442
1345	1.86	1.03					1.53	446.0	0.0604
1400	1.93	1.13					1.61	507.0	0.0787
1415	2.06	1.23					1.73	739.0	0.1055
1430	2.14	1.33					1.82	854.0	0.1364
1445	2.27	1.43					1.93	980.0	0.1719
1500	2.52	1.74					2.21	1170.0	0.2142
1515	2.72	1.95					2.41	1380.0	0.2642
1530	2.86	2.16					2.58	1470.0	0.3174
1545	3.09	2.37					2.80	1600.0	0.3753
1600	3.23	2.58					2.97	1700.0	0.4677
1630	3.33	2.68					3.07	1580.0	0.5535
1645	3.37	2.78					3.13	1530.0	0.6089
1700	3.39	2.78					3.15	1450.0	0.6876
1730	3.39	2.78					3.15	1340.0	0.7846
1800	3.39	2.78					3.15	1180.0	0.9128
1900	3.39	2.78					3.15	980.0	1.0547
2000	3.44	2.78					3.18	887.0	1.1350
2015	3.59	2.78					3.27	882.0	1.1670
2030	3.66	2.88					3.35	924.0	1.2004
2045	3.79	3.09					3.51	1020.0	1.2373
2100	4.00	3.40					3.76	1220.0	1.2815
2115	4.78	3.50					4.27	1450.0	1.3340
2130	4.98	3.81					4.51	1550.0	1.4182
2200	5.19	3.91					4.68	1720.0	1.5116
2215	5.28	3.91					4.73	1740.0	1.5746
2230	5.39	4.01					4.84	1710.0	1.6984
2315	5.64	4.11					5.03	1520.0	1.8360
2345	5.82	4.21					5.18	1540.0	1.9196
2400	5.84	4.21					5.19	1510.0	1.9606
JULY 26									
0000	5.84	4.21					5.19	1510.0	1.9606

STA. NO. 08075650 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TEXAS — STORM OF JULY 25-27, 1979

DATE & TIME	GAGE NUMBER 401R	5650					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 26									
0015	5.85	4.31					5.23	1460.0	2.0271
0030	5.85	4.31					5.23	1420.0	2.0786
0045	6.10	4.31					5.38	1380.0	2.1285
0100	6.72	4.41					5.80	1570.0	2.1854
0115	7.32	4.72					6.28	2030.0	2.2589
0130	7.60	5.14					6.62	2240.0	2.3400
0145	7.92	5.35					6.89	2370.0	2.4258
0200	8.31	5.45					7.17	2570.0	2.5188
0215	8.45	5.76					7.37	2780.0	2.6195
0230	8.71	6.07					7.65	3140.0	2.7331
0245	9.18	6.49					8.10	3490.0	2.8595
0300	9.52	6.80					8.43	3820.0	2.9978
0315	9.75	7.32					8.78	3940.0	3.1405
0330	9.92	7.53					8.96	4060.0	3.2874
0345	10.24	7.84					9.28	4180.0	3.4388
0400	10.64	7.94					9.56	4250.0	3.5927
0415	10.97	7.94					9.76	4350.0	3.7501
0430	11.08	8.15					9.91	4430.0	3.9907
0500	11.12	8.25					9.97	4620.0	4.2416
0515	11.15	8.35					10.03	4650.0	4.4100
0530	11.19	8.35					10.05	4550.0	4.5747
0545	11.30	8.35					10.12	4310.0	4.8868
0630	11.34	8.45					10.18	3980.0	5.2471
0700	11.47	8.45					10.26	3840.0	5.9422
0900	11.51	8.45					10.29	3240.0	6.6460
1000	11.59	8.55					10.37	2890.0	7.0646
1100	11.59	8.55					10.37	2630.0	7.4454
1200	11.59	8.75					10.45	2510.0	8.1724
1500	11.59	8.85					10.49	1790.0	8.9501
1800	11.59	8.85					10.49	1120.0	9.4367
2100	11.59	8.85					10.49	598.0	9.6965
2400	11.59	8.85					10.49	304.0	9.8286
JULY 27									
0000	11.59	8.85					10.49	304.0	9.8286
0600	11.80	8.90					10.64	152.0	10.0267
1200	11.91	9.05					10.77	105.0	10.1636
2400	11.91	9.15					10.81	60.0	10.2157

STA. NO. 08075650 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT FOREST OAKS STREET , HOUSTON , TEXAS — STORM OF SEPT. 1-2 , 1979

DATE & TIME	GAGE NUMBER 402R	401R	5650				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 1									
0000	0.0	0.0	0.0				0.0	5.0	0.0011
0300	0.0	0.0	0.0				0.0	5.0	0.0027
0430	0.0	0.05	0.10				0.05	8.0	0.0049
0645	0.0	0.05	0.20				0.07	10.0	0.0085
0930	0.0	0.05	0.20				0.07	10.0	0.0109
1000	0.0	0.08	0.20				0.09	10.0	0.0152
1530	0.0	0.08	0.20				0.09	10.0	0.0194
1545	0.0	0.08	0.20				0.09	10.0	0.0197
1600	0.0	0.18	0.20				0.13	25.0	0.0206
1615	0.0	0.20	0.41				0.19	130.0	0.0253
1630	0.0	0.63	0.62				0.44	177.0	0.0318
1645	0.24	1.68	1.35				1.17	411.0	0.0466
1700	0.64	2.58	2.18				1.90	768.0	0.0744
1715	0.93	3.26	2.49				2.37	1020.0	0.1114
1730	1.38	3.59	2.91				2.76	1280.0	0.1577
1745	1.57	3.66	3.01				2.87	1520.0	0.2127
1800	1.62	3.70	3.11				2.93	1750.0	0.2761
1815	1.66	3.72	3.11				2.95	1940.0	0.3463
1830	1.66	3.73	3.11				2.95	1960.0	0.4173
1845	1.67	3.74	3.11				2.96	1880.0	0.4854
1900	1.68	3.75	3.11				2.97	1790.0	0.5502
1915	1.69	3.75	3.21				3.00	1690.0	0.6420
1945	1.71	3.75	3.21				3.00	1520.0	0.7245
2000	1.71	3.75	3.21				3.00	1470.0	0.8576
2100	1.71	3.75	3.21				3.00	1250.0	1.0386
2200	1.71	3.75	3.21				3.00	1040.0	1.2645
2400	1.71	3.75	3.21				3.00	688.0	1.4389
SEP. 2									
0000	1.71	3.75	3.21				3.00	688.0	1.4389
0300	1.71	3.78	3.21				3.02	334.0	1.6587
0600	1.71	3.78	3.21				3.02	171.0	1.7701
1200	1.71	3.78	3.21				3.02	50.0	1.8136
1800	1.71	3.78	3.21				3.02	20.0	1.8310
2400	1.71	3.78	3.21				3.02	10.0	1.8353

STA. NO. 08075650 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TEXAS — STORM OF SEP. 18-21, 1979

DATE & TIME	GAGE NUMBER 402R	401R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 18									
0000	0.0	0.0					0.0	20.0	0.0022
0130	0.18	0.17					0.17	30.0	0.0109
0400	0.23	0.24					0.24	20.0	0.0203
0800	0.35	0.37					0.36	20.0	0.0282
0930	0.48	0.48					0.48	30.0	0.0342
1045	0.54	0.58					0.56	40.0	0.0393
1115	0.57	0.80					0.70	60.0	0.0436
1145	0.83	1.24					1.06	102.0	0.0492
1200	1.16	1.50					1.35	132.0	0.0539
1215	1.53	1.67					1.61	169.0	0.0601
1230	1.70	1.92					1.82	200.0	0.0709
1300	2.07	1.97					2.01	416.0	0.0935
1315	2.09	1.97					2.02	562.0	0.1139
1330	2.09	1.97					2.02	780.0	0.1421
1345	2.09	1.97					2.02	902.0	0.1748
1400	2.09	1.97					2.02	990.0	0.2106
1415	2.09	1.97					2.02	1010.0	0.2472
1430	2.09	1.97					2.02	989.0	0.2830
1445	2.09	1.97					2.02	978.0	0.3184
1500	2.10	1.97					2.03	939.0	0.3694
1530	2.11	1.98					2.04	865.0	0.4320
1600	2.14	2.02					2.07	802.0	0.5191
1700	2.19	2.06					2.12	660.0	0.6147
1800	2.21	2.08					2.14	519.0	0.7275
2000	2.26	2.11					2.18	326.0	0.8219
2200	2.26	2.14					2.19	260.0	0.8972
2400	2.37	2.24					2.30	215.0	0.9361
SEP. 19									
0000	2.37	2.24					2.30	215.0	0.9361
0100	2.40	2.29					2.34	200.0	0.9620
0115	2.40	2.39					2.39	196.0	0.9726
0145	2.42	2.43					2.43	190.0	0.9830
0200	2.49	2.55					2.52	187.0	0.9931
0230	2.52	2.62					2.57	189.0	1.0034
0245	2.64	2.67					2.66	191.0	1.0172
0330	2.76	2.80					2.78	240.0	1.0476
0430	2.98	2.92					2.95	343.0	1.1097
0600	3.16	3.03					3.09	456.0	1.1757
0630	3.18	3.05					3.11	469.0	1.2522
0815	3.24	3.12					3.17	420.0	1.3130

STA. NO. 08075650 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TEXAS — STORM OF SEP. 18-21, 1979

DATE & TIME	GAGE NUMBER 402R	401R						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0830	3.24	3.28						3.26	409.0	1.3278
0845	3.26	3.31						3.29	396.0	1.3421
0900	3.46	3.36						3.40	384.0	1.3560
0915	3.51	3.43						3.47	386.0	1.3700
0930	3.53	3.57						3.55	398.0	1.3844
0945	3.60	3.71						3.66	426.0	1.3998
1000	3.71	3.88						3.80	490.0	1.4176
1015	3.89	4.12						4.02	562.0	1.4379
1030	4.15	4.27						4.22	678.0	1.4625
1045	4.30	4.32						4.31	818.0	1.4921
1100	4.51	4.34						4.42	1020.0	1.5290
1115	4.59	4.36						4.46	1110.0	1.5692
1130	4.60	4.38						4.48	1160.0	1.6322
1200	4.62	4.51						4.56	1190.0	1.6968
1215	4.70	4.57						4.63	1200.0	1.7403
1230	4.73	4.75						4.74	1210.0	1.8060
1300	4.85	4.78						4.81	1190.0	1.9137
1345	4.88	4.80						4.84	1230.0	2.0918
1500	5.02	5.02						5.02	1130.0	2.2759
1600	5.22	5.24						5.23	1070.0	2.3921
1630	5.36	5.40						5.38	1050.0	2.4682
1700	5.58	5.52						5.55	1090.0	2.5274
1715	5.64	5.82						5.74	1110.0	2.5676
1730	5.69	5.87						5.79	1140.0	2.6088
1745	5.90	5.98						5.94	1170.0	2.6936
1830	6.19	6.25						6.22	1300.0	2.7877
1845	6.25	6.41						6.34	1320.0	2.8833
1930	6.69	6.96						6.84	1430.0	3.0127
2000	6.90	7.02						6.97	1470.0	3.1191
2030	7.22	7.29						7.26	1630.0	3.2077
2045	7.35	7.45						7.40	1690.0	3.2689
2100	7.51	7.76						7.65	1800.0	3.3340
2115	7.61	8.06						7.86	1870.0	3.4017
2130	7.77	8.30						8.06	1930.0	3.4716
2145	8.00	8.43						8.24	1970.0	3.5429
2200	8.16	8.89						8.56	2010.0	3.6157
2215	8.29	9.46						8.93	2050.0	3.6899
2230	8.52	9.76						9.20	2120.0	3.7667
2245	9.09	10.09						9.64	2300.0	3.8499

STA. NO. 08075650 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TEXAS — STORM OF SEP. 18-21, 1979

DATE & TIME	GAGE NUMBER 402R	401R						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
2300	9.44	10.22						9.87	2600.0	3.9441
2315	9.54	10.47						10.05	2840.0	4.0469
2330	9.64	10.64						10.19	3070.0	4.1581
2345	9.87	10.75						10.35	3240.0	4.2754
2400	10.09	11.20						10.70	3380.0	4.3671
SEP. 20										
0000	10.09	11.20						10.70	3380.0	4.3671
0015	10.19	11.25						10.77	3550.0	4.5263
0030	10.44	11.35						10.94	3710.0	4.6606
0045	10.60	11.40						11.04	4000.0	4.8054
0100	10.64	11.40						11.06	4200.0	4.9575
0115	10.76	11.40						11.11	4300.0	5.1131
0130	10.81	11.40						11.13	4350.0	5.2706
0145	10.81	11.40						11.13	4350.0	5.4281
0200	10.81	11.40						11.13	4330.0	5.6633
0230	10.81	11.40						11.13	4270.0	5.9725
0300	10.81	11.40						11.13	4050.0	6.4124
0400	10.81	11.40						11.13	3750.0	7.2270
0600	10.81	11.40						11.13	3080.0	8.3421
0900	10.81	11.40						11.13	2220.0	9.3066
1200	10.81	11.40						11.13	1620.0	10.0105
1500	10.81	11.40						11.13	1100.0	10.4884
1800	10.81	11.40						11.13	340.0	10.6361
2100	10.81	11.40						11.13	200.0	10.7230
2400	10.81	11.40						11.13	129.0	10.7650
SEP. 21										
0000	10.81	11.40						11.13	129.0	10.7650
0300	10.81	11.40						11.13	85.0	10.8159
0600	10.81	11.40						11.13	58.0	10.8411
0900	10.81	11.40						11.13	43.0	10.8598
1200	10.81	11.40						11.13	27.0	10.8774
1800	10.81	11.40						11.13	14.0	10.8896
2400	10.81	11.40						11.13	10.0	10.8939

VINCE BAYOU DRAINAGE BASIN

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

Weighted-mean rainfall in the drainage basin based on two rain gages for the 1979 water year was 71.82 inches or 23.63 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of March 19-20, July 24-27, and Sept. 17-21 were selected for analysis at station 08075730, Vince Bayou at Pasadena.

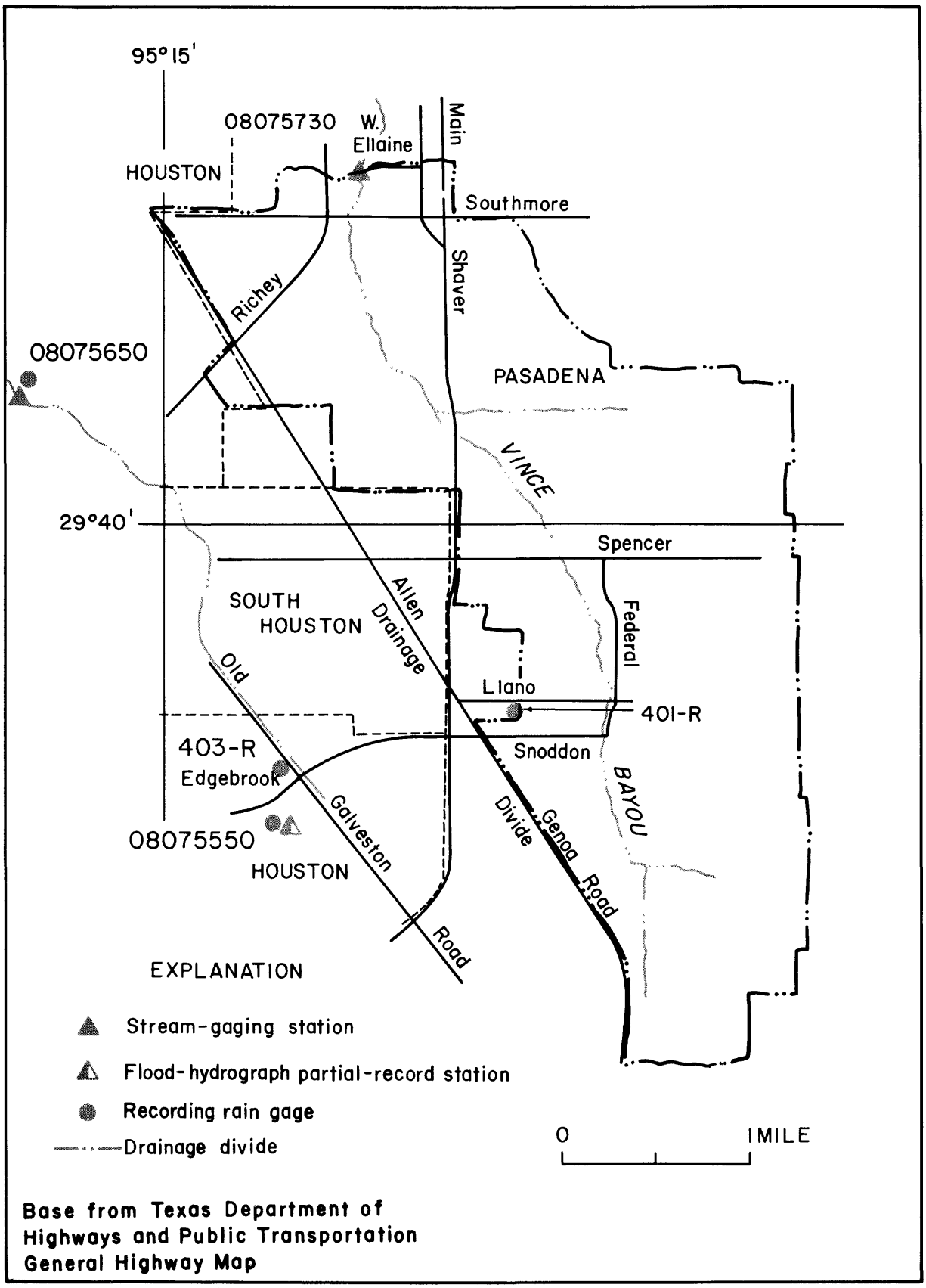


FIGURE 16.- Locations of data-collection sites in and near the Vince Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 14.--Storm rainfall-runoff data, 1979 Water Year, Vince Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Vince Bayou at Pasadena, TX. (Drainage area--7.32 mi^2)								
Mar. 19-20, 1979	2.3	3.32	0.62	1.14	2.07	2.76	0.83	2,450
July 24-27, 1979	15.4	11.92	0.78	1.22	1.82	11.84	0.99	3,940 *,++
Sept. 17-21, 1979	-	-	-	-	-	13.44	-	3,600

*-Annual peak discharge for 1979 water year.
++-Peak discharge for period of record.

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 (revised).--7.32 mi² (18.96 km²). Prior to Jan. 1, 1978, 8.21 mi² (21.26 km²). Jan. 1 to Sept. 30, 1978, 7.61 mi² (19.71 km²). Drainage area revisions due to drainage ditch changes.

WATER-DISCHARGE RECORDS

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.--Water-discharge records fair. Low flow is sustained by sewage effluent.

AVERAGE DISCHARGE.--8 years, 18.4 ft³/s (0.521 m³/s), 13,330 acre-ft/yr (16.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,940 ft³/s (112 m³/s) July 26, 1979, gage height, 16.93 ft (5.160 m); no flow Aug. 5, 6, 18, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
aJan. 26	1100	111	3.14	9.24	2.816	aJuly 17	1645	324	9.18	10.24	3.121
aMar. 19	1945	2,450	69.4	14.76	4.499	aJuly 26	0400	*3,940	112	16.93	5.160
aMay 22	0545	145	4.11	9.44	2.877	Sept. 1	1815	2,700	76.5	15.18	4.627
June 3	1815	1,760	49.8	13.61	4.148	Sept. 20	0145	3,600	102	16.51	5.032

a Water-quality samples were obtained on this date.

Minimum discharge, 0.20 ft³/s (0.006 m³/s) Oct. 23, June 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	.30	1.5	186	3.0	2.7	3.3	10	34	.51	1.7	456
2	1.2	.33	.81	22	3.6	3.1	21	5.6	199	.44	1.9	86
3	.90	.29	1.8	4.0	23	6.9	41	1.2	234	.31	1.4	5.8
4	.56	.22	18	3.3	74	3.7	9.1	143	127	.35	3.1	3.3
5	.66	.24	5.5	79	223	3.8	4.6	8.7	34	28	3.3	53
6	1.5	70	1.4	286	234	3.5	2.2	3.6	32	34	3.9	59
7	.78	3.7	1.3	53	25	4.0	2.6	2.4	2.8	2.4	5.7	66
8	.38	1.6	1.8	11	8.0	3.7	1.6	1.5	1.0	11	4.0	7.9
9	.56	.76	1.0	6.6	4.0	4.7	1.5	1.0	.97	3.3	17	1.6
10	.90	.83	.88	17	2.8	4.8	1.3	1.0	1.4	5.9	1.8	1.4
11	.90	.61	.90	42	2.7	4.1	2.2	16	1.1	.91	.84	1.8
12	1.0	.41	.88	7.7	3.1	3.8	1.5	7.6	.56	1.7	7.7	1.5
13	.90	1.4	1.2	6.7	2.9	3.7	1.8	1.7	.48	106	27	1.3
14	1.5	1.9	11	6.1	2.2	4.2	1.7	1.9	.38	20	3.2	1.2
15	.30	.34	11	5.5	2.0	4.1	1.9	1.5	.83	2.1	4.2	1.5
16	.38	3.5	2.4	3.6	2.3	3.9	2.0	1.7	.74	1.5	3.0	1.7
17	.30	.62	1.5	3.3	7.4	4.0	8.1	2.4	.64	57	2.9	39
18	.33	.31	1.7	3.4	8.4	3.8	87	2.1	4.8	25	1.1	318
19	.34	25	1.3	38	4.1	434	188	2.7	1.2	6.4	2.9	1320
20	.44	9.3	1.2	101	2.4	106	272	3.6	.25	10	49	919
21	.83	2.9	1.4	9.5	2.2	233	30	3.0	.27	7.4	1.8	14
22	.31	.96	1.0	3.7	2.7	238	6.2	20	.21	33	11	3.4
23	.20	1.2	.90	39	5.7	23	1.8	4.8	.28	6.8	1.5	3.0
24	.25	.59	1.4	5.9	4.8	6.9	2.4	2.1	25	23	.76	3.2
25	.42	.42	1.4	3.7	5.1	5.1	2.1	1.1	22	695	.63	1.9
26	.31	264	2.4	34	2.9	4.5	.90	1.6	54	1520	43	2.3
27	1.6	30	2.2	6.3	2.2	3.4	.66	1.4	9.1	88	2.6	1.8
28	.34	2.8	1.8	5.5	2.8	3.2	.66	1.4	2.1	10	4.1	1.9
29	.36	56	11	3.4	---	2.3	76	60	.46	2.6	9.1	1.4
30	.28	3.7	5.8	21	---	2.2	4.0	50	.20	3.2	13	.41
31	.37	---	6.2	7.4	---	7.0	---	11	---	2.1	12	---
TOTAL	19.88	484.23	102.57	1024.6	666.3	1141.1	779.12	375.6	790.77	2707.92	245.13	3378.31
MEAN	.64	16.1	3.31	33.1	23.8	36.8	26.0	12.1	26.4	87.4	7.91	113
MAX	1.6	264	18	286	234	434	272	143	234	1520	49	1320
MIN	.20	.22	.81	3.3	2.0	2.2	.66	1.0	.20	.31	.63	.41
AC-FT	39	960	203	2030	1320	2260	1550	745	1570	5370	486	6700
(††)	.00	6.42	1.37	6.15	3.34	6.10	5.57	3.60	4.39	15.93	2.83	16.12

CAL YR 1978 TOTAL 3078.04 MEAN 8.43 MAX 264 MIN .15 AC-FT 6110 †† 36.56
WTR YR 1979 TOTAL 11715.53 MEAN 32.1 MAX 1520 MIN .20 AC-FT 23240 †† 71.82

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

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: May 1971 to September 1973, October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
24...	1215	.22	763	10.3	24.0	60	10	20.0	244	11
DEC										
12...	0955	.78	799	7.2	7.0	30	8.0	16.8	142	4.0
JAN										
26...	1110	105	246	7.4	13.0	200	100	8.7	101	29
27...	1235	5.2	440	4.8	15.5	180	30	15.0	155	4.4
MAR										
14...	0855	4.0	692	7.1	19.0	25	5.0	9.9	110	9.6
19...	1940	2360	136	7.8	18.5	65	100	10.2	112	13
19...	2050	2000	141	7.8	18.5	110	150	9.8	108	8.1
20...	1020	55	239	7.4	19.0	220	150	6.6	73	12
MAY										
22...	1055	24	427	7.5	24.0	50	68	6.8	83	17
JUN										
05...	1100	40	318	7.2	28.0	200	58	8.1	104	4.8
JUL										
17...	1520	40	263	7.6	29.0	30	13	7.1	93	12
25...	1450	1400	115	6.8	25.5	80	200	7.4	92	5.7

DATE	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 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)
OCT										
24...	1000	2	14	--	--	--	--	--	--	--
DEC										
12...	98000	6200	410	160	0	43	12	95	3.3	3.6
JAN										
26...	160000	14000	8700	84	11	27	4.1	14	.7	2.9
27...	11000	3800	270	--	--	--	--	--	--	--
MAR										
14...	280000	32000	5300	120	0	31	9.3	89	3.6	3.2
19...	180000	36000	7400	--	--	--	--	--	--	--
19...	520000	48000	7100	--	--	--	--	--	--	--
20...	1300000	54000	6800	76	9	24	4.0	13	.6	3.0
MAY										
22...	260000	62000	8900	--	--	--	--	--	--	--
JUN										
05...	200000	35000	5400	--	--	--	--	--	--	--
JUL										
17...	420000	120000	2700	--	--	--	--	--	--	--
25...	200000	140000	10000	47	4	16	1.7	4.2	.3	2.6

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
24...	--	--	--	--	--	--	--	24	15	.01
DEC										
12...	210	0	49	110	.4	7.8	424	18	9	.11
JAN										
26...	89	0	18	14	.2	7.5	132	236	54	.79
27...	--	--	--	--	--	--	--	45	8	.52
MAR										
14...	200	0	47	77	.6	2.4	358	10	2	.00
19...	--	--	--	--	--	--	--	484	108	.75
19...	--	--	--	--	--	--	--	552	72	.82
20...	82	0	19	13	.3	.5	117	308	12	.59
MAY										
22...	--	--	--	--	--	--	--	131	37	.40
JUN										
05...	--	--	--	--	--	--	--	103	41	.06
JUL										
17...	--	--	--	--	--	--	--	31	31	.56
25...	52	0	5.6	2.6	.2	5.0	<64	440	28	.23

08075730 VINCE BAYOU AT PASADENA, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
24...	.02	.03	.08	2.1	2.2	1.4	18	--	1.7
DEC									
12...	.04	.15	.51	.79	1.3	.49	6.7	--	.30
JAN									
26...	.14	.93	.26	1.5	1.8	.38	27	8	.10
27...	.12	.64	.15	.95	1.1	.34	12	--	.10
MAR									
14...	.02	.02	.25	.61	.86	.29	7.7	8	.10
19...	.06	.81	.51	.99	1.5	.45	14	4	.10
19...	.08	.90	.62	.88	1.5	.52	17	--	.10
20...	.18	.77	.47	.93	1.4	.43	15	--	.10
MAY									
22...	.14	.54	.18	1.3	1.5	.39	22	--	.60
JUN									
05...	.06	.12	.26	.05	.31	.36	23	--	.10
JUL									
17...	.12	.68	.08	.74	.82	.39	19	--	.40
25...	.04	.27	.10	.75	.85	.41	14	5	.10

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)
JAN						
26...	1110	2	100	0	0	5
MAR						
14...	0855	1	100	0	0	1
JUL						
25...	1450	1	30	<1	0	1

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
JAN							
26...	110	2	0	.0	0	0	30
MAR							
14...	0	0	0	.0	0	0	10
JUL							
25...	40	5	4	.6	0	0	8

08075730 VINCE BAYOU AT PASADENA, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)
JAN									
26...	1110	.1	--	.00	.3	.00	.00	.01	.19
MAR									
14...	0855	.0	--	.00	.0	.00	.00	.00	.00
19...	1940	.0	--	.00	.6	.00	.01	.03	.90
JUL									
25...	1450	.2	.00	.00	.1	.00	.00	.00	.53

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
JAN									
26...	.02	.00	.00	.00	.03	.01	.00	.04	.00
MAR									
14...	.00	.00	.00	.00	.00	.00	.05	.00	.00
19...	.04	.00	.00	.00	.03	.03	.15	.04	.00
JUL									
25...	.00	.00	.00	.00	.00	.00	.00	.02	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN								
26...	.00	.00	.00	0	.00	.05	.01	.00
MAR								
14...	.00	.00	.00	0	.00	.80	.01	.01
19...	.00	.00	.00	0	.00	.46	.03	.01
JUL								
25...	.00	.00	.01	0	.00	.02	.02	.00

STA. NO. 08075730 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

VINCE BAYOU AT PASADENA , TEXAS — STORM OF MARCH 19-20 , 1979

DATE & TIME	GAGE NUMBER 5650	403R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
MAR. 19									
0000	0.0	0.0					0.0	4.0	0.0071
1645	0.0	0.0					0.0	4.4	0.0150
1700	0.0	0.10					0.07	4.4	0.0152
1715	0.10	0.40					0.33	12.0	0.0159
1730	0.41	0.60					0.59	132.0	0.0229
1745	0.93	0.80					0.92	558.0	0.0524
1800	1.55	1.20					1.44	992.0	0.1049
1815	1.86	1.40					1.70	1650.0	0.1922
1830	2.48	1.60					2.07	1900.0	0.2928
1845	2.79	1.80					2.32	1930.0	0.3949
1900	3.21	1.90					2.55	2030.0	0.5023
1915	3.42	2.20					2.84	2140.0	0.6156
1930	3.63	2.40					3.07	2350.0	0.7400
1945	3.73	2.40					3.10	2450.0	0.8696
2000	3.73	2.50					3.17	2390.0	0.9961
2015	3.83	2.50					3.21	2320.0	1.2417
2100	3.83	2.60					3.28	1930.0	1.6502
2215	3.93	2.60					3.32	1340.0	1.9339
2300	3.93	2.60					3.32	1050.0	2.1284
2400	3.93	2.60					3.32	711.0	2.2413
MAR. 20									
0000	3.93	2.60					3.32	711.0	2.2413
0100	3.93	2.60					3.32	500.0	2.4377
0300	3.93	2.60					3.32	250.0	2.5700
0600	3.93	2.60					3.32	119.0	2.6456
0900	3.93	2.60					3.32	66.0	2.6875
1200	3.93	2.60					3.32	42.0	2.7275
1800	3.93	2.60					3.32	22.0	2.7554
2400	3.93	2.60					3.32	14.0	2.7643

STA. NO. 08075730 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

VINCE BAYOU AT PASADENA , TEXAS — STORM OF JULY 24-27 , 1979

DATE & TIME	GAGE NUMBER 401R	5650						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 24										
0000	0.0	0.0						0.0	18.0	0.0171
0900	0.0	0.0						0.0	4.4	0.0222
1045	0.04	0.0						0.03	4.0	0.0230
1100	0.07	0.10						0.08	4.4	0.0254
1600	0.07	0.10						0.08	5.2	0.0283
1615	0.34	0.31						0.33	7.6	0.0287
1630	0.36	0.41						0.37	41.0	0.0309
1645	0.38	0.51						0.41	52.0	0.0350
1715	0.38	0.51						0.41	93.0	0.0424
1730	0.38	0.51						0.41	88.0	0.0471
1745	0.46	0.61						0.49	80.0	0.0513
1800	0.46	0.71						0.51	80.0	0.0640
1915	0.46	0.71						0.51	55.0	0.0727
1930	0.52	0.71						0.56	50.0	0.0780
2015	0.52	0.71						0.56	72.0	0.1123
2400	0.52	0.71						0.56	28.0	0.1309
JULY 25										
0000	0.52	0.71						0.56	28.0	0.1309
0500	0.52	0.71						0.56	13.0	0.1496
0815	0.57	0.71						0.60	8.7	0.1528
0830	0.60	0.81						0.64	10.0	0.1568
1200	0.60	0.81						0.64	14.0	0.1624
1215	0.60	0.91						0.66	19.0	0.1639
1245	0.62	0.91						0.68	80.0	0.1702
1300	1.12	1.33						1.16	262.0	0.1841
1315	1.76	1.43						1.69	483.0	0.2096
1330	2.24	1.53						2.10	719.0	0.2477
1345	2.38	1.74						2.25	882.0	0.2944
1400	2.45	1.84						2.33	996.0	0.3471
1415	2.58	1.94						2.45	1110.0	0.4058
1430	2.66	2.04						2.54	1200.0	0.4693
1445	2.79	2.14						2.66	1280.0	0.5371
1500	3.04	2.45						2.92	1480.0	0.6154
1515	3.24	2.66						3.12	1680.0	0.7043
1530	3.38	2.87						3.28	1840.0	0.8017
1545	3.61	3.08						3.50	2040.0	0.9097
1600	3.75	3.29						3.66	2190.0	1.0256
1615	3.81	3.29						3.71	2200.0	1.1420
1630	3.85	3.39						3.76	2200.0	1.2584
1645	3.89	3.49						3.81	2120.0	1.3706

STA. NO. 08075730 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

VINCE BAYOU AT PASADENA , TEXAS — STORM OF JULY 24-27 , 1979

DATE & TIME	GAGE NUMBER 401R	5650						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 25										
1700	3.91	3.49						3.83	2060.0	1.6432
1800	3.91	3.49						3.83	1500.0	1.9607
1900	3.91	3.49						3.83	1070.0	2.1872
2000	3.96	3.49						3.87	786.0	2.2912
2015	4.11	3.49						3.99	727.0	2.3297
2030	4.18	3.59						4.06	732.0	2.3684
2045	4.31	3.80						4.21	853.0	2.4136
2100	4.52	4.11						4.44	1010.0	2.4670
2115	5.30	4.21						5.08	1140.0	2.5274
2130	5.50	4.52						5.30	1350.0	2.5988
2145	5.62	4.52						5.40	1570.0	2.6819
2200	5.71	4.62						5.49	1820.0	2.7782
2215	5.80	4.62						5.56	2040.0	2.8862
2230	5.91	4.72						5.67	2200.0	3.0026
2245	5.97	4.72						5.72	2220.0	3.1201
2300	6.06	4.72						5.79	2180.0	3.2355
2315	6.16	4.82						5.89	2160.0	3.3498
2330	6.26	4.82						5.97	2120.0	3.4620
2345	6.34	4.92						6.06	2060.0	3.5710
2400	6.36	4.92						6.07	2060.0	3.6528
JULY 26										
0000	6.36	4.92						6.07	2060.0	3.6528
0015	6.37	5.02						6.10	2060.0	3.7890
0030	6.37	5.02						6.10	1980.0	3.8938
0045	6.62	5.02						6.30	1870.0	3.9928
0100	7.24	5.12						6.82	1730.0	4.0843
0115	7.84	5.43						7.36	1880.0	4.1838
0130	8.12	5.85						7.67	2490.0	4.3156
0145	8.44	6.06						7.96	2790.0	4.4633
0200	8.83	6.16						8.30	2960.0	4.6199
0215	8.97	6.47						8.47	3160.0	4.7872
0230	9.23	6.78						8.74	3350.0	4.9644
0245	9.70	7.20						9.20	3600.0	5.1550
0300	10.04	7.51						9.53	3680.0	5.3497
0315	10.27	8.03						9.82	3800.0	5.5508
0330	10.44	8.24						10.00	3870.0	5.7556
0345	10.76	8.55						10.32	3870.0	5.9605
0400	11.16	8.65						10.66	3940.0	6.1690
0415	11.49	8.65						10.92	3880.0	6.3743
0430	11.60	8.86						11.05	3830.0	6.6784

STA. NO. 08075730 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

VINCE BAYOU AT PASADENA , TEXAS — STORM OF JULY 24-27 , 1979

DATE & TIME	GAGE NUMBER 401R	5650					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 26									
0500	11.64	8.96					11.10	3780.0	6.9784
0515	11.67	9.06					11.15	3700.0	7.2722
0545	11.82	9.06					11.27	3500.0	7.7352
0630	11.86	9.16					11.32	3150.0	8.4854
0800	12.01	9.16					11.44	2430.0	9.3856
1000	12.11	9.26					11.54	1480.0	9.8948
1115	12.11	9.36					11.56	1110.0	10.0710
1130	12.11	9.46					11.58	1080.0	10.2425
1245	12.11	9.46					11.58	992.0	10.4000
1300	12.11	9.56					11.60	944.0	10.4999
1345	12.11	9.56					11.60	1100.0	10.7327
1500	12.11	9.56					11.60	694.0	10.9715
1700	12.11	9.56					11.60	396.0	11.1810
2000	12.11	9.56					11.60	224.0	11.3470
2400	12.11	9.56					11.60	105.0	11.4054
JULY 27									
0000	12.11	9.56					11.60	105.0	11.4054
0230	12.11	9.56					11.60	76.0	11.4474
0330	12.21	9.56					11.68	69.0	11.4693
0530	12.21	9.56					11.68	73.0	11.4886
0600	12.34	9.56					11.78	80.0	11.4950
0615	12.36	9.66					11.82	104.0	11.5032
0645	12.41	9.66					11.86	165.0	11.5338
0800	12.41	9.66					11.86	250.0	11.6066
0930	12.41	9.66					11.86	161.0	11.6364
0945	12.43	9.76					11.90	148.0	11.6481
1015	12.43	9.76					11.90	161.0	11.7206
1400	12.43	9.76					11.90	78.0	11.7928
1900	12.43	9.76					11.90	36.0	11.8138
1930	12.43	9.86					11.92	35.0	11.8323
2400	12.43	9.86					11.92	23.0	11.8432

STA. NO. 08075730 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

VINCE BAYOU AT PASADENA , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 401R a/							ACCUM. WEIGHTED PRECIP. IN. a/	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0							0.0	1.7	0.0024
1330	0.0							0.0	1.7	0.0049
1345	0.15							0.15	4.4	0.0051
1400	0.20							0.20	6.1	0.0061
1515	0.30							0.30	75.0	0.0180
1530	0.43							0.43	100.0	0.0233
1545	0.45							0.45	120.0	0.0424
1700	0.45							0.45	224.0	0.1431
2000	0.45							0.45	62.0	0.1727
2130	0.47							0.47	46.0	0.1824
2200	0.60							0.60	42.0	0.1891
2300	0.69							0.69	78.0	0.2056
2400	0.83							0.83	118.0	0.2243
SEP. 18										
0000	0.83							0.83	118.0	0.2243
0100	0.97							0.97	156.0	0.2636
0200	1.00							1.00	169.0	0.3083
0330	1.03							1.03	134.0	0.3508
0500	1.14							1.14	108.0	0.4051
0815	1.21							1.21	78.0	0.4382
0900	1.30							1.30	77.0	0.4524
1000	1.33							1.33	118.0	0.4743
1045	1.41							1.41	119.0	0.4869
1100	1.53							1.53	118.0	0.4931
1115	1.63							1.63	122.0	0.4996
1130	1.86							1.86	146.0	0.5073
1145	2.07							2.07	188.0	0.5173
1200	2.33							2.33	287.0	0.5325
1215	2.50							2.50	480.0	0.5579
1230	2.75							2.75	817.0	0.6227
1300	2.80							2.80	1220.0	0.8164
1400	2.80							2.80	1290.0	0.9871
1415	2.80							2.80	1320.0	1.0569
1430	2.80							2.80	1200.0	1.1522
1500	2.80							2.80	866.0	1.2897
1600	2.85							2.85	532.0	1.4023
1700	2.89							2.89	421.0	1.5806
2000	2.94							2.94	264.0	1.7482
2300	3.02							3.02	186.0	1.8270
2400	3.07							3.07	190.0	1.8571

See footnote at end of table.

STA. NO. 08075730 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

VINCE BAYOU AT PASADENA , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 401R a/							ACCUM. WEIGHTED PRECIP. IN. a/	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0000	3.07							3.07	190.0	1.8571
0100	3.12							3.12	211.0	1.8951
0115	3.22							3.22	211.0	1.9119
0145	3.26							3.26	213.0	1.9288
0200	3.38							3.38	224.0	1.9703
0330	3.63							3.63	547.0	2.1150
0430	3.75							3.75	642.0	2.2849
0600	3.86							3.86	547.0	2.5020
0815	3.95							3.95	375.0	2.6012
0830	4.11							4.11	370.0	2.6306
0900	4.19							4.19	405.0	2.6628
0915	4.26							4.26	514.0	2.7036
0945	4.54							4.54	642.0	2.7545
1000	4.71							4.71	853.0	2.7997
1015	4.95							4.95	1170.0	2.8616
1030	5.10							5.10	1480.0	2.9399
1045	5.15							5.15	1770.0	3.0804
1115	5.19							5.19	2150.0	3.2511
1130	5.21							5.21	2120.0	3.4755
1215	5.40							5.40	1740.0	3.6597
1230	5.58							5.58	1680.0	3.7930
1300	5.61							5.61	1640.0	4.0534
1400	5.66							5.66	1470.0	4.3646
1500	5.85							5.85	1112.0	4.5411
1530	5.91							5.91	1090.0	4.6565
1600	6.07							6.07	1112.0	4.7742
1630	6.23							6.23	1150.0	4.8959
1700	6.35							6.35	1370.0	5.0047
1715	6.65							6.65	1460.0	5.1979
1815	6.97							6.97	1920.0	5.4519
1830	7.08							7.08	1980.0	5.5567
1845	7.24							7.24	1950.0	5.9179
2015	7.96							7.96	2240.0	6.3328
2030	8.12							8.12	2310.0	6.4550
2045	8.28							8.28	2320.0	6.6392
2115	8.89							8.89	2400.0	6.8297
2130	9.13							9.13	2520.0	6.9631
2145	9.26							9.26	2750.0	7.1086
2200	9.72							9.72	2850.0	7.2595

See footnote at end of table.

STA. NO. 08075730 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

VINCE BAYOU AT PASADENA , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 401R a/						ACCUM. WEIGHTED PRECIP. IN. a/	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19									
2215	10.29						10.29	2840.0	7.4849
2245	10.92						10.92	3190.0	7.7382
2300	11.05						11.05	3340.0	7.9149
2315	11.30						11.30	3550.0	8.1028
2330	11.47						11.47	3560.0	8.2912
2345	11.58						11.58	3500.0	8.4764
2400	12.03						12.03	3470.0	8.7519
SEP. 20									
0000	12.03						12.03	3470.0	8.7519
0100	12.23						12.23	3360.0	9.4690
0130	12.23						12.23	3550.0	9.7508
0145	12.23						12.23	3600.0	9.9413
0200	12.23						12.23	3500.0	10.2192
0230	12.23						12.23	3300.0	10.5685
0300	12.23						12.23	3020.0	11.0480
0400	12.23						12.23	2450.0	11.8259
0600	12.23						12.23	1270.0	12.4981
0900	12.23						12.23	573.0	12.8620
1200	12.23						12.23	338.0	13.1124
1600	12.23						12.23	157.0	13.2453
2000	12.23						12.23	80.0	13.3131
2400	12.23						12.23	51.0	13.3509
SEP. 21									
0000	12.23						12.23	51.0	13.3509
0600	12.23						12.23	27.0	13.4013
1200	12.23						12.23	17.0	13.4229
1800	12.23						12.23	9.9	13.4355
2400	12.23						12.23	8.1	13.4407

a/ Adequate rainfall data not available for this storm at this basin. These values are indicative of the storm's rainfall distribution for this basin.

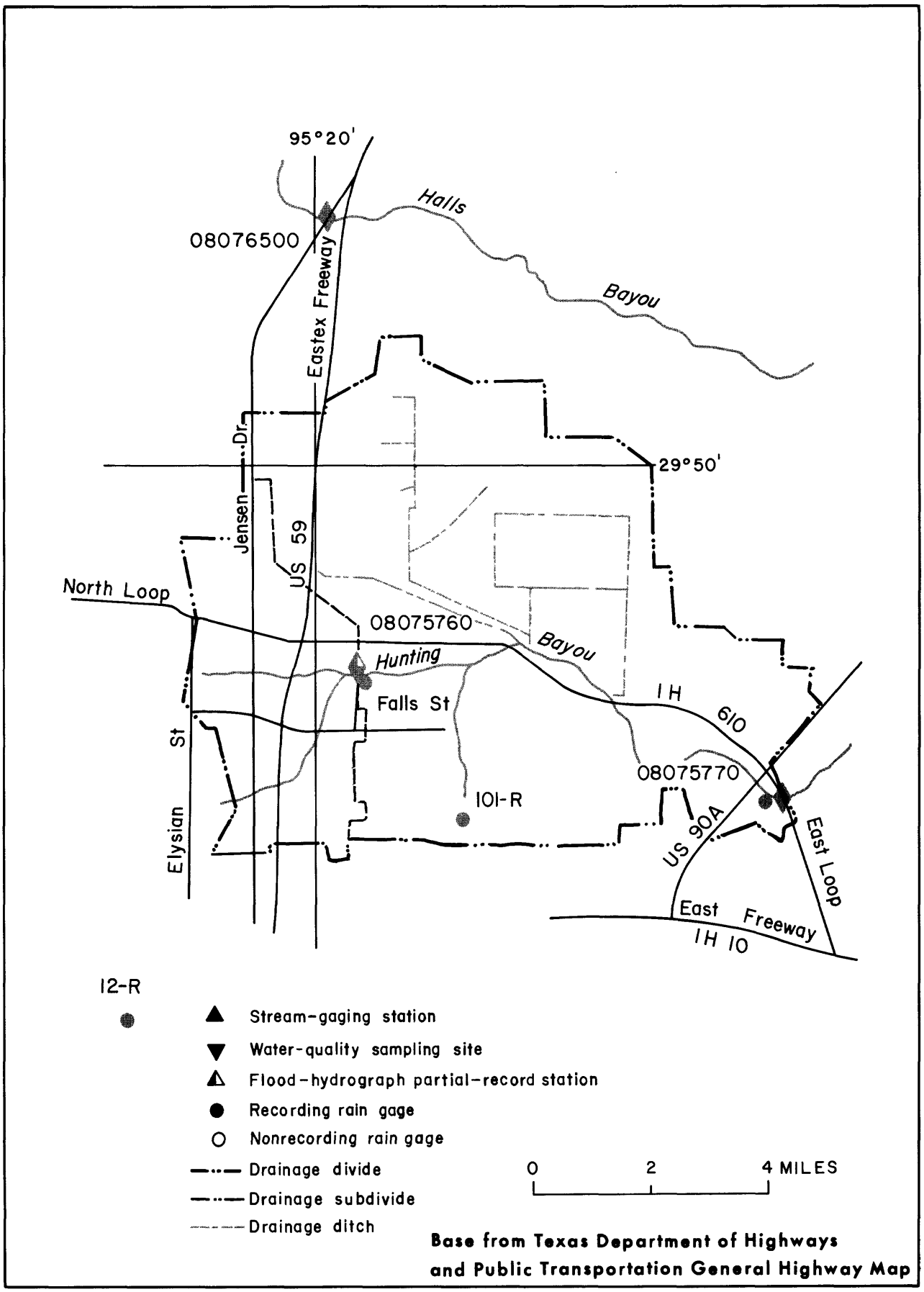


FIGURE 17.- Locations of data-collection sites in and near the Hunting Bayou drainage basin

HUNTING BAYOU DRAINAGE BASIN

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

Weighted-mean rainfall in the drainage basin based on three rain gages for the 1979 water year was 70.04 inches, or 21.85 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storms of Sept. 1-2 and Sept. 17-21 were selected for analysis at station 08075760, Hunting Bayou at Falls Street. The storms of April 18-22 and Sept. 17-22 were selected for analysis at station 08075770, Hunting Bayou at Interstate Highway 610.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 15--Storm rainfall-runoff data, 1979 Water Year, Hunting Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/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^2)								
Sept. 1-2, 1979	1.2	6.20	1.60	3.00	4.90	4.90	0.79	640*
Sept. 17-18, 1979	21.2	2.20	0.30	0.40	0.60	8.60	0.89	108
Sept. 19-21, 1979	14.2	7.50	0.60	0.90	1.50			603
Hunting Bayou at Interstate Highway 610, Houston, TX. (Drainage area--15.8 mi^2)								
April 18, 1979	1.5	1.66	0.45	0.80	1.23	4.03	0.57	374
April 19-22, 1979	4.2	5.41	0.85	1.60	2.40			2,300
Sept. 17-22, 1979	49.8	9.88	0.66	1.21	1.67	7.93	0.80	2,470*

*-Annual peak discharge for 1979 water year.

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 (revised).--2.57 mi² (6.66 km²). Oct. 1, 1973, to Sept. 30, 1978, 2.75 mi² (7.12 km²). Prior to Oct. 1, 1973, 3.50 mi² (9.07 km²). 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. Addi[illegible] storm rainfall-runoff data for this site can be obtained from the report "Hydrologic Data for Urb[illegible] [illegible]udies in th[illegible] Houston, Texas Metropolitan Area, 1979."

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 778 ft³/s (22.0 m³/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 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	1815	345	9.77	42.72	13.021	aJuly 25	1530	72	2.04	40.13	12.232
aJan. 26	unknown	20	.57	unknown	--	Sept. 1	1830	*640	18.1	47.35	14.432
Apr. 19	2215	545	15.4	46.56	14.191	aSept. 20	0045	603	17.1	47.01	14.329

a Water-quality samples were made on this date.

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 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
25...	0955	.28	1160	7.7	--	60	20	1.4	16	23
JAN										
22...	1050	2.8	1020	7.4	15.5	25	10	4.3	44	5.1
26...	0920	18	553	7.4	14.0	140	110	5.8	58	30
26...	1345	2.3	613	6.7	14.0	100	85	5.2	52	31
27...	1040	.38	1060	7.3	13.5	90	20	3.4	34	15
APR										
09...	1155	1.8	1160	7.1	21.5	10	4.2	6.3	73	5.2
JUL										
25...	1825	42	370	6.8	26.0	50	18	5.1	64	11
26...	1545	5.0	558	6.9	26.0	60	9.0	1.6	20	11
SEP										
17...	1540	49	500	6.8	24.0	50	65	7.6	93	32
18...	1345	42	386	6.9	25.0	55	22	3.4	42	15
19...	0820	35	332	6.6	23.5	50	17	5.6	67	6.3
25...	0855	2.3	894	7.1	22.0	10	9.0	5.4	61	2.4

DATE	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 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)
OCT										
25...	1800000	51000	3200	--	--	--	--	--	--	--
JAN										
22...	200000	49000	5500	--	--	--	--	--	--	--
26...	730000	100000	39000	140	0	45	7.8	54	2.0	4.4
26...	420000	36000	40000	--	--	--	--	--	--	--
27...	720000	58000	25000	--	--	--	--	--	--	--
APR										
09...	49000	9700	550	160	0	31	20	120	4.1	2.6
JUL										
25...	980000	170000	7700	84	38	29	2.8	32	1.5	4.6
26...	1200000	660000	39000	--	--	--	--	--	--	--
SEP										
17...	130000	42000	50000	130	0	40	6.3	56	2.2	3.3
18...	840000	300000	96000	--	--	--	--	--	--	--
19...	780000	160000	42000	--	--	--	--	--	--	--
25...	140000	9300	3900	--	--	--	--	--	--	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, VOLATILE, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT										
25...	--	--	--	--	--	--	--	36	24	.00
JAN										
22...	--	--	--	--	--	--	--	17	5	.38
26...	190	0	45	47	.4	11	308	228	54	.73
26...	--	--	--	--	--	--	--	104	20	.91
27...	--	--	--	--	--	--	--	30	13	.38
APR										
09...	210	0	59	130	.5	.1	467	12	16	.29
JUL										
25...	56	0	33	54	.2	4.6	188	62	12	.92
26...	--	--	--	--	--	--	--	54	5	.85
SEP										
17...	200	0	23	48	.4	10	286	964	44	.21
18...	--	--	--	--	--	--	--	58	6	.60
19...	--	--	--	--	--	--	--	38	11	.51
25...	--	--	--	--	--	--	--	13	14	.00

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
25...	.01	--	11	.00	11	4.20	27	--	4.0
JAN									
22...	.08	.46	1.7	.40	2.1	.440	7.0	--	.30
26...	.21	.94	2.9	1.9	4.8	1.20	26	19	.20
26...	.19	1.1	3.7	2.0	5.7	1.30	21	--	.30
27...	.14	.52	7.0	2.0	9.0	1.30	14	--	1.1
APR									
09...	.16	.45	2.5	.70	3.2	.960	10	18	.20
JUL									
25...	.28	1.2	5.6	.00	5.4	1.60	15	160	.30
26...	.12	1.0	1.2	.00	.49	1.60	22	--	.40
SEP									
17...	.08	.29	.46	1.2	1.7	.660	60	--	--
18...	.18	.78	2.5	3.5	6.0	1.50	28	--	--
19...	.12	.63	1.3	1.5	2.8	.200	21	--	--
25...	.08	.05	2.1	.40	2.5	1.90	5.3	--	--

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
JAN							
26...	0920	4	100	1	0	6	0
APR							
09...	1155	2	200	1	0	2	0
JUL							
25...	1825	4	0	1	10	20	170
SEP							
17...	1540	3	80	3	0	0	<10

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
JAN						
26...	1	0	.0	0	0	70
APR						
09...	0	10	.0	1	0	20
JUL						
25...	15	120	.3	0	0	90
SEP						
17...	2	<1	.0	0	0	20

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)
JAN									
26...	0920	.2	--	.00	.1	.00	.00	.03	.15
APR									
09...	1155	.0	--	.00	.0	.00	.00	.00	.14
JUL									
25...	1825	.2	.00	.00	.2	.00	.00	.07	.31

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
JAN									
26...	.00	.00	.00	.00	.00	.00	.00	.49	.00
APR									
09...	.00	.00	.00	.00	.00	.00	.00	.01	.00
JUL									
25...	.00	.00	.00	.00	.00	.00	.00	9.4	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN								
26...	.00	.00	.00	0	.00	.27	.03	.00
APR								
09...	.00	.00	.00	0	.00	.00	.00	.00
JUL								
25...	.00	.00	1.1	0	.00	.33	.03	.00

STA. NO. 08075760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUNTING BAYOU AT FALLS STREET , HOUSTON , TEXAS — STORM OF SEP . 1-2 , 1979

DATE & TIME	GAGE NUMBER 5760						ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 1									
0000	0.0						0.0	21.0	0.0127
0200	0.0						0.0	15.0	0.0568
0945	0.0						0.0	5.0	0.0688
1000	0.10						0.10	5.0	0.0767
1500	0.10						0.10	5.0	0.0846
1515	0.40						0.40	15.0	0.0869
1530	1.00						1.00	23.0	0.0904
1545	2.60						2.60	102.0	0.1057
1600	4.00						4.00	258.0	0.1446
1615	4.90						4.90	427.0	0.2090
1630	5.90						5.90	541.0	0.2905
1645	6.10						6.10	581.0	0.3781
1700	6.10						6.10	604.0	0.5147
1730	6.10						6.10	629.0	0.7043
1800	6.20						6.20	636.0	0.8961
1830	6.20						6.20	640.0	1.0890
1900	6.20						6.20	638.0	1.2813
1930	6.20						6.20	632.0	1.4719
2000	6.20						6.20	624.0	1.7541
2100	6.20						6.20	604.0	2.1182
2200	6.20						6.20	583.0	2.6455
2400	6.20						6.20	536.0	3.1303
SEP. 2									
0000	6.20						6.20	536.0	3.1303
0200	6.20						6.20	470.0	4.0004
0500	6.20						6.20	240.0	4.4345
0800	6.20						6.20	132.0	4.7130
1200	6.20						6.20	53.0	4.8169
1430	6.20						6.20	28.0	4.8675
1800	6.20						6.20	10.0	4.8841
2000	6.20						6.20	5.0	4.8932
2400	6.20						6.20	5.0	4.8992

STA. NO. 08075760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUNTING BAYOU AT FALLS STREET , HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 5760							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 17										
0000	0.0							0.0	3.0	0.0122
1330	0.0							0.0	3.0	0.0246
1345	0.10							0.10	4.0	0.0262
1445	0.10							0.10	5.0	0.0280
1500	0.40							0.40	10.0	0.0311
1545	0.70							0.70	56.0	0.0479
1600	0.70							0.70	61.0	0.0571
1615	1.00							1.00	65.0	0.0669
1630	1.10							1.10	87.0	0.0800
1645	1.10							1.10	103.0	0.0956
1700	1.10							1.10	108.0	0.1118
1715	1.20							1.20	107.0	0.1441
1800	1.20							1.20	90.0	0.2187
2000	1.20							1.20	45.0	0.2798
2230	1.20							1.20	25.0	0.3024
2300	1.40							1.40	25.0	0.3137
2400	1.40							1.40	33.0	0.3261
SEP. 18										
0000	1.40							1.40	33.0	0.3261
0030	1.40							1.40	32.0	0.3358
0045	1.50							1.50	33.0	0.3483
0145	1.50							1.50	43.0	0.3645
0200	1.60							1.60	43.0	0.4261
0630	1.60							1.60	25.0	0.4619
0645	1.80							1.80	25.0	0.4920
1030	1.80							1.80	21.0	0.5173
1045	1.90							1.90	21.0	0.5268
1200	1.90							1.90	20.0	0.5359
1215	2.00							2.00	25.0	0.5509
1400	2.00							2.00	43.0	0.5996
1600	2.10							2.10	30.0	0.6538
2000	2.10							2.10	18.0	0.6905
2245	2.20							2.20	14.0	0.7073
2400	2.20							2.20	13.0	0.7152
SEP. 19										
0000	2.20							2.20	13.0	0.7152
0130	2.30							2.30	12.0	0.7290
0300	2.30							2.30	12.0	0.7353
0315	2.40							2.40	24.0	0.7480
0445	2.40							2.40	27.0	0.7622
0500	2.60							2.60	28.0	0.7749

STA. NO. 08075760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUNTING BAYOU AT FALLS STREET , HOUSTON , TEXAS — STORM OF SEP . 17-21 . 1979

DATE & TIME	GAGE NUMBER 5760							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 19										
0615	2.60							2.60	36.0	0.7911
0630	2.70							2.70	36.0	0.8101
0800	2.70							2.70	34.0	0.8281
0815	2.80							2.80	34.0	0.8358
0845	2.80							2.80	39.0	0.8446
0900	3.00							3.00	42.0	0.8541
0930	3.00							3.00	62.0	0.8681
0945	3.20							3.20	66.0	0.8780
1000	3.20							3.20	72.0	0.8998
1045	3.90							3.90	133.0	0.9599
1130	4.50							4.50	258.0	1.0571
1200	4.60							4.60	246.0	1.1127
1215	4.60							4.60	258.0	1.1516
1230	4.80							4.80	268.0	1.2122
1300	5.00							5.00	288.0	1.2774
1315	5.00							5.00	294.0	1.3881
1415	5.10							5.10	282.0	1.5369
1500	5.20							5.20	269.0	1.6383
1530	5.30							5.30	274.0	1.7415
1615	5.40							5.40	280.0	1.8893
1715	5.80							5.80	306.0	2.0046
1730	5.80							5.80	310.0	2.0513
1745	6.00							6.00	330.0	2.1508
1830	6.40							6.40	389.0	2.2974
1900	6.50							6.50	410.0	2.4210
1930	6.70							6.70	427.0	2.5175
1945	6.70							6.70	433.0	2.5828
2000	7.00							7.00	448.0	2.7516
2100	7.50							7.50	482.0	2.9696
2130	7.60							7.60	492.0	3.0808
2145	7.70							7.70	499.0	3.1937
2215	7.80							7.80	503.0	3.3074
2230	8.10							8.10	509.0	3.3841
2245	8.40							8.40	523.0	3.4630
2300	9.00							9.00	547.0	3.5454
2315	9.30							9.30	567.0	3.6736
2345	9.40							9.40	582.0	3.8052
2400	9.50							9.50	595.0	3.8725
SEP. 20										
0000	9.50							9.50	595.0	3.8725

STA. NO. 08075760 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUNTING BAYOU AT FALLS STREET , HOUSTON , TEXAS — STORM OF SEP . 17-21 , 1979

DATE & TIME	GAGE NUMBER 5760							ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP. 20										
0015	9.50							9.50	600.0	4.0306
0045	9.60							9.60	603.0	4.1669
0100	9.60							9.60	603.0	4.3033
0130	9.60							9.60	595.0	4.4826
0200	9.60							9.60	586.0	4.7476
0300	9.60							9.60	573.0	5.1795
0430	9.60							9.60	548.0	5.5099
0500	9.70							9.70	541.0	5.7546
0600	9.70							9.70	534.0	6.3985
0900	9.70							9.70	435.0	7.1854
1200	9.70							9.70	298.0	7.8142
1600	9.70							9.70	162.0	8.2050
2000	9.70							9.70	74.0	8.3834
2400	9.70							9.70	34.0	8.4347
SEP. 21										
0000	9.70							9.70	34.0	8.4347
0200	9.70							9.70	24.0	8.4883
0600	9.70							9.70	15.0	8.5336
1200	9.70							9.70	10.0	8.5697
1800	9.70							9.70	5.0	8.5878
2400	9.70							9.70	4.0	8.5951

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 downstraam service road bridge of Interstate Highway 610 in northeast Houston and 8.8 mi (14.2 km) upstream from mouth.

DRAINAGE AREA (revised).--15.8 mi² (40.9 km²). Prior to Oct. 1, 1973, 16.8 mi² (43.5 km²). Oct. 1, 1973, to Sept. 30, 1978, 14.7 mi² (38.1 km²). 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. 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. Low flow is largely maintained by sewage and industrial effluent. Recording rain gage at station.

AVERAGE DISCHARGE.--15 years, 22.9 ft³/s (0.649 m³/s), 16,590 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,380 ft³/s (95.7 m³/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 ft³/s (0.025 m³/s) Aug. 24, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Elevation (ft)	Elevation (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Elevation (ft)	Elevation (m)
Nov. 26	2030	1,000	28.3	32.80	9.997	Sept. 1	2100	2,240	63.4	38.62	11.771
aJan. 26	1300	81	2.29	23.25	7.087	aSept. 18	0200	333	9.43	27.09	8.257
Apr. 19	2330	2,300	65.1	38.55	11.750	Sept. 20	0200	*2,470	70.0	39.11	11.921
aAug. 22	1500	360	10.2	27.40	8.352						

a Water-quality samples were obtained on this date.

Minimum daily discharge, 2.7 ft³/s (0.076 m³/s) May 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.2	14	154	14	8.4	4.5	19	8.5	4.1	5.4	670
2	3.9	4.4	11	37	17	10	11	18	90	4.0	4.6	1150
3	3.8	4.4	20	18	53	16	224	15	25	4.2	4.4	108
4	3.8	4.7	29	12	60	9.3	152	251	98	5.4	4.4	46
5	3.8	5.0	15	34	270	8.4	29	62	60	5.1	5.2	35
6	3.7	96	10	301	319	8.9	18	21	27	18	6.2	71
7	3.7	8.5	9.8	181	89	8.2	13	15	14	9.1	8.4	197
8	3.7	5.5	16	31	32	11	11	14	9.7	16	64	46
9	3.6	4.3	10	19	21	8.7	10	11	7.8	6.4	30	15
10	3.6	4.3	8.7	19	17	8.0	9.5	8.9	7.2	5.0	6.2	12
11	3.6	9.4	8.4	53	15	8.0	9.5	12	6.6	5.0	5.0	7.7
12	3.5	8.8	8.4	23	14	8.9	8.8	12	6.3	5.0	4.4	5.8
13	3.5	5.5	8.2	18	14	9.6	9.9	6.5	6.0	115	6.6	5.6
14	3.5	5.3	11	13	13	7.4	9.2	5.8	6.2	38	4.8	4.8
15	3.4	4.5	16	13	11	6.6	8.3	5.4	6.1	8.8	40	4.2
16	3.4	5.2	9.6	14	10	6.3	6.9	5.1	8.3	6.2	33	4.6
17	3.3	7.3	7.6	13	22	6.2	7.3	4.8	6.3	6.1	12	74
18	3.4	4.8	7.0	13	29	5.5	112	4.6	9.9	6.0	9.1	258
19	3.9	42	6.6	24	15	51	432	4.7	8.1	7.2	156	982
20	3.9	27	6.6	135	19	83	1010	4.5	5.4	6.7	210	1770
21	3.8	8.2	6.1	28	19	236	119	4.2	5.4	5.4	37	233
22	3.6	6.8	6.7	20	14	268	36	31	5.5	5.7	165	37
23	3.6	7.2	6.4	27	19	90	21	6.6	5.5	6.9	49	18
24	3.4	5.7	6.3	15	17	13	16	5.1	5.8	11	9.7	15
25	4.0	5.5	6.1	13	12	8.4	13	4.4	50	166	8.4	13
26	4.2	344	6.4	51	10	7.0	11	4.3	25	336	6.7	7.7
27	4.3	264	6.3	25	10	6.0	9.3	3.1	6.0	55	40	7.1
28	4.2	24	6.9	16	8.9	5.5	8.8	2.7	3.6	29	12	7.3
29	4.2	100	52	16	---	5.0	124	53	4.4	11	19	6.5
30	4.1	25	24	36	---	4.8	36	33	4.2	9.6	8.2	6.1
31	4.1	---	17	19	---	4.6	---	48	---	6.6	25	---
TOTAL	116.4	1051.5	377.1	1391	1163.9	937.7	2490.0	695.7	531.8	923.5	999.7	5817.4
MEAN	3.75	35.1	12.2	44.9	41.6	30.2	83.0	22.4	17.7	29.8	32.2	194
MAX	4.3	344	52	301	319	268	1010	251	98	336	210	1770
MIN	3.3	4.2	6.1	12	8.9	4.6	4.5	2.7	3.6	4.0	4.4	4.2
AC-FT	231	2090	748	2760	2310	1860	4940	1380	1050	1830	1980	11540
(††)	.00	7.70	2.27	5.36	3.44	4.15	10.39	3.94	2.85	6.07	6.61	17.26

CAL YR 1978 TOTAL 8169.2 MEAN 22.4 MAX 718 MIN 3.3 AC-FT 16200 †† 46.89
WTR YR 1979 TOTAL 16495.7 MEAN 45.2 MAX 1770 MIN 2.7 AC-FT 32720 †† 70.04

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
24...	0945	3.4	1060	7.2	21.0	70	20	2.1	24	9.6
DEC										
26...	1320	6.2	805	7.4	16.5	20	70	7.1	75	19
JAN										
26...	1005	66	632	7.1	13.0	80	10	5.6	55	35
26...	1430	78	553	7.2	13.5	90	85	5.2	51	35
27...	1140	24	693	7.3	11.5	100	30	6.3	59	9.6
MAR										
13...	1205	9.6	927	7.5	20.0	25	10	10.1	115	9.0
JUN										
27...	1320	5.4	719	7.6	29.5	30	6.3	9.4	124	9.3
AUG										
22...	1020	42	376	6.9	24.0	30	110	7.3	89	19
22...	1240	337	212	7.0	24.0	40	200	6.8	83	12
23...	1110	59	334	7.0	25.5	50	24	5.2	65	5.5
SEP										
17...	1600	92	391	7.1	23.5	45	50	7.8	94	19
18...	0840	296	270	6.9	23.0	80	30	4.1	49	12

DATE	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 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)
OCT										
24...	30000	900	250	--	--	--	--	--	--	--
DEC										
26...	13000	60	18	--	--	--	--	--	--	--
JAN										
26...	190000	17000	25000	170	0	52	9.9	60	2.0	4.3
26...	500000	17000	11000	--	--	--	--	--	--	--
27...	11000	900	780	--	--	--	--	--	--	--
MAR										
13...	170000	210	230	210	0	61	13	110	3.3	4.8
JUN										
27...	30000	2300	270	160	0	50	9.3	82	2.8	4.6
AUG										
22...	270000	31000	7700	--	--	--	--	--	--	--
22...	190000	41000	9100	63	0	20	3.2	14	.8	3.8
23...	71000	11000	2000	--	--	--	--	--	--	--
SEP										
17...	52000	13000	39000	--	--	--	--	--	--	--
18...	500000	220000	70000	--	--	--	--	--	--	--

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
24...	--	--	--	--	--	--	--	36	10	.27
DEC										
26...	--	--	--	--	--	--	--	240	72	.07
JAN										
26...	230	0	53	52	.5	12	357	172	40	.51
26...	--	--	--	--	--	--	--	152	38	.64
27...	--	--	--	--	--	--	--	39	10	.73
MAR										
13...	330	0	46	94	.6	10	502	28	8	.12
JUN										
27...	260	0	50	61	.5	11	397	21	9	.00
AUG										
22...	--	--	--	--	--	--	--	86	55	.24
22...	77	0	22	9.8	.2	5.5	116	506	56	.29
23...	--	--	--	--	--	--	--	65	14	.00
SEP										
17...	--	--	--	--	--	--	--	434	46	.12
18...	--	--	--	--	--	--	--	84	17	1.8

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
24...	.38	.65	7.8	.90	8.7	2.6	23	--	.90
DEC									
26...	.93	1.0	4.5	2.0	6.5	1.4	110	--	.10
JAN									
26...	.40	.91	1.8	1.4	3.2	1.3	24	26	.30
26...	.35	.99	1.8	1.4	3.2	1.3	24	--	.00
27...	.47	1.2	1.5	1.1	2.6	.71	17	--	.60
MAR									
13...	.16	.28	3.0	1.3	4.3	1.7	13	9	.20
JUN									
27...	.14	.11	2.1	2.3	4.4	.68	11	13	.40
AUG									
22...	.18	.42	1.4	1.6	3.0	1.3	35	7	.20
22...	.12	.41	.63	1.5	2.1	.84	34	--	.10
23...	.02	.01	.01	2.8	2.8	1.6	18	--	.20
SEP									
17...	.19	.31	.76	1.4	2.2	.91	31	--	--
18...	.18	2.0	2.3	1.0	3.3	.44	18	--	--

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
JAN							
26...	1005	5	100	0	0	5	10
MAR							
13...	1205	3	100	0	0	0	10
JUN							
27...	1320	11	80	2	0	1	20

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
JAN						
26...	1	0	.0	0	0	40
MAR						
13...	0	170	.0	0	0	20
JUN						
27...	0	2	.0	0	0	10

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)
JAN									
26...	1005	.1	--	.00	.0	.00	.00	.02	.28
MAR									
13...	1205	.0	--	.00	.0	.00	.00	.00	.03
JUN									
27...	1320	.0	--	.00	.0	.00	.00	.00	.36
AUG									
22...	1020	.6	.00	.00	.0	.00	.00	.00	.30

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
JAN									
26...	.00	.00	.00	.00	.00	.00	.03	.13	.00
MAR									
13...	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUN									
27...	.00	.00	.00	.00	.00	.00	.00	1.1	.00
AUG									
22...	.00	.00	.00	.00	.00	.00	.00	1.0	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JAN								
26...	.00	.00	.00	0	.00	.10	.02	.00
MAR								
13...	.00	.00	.00	0	.00	.00	.01	.00
JUN								
27...	.00	.00	.00	0	.00	.10	.00	.03
AUG								
22...	.00	.00	.00	0	.00	.08	.00	.00

STA. NO. 08075770 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUNTING BAYOU AT INTERSTATE HIGHWAY 610 , HOUSTON,TEXAS — STORM OF APRIL 18-22 , 1979

DATE & TIME	GAGE NUMBER 5760	101R	5770				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 18									
0000	0.0	0.0	0.0				0.0	9.3	0.0027
0600	0.0	0.0	0.0				0.0	9.1	0.0059
0700	0.0	0.0	0.02				0.00	8.2	0.0064
0715	0.10	0.02	0.02				0.07	8.2	0.0066
0730	0.10	0.08	0.02				0.08	9.3	0.0069
0800	0.10	0.08	0.14				0.10	11.0	0.0077
0900	0.10	0.08	0.15				0.10	9.3	0.0109
1500	0.10	0.08	0.15				0.10	13.0	0.0149
1515	0.20	0.17	0.15				0.19	26.0	0.0155
1530	0.60	0.33	0.60				0.55	43.0	0.0166
1545	1.00	0.78	0.70				0.91	62.0	0.0181
1600	1.20	1.06	1.05				1.15	91.0	0.0203
1615	1.40	1.34	1.35				1.38	133.0	0.0236
1630	1.50	1.56	1.70				1.54	179.0	0.0280
1645	1.60	1.62	1.78				1.63	200.0	0.0329
1700	1.60	1.62	1.85				1.64	221.0	0.0519
1830	1.60	1.68	1.92				1.66	305.0	0.0967
2000	1.60	1.68	1.92				1.66	368.0	0.1418
2100	1.60	1.68	1.92				1.66	374.0	0.1785
2200	1.60	1.68	1.92				1.66	368.0	0.2146
2300	1.60	1.68	1.92				1.66	351.0	0.2490
2400	1.60	1.68	1.92				1.66	328.0	0.2892
APR. 19									
0000	1.60	1.68	1.92				1.66	328.0	0.2892
0300	1.60	1.68	1.92				1.66	255.0	0.3884
0600	1.60	1.68	1.92				1.66	157.0	0.4307
0830	1.60	1.68	1.95				1.67	96.0	0.4496
1000	1.60	1.68	1.95				1.67	106.0	0.4652
1130	1.60	1.68	1.95				1.67	78.0	0.4786
1330	1.60	1.70	2.02				1.68	56.0	0.4937
1700	1.60	1.71	2.02				1.68	39.0	0.5008
1715	1.70	1.73	2.02				1.75	40.0	0.5018
1730	2.00	1.86	2.08				1.98	41.0	0.5028
1745	2.30	2.22	2.57				2.32	75.0	0.5047
1800	2.40	2.32	2.76				2.44	119.0	0.5076
1815	2.60	2.51	3.10				2.66	163.0	0.5116
1830	2.80	2.67	3.22				2.84	214.0	0.5168
1845	3.20	3.10	3.37				3.21	255.0	0.5231
1900	3.50	3.48	3.64				3.52	299.0	0.5304
1915	3.90	3.73	3.92				3.87	362.0	0.5393

STA. NO. 08075770 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUNTING BAYOU AT INTERSTATE HIGHWAY 610 , HOUSTON,TEXAS — STORM OF APRIL 18-22 , 1979

DATE & TIME	GAGE NUMBER 5760	101R	5770				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 19									
1930	4.60	4.28	4.20				4.48	431.0	0.5498
1945	4.80	5.13	4.55				4.83	524.0	0.5627
2000	5.30	5.88	4.90				5.36	627.0	0.5781
2015	5.60	6.06	5.64				5.70	820.0	0.5982
2030	5.60	6.12	5.90				5.75	1050.0	0.6239
2045	5.70	6.18	5.95				5.83	1220.0	0.6538
2100	5.90	6.36	6.00				6.01	1400.0	0.6882
2115	6.00	6.83	6.50				6.24	1580.0	0.7269
2130	6.00	6.98	7.22				6.38	1780.0	0.7705
2145	6.30	7.21	7.64				6.68	1920.0	0.8176
2200	6.40	7.49	7.87				6.84	2060.0	0.8681
2215	6.50	7.55	7.95				6.93	2130.0	0.9465
2245	6.50	7.63	8.00				6.95	2240.0	1.0288
2300	6.50	7.64	8.04				6.96	2280.0	1.1127
2330	6.50	7.65	8.04				6.96	2300.0	1.2255
2400	6.50	7.66	8.04				6.96	2300.0	1.3101
APR. 20									
0000	6.50	7.66	8.04				6.96	2300.0	1.3101
0030	6.50	7.69	8.04				6.97	2290.0	1.4506
0100	6.50	7.69	8.08				6.97	2280.0	1.7301
0300	6.50	7.69	8.08				6.97	2130.0	2.0434
0400	6.50	7.69	8.08				6.97	2010.0	2.3391
0600	6.50	7.69	8.08				6.97	1610.0	2.7339
0900	6.50	7.69	8.08				6.97	1030.0	3.0622
1230	6.50	7.69	8.08				6.97	655.0	3.1826
1245	6.60	7.69	8.08				7.04	630.0	3.2753
1530	6.60	7.69	8.08				7.04	503.0	3.3493
1545	6.60	7.78	8.13				7.07	492.0	3.3614
1600	6.60	7.79	8.18				7.07	484.0	3.4622
2000	6.60	7.79	8.18				7.07	357.0	3.6023
2400	6.60	7.79	8.18				7.07	260.0	3.6915
APR. 21									
0000	6.60	7.79	8.18				7.07	260.0	3.6915
0600	6.60	7.79	8.18				7.07	153.0	3.8198
1200	6.60	7.79	8.18				7.07	100.0	3.8787
1800	6.60	7.79	8.18				7.07	74.0	3.9222
2400	6.60	7.79	8.18				7.07	56.0	3.9552
APR. 22									
0000	6.60	7.79	8.18				7.07	56.0	3.9552
1200	6.60	7.79	8.18				7.07	33.0	4.0105
2400	6.60	7.79	8.18				7.07	25.0	4.0252

STA. NO. 08075770 STORM RAINFALL AND RUNOFF RECORD 1979 WATER YEAR

HUNTING BAYOU AT INTERSTATE HIGHWAY 610 , HOUSTON, TEXAS STORM OF SEP . 17-22, 1979

DATE & TIME	GAGE NUMBER 5760	101R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP 17									
0000	0.0	0.0					0.0	5.2	0.0033
1300	0.0	0.0					0.0	3.9	0.0059
1345	0.10	0.0					0.06	4.9	0.0064
1445	0.10	0.0					0.06	14.0	0.0072
1500	0.40	0.35					0.38	31.0	0.0080
1515	0.50	0.44					0.48	44.0	0.0091
1530	0.60	0.74					0.65	45.0	0.0102
1545	0.70	0.75					0.72	67.0	0.0118
1600	0.70	0.80					0.73	92.0	0.0141
1615	1.00	1.05					1.02	110.0	0.0168
1630	1.10	1.32					1.18	127.0	0.0214
1700	1.10	1.38					1.20	148.0	0.0287
1730	1.20	1.41					1.27	163.0	0.0527
2000	1.20	1.42					1.28	207.0	0.0882
2100	1.20	1.43					1.28	212.0	0.1142
2230	1.20	1.44					1.28	276.0	0.1413
2300	1.40	1.54					1.45	295.0	0.1630
2400	1.40	1.56					1.46	309.0	0.1838
SEP 18									
0000	1.40	1.58					1.46	309.0	0.1838
0045	1.50	1.66					1.56	320.0	0.2130
0130	1.50	1.72					1.58	331.0	0.2333
0200	1.60	1.76					1.66	333.0	0.2578
0300	1.60	1.80					1.67	331.0	0.3349
0645	1.80	1.88					1.83	293.0	0.4031
0745	1.80	1.92					1.84	292.0	0.4354
0900	1.80	1.93					1.85	296.0	0.4789
1045	1.90	2.00					1.93	272.0	0.5223
1215	2.00	2.14					2.05	255.0	0.5879
1600	2.10	2.28					2.16	227.0	0.7048
2245	2.20	2.39					2.27	175.0	0.7734
2400	2.20	2.46					2.29	169.0	0.7900
SEP 19									
0000	2.20	2.46					2.29	169.0	0.7900
0130	2.30	2.51					2.37	165.0	0.8225
0315	2.40	2.64					2.48	175.0	0.8526
0500	2.60	2.77					2.66	195.0	0.8836
0630	2.70	2.88					2.76	216.0	0.9181
0815	2.80	2.92					2.84	263.0	0.9471
0845	2.80	3.01					2.87	282.0	0.9574
0900	3.00	3.03					3.01	293.0	0.9646

STA. NO. 08075770 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HUNTING BAYOU AT INTERSTATE HIGHWAY 610 , HOUSTON,TEXAS — STORM OF SEP . 17-22, 1979

DATE & TIME	GAGE NUMBER 5760	101R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP 19									
0915	3.00	3.17					3.06	302.0	0.9757
0945	3.20	3.23					3.21	328.0	0.9878
1000	3.20	3.29					3.23	346.0	0.9963
1015	3.40	3.37					3.39	380.0	1.0196
1115	4.40	4.14					4.31	579.0	1.0551
1130	4.50	4.31					4.43	622.0	1.0779
1200	4.60	4.43					4.54	738.0	1.1141
1230	4.80	4.56					4.72	882.0	1.1574
1300	5.00	4.77					4.92	1020.0	1.1949
1315	5.00	4.85					4.95	1090.0	1.2617
1415	5.10	4.88					5.02	1310.0	1.4544
1615	5.40	5.23					5.34	1530.0	1.6232
1630	5.50	5.30					5.43	1550.0	1.6802
1700	5.70	5.58					5.66	1590.0	1.7582
1730	5.80	5.71					5.77	1650.0	1.8189
1745	6.00	5.78					5.92	1690.0	1.8603
1800	6.10	6.03					6.08	1720.0	2.0079
1930	6.70	6.57					6.65	1880.0	2.1693
1945	6.70	6.65					6.68	1910.0	2.2161
2000	7.00	6.78					6.92	1940.0	2.3350
2100	7.50	7.35					7.45	2050.0	2.4858
2130	7.60	7.58					7.59	2100.0	2.5630
2145	7.70	7.77					7.72	2130.0	2.6414
2215	7.80	7.87					7.82	2190.0	2.7219
2230	8.10	8.03					8.08	2230.0	2.7766
2245	8.40	8.31					8.37	2280.0	2.8325
2300	9.00	8.97					8.99	2320.0	2.8894
2315	9.30	9.52					9.36	2350.0	2.9470
2330	9.30	9.70					9.44	2380.0	3.0054
2345	9.40	9.80					9.54	2400.0	3.0642
2400	9.50	9.92					9.65	2420.0	3.1087
SEP 20									
0000	9.50	9.92					9.65	2420.0	3.1087
0015	9.50	9.95					9.66	2430.0	3.2129
0045	9.60	10.09					9.77	2450.0	3.3330
0115	9.60	10.14					9.79	2460.0	3.4838
0200	9.60	10.17					9.80	2470.0	3.6958
0300	9.60	10.17					9.80	2470.0	3.9986
0430	9.60	10.18					9.80	2440.0	4.2379
0500	9.70	10.22					9.88	2430.0	4.4166

STA. NO. 08075770 STORM RAINFALL AND RUNOFF RECORD 1979 WATER YEAR

HUNTING BAYOU AT INTERSTATE HIGHWAY 610 , HOUSTON,TEXAS STORM OF SEP . 17-22, 1979

DATE & TIME	GAGE NUMBER 5760	101R					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEP 20									
0600	9.70	10.22					9.88	2400.0	4.7697
0800	9.70	10.22					9.88	2320.0	5.2248
1000	9.70	10.22					9.88	2200.0	5.6563
1200	9.70	10.22					9.88	2000.0	6.1467
1400	9.70	10.22					9.88	1540.0	6.5998
1800	9.70	10.22					9.88	1130.0	6.9323
2100	9.70	10.22					9.88	821.0	7.1738
2400	9.70	10.22					9.88	584.0	7.3743
SEP 21									
0000	9.70	10.22					9.88	584.0	7.3743
0800	9.70	10.22					9.88	279.0	7.7078
1600	9.70	10.22					9.88	128.0	7.8082
2400	9.70	10.22					9.88	68.0	7.8549
SEP 22									
0000	9.70	10.22					9.88	68.0	7.8549
1200	9.70	10.22					9.88	33.0	7.9137
2400	9.70	10.22					9.88	22.0	7.9267

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 18. 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 in the report.

Weighted-mean rainfall for the drainage basin, above the U.S. Highway 75 station, based on five rain gages, for the 1979 water year was 57.71 inches or 9.52 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 1979 water year was 57.38 inches or 9.19 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storm of July 7-9 was selected for analysis at station 08075780, Greens Bayou at Cutten Road near Houston. The storms of April 18-24 and Sept. 17-23 were selected for analysis at station 08075900, Greens Bayou at U.S. Highway 75 near Houston. The storms of April 18-24, July 25-26, and Sept. 17-24 were selected for analysis at station 08076000, Greens Bayou near Houston (U.S. Highway 59).

The storm of April 18-24 was selected for analysis at station 08076700, Greens Bayou at Ley Road, Houston.

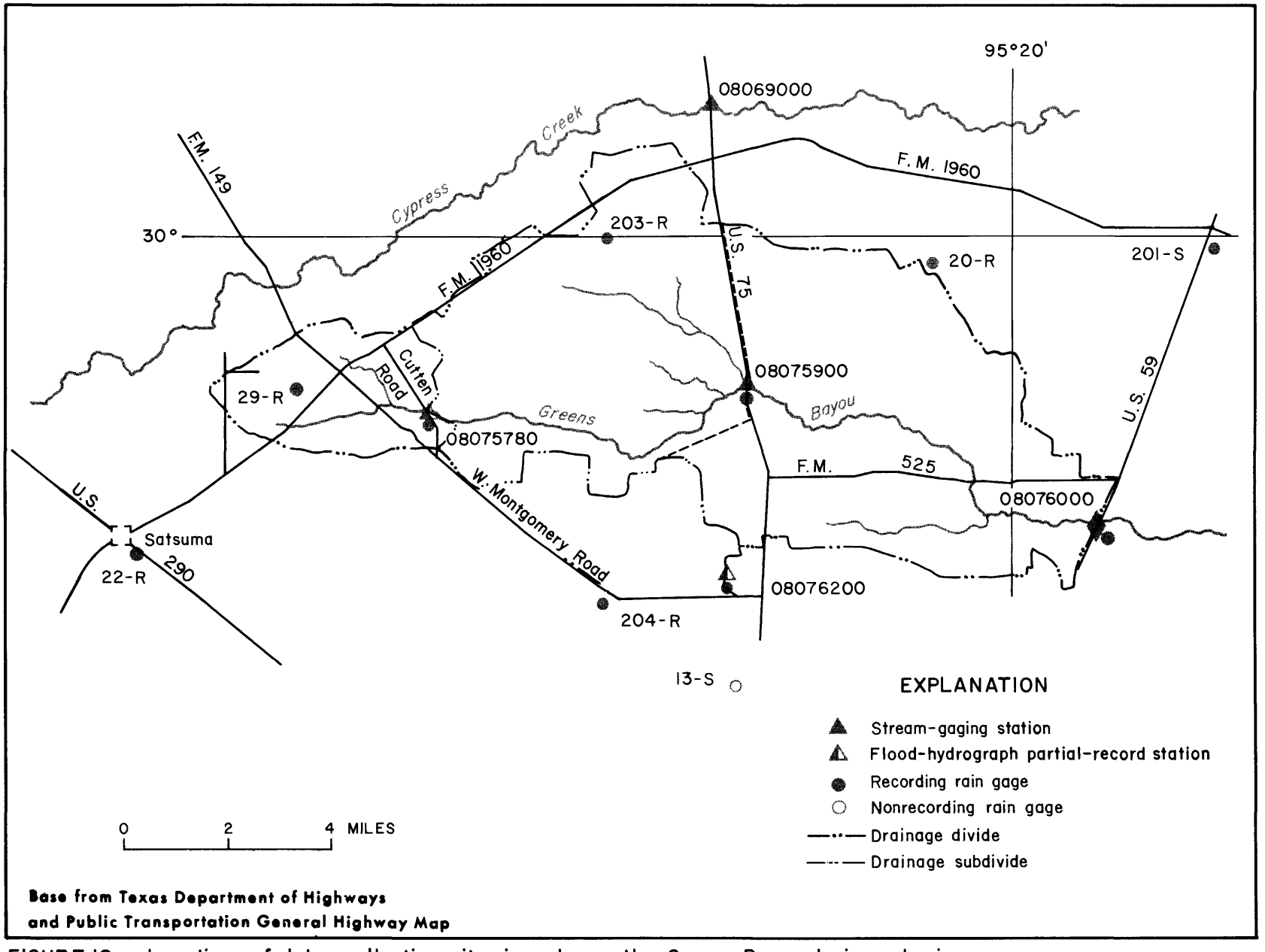


FIGURE 18. - Locations of data-collection sites in and near the Greens Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 16--Storm rainfall-runoff data, 1979 Water Year, Greens Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Greens Bayou at Cutten Road, Houston, TX. (Drainage area--8.06 mi^2)								
July 7-9, 1979	3.2	3.14	1.50	2.30	3.00	0.76	0.24	207
Greens Bayou at U.S. Highway 75 near Houston, TX. (Drainage area--36.1 mi^2)								
April 18-24, 1979	48.6	5.63	1.10	1.80	2.60	3.42	0.61	2,140
Sept. 17-23, 1979	47.9	8.57	0.49	0.70	1.07	3.87	0.45	2,950*, ++

*-Annual peak discharge for 1979 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 16--Storm rainfall-runoff data, 1979 Water Year, Greens Bayou.--Continued

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/s)
		Weighted Total	Maximum Increment Recorded in Basin					
			15-minute	30-minute	60-minute			
Greens Bayou near Houston, TX. (Drainage area--69.6 mi^2)								
April 18-24, 1979	48.7	5.61	1.30	1.80	2.60	3.52	0.63	3,140
July 25-26, 1979	10.0	2.09	0.26	0.50	0.91	0.61	0.29	1,680
Sept. 17-24, 1979	48.6	8.44	0.49	0.79	1.26	4.20	0.50	5,760*
Greens Bayou at Ley Road, Houston, TX. (Drainage area--182.0 mi^2)								
April 18-24, 1979	49.1	5.55	1.30	1.80	2.60	4.34	0.78	11,800

*-Annual peak discharge for 1979 water year.

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 dowmstream 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^2. Prior to Oct. 1, 1973, 8.73 mi^2.

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^3/s, Sept. 19, 1979 (elevation 113.16 ft) after channel rectification. Maximum discharge, 520 ft^3/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^3/s and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	ELEVATION (ft)
Jan. 6	2115	271	108.57
Feb. 6	0645	184	108.26
Mar. 22	1300	203	108.52
Apr. 18	1900	495	110.09
Apr. 20	0030	238	108.86
May 4	1100	194	108.68
July 7	1930	207	110.33
Sept. 19	about 2400	*576	113.16

Minimum discharge not determined.

STA. NO. 08075780 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT CUTTEN ROAD • HOUSTON • TEXAS — STORM OF JULY 7-9 • 1979

DATE & TIME	GAGE NUMBER 298	GAGE NUMBER 5780					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 7									
0000	0.0	0.0					0.0	6.0	0.0079
1345	0.0	0.0					0.0	6.0	0.0160
1400	0.26	0.0					0.10	6.0	0.0163
1415	1.06	0.80					0.90	11.0	0.0168
1430	1.54	2.30					2.00	60.0	0.0197
1445	1.78	2.90					2.45	110.0	0.0250
1500	1.85	3.00					2.54	135.0	0.0315
1515	1.87	3.00					2.55	139.0	0.0382
1530	1.89	3.00					2.56	138.0	0.0448
1545	1.89	3.00					2.56	138.0	0.0514
1600	1.91	3.10					2.62	141.0	0.0582
1615	1.93	3.10					2.63	148.0	0.0653
1630	1.95	3.10					2.64	161.0	0.0769
1700	2.01	3.10					2.66	181.0	0.0900
1715	2.03	3.20					2.73	189.0	0.0991
1730	2.03	3.20					2.73	195.0	0.1131
1800	2.03	3.20					2.73	202.0	0.1422
1900	2.03	3.20					2.73	203.0	0.1715
1930	2.03	3.20					2.73	207.0	0.1914
2000	2.03	3.20					2.73	205.0	0.2210
2100	2.03	3.20					2.73	195.0	0.2585
2200	2.03	3.20					2.73	187.0	0.2944
2300	2.03	3.20					2.73	174.0	0.3279
2400	2.03	3.20					2.73	161.0	0.3666
JULY 8									
0000	2.03	3.20					2.73	161.0	0.3666
0300	2.03	3.20					2.73	120.0	0.4590
0600	2.03	3.20					2.73	93.0	0.5394
1200	2.03	3.20					2.73	54.0	0.6017
1800	2.35	3.40					2.98	40.0	0.6479
2400	2.48	3.40					3.03	31.0	0.6836
JULY 9									
0000	2.48	3.40					3.03	31.0	0.6836
1200	2.48	3.40					3.03	17.0	0.7309
1800	2.75	3.40					3.14	12.0	0.7448
2400	2.75	3.40					3.14	19.0	0.7557

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, and 21 mi (34 km) upstream from Halls Bayou.

DRAINAGE AREA.--36.1 mi² (93.5 km²). Prior to October 1973, 34.8 mi² (90.1 km²).

PERIOD OF RECORD.--August 1965 to current year.

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

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

REMARKS.--Records fair. Records furnished by Houston Lighting and Power Co. show that about 1,950 acre-ft (2.40 hm³) 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.--14 years, 30.6 ft³/s (0.867 m³/s), 22,170 acre-ft/yr (27.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,950 ft³/s (83.5 m³/s) Sept. 20, 1979, elevation, 90.46 ft (27.572 m); maximum elevation, 91.09 ft (27.764 m) Feb. 21, 1969; minimum daily discharge, 0.16 ft³/s (0.004 m³/s) Oct. 21, 22, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 26	1800	1,700	48.1	87.17	26.572	Apr. 18	1930	2,140	60.6	88.50	26.975
Jan. 6	2130	1,100	31.2	85.10	25.938	Sept. 20	0200	*2,950	83.5	90.46	27.572

Minimum discharge, 5.6 ft³/s (0.16 m³/s) Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	6.7	17	228	23	15	16	26	34	15	12	15
2	6.4	6.7	13	62	17	15	101	24	96	14	14	17
3	7.2	6.9	36	24	95	30	279	20	37	14	11	13
4	7.2	8.3	39	16	104	16	191	389	26	44	11	12
5	7.1	8.3	20	65	433	14	59	172	26	25	12	14
6	7.8	86	26	582	564	15	26	65	17	17	13	26
7	6.4	21	35	437	212	13	14	35	17	198	61	63
8	6.5	9.2	33	97	82	13	11	22	12	230	21	16
9	7.2	7.2	19	42	40	13	11	17	11	38	13	11
10	6.9	6.5	12	28	28	15	11	17	11	26	11	12
11	6.6	7.6	11	81	20	16	10	22	11	20	14	11
12	6.6	15	9.8	41	18	16	8.8	25	10	27	13	10
13	8.2	7.5	9.7	25	17	15	10	16	9.8	62	12	10
14	7.5	6.6	13	16	15	12	8.9	14	9.6	98	12	9.8
15	7.2	6.0	11	13	16	11	6.9	13	11	33	32	9.4
16	7.3	5.6	9.8	14	14	13	6.6	13	10	15	29	9.8
17	6.9	8.1	8.7	13	48	12	6.4	12	12	11	24	28
18	7.0	7.1	8.7	14	108	11	608	12	13	12	15	147
19	6.6	107	8.7	37	38	26	858	12	12	11	27	1090
20	6.9	86	9.7	143	28	80	1050	12	12	71	40	1870
21	7.2	14	8.7	51	26	140	495	11	10	258	14	456
22	7.2	8.7	9.8	26	23	298	151	150	9.4	43	33	103
23	7.2	7.0	9.7	18	86	157	74	36	11	20	17	47
24	7.9	7.4	10	12	119	47	46	14	12	16	12	29
25	8.3	6.9	9.4	11	43	24	32	11	14	151	11	18
26	7.5	592	9.4	26	23	16	26	12	13	150	13	15
27	6.8	385	9.2	18	18	11	20	13	13	124	11	14
28	6.1	54	8.8	12	17	9.7	18	14	12	150	11	13
29	6.3	85	51	14	---	10	70	97	13	36	11	12
30	6.7	37	36	157	---	10	50	80	15	20	11	13
31	6.6	---	42	66	---	29	---	58	---	14	13	---
TOTAL	217.7	1620.3	554.1	2389	2275	1122.7	4274.6	1434	519.8	1963	554	4114.0
MEAN	7.02	54.0	17.9	77.1	81.3	36.2	142	46.3	17.3	63.3	17.9	137
MAX	8.3	592	51	582	564	298	1050	389	96	258	61	1870
MIN	6.1	5.6	8.7	11	14	9.7	6.4	11	9.4	11	11	9.4
AC-FT	432	3210	1100	4740	4510	2230	8480	2840	1030	3890	1100	8160
(††)	.13	7.58	2.49	5.65	3.84	3.26	7.94	4.74	1.52	8.56	2.98	9.02

CAL YR 1978 TOTAL 10480.2 MEAN 28.7 MAX 1210 MIN 5.6 AC-FT 20790 †† 41.30
WTR YR 1979 TOTAL 21038.2 MEAN 57.6 MAX 1870 MIN 5.6 AC-FT 41730 †† 57.71

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

STA. NO. 08075900 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT U.S.HIGHWAY 75 NEAR HOUSTON , TEXAS — STORM OF APRIL 18-24 , 1979

DATE & TIME	GAGE NUMBER 298	5780	5900					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18										
0000	0.0	0.0	0.0					0.0	5.8	0.0003
0215	0.0	0.0	0.0					0.0	5.8	0.0006
0230	0.02	0.0	0.0					0.00	5.8	0.0008
0345	0.02	0.0	0.0					0.00	5.8	0.0010
0400	0.05	0.0	0.02					0.02	5.8	0.0010
0415	0.06	0.0	0.43					0.20	5.8	0.0011
0445	0.13	0.0	0.50					0.24	5.8	0.0013
0530	0.13	0.0	0.50					0.24	15.0	0.0017
0600	0.13	0.10	0.51					0.29	22.0	0.0022
0630	0.14	0.10	0.53					0.30	22.0	0.0025
0645	0.15	0.10	0.66					0.36	21.0	0.0027
0700	0.15	0.10	0.68					0.37	18.0	0.0029
0715	0.15	0.10	0.68					0.37	17.0	0.0032
0745	0.15	0.10	0.68					0.37	17.0	0.0037
0830	0.15	0.10	0.68					0.37	20.0	0.0044
0930	0.15	0.10	0.68					0.37	20.0	0.0063
1300	0.15	0.10	0.68					0.37	16.0	0.0076
1315	0.17	0.10	0.70					0.38	16.0	0.0078
1330	0.17	0.10	0.70					0.38	15.0	0.0080
1345	0.17	0.20	0.70					0.42	15.0	0.0081
1400	0.17	0.20	1.38					0.73	15.0	0.0084
1430	1.22	0.20	2.24					1.27	15.0	0.0086
1445	1.72	1.30	2.39					1.85	29.0	0.0089
1500	1.98	2.00	2.60					2.27	136.0	0.0104
1515	2.12	2.50	2.70					2.53	253.0	0.0131
1530	2.40	2.80	2.72					2.70	330.0	0.0184
1600	2.48	3.20	2.76					2.89	574.0	0.0276
1615	2.51	3.40	2.77					2.98	734.0	0.0395
1645	2.60	3.40	2.78					3.00	1070.0	0.0567
1700	2.61	3.40	2.78					3.00	1260.0	0.0905
1800	2.62	3.40	2.78					3.00	1900.0	0.1516
1830	2.62	3.40	2.78					3.00	2050.0	0.1956
1900	2.62	3.40	2.78					3.00	2120.0	0.2411
1930	2.62	3.40	2.78					3.00	2140.0	0.2871
2000	2.62	3.40	2.78					3.00	2120.0	0.3553
2100	2.62	3.40	2.78					3.00	2000.0	0.4626
2230	2.62	3.40	2.78					3.00	1770.0	0.5766
2400	2.62	3.40	2.78					3.00	1540.0	0.6923
APR 19										
0000	2.62	3.40	2.78					3.00	1540.0	0.6923

STA. NO. 08075900 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT U.S.HIGHWAY 75 NEAR HOUSTON , TEXAS — STORM OF APRIL 18-24 . 1979

DATE & TIME	GAGE NUMBER 29R	5780	5900					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 19										
0400	2.62	3.40	2.78					3.00	1070.0	0.9421
0800	2.62	3.40	2.78					3.00	778.0	1.0757
1200	2.62	3.40	2.78					3.00	594.0	1.1649
1500	2.62	3.40	2.78					3.00	498.0	1.2077
1600	2.65	3.40	2.83					3.03	468.0	1.2202
1615	2.65	3.40	2.83					3.03	459.0	1.2276
1645	2.66	3.80	2.83					3.19	446.0	1.2348
1700	2.66	3.80	2.87					3.21	439.0	1.2419
1730	2.68	3.80	3.17					3.35	425.0	1.2487
1745	2.70	3.80	3.45					3.48	418.0	1.2532
1800	2.85	3.80	3.49					3.52	417.0	1.2577
1815	2.90	4.20	3.58					3.73	430.0	1.2646
1845	3.00	4.20	3.61					3.75	495.0	1.2726
1900	3.05	4.20	3.66					3.78	530.0	1.2811
1930	3.13	4.40	3.75					3.92	639.0	1.2982
2015	3.27	4.60	3.87					4.07	898.0	1.3175
2030	3.28	4.60	3.87					4.07	906.0	1.3272
2045	3.28	4.60	3.87					4.07	951.0	1.3374
2100	3.30	4.60	3.87					4.08	1010.0	1.3699
2215	3.42	4.70	4.02					4.20	1210.0	1.4219
2300	3.42	4.70	4.02					4.20	1290.0	1.4703
2400	3.42	4.70	4.02					4.20	1340.0	1.5063
APR 20										
0000	3.42	4.70	4.02					4.20	1340.0	1.5063
0030	3.42	4.70	4.02					4.20	1340.0	1.5566
0130	3.42	4.70	4.02					4.20	1310.0	1.6269
0300	3.42	4.70	4.02					4.20	1220.0	1.7447
0600	3.42	4.70	4.02					4.20	1020.0	1.9089
1030	3.42	4.70	4.02					4.20	743.0	1.9847
1045	3.42	4.70	4.02					4.20	728.0	1.9925
1100	3.43	4.70	4.02					4.20	716.0	2.0270
1300	3.43	4.70	4.02					4.20	630.0	2.0575
1315	3.43	4.70	4.02					4.20	621.0	2.0641
1330	3.43	5.10	4.02					4.36	612.0	2.0707
1345	3.43	5.20	4.02					4.40	600.0	2.0771
1400	3.43	5.20	4.52					4.63	592.0	2.0835
1415	3.43	5.20	5.62					5.12	580.0	2.0897
1430	3.43	5.20	6.29					5.42	572.0	2.0959
1445	3.43	5.20	6.34					5.45	582.0	2.1021
1500	3.53	5.20	6.37					5.48	674.0	2.1093

STA. NO. 08075900 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT U.S.HIGHWAY 75 NEAR HOUSTON • TEXAS — STORM OF APRIL 18-24 • 1979

DATE & TIME	GAGE NUMBER 298	5780	5900					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 20										
1515	3.57	5.30	6.37					5.52	829.0	2.1182
1530	3.77	5.40	6.37					5.59	951.0	2.1284
1545	3.77	5.50	6.37					5.63	1050.0	2.1397
1600	3.77	5.50	6.37					5.63	1200.0	2.1590
1630	3.77	5.50	6.37					5.63	1390.0	2.2038
1730	3.77	5.50	6.37					5.63	1600.0	2.2724
1830	3.77	5.50	6.37					5.63	1670.0	2.3441
1930	3.77	5.50	6.37					5.63	1610.0	2.4305
2100	3.77	5.50	6.37					5.63	1410.0	2.5667
2400	3.77	5.50	6.37					5.63	1040.0	2.6671
APR 21										
0000	3.77	5.50	6.37					5.63	1040.0	2.6671
0300	3.77	5.50	6.37					5.63	799.0	2.8035
0600	3.77	5.50	6.37					5.63	632.0	2.9256
1200	3.77	5.50	6.37					5.63	433.0	3.0371
1800	3.77	5.50	6.37					5.63	298.0	3.1043
2230	3.77	5.50	6.37					5.63	243.0	3.1329
2330	3.77	5.50	6.37					5.63	251.0	3.1410
2400	3.77	5.50	6.37					5.63	251.0	3.1464
APR 22										
0000	3.77	5.50	6.37					5.63	251.0	3.1464
0100	3.77	5.50	6.37					5.63	239.0	3.1799
0600	3.77	5.50	6.37					5.63	175.0	3.2325
1500	3.77	5.50	6.37					5.63	125.0	3.2808
2400	3.77	5.50	6.37					5.63	94.0	3.3110
APR 23										
0000	3.77	5.50	6.37					5.63	94.0	3.3110
1200	3.77	5.50	6.37					5.63	74.0	3.3612
2400	3.77	5.50	6.37					5.63	56.0	3.3829
APR 24										
0000	3.77	5.50	6.37					5.63	56.0	3.3829
1200	3.77	5.50	6.37					5.63	46.0	3.4138
2400	3.77	5.50	6.37					5.63	38.0	3.4236

STA. NO. 08075900 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT U.S.HIGHWAY 75 NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 17									
0000	0.0	0.0	0.0				0.0	10.0	0.0033
1515	0.0	0.0	0.0				0.0	12.0	0.0073
1530	0.01	0.0	0.11				0.03	12.0	0.0074
1545	0.06	0.10	0.20				0.11	13.0	0.0075
1600	0.15	0.30	0.52				0.30	15.0	0.0077
1615	0.36	0.34	0.58				0.41	18.0	0.0079
1630	0.42	0.43	0.75				0.51	27.0	0.0082
1645	0.47	0.56	0.89				0.61	31.0	0.0085
1700	0.55	0.62	0.94				0.68	46.0	0.0093
1730	0.63	0.72	1.02				0.76	54.0	0.0104
1800	0.72	0.78	1.08				0.83	55.0	0.0116
1830	0.74	0.80	1.10				0.85	57.0	0.0128
1900	0.75	0.81	1.11				0.86	61.0	0.0148
2000	0.75	0.81	1.11				0.86	73.0	0.0179
2100	0.77	0.82	1.11				0.87	79.0	0.0213
2200	0.78	0.83	1.11				0.88	75.0	0.0237
2230	0.78	0.83	1.11				0.88	75.0	0.0249
2245	0.78	0.84	1.11				0.89	75.0	0.0257
2300	0.79	0.85	1.18				0.91	77.0	0.0266
2315	0.81	0.90	1.30				0.97	79.0	0.0274
2330	0.86	0.98	1.32				1.02	81.0	0.0283
2345	0.92	1.02	1.36				1.07	84.0	0.0292
2400	0.95	1.05	1.38				1.10	86.0	0.0299
SEPT 18									
0000	0.95	1.05	1.38				1.10	86.0	0.0299
0015	0.96	1.10	1.44				1.14	90.0	0.0315
0045	0.98	1.12	1.49				1.16	96.0	0.0331
0100	0.99	1.15	1.52				1.19	98.0	0.0341
0115	1.01	1.20	1.61				1.24	100.0	0.0352
0130	1.06	1.35	1.67				1.33	106.0	0.0364
0145	1.09	1.45	1.69				1.38	113.0	0.0388
0230	1.13	1.52	1.74				1.44	128.0	0.0422
0300	1.13	1.55	1.76				1.46	130.0	0.0443
0315	1.15	1.56	1.76				1.47	130.0	0.0464
0345	1.17	1.56	1.78				1.48	131.0	0.0485
0400	1.21	1.58	1.80				1.51	132.0	0.0535
0530	1.29	1.69	1.83				1.58	142.0	0.0596
0600	1.33	1.69	1.86				1.61	145.0	0.0642
0700	1.33	1.69	1.86				1.61	149.0	0.0706
0800	1.35	1.69	1.88				1.62	151.0	0.0771

STA. NO. 08075900 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT U.S.HIGHWAY 75 NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 18										
0900	1.40	1.72	1.92					1.66	148.0	0.0835
1000	1.50	1.82	1.92					1.73	142.0	0.0896
1100	1.52	1.85	1.94					1.76	129.0	0.0951
1200	1.56	1.90	2.01					1.81	117.0	0.1014
1330	1.63	2.02	2.08					1.90	104.0	0.1069
1430	1.63	2.02	2.09					1.90	97.0	0.1101
1500	1.63	2.08	2.21					1.95	97.0	0.1116
1515	1.63	2.11	2.23					1.97	100.0	0.1127
1530	1.72	2.11	2.23					2.00	101.0	0.1154
1630	1.72	2.11	2.27					2.01	103.0	0.1182
1645	1.74	2.11	2.30					2.03	103.0	0.1193
1700	1.77	2.12	2.43					2.07	103.0	0.1204
1715	1.97	2.26	2.52					2.22	108.0	0.1215
1730	2.46	2.31	2.69					2.46	121.0	0.1228
1745	2.60	2.37	2.70					2.53	130.0	0.1242
1800	2.61	2.41	2.70					2.55	146.0	0.1344
2100	2.61	2.42	2.71					2.56	237.0	0.1599
2300	2.61	2.42	2.72					2.56	239.0	0.1752
2400	2.63	2.46	2.72					2.58	236.0	0.1816
SEPT 19										
0000	2.63	2.46	2.72					2.58	236.0	0.1816
0030	2.65	2.48	2.74					2.60	234.0	0.1879
0100	2.65	2.48	2.77					2.61	231.0	0.1928
0130	2.67	2.48	2.78					2.62	228.0	0.1977
0200	2.73	2.51	2.82					2.66	226.0	0.2050
0300	2.82	2.58	2.89					2.74	222.0	0.2145
0400	2.83	2.62	2.91					2.77	220.0	0.2240
0500	2.86	2.63	2.92					2.78	214.0	0.2297
0515	2.88	2.64	2.98					2.81	214.0	0.2320
0530	2.95	2.70	3.02					2.87	214.0	0.2354
0600	3.01	2.75	3.08					2.92	217.0	0.2424
0700	3.07	2.78	3.09					2.96	220.0	0.2519
0800	3.12	2.80	3.10					2.99	223.0	0.2650
0945	3.28	2.88	3.29					3.12	228.0	0.2748
1000	3.33	2.89	3.30					3.15	228.0	0.2773
1015	3.39	2.91	3.46					3.22	228.0	0.2797
1030	3.57	2.96	3.60					3.33	235.0	0.2822
1045	3.74	3.33	3.72					3.57	257.0	0.2850
1100	3.85	3.48	3.85					3.70	265.0	0.2878
1115	4.08	3.66	4.03					3.90	298.0	0.2910

STA. NO. 08075900 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT U.S.HIGHWAY 75 NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 19									
1130	4.17	3.90	4.16				4.06	323.0	0.2945
1145	4.47	4.09	4.30				4.28	378.0	0.2986
1200	4.87	4.55	4.40				4.62	436.0	0.3032
1215	4.90	4.70	4.47				4.71	506.0	0.3114
1245	4.94	4.80	4.73				4.83	654.0	0.3219
1300	5.08	5.00	4.87				5.00	767.0	0.3301
1315	5.19	5.29	4.98				5.18	876.0	0.3395
1330	5.22	5.43	5.02				5.25	986.0	0.3607
1415	5.30	5.50	5.08				5.32	1250.0	0.3875
1430	5.38	5.54	5.12				5.38	1330.0	0.4018
1445	5.41	5.58	5.13				5.41	1380.0	0.4314
1530	5.58	5.66	5.20				5.52	1580.0	0.4738
1600	5.73	5.85	5.30				5.67	1680.0	0.5099
1630	5.88	6.01	5.50				5.84	1770.0	0.5858
1800	6.38	6.52	6.03				6.35	2040.0	0.6625
1815	6.58	6.63	6.11				6.48	2090.0	0.6849
1830	6.67	6.74	6.21				6.58	2120.0	0.7190
1900	6.88	6.98	6.42				6.80	2210.0	0.7546
1915	7.03	7.08	6.52				6.92	2270.0	0.8033
2000	7.27	7.40	6.72				7.18	2410.0	0.8550
2015	7.39	7.48	6.84				7.29	2450.0	0.8813
2030	7.56	7.56	6.98				7.41	2480.0	0.9079
2045	7.66	7.72	7.06				7.53	2530.0	0.9351
2100	7.70	7.90	7.12				7.63	2590.0	0.9629
2115	7.71	7.93	7.18				7.67	2620.0	0.9910
2130	7.73	7.95	7.20				7.69	2660.0	1.0338
2200	7.82	8.09	7.39				7.82	2720.0	1.0776
2215	7.83	8.13	7.42				7.85	2760.0	1.1072
2230	7.87	8.13	7.42				7.86	2780.0	1.1371
2245	7.90	8.14	7.46				7.89	2790.0	1.1670
2300	7.91	8.17	7.50				7.91	2800.0	1.1970
2315	7.94	8.24	7.68				7.99	2820.0	1.2273
2330	8.01	8.32	7.90				8.11	2840.0	1.2578
2345	8.09	8.42	8.00				8.20	2860.0	1.2885
2400	8.13	8.58	8.08				8.30	2890.0	1.3195
SEPT 20									
0000	8.13	8.58	8.08				8.30	2890.0	1.3195
0030	8.21	8.77	8.11				8.41	2910.0	1.3818
0045	8.23	8.78	8.22				8.45	2920.0	1.4132
0100	8.28	8.81	8.23				8.48	2930.0	1.4603

STA. NO. 08075900 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT U.S.HIGHWAY 75 NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 20									
0130	8.31	8.87	8.23				8.51	2940.0	1.5234
0200	8.32	8.92	8.24				8.54	2950.0	1.5867
0230	8.33	8.95	8.27				8.56	2920.0	1.6494
0300	8.33	8.95	8.27				8.56	2900.0	1.7116
0330	8.34	8.95	8.27				8.57	2870.0	1.7732
0400	8.35	8.95	8.27				8.57	2830.0	1.9251
0600	8.35	8.95	8.27				8.57	2570.0	2.2009
0900	8.35	8.95	8.27				8.57	2110.0	2.4726
1200	8.35	8.95	8.27				8.57	1760.0	2.6142
1245	8.35	8.95	8.27				8.57	1690.0	2.6505
1300	8.35	8.95	8.27				8.57	1660.0	2.7307
1500	8.35	8.95	8.27				8.57	1460.0	2.8874
1800	8.35	8.95	8.27				8.57	1220.0	3.1230
2400	8.35	8.95	8.27				8.57	880.0	3.2930
SEPT 21									
0000	8.35	8.95	8.27				8.57	880.0	3.2930
0600	8.35	8.95	8.27				8.57	614.0	3.5078
1200	8.35	8.95	8.27				8.57	426.0	3.6175
1800	8.35	8.95	8.27				8.57	273.0	3.6878
2400	8.35	8.95	8.27				8.57	181.0	3.7228
SEPT 22									
0000	8.35	8.95	8.27				8.57	181.0	3.7228
0600	8.35	8.95	8.27				8.57	124.0	3.7664
1200	8.35	8.95	8.27				8.57	92.0	3.7901
1800	8.35	8.95	8.27				8.57	80.0	3.8107
2400	8.35	8.95	8.27				8.57	68.0	3.8238
SEPT 23									
0000	8.35	8.95	8.27				8.57	68.0	3.8238
0600	8.35	8.95	8.27				8.57	58.0	3.8431
1200	8.35	8.95	8.27				8.57	50.0	3.8560
1800	8.35	8.95	8.27				8.57	43.0	3.8671
2400	8.35	8.95	8.27				8.57	36.0	3.8717

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 mi² (180.3 km²). Prior to Oct. 1, 1973, 72.7 mi² (188.3 km²).

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.--27 years, 55.6 ft³/s (1.575 m³/s), 40,280 acre-ft/yr (49.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,730 ft³/s (219 m³/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 1,700 ft³/s (48.1 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
aNov. 26	2130	2,180	61.7	56.86	17.331	Apr. 20	2000	3,140	88.9	59.36	18.093
Jan. 6	2230	2,130	60.3	56.67	17.273	aJuly 25	2330	1,680	47.6	56.57	17.243
Feb. 23	2230	2,360	66.8	57.42	17.502	Sept. 20	0330	*5,760	163	64.78	19.745
aApr. 18	2230	3,040	86.1	59.14	18.026						

a Water-quality samples were obtained on this date.

Minimum daily discharge, 10 ft³/s (0.28 m³/s) Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	32	477	54	31	30	38	62	23	20	268
2	11	11	21	163	49	31	113	34	361	23	20	149
3	13	12	118	50	250	62	582	29	104	24	24	27
4	13	12	128	36	225	35	353	787	55	79	20	22
5	13	13	48	91	903	24	115	412	53	54	18	17
6	14	155	23	1090	1170	23	53	142	36	32	18	49
7	13	54	73	1040	472	21	32	64	34	120	61	188
8	16	21	69	219	190	21	24	39	25	393	28	55
9	13	13	39	94	98	20	22	28	20	67	20	19
10	13	11	17	56	61	21	21	25	19	35	17	16
11	12	12	14	189	46	22	19	30	19	27	16	17
12	13	19	14	101	39	21	18	46	21	29	20	15
13	13	13	14	56	36	20	17	26	18	166	14	15
14	15	12	13	37	32	20	16	23	17	170	17	15
15	13	11	20	30	32	17	14	21	18	71	91	15
16	13	10	15	29	29	21	13	21	18	27	57	15
17	13	17	13	26	83	21	15	20	19	22	37	55
18	12	14	13	26	218	17	808	20	27	23	21	279
19	12	107	13	106	85	39	1640	19	26	20	137	1700
20	12	244	14	382	57	150	2210	19	21	29	164	4280
21	13	34	12	119	54	340	1250	19	20	330	71	1100
22	13	17	13	53	49	568	378	330	18	75	206	264
23	13	15	14	38	424	360	175	92	18	31	71	112
24	14	13	14	26	867	103	89	26	20	25	21	61
25	14	13	13	22	148	47	50	19	21	451	17	42
26	15	710	13	61	66	32	36	19	43	700	17	32
27	14	812	13	43	47	28	27	20	26	138	19	28
28	12	126	13	26	37	24	23	21	21	292	17	26
29	12	192	72	25	---	22	168	182	21	72	16	24
30	12	101	123	188	---	21	122	241	22	38	16	21
31	13	---	64	161	---	37	---	175	---	24	17	---
TOTAL	405	2806	1075	5060	5821	2219	8433	2987	1203	3610	1308	8926
MEAN	13.1	93.5	34.7	163	208	71.6	281	96.4	40.1	116	42.2	298
MAX	16	812	128	1090	1170	568	2210	787	361	700	206	4280
MIN	11	10	12	22	29	17	13	19	17	20	14	15
AC-FT	803	5570	2130	10040	11550	4400	16730	5920	2390	7160	2590	17700
(††)	.11	6.98	2.50	5.62	4.32	3.00	7.92	4.43	1.65	8.27	3.14	9.44

CAL YR 1978 TOTAL 24068 MEAN 65.9 MAX 2470 MIN 10 AC-FT 47740 †† 41.08
WTR YR 1979 TOTAL 43853 MEAN 120 MAX 4280 MIN 10 AC-FT 86980 †† 57.38

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
18...	1100	13	990	7.2	17.5	40	20	8.8	95	18
NOV										
27...	1935	298	221	7.5	17.0	200	250	7.7	82	5.5
DEC										
12...	0815	15	815	6.9	6.5	40	40	9.8	82	11
JAN										
22...	1240	48	510	7.7	11.5	200	50	9.2	87	18
MAR										
14...	1420	18	1000	8.4	24.0	20	20	15.5	189	5.4
APR										
18...	0845	39	616	7.4	21.0	25	310	5.7	66	24
18...	1410	128	372	7.2	21.5	25	250	13.0	151	26
18...	2200	3010	172	7.0	20.0	75	810	8.6	98	14
19...	1505	1060	186	7.1	20.5	100	580	7.2	82	5.0
JUL										
25...	1330	74	626	7.2	26.0	30	160	5.9	74	17
26...	1045	639	144	7.6	24.5	280	180	6.5	79	12
31...	1050	23	712	7.4	28.5	70	96	5.2	68	16

DATE	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 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)
OCT										
18...	16000	2900	40	--	--	--	--	--	--	--
NOV										
27...	150000	30000	5500	76	6	26	2.8	12	.6	3.5
DEC										
12...	14000	2300	620	200	12	66	8.6	77	2.4	7.2
JAN										
22...	61000	8300	980	--	--	--	--	--	--	--
MAR										
14...	13000	2000	68	260	14	86	11	110	3.0	5.9
APR										
18...	480000	30000	4700	--	--	--	--	--	--	--
18...	840000	38000	7800	110	0	37	3.4	29	1.2	3.2
18...	580000	36000	21000	69	0	24	2.3	7.8	.4	1.8
19...	120000	34000	4400	--	--	--	--	--	--	--
JUL										
25...	460000	100000	7400	160	32	55	6.3	63	2.1	4.3
26...	120000	100000	12000	--	--	--	--	--	--	--
31...	26000	3000	2000	190	29	64	8.1	74	2.3	4.5

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
18...	--	--	--	--	--	--	--	42	14	2.5
NOV										
27...	86	0	10	14	.1	8.7	120	532	36	.35
DEC										
12...	230	0	52	85	.3	34	443	71	20	2.1
JAN										
22...	--	--	--	--	--	--	--	105	19	1.1
MAR										
14...	300	0	110	95	.4	33	600	32	9	1.1
APR										
18...	--	--	--	--	--	--	--	752	94	.20
18...	140	0	19	23	.3	.3	184	568	68	.53
18...	86	0	7.7	6.1	.3	2.3	95	762	68	.25
19...	--	--	--	--	--	--	--	266	34	.10
JUL										
25...	160	0	90	53	.3	23	374	237	72	.35
26...	--	--	--	--	--	--	--	276	56	.24
31...	200	0	71	67	.3	27	415	157	27	.26

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
18...	.42	2.9	1.6	1.3	2.9	6.1	12	--	.30
NOV									
27...	.04	.39	.24	1.2	1.4	.59	15	--	.10
DEC									
12...	.30	2.4	2.7	1.4	4.1	2.8	8.0	--	--
JAN									
22...	.55	1.6	3.0	1.5	4.5	2.9	15	--	.20
MAR									
14...	.51	1.6	1.7	.80	2.5	2.1	4.8	2	.10
APR									
18...	.34	.54	1.4	2.1	3.5	1.6	17	--	.20
18...	.31	.84	1.1	.90	2.0	.58	17	0	.10
18...	.10	.35	.39	.81	1.2	.25	25	--	.00
19...	.08	.18	.22	.88	1.1	.18	16	--	.00
JUL									
25...	.41	.76	.82	1.2	2.0	1.8	13	4	.20
26...	.12	.36	.15	.38	.53	.49	14	--	.00
31...	.34	.60	.36	.00	.24	2.0	12	1	.10

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)
MAR						
14...	1420	5	300	0	0	0
APR						
18...	1410	4	100	1	0	2
JUL						
25...	1330	7	300	0	0	1
31...	1050	8	300	1	0	4

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
MAR							
14...	0	0	0	.0	2	0	10
APR							
18...	10	0	0	.0	0	0	10
JUL							
25...	0	0	40	.0	1	2	8
31...	20	0	30	.0	1	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	DIAZINON, TOTAL (UG/L)
MAR									
14...	1420	.0	--	.00	.0	.00	.00	.00	.00
APR									
18...	1410	.0	--	.00	.1	.00	.00	.00	.40
JUL									
25...	1330	.2	.00	.00	.1	.00	.00	.00	.88
31...	1050	.0	.00	.00	.0	.00	.00	.00	.29

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
MAR									
14...	.00	.00	.00	.00	.00	.00	.01	.00	.00
APR									
18...	.00	.00	.00	.00	.00	.00	.00	.11	.00
JUL									
25...	.00	.00	.00	.00	.00	.00	.00	.01	.00
31...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR								
14...	.00	.00	.00	0	.00	.08	.00	.00
APR								
18...	.00	.00	.00	0	.00	.28	.04	.00
JUL								
25...	.00	.00	.01	0	.00	3.0	.03	.00
31...	.00	.00	.00	0	.00	.00	.00	.00

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF APRIL 18-24, 1979

DATE & TIME	GAGE NUMBER 29R	5780	5900	6000	20R			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18										
0000	0.0	0.0	0.0	0.0	0.0			0.0	22.0	0.0006
0215	0.0	0.0	0.0	0.0	0.0			0.0	28.0	0.0013
0230	0.02	0.0	0.0	0.0	0.0			0.00	28.0	0.0018
0345	0.02	0.0	0.0	0.0	0.0			0.00	28.0	0.0023
0400	0.05	0.0	0.02	0.0	0.0			0.01	28.0	0.0024
0415	0.06	0.0	0.43	0.0	0.0			0.20	28.0	0.0027
0445	0.13	0.0	0.50	0.0	0.0			0.24	27.0	0.0030
0530	0.13	0.0	0.50	0.08	0.09			0.26	27.0	0.0034
0600	0.13	0.10	0.51	0.10	0.15			0.29	27.0	0.0037
0630	0.14	0.10	0.53	0.10	0.15			0.30	29.0	0.0039
0645	0.15	0.10	0.66	0.10	0.15			0.36	30.0	0.0041
0700	0.15	0.10	0.68	0.10	0.15			0.37	30.0	0.0044
0730	0.15	0.10	0.68	0.10	0.15			0.37	30.0	0.0046
0745	0.15	0.10	0.68	0.12	0.18			0.38	30.0	0.0048
0800	0.15	0.10	0.68	0.32	0.28			0.42	30.0	0.0050
0830	0.15	0.10	0.68	0.38	0.28			0.43	32.0	0.0054
0900	0.15	0.10	0.68	0.41	0.28			0.43	41.0	0.0065
1100	0.15	0.10	0.68	0.41	0.28			0.43	140.0	0.0104
1130	0.15	0.10	0.68	0.41	0.28			0.43	146.0	0.0121
1200	0.15	0.10	0.68	0.41	0.28			0.43	151.0	0.0137
1230	0.15	0.10	0.68	0.41	0.28			0.43	152.0	0.0154
1300	0.15	0.10	0.68	0.41	0.28			0.43	146.0	0.0166
1315	0.17	0.10	0.70	0.41	0.28			0.44	142.0	0.0178
1345	0.17	0.20	0.70	0.41	0.28			0.46	135.0	0.0190
1400	0.17	0.20	1.38	0.41	0.28			0.77	132.0	0.0201
1430	1.22	0.20	2.24	0.41	1.60			1.39	123.0	0.0211
1445	1.72	1.30	2.39	0.41	2.00			1.77	116.0	0.0217
1500	1.98	2.00	2.60	0.41	2.47			2.08	114.0	0.0224
1515	2.12	2.50	2.70	0.70	2.70			2.30	109.0	0.0230
1530	2.40	2.80	2.72	2.00	2.90			2.61	107.0	0.0236
1545	2.44	2.90	2.76	2.39	3.00			2.72	180.0	0.0246
1600	2.48	3.20	2.76	2.43	3.03			2.80	290.0	0.0262
1615	2.51	3.40	2.77	2.46	3.05			2.85	410.0	0.0296
1645	2.60	3.40	2.78	2.49	3.07			2.87	738.0	0.0358
1700	2.61	3.40	2.78	2.52	3.08			2.88	929.0	0.0487
1800	2.62	3.40	2.78	2.54	3.10			2.88	1740.0	0.0874
1900	2.62	3.40	2.78	2.57	3.10			2.89	2320.0	0.1649
2100	2.62	3.40	2.78	2.57	3.10			2.89	2900.0	0.2618
2200	2.62	3.40	2.78	2.58	3.10			2.89	3000.0	0.3119

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF APRIL 18-24, 1979

DATE & TIME	GAGE NUMBER 29R	5780	5900	6000	20R			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18										
2230	2.62	3.40	2.78	2.58	3.10			2.89	3040.0	0.3457
2300	2.62	3.40	2.78	2.58	3.10			2.89	3030.0	0.3963
2400	2.62	3.40	2.78	2.58	3.10			2.89	2970.0	0.4624
APR 19										
0000	2.62	3.40	2.78	2.58	3.10			2.89	2970.0	0.4624
0200	2.62	3.40	2.78	2.58	3.10			2.89	2640.0	0.6718
0600	2.62	3.40	2.78	2.58	3.10			2.89	1970.0	0.8911
1200	2.62	3.40	2.78	2.58	3.10			2.89	1270.0	1.0184
1500	2.62	3.40	2.78	2.58	3.10			2.89	1070.0	1.0660
1600	2.65	3.40	2.83	2.58	3.11			2.92	1000.0	1.0799
1615	2.65	3.50	2.83	2.58	3.11			2.94	987.0	1.0882
1645	2.66	3.50	2.83	2.58	3.11			2.94	957.0	1.0961
1700	2.66	3.50	2.87	2.58	3.13			2.96	949.0	1.1041
1730	2.68	3.50	3.17	2.58	3.14			3.10	916.0	1.1117
1745	2.70	3.50	3.45	2.58	3.15			3.22	900.0	1.1167
1800	2.85	3.50	3.49	2.58	3.16			3.26	896.0	1.1217
1815	2.90	4.00	3.58	2.68	3.26			3.43	878.0	1.1266
1830	2.96	4.10	3.60	3.17	3.40			3.55	865.0	1.1314
1845	3.00	4.20	3.61	3.35	3.47			3.61	865.0	1.1362
1900	3.05	4.20	3.67	3.74	3.54			3.71	878.0	1.1436
1930	3.13	4.30	3.75	3.90	3.64			3.81	985.0	1.1518
1945	3.19	4.30	3.81	4.03	3.69			3.87	1050.0	1.1605
2015	3.27	4.40	3.87	4.20	3.80			3.96	1210.0	1.1706
2030	3.28	4.40	3.87	4.23	3.84			3.97	1300.0	1.1815
2100	3.30	4.50	3.87	4.24	3.86			3.99	1480.0	1.2062
2200	3.40	4.60	3.99	4.25	3.88			4.08	1700.0	1.2299
2215	3.42	4.70	4.02	4.28	4.00			4.13	1820.0	1.2603
2330	3.42	4.70	4.02	4.44	4.03			4.16	2090.0	1.3010
2400	3.42	4.70	4.02	4.44	4.03			4.16	2220.0	1.3257
APR 20										
0000	3.42	4.70	4.02	4.44	4.03			4.16	2220.0	1.3257
0100	3.42	4.70	4.02	4.44	4.03			4.16	2370.0	1.3908
0200	3.42	4.70	4.02	4.44	4.03			4.16	2470.0	1.4321
0230	3.42	4.70	4.02	4.44	4.03			4.16	2500.0	1.4599
0300	3.42	4.70	4.02	4.44	4.03			4.16	2500.0	1.4877
0330	3.42	4.70	4.02	4.44	4.03			4.16	2490.0	1.5293
0430	3.42	4.70	4.02	4.44	4.03			4.16	2420.0	1.6101
0630	3.42	4.70	4.02	4.44	4.03			4.16	2220.0	1.7646
1045	3.42	4.70	4.02	4.46	4.04			4.16	1720.0	1.8507
1100	3.43	4.70	4.02	4.46	4.04			4.16	1680.0	1.8975
1315	3.43	5.10	4.02	4.46	4.04			4.24	1460.0	1.9381

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF APRIL 18-24, 1979

DATE & TIME	GAGE NUMBER 29R	5780	5900	6000	20R			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 20										
1330	3.43	5.20	4.02	4.46	4.04			4.26	1440.0	1.9461
1345	3.43	5.20	4.02	4.46	4.04			4.26	1410.0	1.9540
1400	3.43	5.20	4.52	4.46	4.04			4.49	1390.0	1.9617
1415	3.43	5.20	5.62	4.46	4.04			4.98	1380.0	1.9694
1430	3.43	5.20	6.29	4.46	4.04			5.29	1350.0	1.9769
1445	3.43	5.20	6.34	4.46	4.25			5.33	1330.0	1.9843
1500	3.53	5.20	6.37	4.46	4.31			5.36	1320.0	1.9917
1515	3.57	5.30	6.37	4.80	4.45			5.45	1300.0	1.9989
1530	3.77	5.40	6.37	5.10	4.50			5.54	1280.0	2.0060
1545	3.77	5.50	6.37	5.38	4.52			5.60	1270.0	2.0131
1600	3.77	5.50	6.37	5.41	4.52			5.61	1320.0	2.0315
1700	3.77	5.50	6.37	5.41	4.52			5.61	1860.0	2.0729
1800	3.77	5.50	6.37	5.41	4.52			5.61	2640.0	2.1316
1900	3.77	5.50	6.37	5.41	4.52			5.61	3030.0	2.1822
1930	3.77	5.50	6.37	5.41	4.52			5.61	3090.0	2.2166
2000	3.77	5.50	6.37	5.41	4.52			5.61	3140.0	2.2516
2030	3.77	5.50	6.37	5.41	4.52			5.61	3100.0	2.2861
2100	3.77	5.50	6.37	5.41	4.52			5.61	3070.0	2.3544
2230	3.77	5.50	6.37	5.41	4.52			5.61	2970.0	2.4536
2400	3.77	5.50	6.37	5.41	4.52			5.61	2570.0	2.5824
APR 21										
0000	3.77	5.50	6.37	5.41	4.52			5.61	2570.0	2.5824
0600	3.77	5.50	6.37	5.41	4.52			5.61	1620.0	2.8846
1200	3.77	5.50	6.37	5.41	4.52			5.61	1090.0	3.0302
1800	3.77	5.50	6.37	5.41	4.53			5.61	784.0	3.1349
2400	3.77	5.50	6.37	5.41	4.54			5.61	580.0	3.1931
APR 22										
0000	3.77	5.50	6.37	5.41	4.54			5.61	580.0	3.1931
0600	3.77	5.50	6.37	5.41	4.54			5.61	469.0	3.2751
1200	3.77	5.50	6.37	5.41	4.54			5.61	356.0	3.3226
1800	3.77	5.50	6.37	5.41	4.54			5.61	290.0	3.3614
2400	3.77	5.50	6.37	5.41	4.54			5.61	238.0	3.3852
APR 23										
0000	3.77	5.50	6.37	5.41	4.54			5.61	238.0	3.3852
0600	3.77	5.50	6.37	5.41	4.54			5.61	196.0	3.4193
1200	3.77	5.50	6.37	5.41	4.54			5.61	172.0	3.4423
1800	3.77	5.50	6.37	5.41	4.54			5.61	150.0	3.4624
2400	3.77	5.50	6.37	5.41	4.54			5.61	122.0	3.4787
APR 24										
0000	3.77	5.50	6.37	5.41	4.54			5.61	122.0	3.4787
1200	3.77	5.50	6.37	5.41	4.54			5.61	87.0	3.5100
2400	3.77	5.50	6.37	5.41	4.54			5.61	63.0	3.5185

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF JULY 25-26 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 25										
0000	0.0	0.0	0.0	0.0				0.0	36.0	0.0030
0730	0.0	0.0	0.0	0.0				0.0	38.0	0.0063
0745	0.0	0.0	0.0	0.06				0.01	37.0	0.0065
0800	0.0	0.0	0.02	0.09				0.02	37.0	0.0068
0830	0.0	0.0	0.05	0.18				0.05	36.0	0.0072
0900	0.0	0.0	0.06	0.19				0.06	36.0	0.0078
1000	0.0	0.0	0.08	0.20				0.07	36.0	0.0084
1030	0.03	0.0	0.08	0.20				0.07	35.0	0.0088
1100	0.03	0.0	0.08	0.20				0.07	35.0	0.0091
1115	0.11	0.0	0.08	0.20				0.09	34.0	0.0093
1130	0.17	0.08	0.09	0.20				0.12	34.0	0.0095
1145	0.17	0.20	0.14	0.20				0.17	34.0	0.0097
1200	0.20	0.28	0.38	0.20				0.30	34.0	0.0098
1215	0.23	0.28	0.40	0.20				0.31	34.0	0.0100
1230	0.27	0.34	0.47	0.20				0.36	35.0	0.0102
1245	0.30	0.43	0.60	0.32				0.46	41.0	0.0107
1330	0.54	0.62	0.92	0.68				0.75	70.0	0.0115
1345	0.61	0.70	1.04	0.76				0.84	82.0	0.0119
1400	0.64	0.92	1.30	0.82				1.02	90.0	0.0127
1430	0.65	0.98	1.51	1.06				1.16	143.0	0.0143
1500	0.65	1.00	1.55	1.50				1.25	213.0	0.0166
1530	0.65	1.04	1.64	1.74				1.34	306.0	0.0200
1600	0.65	1.06	1.68	2.12				1.42	424.0	0.0271
1700	0.65	1.06	1.68	2.23				1.43	725.0	0.0433
1800	0.65	1.06	1.68	2.23				1.43	975.0	0.0568
1815	0.65	1.06	1.68	2.23				1.43	1030.0	0.0626
1830	0.74	1.06	1.68	2.23				1.45	1060.0	0.0714
1900	0.74	1.07	1.90	2.26				1.56	1110.0	0.0838
1930	0.76	1.10	2.02	2.26				1.62	1120.0	0.0931
1945	0.79	1.12	2.09	2.27				1.66	1180.0	0.0997
2000	0.80	1.12	2.10	2.44				1.69	1220.0	0.1099
2030	0.80	1.12	2.10	2.93				1.77	1320.0	0.1209
2045	0.80	1.12	2.10	3.18				1.81	1400.0	0.1287
2100	0.80	1.15	2.15	3.30				1.85	1440.0	0.1367
2115	0.80	1.15	2.15	3.47				1.88	1490.0	0.1450
2130	0.80	1.15	2.15	3.49				1.88	1520.0	0.1577
2200	0.80	1.15	2.15	3.52				1.89	1600.0	0.1710
2215	0.80	1.15	2.15	3.65				1.90	1630.0	0.1801
2230	0.80	1.15	2.15	3.67				1.91	1650.0	0.1939

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF JULY 25-26 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
JULY 25										
2300	0.80	1.15	2.15	3.71				1.91	1670.0	0.2125
2330	0.80	1.15	2.15	3.71				1.91	1680.0	0.2312
2400	0.80	1.15	2.15	3.71				1.91	1670.0	0.2498
JULY 26										
0000	0.80	1.15	2.15	3.71				1.91	1670.0	0.2498
0100	0.80	1.15	2.15	3.71				1.91	1600.0	0.2947
0200	0.80	1.15	2.15	3.71				1.91	1500.0	0.3281
0300	0.80	1.15	2.15	3.71				1.91	1390.0	0.3590
0400	0.81	1.15	2.19	3.74				1.94	1280.0	0.3875
0500	0.81	1.16	2.23	3.74				1.96	1160.0	0.4134
0600	0.81	1.18	2.23	3.74				1.96	1050.0	0.4309
0630	0.83	1.18	2.23	3.74				1.97	995.0	0.4392
0645	0.83	1.18	2.23	3.79				1.97	963.0	0.4446
0700	0.83	1.18	2.23	3.79				1.97	941.0	0.4524
0730	0.83	1.18	2.23	3.80				1.98	892.0	0.4623
0800	0.83	1.20	2.23	3.86				1.99	844.0	0.4717
0830	0.86	1.25	2.23	3.87				2.01	803.0	0.4807
0900	0.86	1.35	2.23	3.87				2.03	747.0	0.5098
1200	0.86	1.35	2.23	3.89				2.03	562.0	0.5364
1315	0.86	1.35	2.23	3.89				2.03	500.0	0.5447
1330	0.86	1.42	2.23	3.89				2.04	491.0	0.5570
1530	0.86	1.42	2.23	3.89				2.04	389.0	0.5678
1600	0.88	1.42	2.23	3.89				2.05	372.0	0.5710
1615	0.90	1.42	2.23	3.89				2.05	362.0	0.5730
1630	0.95	1.44	2.23	3.89				2.06	351.0	0.5749
1645	0.97	1.45	2.23	3.89				2.07	340.0	0.5768
1700	0.97	1.46	2.23	3.89				2.07	333.0	0.5796
1730	0.97	1.52	2.23	3.89				2.08	310.0	0.5830
1800	0.97	1.53	2.23	3.89				2.09	290.0	0.5863
1830	0.97	1.53	2.23	3.89				2.09	283.0	0.5957
2100	0.97	1.53	2.23	3.89				2.09	218.0	0.6091
2400	0.97	1.53	2.23	3.89				2.09	177.0	0.6150

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-24 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 17										
0000	0.0	0.0	0.0	0.0				0.0	16.0	0.0027
1500	0.0	0.0	0.0	0.0				0.0	14.0	0.0050
1515	0.0	0.0	0.0	0.09				0.01	15.0	0.0051
1530	0.01	0.0	0.11	0.11				0.07	15.0	0.0052
1545	0.06	0.10	0.20	0.12				0.14	16.0	0.0053
1600	0.15	0.30	0.52	0.14				0.34	16.0	0.0054
1615	0.36	0.34	0.58	0.21				0.43	17.0	0.0055
1630	0.42	0.43	0.75	0.28				0.55	18.0	0.0056
1645	0.47	0.56	0.89	0.33				0.66	20.0	0.0057
1700	0.55	0.62	0.94	0.42				0.72	21.0	0.0060
1800	0.72	0.78	1.08	0.48				0.86	30.0	0.0065
1830	0.74	0.80	1.10	0.49				0.88	31.0	0.0068
1900	0.75	0.81	1.11	0.49				0.88	32.0	0.0074
2000	0.75	0.81	1.11	0.49				0.88	133.0	0.0103
2100	0.77	0.82	1.11	0.49				0.89	218.0	0.0152
2200	0.78	0.83	1.11	0.49				0.89	252.0	0.0194
2230	0.78	0.83	1.11	0.51				0.90	260.0	0.0216
2245	0.78	0.84	1.11	0.52				0.90	258.0	0.0230
2300	0.79	0.85	1.18	0.54				0.94	257.0	0.0244
2315	0.81	0.90	1.30	0.56				1.01	256.0	0.0259
2330	0.86	0.98	1.32	0.57				1.05	253.0	0.0273
2345	0.92	1.02	1.36	0.57				1.09	244.0	0.0286
2400	0.95	1.05	1.38	0.57				1.11	243.0	0.0296
SEPT 18										
0000	0.95	1.05	1.38	0.57				1.11	243.0	0.0296
0015	0.96	1.10	1.44	0.57				1.15	235.0	0.0319
0045	0.98	1.11	1.49	0.61				1.18	226.0	0.0338
0100	0.99	1.15	1.52	0.66				1.21	225.0	0.0351
0115	1.01	1.20	1.61	0.70				1.27	221.0	0.0363
0130	1.06	1.35	1.67	0.72				1.34	219.0	0.0375
0145	1.09	1.45	1.69	0.74				1.38	218.0	0.0400
0230	1.13	1.52	1.74	0.77				1.43	215.0	0.0429
0300	1.13	1.55	1.76	0.78				1.44	219.0	0.0466
0400	1.21	1.58	1.80	0.84				1.49	256.0	0.0537
0530	1.29	1.69	1.83	0.86				1.55	274.0	0.0598
0600	1.33	1.69	1.86	0.86				1.57	288.0	0.0646
0700	1.33	1.69	1.86	0.88				1.57	310.0	0.0698
0730	1.34	1.69	1.87	0.89				1.58	313.0	0.0733
0800	1.35	1.69	1.88	0.93				1.59	316.0	0.0786
0900	1.40	1.72	1.92	0.95				1.63	312.0	0.0855

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-24 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 18										
1000	1.50	1.82	1.92	0.95				1.67	302.0	0.0922
1100	1.52	1.85	1.94	0.97				1.69	290.0	0.0987
1200	1.56	1.90	2.01	1.04				1.75	278.0	0.1064
1330	1.63	2.02	2.08	1.09				1.83	270.0	0.1140
1430	1.63	2.02	2.09	1.10				1.84	264.0	0.1184
1500	1.63	2.08	2.21	1.10				1.90	261.0	0.1205
1515	1.63	2.11	2.23	1.10				1.92	260.0	0.1220
1530	1.72	2.11	2.23	1.10				1.93	258.0	0.1256
1630	1.72	2.11	2.27	1.10				1.95	256.0	0.1291
1645	1.74	2.11	2.30	1.17				1.98	255.0	0.1306
1700	1.77	2.12	2.43	1.23				2.06	255.0	0.1320
1715	1.97	2.26	2.52	1.25				2.17	256.0	0.1334
1730	2.46	2.31	2.69	1.27				2.35	257.0	0.1348
1745	2.60	2.37	2.70	1.27				2.40	260.0	0.1363
1800	2.61	2.41	2.70	1.28				2.41	262.0	0.1399
1900	2.61	2.41	2.70	1.29				2.41	326.0	0.1508
2100	2.61	2.42	2.71	1.30				2.42	335.0	0.1620
2200	2.61	2.42	2.72	1.30				2.42	359.0	0.1700
2300	2.61	2.42	2.72	1.31				2.43	374.0	0.1783
2400	2.63	2.46	2.72	1.37				2.45	381.0	0.1847
SEPT 19										
0000	2.63	2.46	2.72	1.37				2.45	381.0	0.1847
0100	2.65	2.48	2.77	1.44				2.49	383.0	0.1932
0130	2.67	2.48	2.78	1.46				2.50	384.0	0.1975
0200	2.73	2.51	2.82	1.49				2.54	386.0	0.2039
0300	2.82	2.58	2.89	1.56				2.61	389.0	0.2126
0400	2.83	2.62	2.91	1.57				2.63	391.0	0.2202
0445	2.84	2.63	2.92	1.58				2.64	400.0	0.2246
0500	2.86	2.63	2.92	1.65				2.66	403.0	0.2269
0515	2.88	2.64	2.98	1.68				2.70	405.0	0.2291
0530	2.95	2.70	3.02	1.68				2.74	406.0	0.2325
0600	3.01	2.75	3.08	1.69				2.79	415.0	0.2395
0700	3.07	2.78	3.09	1.70				2.82	434.0	0.2491
0800	3.12	2.80	3.10	1.75				2.84	443.0	0.2627
0945	3.28	2.88	3.29	1.81				2.98	465.0	0.2730
1000	3.33	2.89	3.30	1.92				3.02	471.0	0.2757
1015	3.39	2.91	3.46	2.06				3.13	480.0	0.2783
1030	3.57	2.96	3.60	2.09				3.24	486.0	0.2810
1045	3.74	3.33	3.72	2.30				3.43	496.0	0.2838
1100	3.85	3.48	3.85	2.40				3.56	504.0	0.2866

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-24 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 19										
1115	4.08	3.66	4.03	2.55				3.74	529.0	0.2895
1130	4.17	3.90	4.16	2.69				3.89	536.0	0.2925
1145	4.47	4.09	4.30	2.80				4.07	580.0	0.2958
1200	4.87	4.55	4.40	2.89				4.30	610.0	0.2992
1215	4.90	4.70	4.47	3.07				4.39	651.0	0.3046
1245	4.94	4.80	4.73	3.45				4.59	753.0	0.3109
1300	5.08	5.00	4.87	3.49				4.73	838.0	0.3155
1315	5.19	5.29	4.98	3.59				4.88	928.0	0.3207
1330	5.22	5.43	5.02	3.65				4.94	1070.0	0.3326
1415	5.30	5.50	5.08	3.66				4.99	1470.0	0.3490
1430	5.38	5.54	5.10	3.67				5.03	1630.0	0.3581
1445	5.41	5.58	5.13	3.69				5.06	1740.0	0.3774
1530	5.58	5.66	5.20	3.84				5.16	2120.0	0.4069
1600	5.73	5.85	5.30	3.93				5.29	2310.0	0.4326
1630	5.88	6.01	5.50	4.04				5.46	2500.0	0.4883
1800	6.38	6.52	6.03	4.61				5.98	3040.0	0.5560
1830	6.67	6.74	6.21	4.75				6.19	3210.0	0.5917
1900	6.88	6.98	6.40	4.97				6.40	3460.0	0.6206
1915	7.03	7.08	6.52	5.04				6.51	3580.0	0.6605
2000	7.27	7.40	6.72	5.30				6.75	3840.0	0.7246
2045	7.66	7.72	7.06	5.62				7.10	4090.0	0.7701
2100	7.70	7.90	7.12	5.70				7.18	4170.0	0.8049
2130	7.73	7.95	7.20	5.89				7.26	4400.0	0.8539
2200	7.82	8.09	7.39	6.15				7.43	4520.0	0.8916
2215	7.83	8.13	7.42	6.17				7.46	4590.0	0.9172
2230	7.87	8.13	7.42	6.25				7.48	4640.0	0.9559
2300	7.91	8.17	7.50	6.58				7.58	4780.0	0.9958
2315	7.94	8.24	7.68	6.91				7.73	4880.0	1.0230
2330	8.01	8.32	7.90	7.37				7.93	5020.0	1.0509
2345	8.09	8.42	8.00	7.67				8.05	5100.0	1.0793
2400	8.13	8.58	8.08	7.79				8.15	5200.0	1.1083
SEPT 20										
0000	8.13	8.58	8.08	7.79				8.15	5200.0	1.1083
0030	8.21	8.77	8.10	8.07				8.25	5370.0	1.1676
0045	8.23	8.78	8.22	8.08				8.31	5525.0	1.1983
0100	8.26	8.81	8.23	8.10				8.33	5560.0	1.2757
0200	8.32	8.92	8.24	8.17				8.38	5690.0	1.3707
0230	8.33	8.95	8.27	8.19				8.41	5700.0	1.4342
0300	8.33	8.95	8.27	8.19				8.41	5730.0	1.4979
0330	8.34	8.95	8.27	8.19				8.41	5760.0	1.5621

STA. NO. 08076000 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU NEAR HOUSTON , TEXAS — STORM OF SEPT. 17-24 , 1979

DATE & TIME	GAGE NUMBER 29R	203R	5900	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 20										
0400	8.35	8.95	8.27	8.19				8.41	5750.0	1.6261
0430	8.35	8.95	8.27	8.23				8.42	5720.0	1.6898
0500	8.35	8.95	8.27	8.33				8.43	5700.0	1.7849
0600	8.35	8.95	8.27	8.37				8.44	5610.0	1.9723
0800	8.35	8.95	8.27	8.37				8.44	5180.0	2.3183
1200	8.35	8.95	8.27	8.37				8.44	4350.0	2.5483
1245	8.35	8.95	8.27	8.37				8.44	4160.0	2.5946
1300	8.35	8.95	8.27	8.37				8.44	4110.0	2.8348
1800	8.35	8.95	8.27	8.37				8.44	3190.0	3.2254
2400	8.35	8.95	8.27	8.37				8.44	2300.0	3.4559
SEPT 21										
0000	8.35	8.95	8.27	8.37				8.44	2300.0	3.4559
0600	8.35	8.95	8.27	8.37				8.44	1460.0	3.7277
1200	8.35	8.95	8.27	8.37				8.44	916.0	3.8501
1800	8.35	8.95	8.27	8.37				8.44	639.0	3.9354
2400	8.35	8.95	8.27	8.37				8.44	467.0	3.9822
SEPT 22										
0000	8.35	8.95	8.27	8.37				8.44	467.0	3.9822
0600	8.35	8.95	8.27	8.37				8.44	322.0	4.0301
0900	8.35	8.95	8.27	8.37				8.44	271.0	4.0482
1200	8.35	8.95	8.27	8.37				8.44	237.0	4.0719
1800	8.35	8.95	8.27	8.37				8.44	191.0	4.0974
2400	8.35	8.95	8.27	8.37				8.44	156.0	4.1131
SEPT 23										
0000	8.35	8.95	8.27	8.37				8.44	156.0	4.1131
0600	8.35	8.95	8.27	8.37				8.44	128.0	4.1354
1200	8.35	8.95	8.27	8.37				8.44	107.0	4.1497
1800	8.35	8.95	8.27	8.37				8.44	93.0	4.1621
2400	8.35	8.95	8.27	8.37				8.44	80.0	4.1728
SEPT 24										
0000	8.35	8.95	8.27	8.37				8.44	80.0	4.1728
1200	8.35	8.95	8.27	8.37				8.44	59.0	4.1939
2400	8.35	8.95	8.27	8.37				8.44	50.0	4.2005

HALLS BAYOU DRAINAGE BASIN

The locations of data-collection sites in and near the Halls Bayou drainage basin are shown in figure 19.

Weighted-mean rainfall for the drainage basin, based on five rain gages above the Jensen Drive station for the 1979 water year was 55.71 inches, or 7.52 inches more than the 30-year (1941-70) average of 48.19 inches for Houston.

The storm of April 18-23 was selected for analysis at station 08076200, Halls Bayou at Deertrail Street near Houston. The storms of April 18-23 and Sept. 17-23 were selected for analysis at station 08076500, Halls Bayou at Houston (Jensen Drive).

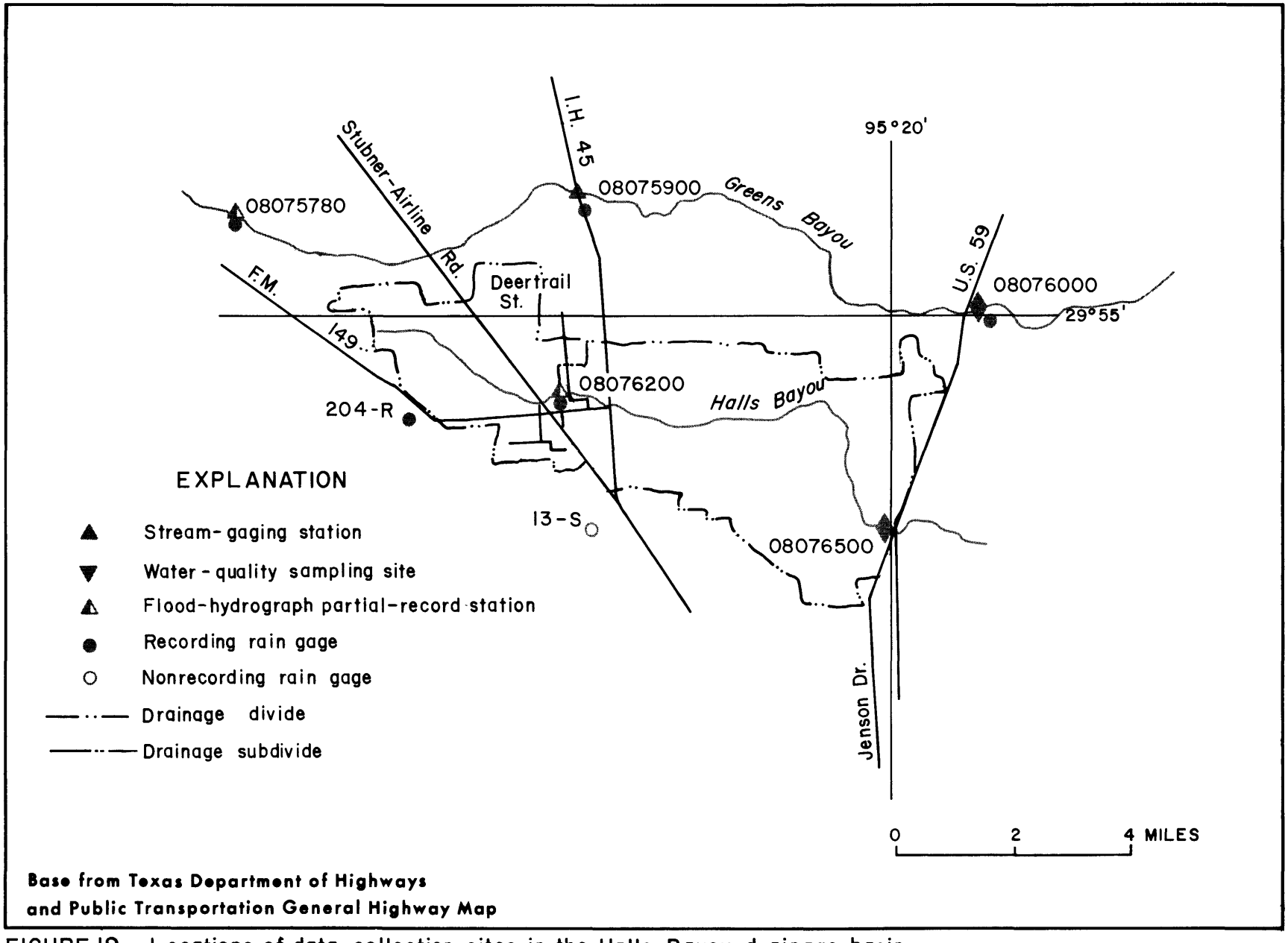


FIGURE 19.– Locations of data-collection sites in the Halls Bayou drainage basin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY-TEXAS DISTRICT

ANNUAL STORM RAINFALL-RUNOFF SUMMARY DATA

Table 17--Storm rainfall-runoff data, 1979 Water Year, Halls Bayou

Date of Storm	85% Duration (hours)	Rainfall (inches)				Runoff (inches)	Ratio runoff to rainfall	Maximum discharge (ft^3/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^2)								
April 18, 1979	3.8	2.21	0.50	0.90	1.43	2.89	0.71	587
April 19-23, 1979	8.5	1.85	1.10	1.77	2.27			525
Halls Bayou at Houston, TX. (Drainage area--27.6 mi^2)								
April 18, 1979	8.8	2.31	1.30	1.69	2.02	3.01	0.68	1,410
April 19-23, 1979	8.5	2.14	0.49	0.70	1.16			1,740
Sept. 17-23, 1979	48.8	7.89	0.46	0.79	1.26	5.72	0.72	3,100*

*-Annual peak discharge for 1979 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 (revised).--8.99 mi^2. For period Oct. 1, 1973 to Sept. 30, 1977, 8.69 mi^2. Prior to Oct. 1, 1973, 6.31 mi^2.

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^3/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^3/s (revised) and maximum (*):

DATE	TIME	DISCHARGE (ft^3/s)	ELEVATION (ft)
Nov. 26	1645	408	82.82
Jan. 6	unknown	405	82.79
Feb. 23	1915	498	82.54
Apr. 18	1730	587	83.17
Apr. 19	2230	525	82.74
Sept. 20	unknown	*922	85.02

Minimum discharge not determined.

STA. NO. 08076200 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HALLS BAYOU AT DEERTRAIL STREET NEAR HOUSTON , TEXAS — STORM OF APRIL 18-23 , 1979

DATE & TIME	GAGE NUMBER 204R	6200	5900					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 18										
0000	0.0	0.0	0.0					0.0	1.5	0.0005
0400	0.0	0.0	0.02					0.00	1.5	0.0011
0415	0.01	0.0	0.43					0.03	1.5	0.0011
0430	0.02	0.0	0.47					0.03	1.5	0.0012
0445	0.04	0.10	0.50					0.10	1.8	0.0013
0500	0.05	0.20	0.50					0.15	2.0	0.0014
0530	0.06	0.20	0.50					0.16	4.0	0.0017
0600	0.06	0.20	0.51					0.16	4.3	0.0021
0630	0.06	0.20	0.53					0.16	3.4	0.0023
0645	0.06	0.20	0.66					0.17	3.2	0.0025
0700	0.06	0.20	0.68					0.17	2.8	0.0027
0730	0.11	0.40	0.68					0.30	2.7	0.0041
1300	0.11	0.40	0.68					0.30	3.2	0.0058
1400	0.11	0.40	1.38					0.33	3.6	0.0063
1430	0.12	0.40	2.24					0.38	4.3	0.0066
1445	0.12	0.40	2.39					0.39	51.0	0.0088
1500	0.12	0.80	2.60					0.62	116.0	0.0138
1515	0.34	1.30	2.70					0.99	177.0	0.0252
1545	1.16	1.80	2.74					1.59	371.0	0.0492
1600	1.55	1.90	2.76					1.80	457.0	0.0689
1615	1.76	2.20	2.77					2.05	517.0	0.0912
1630	2.00	2.20	2.77					2.15	546.0	0.1147
1645	2.07	2.20	2.78					2.18	566.0	0.1391
1700	2.10	2.20	2.78					2.19	578.0	0.1640
1715	2.12	2.20	2.78					2.20	584.0	0.1892
1730	2.14	2.20	2.78					2.20	587.0	0.2145
1745	2.15	2.20	2.78					2.21	587.0	0.2398
1800	2.16	2.20	2.78					2.21	581.0	0.3024
1900	2.16	2.20	2.78					2.21	544.0	0.4430
2100	2.16	2.20	2.78					2.21	436.0	0.6309
2400	2.16	2.20	2.78					2.21	259.0	0.7313
APR. 19										
0000	2.16	2.20	2.78					2.21	259.0	0.7313
0300	2.16	2.20	2.78					2.21	158.0	0.8465
0600	2.16	2.20	2.78					2.21	108.0	0.9024
0900	2.16	2.20	2.78					2.21	84.0	0.9458
1200	2.16	2.20	2.78					2.21	70.0	0.9820
1500	2.16	2.20	2.78					2.21	59.0	1.0023
1600	2.20	2.30	2.83					2.29	57.0	1.0122
1700	2.24	2.30	2.87					2.30	55.0	1.0181

STA. NO. 08076200 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HALLS BAYOU AT DEERTRAIL STREET NEAR HOUSTON , TEXAS — STORM OF APRIL 18-23 , 1979

DATE & TIME	GAGE NUMBER 204R	6200	5900					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR. 19										
1715	2.62	2.30	2.97					2.46	54.0	1.0204
1730	2.85	2.30	3.17					2.56	54.0	1.0227
1745	2.92	2.30	3.45					2.61	58.0	1.0252
1800	2.96	2.30	3.49					2.62	90.0	1.0291
1815	3.06	2.60	3.58					2.83	168.0	1.0400
1845	3.15	3.30	3.61					3.26	311.0	1.0668
1915	3.19	3.40	3.66					3.33	414.0	1.1114
2000	3.29	3.50	3.87					3.43	480.0	1.1527
2015	3.30	3.50	3.87					3.44	496.0	1.1848
2045	3.32	3.60	3.87					3.50	517.0	1.2182
2100	3.34	3.60	3.87					3.51	521.0	1.2968
2230	3.52	3.80	4.02					3.70	525.0	1.4099
2330	3.52	3.90	4.02					3.75	508.0	1.4756
2400	3.52	3.90	4.02					3.75	489.0	1.5599
APR. 20										
0000	3.52	3.90	4.02					3.75	489.0	1.5599
0300	3.52	3.90	4.02					3.75	359.0	1.8087
0600	3.52	3.90	4.02					3.75	245.0	1.9354
0900	3.52	3.90	4.02					3.75	181.0	2.0290
1200	3.56	3.90	4.02					3.77	141.0	2.0837
1330	3.57	3.90	4.02					3.77	128.0	2.1030
1345	3.70	3.90	4.02					3.83	126.0	2.1084
1400	3.72	3.90	4.52					3.86	124.0	2.1138
1415	3.72	3.90	5.62					3.91	122.0	2.1190
1430	3.72	3.90	6.29					3.95	120.0	2.1268
1500	3.72	3.90	6.37					3.95	129.0	2.1379
1530	3.72	4.10	6.37					4.06	138.0	2.1557
1630	3.72	4.10	6.37					4.06	173.0	2.1781
1700	3.72	4.10	6.37					4.06	188.0	2.1943
1730	3.72	4.10	6.37					4.06	192.0	2.3101
2400	3.72	4.10	6.37					4.06	141.0	2.4620
APR. 21										
0000	3.72	4.10	6.37					4.06	141.0	2.4620
1200	3.72	4.10	6.37					4.06	68.0	2.6756
2400	3.72	4.10	6.37					4.06	41.0	2.7604
APR. 22										
0000	3.72	4.10	6.37					4.06	41.0	2.7604
2400	3.72	4.10	6.37					4.06	18.0	2.8214
APR. 23										
0000	3.72	4.10	6.37					4.06	18.0	2.8214
2400	3.72	4.10	6.37					4.06	10.0	2.8907

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 mi² (71.5 km²). Oct. 1, 1973, to Sept. 30, 1977, 28.3 mi² (73.3 km²). Prior to Oct. 1, 1973, 24.7 mi² (64.0 km²). 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. No known diversion above station. Low flow is sustained by sewage effluent from Houston suburbs.

AVERAGE DISCHARGE.--27 years, 27.3 ft³/s (0.773 m³/s), 19,780 acre-ft/yr (24.4 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,780 ft³/s (107 m³/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 ft³/s (34.0 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 6	2000	1,290	36.5	55.60	16.947	aJuly 8	0100	150	4.25	48.18	14.685
aApr. 18	2100	1,410	39.9	56.52	17.227	Sept. 1	2030	1,450	41.1	57.48	17.520
aApr. 20	0100	1,740	49.3	57.55	17.541	Sept. 20	0400	*3,100	87.8	61.42	18.721

a Water-quality samples were obtained on this date.

Minimum daily discharge, 5.6 ft³/s (0.16 m³/s) Nov. 10, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	8.3	12	231	21	24	18	21	23	7.7	8.5	390
2	7.5	8.3	9.8	41	22	23	49	21	92	7.5	8.5	253
3	7.6	7.8	53	19	124	35	379	19	39	8.4	18	24
4	7.2	7.9	53	15	94	24	135	376	27	8.9	14	14
5	7.7	8.8	20	39	406	21	40	66	26	14	9.1	12
6	7.8	66	12	492	534	20	26	42	20	11	8.9	95
7	7.3	19	16	365	136	19	22	27	18	27	40	257
8	7.6	7.1	27	58	61	18	22	22	15	74	15	39
9	8.1	5.9	16	31	38	18	20	19	13	16	10	17
10	7.5	5.6	11	26	30	17	19	17	13	11	8.6	13
11	7.7	6.6	10	91	28	18	18	18	12	8.8	10	11
12	7.6	6.6	9.0	39	27	18	17	25	11	9.0	14	10
13	7.6	6.8	9.3	27	26	17	16	16	11	29	13	9.6
14	7.5	6.5	9.4	21	24	16	15	14	11	27	19	11
15	7.7	6.3	12	19	22	16	14	14	11	19	27	8.5
16	8.0	6.7	10	18	19	18	14	13	11	11	29	8.9
17	7.5	7.4	9.5	18	53	18	15	12	11	9.2	13	51
18	6.4	6.3	9.1	18	89	17	368	12	15	9.0	9.2	198
19	7.0	52	9.0	49	36	38	580	12	14	8.3	85	1120
20	6.9	56	9.4	239	29	89	912	12	13	9.9	51	2480
21	6.3	9.6	8.3	48	28	179	238	12	11	21	21	274
22	7.9	6.5	8.1	27	27	318	76	78	10	10	91	76
23	8.6	6.6	8.8	26	180	104	46	27	11	8.3	39	41
24	7.9	5.8	9.2	20	425	40	30	16	10	9.2	14	28
25	9.5	5.6	9.4	18	64	28	24	13	10	145	10	21
26	8.5	334	9.1	47	37	24	20	13	10	175	31	18
27	8.1	203	9.2	32	30	21	19	11	10	27	40	17
28	8.2	20	8.1	22	27	20	16	11	11	47	13	16
29	8.4	79	38	22	---	20	78	60	8.6	19	12	15
30	8.2	26	38	55	---	19	42	61	8.6	12	10	15
31	8.8	---	25	34	---	18	---	61	---	9.6	12	---
TOTAL	240.0	1002.0	497.7	2207	2637	1275	3288	1141	506.2	808.8	703.8	5543.0
MEAN	7.74	33.4	16.1	71.2	94.2	41.1	110	36.8	16.9	26.1	22.7	185
MAX	9.5	334	53	492	534	318	912	376	92	175	91	2480
MIN	6.3	5.6	8.1	15	19	16	14	11	8.6	7.5	8.5	8.5
AC-FT	476	1990	987	4380	5230	2530	6520	2260	1000	1600	1400	10990
(††)	.09	6.59	2.61	6.74	4.89	2.64	7.09	4.00	1.24	5.76	3.33	10.73

CAL YR 1978 TOTAL 10988.8 MEAN 30.1 MAX 1180 MIN 5.3 AC-FT 21800 †† 41.00
WTR YR 1979 TOTAL 19849.5 MEAN 54.4 MAX 2480 MIN 5.6 AC-FT 39370 †† 55.71

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
OCT										
18...	1145	5.9	829	7.0	18.0	50	8.0	4.5	49	23
DEC										
12...	0855	9.3	813	7.3	8.5	60	9.0	6.4	57	16
JAN										
22...	1155	24	655	7.6	12.0	140	20	6.9	66	17
FEB										
28...	1405	26	855	7.6	19.5	70	10	4.5	51	12
MAR										
14...	1345	15	985	7.8	23.0	30	2.0	9.9	118	7.2
APR										
18...	0900	35	807	7.4	22.0	30	75	3.2	38	19
18...	1405	56	737	7.2	22.0	25	71	4.9	58	31
18...	2045	1400	197	6.9	21.0	50	300	7.7	89	12
19...	1345	173	264	7.2	21.0	130	120	6.1	70	12
JUL										
07...	1715	8.9	834	7.2	30.0	30	1.1	1.3	17	14
07...	2015	55	865	7.4	29.0	30	52	.6	8	22
08...	1310	44	471	7.0	28.0	50	14	1.8	23	16

DATE	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 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)
OCT										
18...	190000	13000	250	--	--	--	--	--	--	--
DEC										
12...	210	160	24	180	0	56	9.9	84	2.7	8.7
JAN										
22...	42000	2500	1600	--	--	--	--	--	--	--
FEB										
28...	35000	3400	550	230	0	72	13	81	2.3	6.9
MAR										
14...	400000	20000	310	250	0	77	14	100	2.8	7.0
APR										
18...	620000	25000	5800	--	--	--	--	--	--	--
18...	680000	72000	7400	190	0	60	9.7	72	2.3	5.1
18...	180000	110000	15000	--	--	--	--	--	--	--
19...	250000	35000	4900	--	--	--	--	--	--	--
JUL										
07...	400000	210000	2500	--	--	--	--	--	--	--
07...	1000000	240000	7700	180	0	57	8.4	92	3.0	8.0
08...	1200000	120000	15000	--	--	--	--	--	--	--

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
18...	--	--	--	--	--	--	--	16	15	.03
DEC										
12...	290	0	31	81	.3	26	440	20	15	1.4
JAN										
22...	--	--	--	--	--	--	--	39	6	.42
FEB										
28...	330	0	30	79	.5	19	464	31	18	.44
MAR										
14...	370	0	33	99	.4	31	544	11	5	.30
APR										
18...	--	--	--	--	--	--	--	132	30	.20
18...	260	0	31	73	.4	1.8	381	120	27	.17
18...	--	--	--	--	--	--	--	714	116	.43
19...	--	--	--	--	--	--	--	298	62	.17
JUL										
07...	--	--	--	--	--	--	--	8	0	.00
07...	300	0	27	110	.2	9.9	<460	310	48	.00
08...	--	--	--	--	--	--	--	52	20	.25

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT									
18...	.03	.06	10	.00	.61	9.80	6.3	--	.70
DEC									
12...	.39	1.8	5.8	2.3	8.1	5.10	15	--	2.6
JAN									
22...	.21	.63	1.3	1.4	2.7	1.70	15	--	.40
FEB									
28...	.48	.92	3.0	2.9	5.9	2.00	16	--	.60
MAR									
14...	.59	.89	5.1	1.8	6.9	5.10	8.4	3	.20
APR									
18...	.32	.52	5.2	2.0	7.2	9.60	14	--	.20
18...	.23	.40	4.4	1.6	6.0	3.40	17	16	.20
18...	.10	.53	.64	1.7	2.3	.510	21	--	.10
19...	.08	.25	.45	1.4	1.8	.700	18	--	.10
JUL									
07...	.14	.07	7.9	.00	5.7	3.30	9.8	--	--
07...	.18	.11	9.1	.00	5.4	3.50	13	7	.40
08...	.26	.51	1.9	1.2	3.1	.920	11	5	.30

DATE	TIME	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
MAR							
14...	1345	4	200	0	10	0	20
APR							
18...	1405	8	100	0	0	0	0
JUL							
07...	2015	8	30	<1	0	1	<10
08...	1310	26	200	0	0	2	100

DATE	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
MAR						
14...	0	10	.0	1	0	20
APR						
18...	0	10	.0	0	0	20
JUL						
07...	2	<1	.0	1	0	<3
08...	1	200	.0	0	0	5

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)	DIAZINON, TOTAL (UG/L)
MAR									
14...	1345	.0	--	.00	.2	.00	.00	.00	.34
APR									
18...	1405	.0	--	.00	.4	.00	.00	.00	.62
JUL									
07...	2015	.0	.00	.00	.1	.00	.00	.00	.75
08...	1310	.0	.00	.00	.0	.00	.00	.00	1.0

DATE	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, 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)	METHYL PARATHION, TOTAL (UG/L)
MAR									
14...	.01	.00	.00	.00	.00	.00	.03	.04	.00
APR									
18...	.03	.00	.00	.00	.01	.00	.04	.12	.00
JUL									
07...	.00	.00	.00	.00	.00	.00	.00	.00	.00
08...	.01	.00	.00	.00	.00	.00	.00	.06	.00

DATE	METHYL TRITHION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR								
14...	.00	.00	.00	0	.00	.04	.00	.00
APR								
18...	.00	.00	.00	0	.00	.06	.03	.00
JUL								
07...	.00	.00	.00	0	.00	--	--	--
08...	.00	.00	.00	0	.00	--	--	--

STA. NO. 08076500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HALLS BAYOU AT HOUSTON , TEXAS — STORM OF APRIL 18-23 , 1979

DATE & TIME	GAGE NUMBER 204R	6200	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18									
0000	0.0	0.0	0.0				0.0	19.0	0.0021
0400	0.0	0.0	0.0				0.0	20.0	0.0047
0430	0.02	0.0	0.0				0.00	20.0	0.0052
0500	0.05	0.20	0.0				0.12	21.0	0.0058
0530	0.06	0.20	0.08				0.15	22.0	0.0064
0600	0.06	0.20	0.10				0.16	22.0	0.0075
0715	0.06	0.20	0.10				0.16	24.0	0.0085
0730	0.11	0.40	0.10				0.28	29.0	0.0089
0745	0.11	0.40	0.12				0.29	30.0	0.0093
0800	0.11	0.40	0.32				0.35	30.0	0.0104
0900	0.11	0.40	0.41				0.37	35.0	0.0143
1200	0.11	0.40	0.41				0.37	62.0	0.0204
1230	0.11	0.40	0.41				0.37	61.0	0.0238
1400	0.11	0.40	0.41				0.37	57.0	0.0274
1445	0.12	0.40	0.41				0.37	54.0	0.0290
1500	0.12	0.80	0.41				0.61	54.0	0.0297
1515	0.34	1.30	0.70				1.02	60.0	0.0306
1530	0.80	1.60	2.00				1.64	66.0	0.0315
1545	1.16	1.80	2.39				1.91	86.0	0.0327
1600	1.55	1.90	2.43				2.02	139.0	0.0346
1615	1.76	2.20	2.46				2.23	162.0	0.0369
1630	2.00	2.20	2.48				2.26	185.0	0.0395
1645	2.07	2.20	2.49				2.27	237.0	0.0428
1700	2.10	2.20	2.52				2.29	332.0	0.0638
1900	2.16	2.20	2.57				2.31	1130.0	0.1590
2000	2.16	2.20	2.57				2.31	1330.0	0.2150
2030	2.16	2.20	2.57				2.31	1390.0	0.2540
2100	2.16	2.20	2.57				2.31	1410.0	0.2936
2130	2.16	2.20	2.58				2.31	1400.0	0.3329
2200	2.16	2.20	2.58				2.31	1370.0	0.4290
2400	2.16	2.20	2.58				2.31	1120.0	0.5391
APR 19									
0000	2.16	2.20	2.58				2.31	1120.0	0.5391
0300	2.16	2.20	2.58				2.31	726.0	0.7085
0600	2.16	2.20	2.58				2.31	474.0	0.8283
1200	2.16	2.20	2.58				2.31	200.0	0.8788
1500	2.16	2.20	2.58				2.31	186.0	0.8997
1600	2.20	2.30	2.58				2.37	147.0	0.9059
1630	2.20	2.30	2.58				2.37	142.0	0.9099
1700	2.24	2.30	2.58				2.38	138.0	0.9137

STA. NO. 08076500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HALLS BAYOU AT HOUSTON , TEXAS — STORM OF APRIL 18-23 , 1979

DATE & TIME	GAGE NUMBER 2048	6200	6000					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 19										
1730	2.85	2.30	2.58					2.44	135.0	0.9175
1800	2.96	2.30	2.58					2.45	132.0	0.9203
1815	3.06	2.60	2.68					2.67	158.0	0.9225
1830	3.10	2.90	3.17					3.00	206.0	0.9254
1845	3.15	3.30	3.35					3.30	287.0	0.9294
1900	3.16	3.30	3.74					3.42	383.0	0.9429
2000	3.29	3.50	4.12					3.66	804.0	0.9824
2045	3.32	3.60	4.23					3.76	1350.0	1.0582
2200	3.47	3.70	4.25					3.84	1550.0	1.1343
2230	3.52	3.80	4.31					3.92	1640.0	1.1804
2300	3.52	3.80	4.38					3.95	1670.0	1.2272
2330	3.52	3.90	4.44					4.02	1710.0	1.2752
2400	3.52	3.90	4.44					4.02	1730.0	1.3117
APR 20										
0000	3.52	3.90	4.44					4.02	1730.0	1.3117
0030	3.52	3.90	4.44					4.02	1740.0	1.3971
0130	3.52	3.90	4.44					4.02	1740.0	1.4703
0200	3.52	3.90	4.44					4.02	1730.0	1.5432
0300	3.52	3.90	4.44					4.02	1680.0	1.7318
0600	3.52	3.90	4.44					4.02	1380.0	2.0030
1000	3.53	3.90	4.46					4.03	804.0	2.1610
1300	3.57	3.90	4.46					4.03	553.0	2.2231
1400	3.72	3.90	4.46					4.05	489.0	2.2643
1600	3.72	4.10	5.41					4.45	393.0	2.3084
1800	3.72	4.10	5.41					4.45	484.0	2.3628
2000	3.72	4.10	5.41					4.45	616.0	2.4146
2100	3.72	4.10	5.41					4.45	635.0	2.4503
2200	3.72	4.10	5.41					4.45	622.0	2.5027
2400	3.72	4.10	5.41					4.45	548.0	2.5796
APR 21										
0000	3.72	4.10	5.41					4.45	548.0	2.5796
0600	3.72	4.10	5.41					4.45	312.0	2.7308
1200	3.72	4.10	5.41					4.45	191.0	2.8274
2400	3.72	4.10	5.41					4.45	108.0	2.8819
APR 22										
0000	3.72	4.10	5.41					4.45	108.0	2.8819
1200	3.72	4.10	5.41					4.45	72.0	2.9486
2400	3.72	4.10	5.41					4.45	61.0	2.9897
APR. 23										
0000	3.72	4.10	5.41					4.45	61.0	2.9897
2400	3.72	4.10	5.41					4.45	40.0	3.0103

STA. NO. 08076500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HALLS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 204R	5900	6000					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 17										
0000	0.0	0.0	0.0					0.0	8.6	0.0036
1445	0.0	0.0	0.0					0.0	8.0	0.0069
1500	0.15	0.0	0.0					0.05	8.0	0.0070
1515	0.20	0.0	0.09					0.11	8.0	0.0072
1545	0.49	0.20	0.12					0.27	12.0	0.0075
1600	0.54	0.52	0.14					0.36	23.0	0.0078
1615	0.60	0.58	0.21					0.42	30.0	0.0082
1630	0.73	0.75	0.28					0.53	42.0	0.0088
1645	0.83	0.89	0.33					0.62	52.0	0.0095
1700	0.84	0.94	0.42					0.67	73.0	0.0111
1730	0.93	1.01	0.45					0.73	101.0	0.0139
1800	0.95	1.08	0.48					0.76	122.0	0.0190
1900	0.95	1.11	0.49					0.77	131.0	0.0264
2000	0.95	1.11	0.49					0.77	127.0	0.0335
2100	0.95	1.11	0.49					0.77	132.0	0.0409
2200	0.95	1.11	0.49					0.77	154.0	0.0496
2300	0.95	1.18	0.54					0.81	174.0	0.0557
2315	1.05	1.30	0.56					0.88	180.0	0.0582
2330	1.20	1.32	0.57					0.94	186.0	0.0621
2400	1.22	1.38	0.57					0.96	197.0	0.0656
SEPT 18										
0000	1.22	1.38	0.57					0.96	197.0	0.0656
0015	1.22	1.44	0.57					0.97	200.0	0.0705
0045	1.24	1.49	0.61					1.01	204.0	0.0748
0100	1.25	1.52	0.68					1.05	206.0	0.0791
0130	1.31	1.67	0.72					1.12	210.0	0.0880
0230	1.37	1.74	0.77					1.17	216.0	0.0971
0300	1.39	1.76	0.78					1.19	219.0	0.1032
0330	1.39	1.78	0.81					1.21	224.0	0.1095
0400	1.43	1.80	0.84					1.24	227.0	0.1190
0500	1.48	1.82	0.85					1.26	236.0	0.1290
0530	1.50	1.83	0.86					1.28	240.0	0.1357
0600	1.50	1.86	0.86					1.28	241.0	0.1425
0630	1.50	1.86	0.87					1.29	242.0	0.1493
0700	1.50	1.86	0.88					1.29	240.0	0.1560
0730	1.50	1.87	0.89					1.30	238.0	0.1627
0800	1.50	1.88	0.93					1.32	233.0	0.1725
0900	1.51	1.92	0.95					1.34	219.0	0.1848
1000	1.59	1.92	0.95					1.37	206.0	0.1964
1100	1.59	1.94	0.97					1.38	191.0	0.2071

STA. NO. 08076500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HALLS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 204R	5900	6000					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 18										
1200	1.65	2.01	1.04					1.45	178.0	0.2196
1330	1.74	2.08	1.09					1.52	164.0	0.2311
1430	1.76	2.09	1.10					1.53	156.0	0.2377
1500	1.77	2.21	1.10					1.56	154.0	0.2420
1530	1.79	2.23	1.10					1.57	152.0	0.2463
1600	1.79	2.25	1.10					1.57	149.0	0.2504
1630	1.79	2.27	1.10					1.58	148.0	0.2536
1645	1.85	2.30	1.17					1.63	147.0	0.2556
1700	1.90	2.43	1.23					1.70	147.0	0.2577
1715	1.99	2.52	1.25					1.76	152.0	0.2598
1730	2.04	2.69	1.27					1.82	157.0	0.2631
1800	2.05	2.70	1.28					1.83	162.0	0.2836
2200	2.05	2.72	1.30					1.85	208.0	0.3128
2300	2.07	2.72	1.31					1.86	218.0	0.3250
2400	2.08	2.72	1.37					1.89	222.0	0.3344
SEPT 19										
0000	2.08	2.72	1.37					1.89	222.0	0.3344
0100	2.10	2.77	1.44					1.94	220.0	0.3498
0200	2.13	2.82	1.49					1.98	214.0	0.3619
0300	2.21	2.89	1.56					2.05	208.0	0.3735
0400	2.22	2.91	1.57					2.07	203.0	0.3821
0430	2.26	2.92	1.58					2.09	201.0	0.3877
0500	2.26	2.92	1.65					2.12	200.0	0.3933
0530	2.37	3.02	1.68					2.19	203.0	0.3990
0600	2.41	3.08	1.69					2.22	207.0	0.4078
0700	2.43	3.09	1.70					2.23	220.0	0.4201
0800	2.47	3.10	1.75					2.27	237.0	0.4334
0900	2.51	3.20	1.79					2.32	253.0	0.4476
1000	2.62	3.30	1.92					2.44	275.0	0.4573
1015	2.67	3.45	2.06					2.55	282.0	0.4612
1030	2.85	3.56	2.09					2.65	306.0	0.4655
1045	2.97	3.70	2.30					2.81	320.0	0.4700
1100	3.11	3.84	2.40					2.94	356.0	0.4775
1130	3.36	4.16	2.69					3.22	454.0	0.4871
1145	3.71	4.30	2.80					3.42	510.0	0.4942
1200	3.90	4.40	2.89					3.55	566.0	0.5022
1215	3.94	4.47	3.07					3.65	620.0	0.5109
1230	3.98	4.60	3.26					3.78	700.0	0.5207
1245	4.03	4.73	3.45					3.91	760.0	0.5314
1300	4.26	4.87	3.49					4.04	857.0	0.5434

STA. NO. 08076500 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

HALLS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 204R	5900	6000					ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 19										
1315	4.40	4.98	3.59					4.15	920.0	0.5563
1330	4.52	5.02	3.65					4.23	1040.0	0.5928
1430	4.59	5.10	3.67					4.28	1410.0	0.6423
1445	4.61	5.13	3.69					4.30	1550.0	0.6858
1530	4.77	5.20	3.84					4.44	1730.0	0.7465
1600	4.91	5.30	3.93					4.55	1850.0	0.7984
1630	5.06	5.50	4.04					4.69	1950.0	0.9079
1800	5.51	6.03	4.61					5.21	2180.0	1.0303
1830	5.79	6.21	4.75					5.41	2250.0	1.0935
1900	5.92	6.40	4.97					5.59	2280.0	1.1575
1930	6.08	6.59	5.04					5.71	2330.0	1.2229
2000	6.18	6.72	5.30					5.89	2370.0	1.2728
2015	6.22	6.85	5.41					5.98	2390.0	1.3063
2030	6.28	6.98	5.55					6.09	2400.0	1.3400
2045	6.38	7.06	5.62					6.17	2420.0	1.3740
2100	6.46	7.10	5.70					6.25	2440.0	1.4253
2130	6.50	7.20	5.89					6.37	2500.0	1.4955
2200	6.59	7.38	6.15					6.55	2550.0	1.5671
2230	6.61	7.42	6.25					6.61	2610.0	1.6404
2300	6.63	7.48	6.58					6.78	2750.0	1.6983
2315	6.67	7.68	6.91					6.98	2800.0	1.7376
2330	6.75	7.90	7.37					7.26	2840.0	1.7774
2345	6.81	8.00	7.67					7.43	2880.0	1.8179
2400	6.84	8.08	7.79					7.52	2910.0	1.8587
SEPT 20										
0000	6.84	8.08	7.79					7.52	2910.0	1.8587
0030	6.88	8.11	8.07					7.66	2970.0	1.9417
0045	6.90	8.22	8.08					7.69	2990.0	1.9836
0100	6.95	8.23	8.10					7.72	3010.0	2.0892
0200	7.02	8.24	8.17					7.78	3060.0	2.2181
0230	7.03	8.27	8.19					7.80	3070.0	2.3043
0300	7.04	8.27	8.19					7.80	3080.0	2.4340
0400	7.05	8.27	8.19					7.81	3100.0	2.5645
0430	7.05	8.27	8.23					7.82	3100.0	2.6515
0500	7.06	8.27	8.33					7.87	3100.0	2.7821
0600	7.06	8.27	8.37					7.89	3090.0	3.0423
0800	7.06	8.27	8.37					7.89	3040.0	3.3837
1000	7.06	8.27	8.37					7.89	2960.0	3.7160
1200	7.06	8.27	8.37					7.89	2860.0	4.0372
1400	7.06	8.27	8.37					7.89	2720.0	4.3426

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HALLS BAYOU AT HOUSTON , TEXAS — STORM OF SEPT. 17-23 , 1979

DATE & TIME	GAGE NUMBER 204R	5900	6000				ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
SEPT 20									
1600	7.06	8.27	8.37				7.89	2530.0	4.6267
1800	7.06	8.27	8.37				7.89	2120.0	4.8647
2000	7.06	8.27	8.37				7.89	1440.0	5.0264
2200	7.06	8.27	8.37				7.89	977.0	5.1361
2400	7.06	8.27	8.37				7.89	709.0	5.2357
SEPT 21									
0000	7.06	8.27	8.37				7.89	709.0	5.2357
0600	7.06	8.27	8.37				7.89	354.0	5.4146
1200	7.06	8.27	8.37				7.89	215.0	5.4870
1800	7.06	8.27	8.37				7.89	151.0	5.5379
2400	7.06	8.27	8.37				7.89	114.0	5.5667
SEPT 22									
0000	7.06	8.27	8.37				7.89	114.0	5.5667
0600	7.06	8.27	8.37				7.89	90.0	5.6066
1200	7.06	8.27	8.37				7.89	71.0	5.6305
1800	7.06	8.27	8.37				7.89	63.0	5.6518
2400	7.06	8.27	8.37				7.89	54.0	5.6654
SEPT 23									
0000	7.06	8.27	8.37				7.89	54.0	5.6654
0600	7.06	8.27	8.37				7.89	46.0	5.6855
1200	7.06	8.27	8.37				7.89	38.0	5.6983
1800	7.06	8.27	8.37				7.89	36.0	5.7104
2400	7.06	8.27	8.37				7.89	34.0	5.7161

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 mi² (471 km²).

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 ft³/s (28.3 m³/s), which are poor. Discharge is computed for all storms which produce peak discharges over 1,000 ft³/s (28.3 m³/s). Tidal influences on the stage-discharge relationship affect discharge below about 500 ft³/s (14.2 m³/s). Discharge below 1,000 ft³/s (28.3 m³/s) is estimated following designated storm periods only.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s (473 m³/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 ft³/s (119 m³/s), revised and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
aNov. 20	0500	850	24.1	7.15	2.179	Apr. 20	0600	11,800	334	28.73	8.757
aNov. 27	0300	3,550	101	17.24	5.255	July 26	0700	5,060	143	22.03	6.715
Jan. 7	0600	4,210	119	18.80	5.730	Sept. 2	0200	4,680	133	21.25	6.477
aFeb. 6	1500	3,510	99.4	16.75	5.105	Sept. 20	b1000	*14,700	416	33.61	10.244
Feb. 24	0700	4,390	124	19.18	5.846						

a Water-quality samples were obtained on this date.
b Estimated.

Minimum discharge not determined (affected by tides).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---		1110	---	---	---	---	60	---	---	1230
2		---		480	---	---	80	---	1020	---	---	2750
3		---		140	680	---	1630	---	500	---	---	410
4		---		---	690	---	1620	1540	100	---	---	100
5		---		60	2330	---	380	1210	---	---	---	---
6		---		1840	3200	---	120	350	---	---	---	240
7		---		3050	1640	---	---	110	---	---	---	1010
8		---		570	540	---	---	---	---	---	---	240
9		---		150	150	---	---	---	---	---	---	60
10		---		---	---	---	---	---	---	---	---	---
11		---		---	---	---	---	---	---	---	---	---
12		---		---	---	---	---	---	---	---	---	---
13		---		---	---	---	---	---	---	680	---	---
14		---		---	---	---	---	---	---	700	---	---
15		---		---	---	---	---	---	---	100	---	---
16		---		---	---	---	---	---	---	---	---	---
17		---		---	---	---	---	---	---	---	---	300
18		---		---	---	---	1040	---	---	---	---	1000
19		---		50	---	---	5480	---	---	---	290	5000
20		---		1120	---	---	9340	---	---	---	430	13900
21		---		400	---	1040	3960	---	---	---	100	7130
22		---		100	---	1900	930	---	---	---	380	1240
23		---		---	170	1440	340	---	---	---	500	450
24		---		---	3010	310	110	---	---	---	120	150
25		---		---	540	100	---	---	---	1110	---	---
26		1060		---	130	---	---	---	---	4050	---	---
27		2190		---	---	---	---	---	---	1180	---	---
28		350		---	---	---	---	---	---	830	---	---
29		---		---	---	---	---	---	---	310	---	---
30		---		---	---	---	---	---	---	100	---	---
31		---		---	---	---	---	---	---	---	---	---
TOTAL		---		---	---	---	---	---	---	---	---	---
MEAN		---		---	---	---	---	---	---	---	---	---
MAX		---		---	---	---	---	---	---	---	---	---
MIN		---		---	---	---	---	---	---	---	---	---
AC-FT		---		---	---	---	---	---	---	---	---	---

NOTE.--No gage-height record Sept. 7-20.

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	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)
NOV										
20...	1015	700	299	7.6	14.5	260	380	7.2	73	14
20...	1430	500	286	7.7	15.0	220	350	7.0	71	23
27...	1410	1840	191	7.7	18.5	180	250	6.6	73	8.7
FEB										
05...	1400	2680	254	7.5	9.0	--	110	9.3	83	5.5
06...	1130	3400	202	7.3	7.5	200	120	10.2	88	4.1

DATE	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 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)
NOV										
20...	480000	44000	48000	84	3	29	2.8	22	1.0	3.5
20...	440000	40000	35000	--	--	--	--	--	--	--
27...	690000	160000	44000	72	12	25	2.4	11	.6	2.8
FEB										
05...	170000	34000	28000	91	1	30	3.9	16	.7	2.5
06...	110000	25000	19000	72	4	24	3.0	12	.6	2.1

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	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-PENDED (MG/L)	SOLIDS, VOLA-TILE, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
NOV										
20...	99	0	14	27	.2	7.0	154	1000	116	.72
20...	--	--	--	--	--	--	--	904	160	.71
27...	74	0	13	16	.1	5.6	112	680	92	.46
FEB										
05...	110	0	12	21	.2	9.2	149	--	--	.31
06...	83	0	10	19	.2	7.8	119	312	16	.21

DATE	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)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
NOV									
20...	.05	.77	.75	1.5	2.2	1.3	17	4	.00
20...	.07	.78	.73	1.8	2.5	1.2	--	--	.00
27...	.04	.50	.24	1.1	1.3	.57	18	2	.10
FEB									
05...	.08	.39	.30	1.3	1.6	.58	22	1	.00
06...	.06	.27	.17	1.0	1.2	.49	17	--	.00

08076700 GREENS BAYOU AT LEY ROAD, HOUSTON, TX--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)
NOV						
20...	1015	8	100	2	0	2
27...	1410	5	80	2	0	4
FEB						
05...	1400	3	100	0	0	4

DATE	IRON, DIS-SOLVED (UG/L AS FE)	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)
NOV							
20...	10	21	<1	.0	0	0	3
27...	30	20	1	.0	0	0	4
FEB							
05...	110	0	0	.0	0	0	30

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									
14...	1420	.0	--	.00	.0	.00	.00	.00	.00
APR									
18...	1410	.0	--	.00	.1	.00	.00	.00	.40
JUL									
25...	1330	.2	.00	.00	.1	.00	.00	.00	.88
31...	1050	.0	.00	.00	.0	.00	.00	.00	.29

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)	METHYL PARA-THION, TOTAL (UG/L)
MAR									
14...	.00	.00	.00	.00	.00	.00	.01	.00	.00
APR									
18...	.00	.00	.00	.00	.00	.00	.00	.11	.00
JUL									
25...	.00	.00	.00	.00	.00	.00	.00	.01	.00
31...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	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								
14...	.00	.00	.00	0	.00	.08	.00	.00
APR								
18...	.00	.00	.00	0	.00	.28	.04	.00
JUL								
25...	.00	.00	.01	0	.00	3.0	.03	.00
31...	.00	.00	.00	0	.00	.00	.00	.00

STA. NO. 08076700 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT LEY ROAD , HOUSTON , TEXAS — STORM OF APRIL 18-24, 1979

DATE & TIME	GAGE NUMBER 5780	5900	6000	6200	5770			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 18										
0000	0.0	0.0	0.0	0.0	0.0			0.0	35.0	0.0006
0400	0.0	0.02	0.0	0.0	0.0			0.00	35.0	0.0012
0415	0.0	0.43	0.0	0.0	0.0			0.09	35.0	0.0013
0445	0.0	0.50	0.0	0.10	0.0			0.11	35.0	0.0015
0500	0.0	0.50	0.0	0.20	0.0			0.13	35.0	0.0016
0530	0.0	0.50	0.08	0.20	0.0			0.17	35.0	0.0017
0600	0.10	0.51	0.10	0.20	0.0			0.19	35.0	0.0019
0645	0.10	0.66	0.10	0.20	0.0			0.22	35.0	0.0020
0700	0.10	0.68	0.10	0.20	0.02			0.23	35.0	0.0022
0730	0.10	0.68	0.10	0.40	0.02			0.26	35.0	0.0023
0745	0.10	0.68	0.12	0.40	0.08			0.27	35.0	0.0023
0800	0.10	0.68	0.32	0.40	0.14			0.37	35.0	0.0025
0900	0.10	0.68	0.41	0.40	0.15			0.42	35.0	0.0033
1300	0.10	0.68	0.41	0.40	0.15			0.42	35.0	0.0039
1315	0.10	0.70	0.41	0.40	0.15			0.42	35.0	0.0040
1345	0.20	0.70	0.41	0.40	0.15			0.43	35.0	0.0041
1400	0.20	1.38	0.41	0.40	0.15			0.57	35.0	0.0042
1430	0.20	2.24	0.41	0.40	0.15			0.74	35.0	0.0044
1445	1.30	2.39	0.41	0.40	0.15			0.88	35.0	0.0044
1500	2.00	2.60	0.41	0.80	0.15			1.05	35.0	0.0045
1515	2.50	2.70	0.70	1.30	0.15			1.34	620.0	0.0058
1530	2.80	2.72	2.00	1.60	0.60			2.09	780.0	0.0075
1545	3.00	2.76	2.39	1.80	0.70			2.35	930.0	0.0095
1600	3.20	2.76	2.43	1.90	1.05			2.42	1170.0	0.0120
1615	3.40	2.77	2.46	2.20	1.35			2.52	1340.0	0.0148
1630	3.40	2.77	2.48	2.20	1.70			2.55	1490.0	0.0180
1645	3.40	2.78	2.49	2.20	1.78			2.56	1650.0	0.0215
1700	3.40	2.78	2.52	2.20	1.85			2.58	1770.0	0.0347
1830	3.40	2.78	2.57	2.20	1.92			2.61	2330.0	0.0744
2100	3.40	2.78	2.57	2.20	1.92			2.61	3280.0	0.1512
2400	3.40	2.78	2.58	2.20	1.92			2.61	4920.0	0.2349
APR 19										
0000	3.40	2.78	2.58	2.20	1.92			2.61	4920.0	0.2349
0200	3.40	2.78	2.58	2.20	1.92			2.61	5960.0	0.3574
0400	3.40	2.78	2.58	2.20	1.92			2.61	6540.0	0.4409
0500	3.40	2.78	2.58	2.20	1.92			2.61	6660.0	0.4976
0600	3.40	2.78	2.58	2.20	1.92			2.61	6620.0	0.5540
0700	3.40	2.78	2.58	2.20	1.92			2.61	6500.0	0.6370
0900	3.40	2.78	2.58	2.20	1.95			2.61	5960.0	0.7638
1200	3.40	2.78	2.58	2.20	1.95			2.61	4920.0	0.8581

STA. NO. 08076700 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT LEY ROAD , HOUSTON , TEXAS — STORM OF APRIL 18-24, 1979

DATE & TIME	GAGE NUMBER 5780	5900	6000	6200	5770			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 19										
1330	3.40	2.78	2.58	2.20	2.02			2.62	4480.0	0.9153
1500	3.40	2.78	2.58	2.20	2.02			2.62	4050.0	0.9584
1600	3.40	2.83	2.58	2.30	2.02			2.64	3770.0	0.9785
1615	3.40	2.83	2.58	2.30	2.02			2.64	3710.0	0.9903
1645	3.80	2.83	2.58	2.30	2.02			2.68	3590.0	1.0018
1700	3.80	2.87	2.58	2.30	2.02			2.69	3550.0	1.0093
1715	3.80	3.02	2.58	2.30	2.02			2.72	3470.0	1.0167
1730	3.80	3.17	2.58	2.30	2.08			2.75	3420.0	1.0240
1745	3.80	3.45	2.58	2.30	2.57			2.83	3390.0	1.0312
1800	3.80	3.49	2.58	2.30	2.76			2.85	3380.0	1.0384
1815	4.20	3.58	2.68	2.60	3.10			3.02	3420.0	1.0457
1830	4.20	3.60	3.17	2.90	3.22			3.32	3440.0	1.0530
1845	4.20	3.61	3.35	3.30	3.37			3.48	3490.0	1.0604
1900	4.20	3.67	3.74	3.30	3.64			3.70	3610.0	1.0681
1915	4.20	3.71	3.82	3.40	3.92			3.78	3730.0	1.0761
1930	4.40	3.75	3.90	3.40	4.20			3.86	3910.0	1.0844
1945	4.40	3.81	4.03	3.40	4.55			3.95	4030.0	1.0930
2000	4.40	3.84	4.12	3.50	4.90			4.04	4320.0	1.1022
2015	4.50	3.87	4.20	3.50	5.64			4.13	4650.0	1.1121
2030	4.50	3.87	4.23	3.50	5.90			4.16	4950.0	1.1226
2045	4.50	3.87	4.23	3.60	5.95			4.18	5250.0	1.1338
2100	4.50	3.87	4.24	3.60	6.00			4.18	5540.0	1.1456
2115	4.50	3.90	4.24	3.60	6.50			4.21	5960.0	1.1582
2130	4.60	3.93	4.25	3.60	7.22			4.27	6300.0	1.1716
2145	4.60	3.96	4.25	3.60	7.64			4.30	6620.0	1.1857
2200	4.60	3.99	4.25	3.60	7.87			4.32	7020.0	1.2007
2215	4.70	4.02	4.28	3.60	7.95			4.35	7380.0	1.2164
2230	4.70	4.02	4.31	3.80	7.97			4.40	7780.0	1.2412
2300	4.70	4.02	4.38	3.80	8.04			4.44	8340.0	1.2767
2330	4.70	4.02	4.44	3.90	8.04			4.48	8900.0	1.3146
2400	4.70	4.02	4.44	3.90	8.04			4.48	9400.0	1.3546
APR 20										
0000	4.70	4.02	4.44	3.90	8.04			4.48	9400.0	1.3546
0100	4.70	4.02	4.44	3.90	8.08			4.48	10300.0	1.4623
0200	4.70	4.02	4.44	3.90	8.08			4.48	11000.0	1.6028
0400	4.70	4.02	4.44	3.90	8.08			4.48	11700.0	1.8021
0600	4.70	4.02	4.44	3.90	8.08			4.48	11800.0	2.0030
0800	4.70	4.02	4.45	3.90	8.08			4.49	11500.0	2.1988
1000	4.70	4.02	4.46	3.90	8.08			4.49	10800.0	2.3827
1200	4.70	4.02	4.46	3.90	8.08			4.49	10000.0	2.5211

STA. NO. 08076700 — STORM RAINFALL AND RUNOFF RECORD — 1979 WATER YEAR

GREENS BAYOU AT LEY ROAD , HOUSTON , TEXAS — STORM OF APRIL 18-24, 1979

DATE & TIME	GAGE NUMBER 5780	5900	6000	6200	5770			ACCUM. WEIGHTED PRECIP. IN.	DISCHARGE IN CFS	ACCUM. RUNOFF IN.
APR 20										
1315	4.70	4.02	4.46	3.90	8.08			4.49	9470.0	2.5816
1330	5.10	4.02	4.46	3.90	8.08			4.53	9310.0	2.6014
1345	5.20	4.02	4.46	3.90	8.08			4.54	9150.0	2.6208
1400	5.20	4.52	4.46	3.90	8.08			4.64	8950.0	2.6399
1415	5.20	5.62	4.46	3.90	8.08			4.86	8840.0	2.6587
1430	5.20	6.29	4.46	3.90	8.08			5.00	8710.0	2.6772
1445	5.20	6.34	4.46	3.90	8.08			5.01	8540.0	2.6954
1500	5.20	6.37	4.46	3.90	8.08			5.01	8440.0	2.7134
1515	5.30	6.37	4.80	3.90	8.08			5.19	8320.0	2.7311
1530	5.40	6.37	5.10	4.10	8.08			5.38	8180.0	2.7485
1545	5.50	6.37	5.38	4.10	8.13			5.54	8060.0	2.7657
1600	5.50	6.37	5.41	4.10	8.18			5.55	7980.0	2.9100
2000	5.50	6.37	5.41	4.10	8.18			5.55	6620.0	3.0791
2200	5.50	6.37	5.41	4.10	8.18			5.55	6500.0	3.1898
2400	5.50	6.37	5.41	4.10	8.18			5.55	6420.0	3.2718
APR 21										
0000	5.50	6.37	5.41	4.10	8.18			5.55	6420.0	3.2718
0200	5.50	6.37	5.41	4.10	8.18			5.55	6340.0	3.4071
0400	5.50	6.37	5.41	4.10	8.18			5.55	6000.0	3.5093
0600	5.50	6.37	5.41	4.10	8.18			5.55	5500.0	3.6263
0900	5.50	6.37	5.41	4.10	8.18			5.55	4680.0	3.7459
1200	5.50	6.37	5.41	4.10	8.18			5.55	3870.0	3.8612
1600	5.50	6.37	5.41	4.10	8.18			5.55	2940.0	3.9613
2000	5.50	6.37	5.41	4.10	8.18			5.55	2000.0	4.0294
2400	5.50	6.37	5.41	4.10	8.18			5.55	1480.0	4.0672
APR 22										
0000	5.50	6.37	5.41	4.10	8.18			5.55	1480.0	4.0672
0400	5.50	6.37	5.41	4.10	8.18			5.55	1180.0	4.1200
0800	5.50	6.37	5.41	4.10	8.18			5.55	1010.0	4.1716
1600	5.50	6.37	5.41	4.10	8.18			5.55	780.0	4.2248
2400	5.50	6.37	5.41	4.10	8.18			5.55	590.0	4.2599
APR 23										
0000	5.50	6.37	5.41	4.10	8.18			5.55	590.0	4.2599
1200	5.50	6.37	5.41	4.10	8.18			5.55	310.0	4.3067
2400	5.50	6.37	5.41	4.10	8.18			5.55	160.0	4.3189
APR 24										
0000	5.50	6.37	5.41	4.10	8.18			5.55	160.0	4.3189
1200	5.50	6.37	5.41	4.10	8.18			5.55	100.0	4.3332
2400	5.50	6.37	5.41	4.10	8.18			5.55	80.0	4.3373

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 mi² (100.5 km²).

PERIOD OF RECORD.--July to October 1944, March to October 1946, April 1947 to December 1959, March 1963 to current year. Discherge 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 good. 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.--28 years (water years 1948-59, 1964-79), 37.0 ft³/s (1.048 m³/s), 26,810 acre-ft/yr (33.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s (61.5 m³/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 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 7	0400	639	18.1	10.12	3.085	May 4	2000	658	18.6	10.29	3.136
Feb. 6	1500	965	27.3	12.74	3.883	June 2	2000	995	28.2	12.96	3.950
Mar. 20	0400	1,100	31.2	13.72	4.182	July 26	1700	*1,950	55.2	18.57	5.660
Mar. 22	2000	916	25.9	12.37	3.770	Sept. 20	0900	1,780	50.4	17.80	5.425
Apr. 21	0200	850	24.1	11.86	3.615						

Minimum daily discharge, 0.41 ft³/s (0.012 m³/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.56	18	36	8.4	3.1	6.2	43	23	13	65	30
2	1.1	.48	11	34	6.9	2.8	8.6	53	653	11	35	30
3	1.0	.44	7.3	15	12	3.1	41	45	626	9.5	21	13
4	1.1	.48	10	9.2	28	2.8	195	364	244	8.3	15	9.9
5	1.1	.50	20	27	467	2.4	70	409	282	11	15	11
6	.95	7.9	13	271	878	2.2	29	134	184	14	15	9.0
7	.90	2.8	9.0	535	513	2.1	15	55	85	14	20	159
8	.90	1.7	8.0	197	174	2.0	9.9	30	31	14	19	132
9	.90	.84	6.1	59	76	2.0	7.5	20	15	36	22	45
10	.90	.68	4.5	34	42	1.8	5.9	20	14	28	22	20
11	.80	2.5	3.4	91	27	2.0	4.8	13	13	22	21	12
12	.80	2.6	2.8	94	19	2.3	4.4	14	9.3	74	26	8.2
13	.80	2.3	2.4	50	15	2.0	3.9	11	9.3	77	23	7.1
14	.69	1.3	2.3	27	12	1.9	3.0	6.4	7.2	82	18	6.3
15	.67	.98	3.6	15	10	1.7	2.7	5.1	5.6	40	20	5.9
16	.67	.83	3.5	11	8.3	1.7	2.7	4.9	5.7	27	18	5.3
17	.67	.67	3.0	11	7.2	1.7	3.0	5.2	8.9	38	21	5.2
18	.59	.65	2.6	10	8.2	1.7	16	4.9	13	70	28	34
19	.58	3.3	2.2	13	7.4	150	58	5.7	17	35	20	816
20	.57	4.7	2.0	163	6.7	881	731	4.5	16	61	20	1760
21	.51	3.5	1.8	77	6.3	589	755	7.2	15	108	39	1630
22	.46	2.3	1.6	27	6.3	682	380	10	15	30	24	1200
23	.47	1.7	1.5	25	6.4	536	131	13	12	24	34	586
24	.47	1.4	1.5	30	6.6	149	65	11	12	27	21	212
25	.44	1.2	1.4	17	5.6	56	33	5.5	11	274	10	91
26	.48	28	1.4	21	4.5	30	16	6.5	38	1870	10	46
27	.41	79	1.3	34	3.9	18	10	7.0	47	1910	9.5	28
28	.48	30	1.2	21	3.6	12	7.8	6.1	25	1800	11	18
29	.48	36	1.5	13	---	8.0	35	15	16	1470	23	13
30	.48	35	2.2	12	---	6.0	90	30	12	481	19	12
31	.56	---	2.1	11	---	6.9	---	45	---	164	20	---
TOTAL	22.13	254.31	152.2	1990.2	2369.3	3163.2	2740.4	1404.0	2465.0	8842.8	684.5	6954.9
MEAN	.71	8.48	4.91	64.2	84.6	102	91.3	45.3	82.2	285	22.1	232
MAX	1.2	79	20	535	878	881	755	409	653	1910	65	1760
MIN	.41	.44	1.2	9.2	3.6	1.7	2.7	4.5	5.6	8.3	9.5	5.2
AC-FT	44	504	302	3950	4700	6270	5440	2780	4890	17540	1360	13800

CAL YR 1978 TOTAL 7331.94 MEAN 20.1 MAX 690 MIN .41 AC-FT 14540
WTR YR 1979 TOTAL 31042.94 MEAN 85.0 MAX 1910 MIN .41 AC-FT 61570

Table 18.--Recording and nonrecording rain gages in the Houston area at sites other than stream-gaging stations

Station no. 1/	Station name	Location	Period of record 2/
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, northwest Harris County, Houston	July 30, 1970 to date

See footnotes at end of table.

Table 18.--Recording and nonrecording rain gages in the Houston area at sites other than stream-gaging stations--Continued

Station no. 1/	Station name	Location	Period of record 2/
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.	--
39-R	KHTV	Lat 29°43'25", long 95°30'06", at station KHTV-TV at Hillcroft and West Park Drive, Houston.	Aug. 22, 1967 to Sept. 30, 1970; Oct. 1, 1971 to date
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 date
201-S	Humble	Lat 30°00', long 95°15' at Humble.	--

See footnotes at end of table

Table 18.--Recording and nonrecording rain gages in the Houston area at sites other than stream-gaging stations--Continued

Station no. 1/	Station name	Location	Period of record 2/
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 northwest 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 northwest 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 intersection 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 18.--Recording and nonrecording rain gages in the Houston area at sites other than stream-gaging stations--Continued

Station no. 1/	Station name	Location	Period of record 2/
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 18.--Recording and nonrecording rain gages in the Houston area at sites other than stream-gaging stations--Continued

Station no. 1/	Station name	Location	Period of record 2/
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 : 1979 WATER YEAR

DATE	3630	4400	4250	4200	4150	205R	22R	21R	6200	6000	5900	5780	204R	203R	29R	20R	5770	5760	101R
OCT																			
3	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.04	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.09	0.00	0.00	0.07	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00
MTOT	0.04	0.00	0.00	0.00	0.00	0.00	0.86	0.19	0.10	0.00	0.07	0.00	0.00	0.32	0.15	0.05	0.00	0.00	0.00
NOV																			
5	0.60	0.18	0.62	0.70	0.55	0.76	0.49	0.62	0.60	0.14	0.24	0.60	0.81	0.40	0.56	0.41	0.42	0.70	1.03
6	1.10	1.02	1.05	1.10	1.00	1.17	1.06	0.94	1.00	1.03	0.90	1.10	0.98	0.92	1.00	0.80	0.96	0.80	0.90
11	0.00	0.10	0.10	0.00	0.05	0.36	0.06	0.05	0.00	0.00	0.06	0.50	0.25	0.00	1.35	0.01	0.00	0.20	0.66
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.20	0.08	0.12	0.10	0.17	0.27	0.38	0.22	0.20	0.07	0.12	0.20	0.24	0.18	0.31	0.16	0.05	0.20	0.20
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	1.10	1.00	1.04	1.10	1.08	1.18	1.14	1.12	1.30	1.07	1.57	1.30	1.10	1.49	1.36	1.27	0.79	1.00	0.82
20	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.18	0.00	0.02	0.00	0.00
22	0.00	0.04	0.04	0.00	0.03	0.00	0.00	0.00	0.10	0.00	0.04	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.10	0.00
26	3.10	3.35	2.86	2.50	1.92	2.42	3.00	2.36	2.20	2.50	3.02	3.20	2.44	3.11	3.67	2.53	4.25	3.40	4.08
27	0.00	0.05	0.15	0.20	0.20	0.35	0.11	0.15	0.10	0.36	0.10	0.10	0.09	0.08	0.15	0.08	0.03	0.10	0.19
28	0.10	0.10	0.10	0.10	0.03	0.12	0.30	0.08	0.10	0.00	0.09	0.20	0.05	0.14	0.29	0.14	0.20	0.10	0.19
29	0.70	0.60	0.64	0.50	0.50	0.54	0.49	0.64	0.60	0.72	0.46	0.50	0.66	0.70	0.54	0.55	0.78	0.60	0.55
MTOT	6.90	6.52	6.72	6.30	5.53	7.17	7.08	6.26	6.20	5.95	6.62	7.70	6.62	7.17	9.41	5.99	7.55	7.30	8.65

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER																	
	3630	4400	4250	4200	4150	205R	22R	21R	6200	6000	5900	5780	204R	203R	29R	20R	5770	5760	101R
DEC																			
2	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.10	0.00	0.00	0.10	0.00	0.00	0.00	0.09	0.00	0.00	0.00
3	0.50	0.76	0.40	0.40	0.62	0.31	0.12	0.10	0.50	0.57	0.73	0.10	0.68	0.18	0.12	0.40	0.11	0.40	0.20
4	0.40	0.24	0.23	0.20	0.25	0.30	0.36	0.48	0.20	0.31	0.34	0.20	0.22	0.20	0.24	0.22	0.26	0.20	0.23
6	0.20	0.04	0.11	0.20	0.19	0.35	0.35	0.30	0.10	0.00	0.13	0.50	0.00	0.00	0.50	0.10	0.00	0.00	0.00
7	0.00	0.00	0.01	0.10	0.04	0.03	0.00	0.10	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.01	0.00	0.00	0.00
8	0.20	0.26	0.23	0.10	0.14	0.18	0.52	0.15	0.20	0.16	0.25	0.20	0.19	0.00	0.25	0.41	0.02	0.20	0.21
9	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
13	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
14	0.40	0.35	0.30	0.30	0.21	0.26	0.10	0.30	0.20	0.05	0.03	0.10	0.20	0.00	0.05	0.06	0.23	0.40	0.35
15	0.00	0.05	0.05	0.10	0.04	0.10	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.05	0.04	0.01	0.00	0.00	0.02
29	1.00	0.68	0.80	1.20	0.84	1.04	0.73	0.80	0.80	0.38	0.88	1.00	0.80	0.95	0.94	0.86	0.95	0.70	0.90
30	0.10	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.03	0.01	0.02	0.00	0.10	0.00
31	0.40	0.63	0.48	0.40	0.36	0.35	0.66	0.35	0.50	0.53	0.33	0.40	0.35	0.40	0.72	0.41	0.17	0.40	0.30
MTOT	3.30	3.05	2.61	3.00	2.77	2.97	2.84	2.58	2.60	2.06	2.71	2.70	2.71	1.81	2.99	2.60	1.76	2.40	2.23
CTOT	*****	*****	41.86	*****	41.80	46.79	34.33	40.80	*****	40.46	40.99	*****	39.85	40.50	44.38	*****	50.26	*****	46.80
JAN																			
1	0.80	0.76	0.95	0.80	0.82	0.85	0.78	0.85	0.80	0.73	0.78	1.00	0.85	0.90	0.75	0.85	0.98	0.70	0.87
5	1.00	0.82	0.85	1.10	0.84	1.15	0.80	1.06	1.20	0.85	1.04	1.00	1.10	1.10	1.12	1.39	0.90	1.10	0.95
6	1.30	1.47	1.35	1.30	1.25	1.37	0.82	1.20	1.40	1.54	1.68	1.20	1.40	0.95	1.06	1.51	1.39	1.20	1.45
10	0.40	0.40	0.36	0.20	0.25	0.33	0.25	0.38	0.30	0.32	0.25	0.40	0.25	0.29	0.41	0.36	0.32	0.40	0.32
11	0.20	0.17	0.22	0.20	0.15	0.20	0.20	0.18	0.20	0.15	0.18	0.10	0.19	0.16	0.21	0.15	0.13	0.10	0.12
16	0.00	0.03	0.02	0.10	0.00	0.04	0.00	0.10	0.00	0.03	0.00	0.00	0.05	0.15	0.06	0.03	0.02	0.00	0.18
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.05	0.32	0.03	0.00	0.00	0.00
18	0.10	0.07	0.08	0.10	0.10	0.05	0.02	0.05	0.10	0.01	0.09	0.10	0.07	0.05	0.11	0.13	0.01	0.00	0.04
19	0.30	0.48	0.40	0.20	0.38	0.35	0.49	0.35	0.70	0.46	0.28	0.50	0.58	0.45	0.51	0.62	0.19	0.20	0.28
20	0.70	0.62	0.50	1.10	0.68	0.65	0.33	0.40	0.40	0.38	0.23	0.40	0.30	0.28	0.23	0.14	0.58	0.60	0.59
23	0.10	0.38	0.09	0.10	0.08	0.10	0.00	0.00	0.10	0.00	0.02	0.10	0.02	0.10	0.00	0.02	0.22	0.20	0.11
25	0.10	0.04	0.02	0.10	0.01	0.12	0.02	0.15	0.10	0.02	0.09	0.10	0.08	0.12	0.17	0.12	0.00	0.10	0.12
26	0.20	0.22	0.24	0.10	0.19	0.17	0.20	0.12	0.10	0.22	0.21	0.00	0.19	0.18	0.18	0.21	0.42	0.20	0.31
29	0.10	0.07	0.10	0.10	0.09	0.06	0.00	0.06	0.10	0.10	0.07	0.10	0.08	0.09	0.09	0.09	0.06	0.10	0.07
30	0.40	0.32	0.38	0.40	0.38	0.36	0.55	0.29	0.40	0.27	0.59	0.80	0.23	0.63	0.70	0.65	0.59	0.10	0.27
MTOT	5.70	5.85	5.56	5.90	5.22	5.80	4.46	5.19	5.90	5.10	5.52	5.80	5.39	5.50	5.92	6.30	5.81	5.00	5.68

MTOT=MONTHLY TOTALS
CTOT=CALENDAR YEAR TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER 3630	4400	4250	4200	4150	205R	22R	21R	6200	6000	5900	5780	204R	203R	29R	20R	5770	5760	101R
FEB																			
2	0.40	0.31	0.34	0.40	0.40	0.49	0.19	0.35	0.60	0.37	0.28	0.30	0.40	0.38	0.34	0.61	0.18	0.40	0.25
3	0.20	0.22	0.22	0.40	0.23	0.23	0.14	0.25	0.20	0.24	0.22	0.20	0.20	0.16	0.18	0.25	0.25	0.10	0.22
4	0.60	0.67	0.58	0.50	0.52	0.59	0.66	0.60	0.50	0.50	0.60	0.70	0.50	0.71	0.80	0.56	0.77	0.70	0.74
5	0.80	0.89	0.84	0.80	0.80	0.91	0.57	0.85	0.80	0.90	0.82	0.80	0.79	0.69	0.77	0.77	0.97	0.80	0.94
6	0.60	0.66	0.58	0.60	0.54	0.53	0.41	0.55	0.60	0.62	0.49	0.60	0.50	0.56	0.60	0.64	0.71	0.80	0.60
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.03	0.10	0.00	0.04	0.03	0.03	0.10	0.00	0.00	0.10	0.05	0.07	0.06	0.05	0.00	0.00	0.05
17	0.60	0.52	0.42	0.50	0.50	0.64	0.66	0.73	0.60	0.64	0.70	0.60	0.65	0.69	0.88	0.75	0.36	0.50	0.46
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.01	0.03	0.00	0.00	0.02	0.00	0.00	0.10	0.00	0.04	0.00	0.01	0.08	0.04	0.05	0.00	0.10	0.00
21	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
23	1.56	0.73	1.75	0.40	1.41	0.62	0.00	0.60	2.80	1.13	1.15	0.20	0.50	0.32	0.05	1.52	0.16	0.00	0.06
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.10	0.00	0.05	0.00	0.03	0.00	0.00	0.00
MTOT	4.76	4.01	4.81	3.70	4.42	4.07	2.66	3.99	6.30	4.40	4.45	3.60	3.61	3.71	3.72	5.23	3.50	3.40	3.32
MAR																			
2	0.10	0.02	0.00	0.10	0.00	0.07	0.19	0.06	0.10	0.01	0.01	0.00	0.06	0.10	0.12	0.04	0.02	0.10	0.05
3	0.10	0.02	0.10	0.10	0.16	0.15	0.10	0.15	0.10	0.06	0.20	0.20	0.14	0.18	0.18	0.23	0.12	0.00	0.08
10	0.00	0.03	0.01	0.10	0.02	0.05	0.08	0.07	0.10	0.00	0.00	0.00	0.05	0.10	0.11	0.11	0.00	0.10	0.08
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
16	0.00	0.03	0.12	0.10	0.10	0.15	0.13	0.10	0.10	0.10	0.09	0.20	0.17	0.10	0.15	0.18	0.05	0.00	0.06
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
19	1.20	0.91	0.76	1.20	0.94	1.11	0.88	1.45	0.70	0.46	0.76	0.70	0.98	0.80	0.78	0.70	1.35	1.10	1.34
20	0.00	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.80	0.90	0.81	0.80	0.95	0.87	0.52	0.82	0.60	0.63	1.07	0.50	0.56	0.42	0.54	0.90	1.35	1.40	1.34
22	0.60	0.57	0.57	0.70	0.57	0.68	1.03	0.75	0.60	1.04	0.76	0.80	0.73	0.87	1.11	0.63	1.10	1.40	1.02
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
30	0.10	0.00	0.00	0.00	0.00	0.00	0.19	0.10	0.00	0.00	0.00	0.20	0.00	0.00	0.10	0.03	0.00	0.00	0.00
31	0.10	0.00	0.03	0.10	0.04	0.05	0.47	0.09	0.10	0.00	0.03	0.60	0.08	0.60	0.67	0.01	0.08	0.00	0.08
MTOT	3.00	2.48	2.44	3.20	2.82	3.13	3.59	3.61	2.40	2.30	2.92	3.20	2.77	3.17	3.76	2.88	4.07	4.10	4.05

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER																	
	3630	4400	4250	4200	4150	205R	22R	21R	6200	6000	5900	5780	204R	203R	29R	20R	5770	5760	101R
APR																			
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.02	0.00	0.00	0.00
2	0.40	0.44	0.45	0.60	0.78	0.84	1.12	0.80	0.50	0.49	1.00	1.30	1.01	0.90	1.22	1.39	0.45	0.70	0.44
3	1.20	1.85	1.10	0.80	0.60	0.64	0.47	0.44	0.30	1.15	0.31	0.40	0.35	0.20	0.46	0.53	1.25	1.40	1.27
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
16	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.04	0.05	0.10	0.06	0.06	0.12	0.08	0.00	0.22	0.00	0.10	0.00	0.00	0.10	0.34	0.05	0.10	0.05
18	0.80	1.61	1.82	1.50	1.34	1.59	1.96	1.50	2.20	2.58	2.78	2.40	2.16	3.18	2.62	3.10	1.92	1.60	1.68
19	2.40	4.10	2.52	2.20	1.64	2.47	0.86	1.02	1.70	1.86	1.24	1.30	1.36	1.68	0.80	0.93	6.12	4.90	5.98
20	0.20	0.01	0.02	0.10	0.03	0.03	0.00	0.10	0.20	0.97	2.35	0.80	0.20	0.60	0.35	0.49	0.14	0.10	0.13
21	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.80	0.95	0.94	1.00	0.80	1.10	0.90	0.97	1.00	0.70	0.87	0.80	0.73	0.89	0.85	0.97	1.24	1.20	1.24
MTOT	5.80	9.09	6.95	6.30	5.30	6.73	5.59	4.91	5.90	8.02	8.55	7.20	5.86	8.01	6.53	7.79	11.17	10.00	10.79
MAY																			
1	0.20	0.18	0.18	0.20	0.11	0.20	0.14	0.16	0.10	0.02	0.05	0.10	0.07	0.09	0.12	0.05	0.15	0.10	0.16
2	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
3	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	1.70	1.35	1.54	1.60	1.56	1.62	1.43	1.60	1.30	1.30	1.28	1.60	1.49	1.42	1.33	1.28	1.04	1.20	1.40
11	0.20	0.30	0.16	0.10	0.22	0.30	0.21	0.24	0.20	0.19	0.14	0.40	0.20	0.20	0.18	0.17	0.44	0.40	0.29
21	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.60	0.59	0.40	0.60	0.38	0.70	1.05	0.93	0.84	0.65	0.92	1.30	1.18	1.02	1.72	0.55	0.44	0.50	0.63
29	0.50	1.18	0.68	0.80	0.68	0.96	0.89	1.10	0.70	0.89	0.87	1.10	1.03	1.00	1.61	1.06	0.80	1.00	1.08
30	0.50	0.93	0.45	0.20	0.39	0.23	0.48	0.27	0.40	0.65	1.33	0.40	0.83	0.59	0.65	0.66	0.78	0.70	0.84
31	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTOT	3.70	4.53	3.45	3.50	3.46	4.01	4.20	4.30	3.54	3.70	4.61	4.90	4.80	4.32	5.61	3.78	3.65	3.90	4.40

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER																	
	3630	4400	4250	4200	4150	2058	22R	21R	6200	6000	5900	5780	204R	203R	29R	20R	5770	5760	101R
JUN																			
1	0.10	0.00	0.36	0.80	0.60	0.69	0.85	0.07	0.20	0.52	0.88	0.50	1.00	0.88	0.32	1.06	0.33	0.00	0.13
2	1.10	0.52	0.36	0.20	0.23	0.35	0.11	0.28	0.20	0.30	0.40	0.10	0.10	0.09	0.08	0.09	0.85	1.00	1.02
3	0.00	0.56	1.08	0.50	0.00	0.90	0.00	0.00	0.00	0.00	0.05	0.00	0.40	0.10	0.00	0.03	0.20	0.00	0.08
4	0.00	0.38	1.25	0.20	0.20	0.27	0.17	0.34	0.00	0.03	0.13	0.10	0.19	0.22	0.18	0.15	1.50	0.80	0.88
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.04	0.00	0.02
6	0.00	0.00	0.06	0.10	0.27	0.12	0.00	0.06	0.00	0.17	0.00	0.10	0.20	0.10	0.00	0.04	0.16	0.20	0.30
16	0.10	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.45	0.05	0.00	0.00	0.10	0.04	0.51	0.25	0.40	0.18
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
25	0.00	0.23	0.18	0.20	0.00	0.12	0.20	0.30	0.00	0.00	0.41	0.00	0.02	0.00	0.37	0.00	0.70	0.00	0.02
26	0.40	0.48	0.68	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.42	0.20	0.40	0.08	0.15	0.00	0.05	0.10	0.24
MTOT	1.70	2.57	3.97	2.00	1.84	2.45	1.33	1.15	0.40	1.47	2.34	1.00	2.31	1.57	1.15	1.88	4.08	2.50	2.99
JUL																			
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.40	0.00	0.00	0.79	0.00	0.00	0.00	0.17
4	0.10	0.00	0.07	0.00	0.54	0.35	0.00	0.13	0.50	0.13	1.14	0.10	0.14	0.21	0.45	0.04	0.26	0.00	0.19
5	0.20	0.22	0.59	0.40	0.25	0.28	0.11	0.13	0.00	0.00	0.02	0.20	0.40	0.30	0.07	0.00	0.10	0.00	0.00
6	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.63	0.00	0.00
7	0.10	1.57	1.79	1.80	2.52	1.95	2.65	3.45	1.70	0.11	1.50	3.20	1.80	2.40	2.03	1.75	0.03	0.00	0.00
8	0.00	0.11	0.05	1.10	0.10	1.03	0.00	0.40	0.00	0.03	0.05	0.20	0.05	0.20	0.45	0.96	0.73	0.10	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.27	0.08	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.65	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.07	0.00	0.67	0.00	0.60	0.00	0.57	0.10	0.37	0.00	0.10	0.00
13	0.40	0.60	0.08	0.40	0.08	0.42	0.00	0.38	0.00	0.89	1.30	0.40	0.30	0.72	1.17	0.80	0.74	1.40	1.86
14	0.00	0.02	0.00	0.00	0.00	0.00	0.21	0.00	0.40	0.09	0.42	0.00	0.00	1.06	0.38	0.24	0.00	0.40	0.11
17	0.00	0.83	0.54	0.40	0.26	0.30	0.00	0.05	0.00	0.24	0.00	0.00	0.03	0.00	0.00	0.56	0.06	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
19	0.60	0.91	0.09	1.20	0.35	0.93	0.20	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.10	0.00
20	1.20	0.59	1.80	0.00	1.40	0.01	0.00	0.00	0.40	0.05	1.61	0.60	1.03	2.32	0.07	0.10	0.02	0.00	0.03
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.10
23	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.50	0.03	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.06
24	0.00	0.00	0.10	0.00	0.00	0.00	0.14	0.00	0.00	0.04	0.18	0.10	0.03	0.00	0.11	0.00	0.25	0.10	0.05
25	0.70	1.88	1.70	1.20	1.52	1.21	0.60	0.78	2.00	3.71	2.15	0.80	1.57	1.15	0.80	2.65	3.12	2.30	2.38
26	0.00	0.04	0.06	0.10	0.02	0.06	0.14	0.18	0.10	0.18	0.08	0.40	0.08	0.38	0.17	0.17	1.11	0.50	0.62
27	0.40	0.23	0.57	0.50	0.42	0.43	0.16	0.50	0.50	0.25	0.54	0.40	0.76	0.49	0.18	0.27	0.56	0.50	0.28
28	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.07	0.10	0.00	0.00	0.02	0.00	0.04	0.00	0.00	0.10
MTOT	3.70	7.02	7.44	7.10	7.60	6.97	4.44	6.80	5.60	7.00	9.12	7.50	6.19	9.93	7.69	8.10	8.08	5.60	5.95

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES NORTH OF BUFFALO BAYOU PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER																	
	3630	4400	4250	4200	4150	205R	22R	21R	6200	6000	5900	5780	204R	203R	29R	20R	5770	5760	101R
AUG																			
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00
3	0.10	0.00	0.90	0.00	0.02	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
4	0.00	0.18	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.02	0.40	0.06	0.49	0.00	0.08	0.00	0.00	0.02	0.10	0.20	1.55	0.07	0.00	0.09	0.00	0.12
7	0.00	0.00	0.00	0.00	0.02	0.00	0.07	0.10	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.04	0.17	0.20	0.02
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.12	1.10	2.56
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.10	0.00	0.09	0.04	0.00	0.10	0.00	0.00	0.10	0.00	0.00	0.31	0.15	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.10	0.77	0.30	1.20	0.04	1.06	0.00	0.33	0.60	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00
14	0.00	0.00	0.00	0.50	0.00	0.24	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.18	0.00	0.00	0.00	0.04
15	0.00	0.42	0.78	1.60	0.55	1.44	0.51	0.72	0.60	1.64	0.56	0.40	0.58	1.65	0.30	0.22	0.48	0.60	1.05
16	0.20	0.10	0.03	0.00	0.02	0.03	0.00	0.03	0.00	0.53	0.09	0.10	0.02	1.12	0.29	0.55	0.16	0.40	0.54
17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
18	0.00	0.28	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.40	2.18	2.46	1.10	1.49	0.88	1.12	0.86	0.20	0.20	0.05	0.80	0.30	0.00	1.31	0.90	2.72	1.60	1.53
20	0.00	0.00	0.02	0.10	0.00	0.10	0.19	0.00	0.00	0.07	0.24	0.00	0.00	0.00	0.00	0.56	0.67	0.10	0.60
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
22	0.00	1.65	0.54	0.20	0.47	0.35	0.27	0.18	0.20	1.34	0.63	0.20	0.38	0.50	0.20	1.47	1.28	0.40	1.79
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00
27	0.60	0.30	0.39	0.50	1.10	0.37	0.00	0.12	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.39	0.44	0.10	0.60
28	0.30	0.52	0.36	0.20	0.10	0.38	0.08	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.25	0.40	0.18
29	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.10	0.19
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.29
31	0.00	0.05	0.02	0.00	0.00	0.00	0.24	0.00	0.00	0.02	0.00	0.10	0.00	0.00	0.30	0.06	0.23	0.10	0.02
MTOT	1.80	6.45	5.98	5.90	3.87	5.43	2.70	2.79	1.90	4.61	1.85	1.90	2.45	4.82	2.96	4.57	7.37	5.60	9.53
SEPT																			
1	0.90	1.20	0.62	0.20	0.84	0.12	0.12	0.60	0.80	2.44	0.10	0.40	1.30	0.30	0.33	0.58	6.98	6.20	5.68
2	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.14	0.01	0.00	0.00	0.00	0.03	0.15	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
5	0.20	0.05	0.34	0.40	0.10	0.46	0.00	0.50	0.00	0.00	0.02	0.10	0.10	0.19	0.24	0.00	0.00	0.10	0.05
6	0.10	0.15	0.66	1.00	1.22	1.22	0.54	0.05	0.40	0.42	0.14	0.70	0.34	1.06	1.26	0.17	0.81	0.50	0.79
7	0.60	0.05	1.17	0.00	0.50	0.00	0.00	0.00	0.20	0.20	0.00	0.00	0.10	0.00	0.00	0.01	0.20	0.10	0.49
8	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.05
17	0.70	1.08	1.12	1.10	0.84	1.18	0.87	1.32	1.00	0.57	1.38	1.10	1.22	1.05	0.95	0.72	1.98	1.40	1.58
18	1.70	1.38	1.50	1.70	1.55	1.96	1.20	2.22	0.90	0.80	1.34	1.80	0.86	1.41	1.68	0.93	0.85	0.80	0.88
19	6.10	5.85	5.97	5.80	5.46	5.48	5.59	5.72	5.20	6.42	5.36	3.10	4.76	6.12	5.50	6.92	7.50	7.30	7.46
20	0.10	0.10	0.16	0.10	0.14	0.10	0.12	0.30	0.20	0.58	0.19	0.10	0.22	0.37	0.22	0.35	0.30	0.20	0.30
MTOT	10.40	9.96	11.54	10.30	10.71	10.57	8.44	10.71	8.70	11.57	8.58	7.30	8.90	10.53	10.28	9.83	18.66	16.70	17.28
WTOT	50.80	61.53	61.47	57.20	53.54	59.30	48.19	52.48	49.54	56.18	57.34	52.80	51.61	60.86	60.17	59.00	75.70	66.50	74.87

MTOT=MONTHLY TOTALS
WTOT =WATER YEAR TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER																		
	4910	4850	4800	4780	308R	303R	39R	32R	12R	5500	5470	5400	305R	304R	31R	5650	5550	403R	402R	401R
OCT																				
3	0.10	0.10	0.00	0.40	0.13	0.32	0.00	0.12	0.00	0.10	0.80	0.10	0.50	0.30	0.35	0.00	0.00	0.00	0.00	0.00
4	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00
5	0.10	0.50	0.44	0.20	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.35	0.00	0.10	0.00	0.08	0.00
6	0.20	0.00	0.0[illegible]	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTOT	0.60	0.60	0.49	0.60	0.13	0.32	0.07	0.46	0.01	0.10	0.90	0.20	0.60	0.70	0.70	0.00	0.10	0.00	0.08	0.00
NOV																				
5	0.20	0.50	0.50	1.00	0.40	1.10	0.57	0.65	0.66	0.20	0.30	0.31	0.30	0.20	0.36	0.21	0.40	0.30	0.47	0.63
6	1.30	1.00	0.97	1.10	1.10	1.20	0.76	1.57	1.09	1.20	1.35	1.61	1.40	1.60	1.25	1.00	1.40	1.40	1.41	1.25
11	0.40	0.20	0.11	0.00	0.25	0.00	0.52	0.07	0.35	0.60	0.85	0.20	0.80	0.20	0.58	0.00	0.10	0.10	1.50	0.07
13	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.30	0.03	0.24
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.10	0.10	0.28	0.14
15	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.10	0.20	0.06	0.10	0.12	0.00	0.12	0.20	0.13	0.10	0.10	0.00	0.10	0.20	0.15	0.00	0.10	0.20	0.07	0.10
18	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.80	1.00	1.00	1.00	0.65	0.96	0.92	1.13	0.77	0.90	0.75	1.02	0.70	1.20	1.08	0.40	0.80	0.70	0.66	0.60
20	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
22	0.00	0.10	0.09	0.00	0.07	0.00	0.06	0.00	0.05	0.00	0.00	0.00	0.00	0.20	0.20	0.00	0.00	0.00	0.00	0.11
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	3.50	3.50	3.05	3.60	3.41	3.30	3.68	2.86	3.28	3.00	3.05	3.81	3.30	3.40	3.02	3.20	2.40	2.40	2.29	2.50
27	0.00	0.00	0.05	0.10	0.01	0.20	0.00	0.12	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.40	0.10	0.20	0.10	0.20	0.14	0.20	0.15	0.18	0.10	0.20	0.30	0.10	0.30	0.29	0.10	0.10	0.10	0.08	0.15
29	0.50	0.50	0.40	0.70	0.61	0.76	0.66	0.96	0.45	0.70	0.50	0.72	0.80	0.70	0.46	0.61	0.60	0.60	0.55	0.80
MTOT	7.20	7.10	6.43	7.80	6.85	7.91	7.49	7.84	7.15	6.80	7.10	7.97	7.60	8.00	7.39	5.92	6.20	6.30	7.34	6.59

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	4910	4850	4800	4780	306R	303R	39R	32R	12R	5500	5470	5400	305R	304R	31R	5650	5550	403R	402R	401R
DEC																				
2	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
3	0.60	0.60	0.35	0.50	0.30	0.17	0.53	0.31	0.30	0.10	0.10	0.20	0.10	0.30	1.00	0.00	0.00	0.00	0.13	0.00
4	0.10	0.20	0.24	0.20	0.22	0.37	0.27	0.31	0.22	0.40	0.50	0.40	0.50	0.20	0.23	0.40	0.30	0.30	0.36	0.30
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
6	0.10	0.10	0.16	0.10	0.13	0.17	0.14	0.08	0.05	0.00	0.00	0.20	0.10	0.10	0.10	0.00	0.00	0.00	0.06	0.00
7	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.40	0.30	0.21	0.10	0.19	0.05	0.24	0.00	0.18	0.10	0.00	0.20	0.00	0.30	0.24	0.00	0.10	0.10	0.06	0.00
10	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.06	0.00	0.07	0.03	0.03	0.00	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.24
14	0.50	0.40	0.31	0.40	0.39	0.45	0.38	0.44	0.32	0.40	0.40	0.30	0.40	0.30	0.33	0.40	0.40	0.40	0.37	0.06
15	0.10	0.10	0.07	0.10	0.04	0.00	0.04	0.05	0.03	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10	0.10	0.05	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.02	0.00	0.03	0.00	0.03	0.04	0.02	0.00	0.00	0.00	0.00	0.10	0.04	0.00	0.00	0.00	0.10	0.00
29	0.60	0.60	0.62	0.70	0.71	1.07	0.72	1.04	0.61	0.30	0.30	0.40	0.30	0.50	0.60	0.10	0.20	0.30	0.61	0.14
30	0.10	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.01	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
31	0.10	0.50	0.56	0.40	0.23	0.38	0.57	0.29	0.28	0.10	0.10	0.10	0.20	0.20	0.25	0.30	0.60	0.60	0.36	0.60
MTOT	2.60	2.80	2.56	2.50	2.43	2.69	3.01	2.61	2.11	1.40	1.60	1.80	1.60	2.30	2.79	1.40	1.70	1.80	2.10	1.36
CTOT	*****	*****	32.62	*****	35.58	41.10	40.06	36.05	33.32	33.60	35.00	32.86	30.90	42.22	37.36	32.68	*****	38.80	36.65	35.12
JAN																				
1	0.80	0.80	0.66	0.70	0.78	0.96	0.75	0.89	0.56	0.80	0.80	0.70	0.90	0.80	0.77	0.60	1.30	1.10	1.28	1.38
4	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	1.00	0.80	0.76	0.80	0.69	1.19	0.94	0.72	1.01	1.10	1.20	0.60	1.50	0.70	0.75	1.20	1.00	1.10	1.10	0.69
6	2.00	2.40	2.37	2.20	1.72	2.17	2.00	1.55	1.36	2.10	1.70	2.00	2.10	2.20	2.30	1.30	1.30	1.20	1.44	1.20
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
10	0.50	0.40	0.31	0.20	0.36	0.46	0.35	0.34	0.32	0.50	0.40	0.40	0.30	0.30	0.40	0.50	0.50	0.50	0.45	0.42
11	0.10	0.20	0.15	0.10	0.12	0.23	0.15	0.14	0.10	0.20	0.20	0.10	0.20	0.10	0.16	0.10	0.10	0.10	0.18	0.15
16	0.00	0.00	0.00	0.10	0.08	0.00	0.00	0.06	0.07	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
18	0.00	0.10	0.00	0.00	0.03	0.10	0.03	0.02	0.01	0.00	0.00	0.10	0.00	0.00	0.07	0.00	0.10	0.00	0.00	0.00
19	0.10	0.20	0.19	0.50	0.18	0.25	0.33	0.30	0.21	0.30	0.20	0.20	0.20	0.10	0.20	0.50	0.70	0.70	0.55	0.71
20	0.70	0.70	0.79	1.20	0.54	1.55	1.22	1.36	0.57	0.40	0.40	0.50	0.40	0.50	0.48	0.20	0.50	0.30	0.33	0.45
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.10	0.20	0.16	0.10	0.47	0.00	0.13	0.22	0.20	0.30	0.50	0.20	0.50	0.20	0.00	0.72	0.10	0.30	0.21	0.12
25	0.00	0.10	0.07	0.00	0.17	0.27	0.15	0.10	0.13	0.10	0.10	0.10	0.10	0.20	0.20	0.10	0.10	0.20	0.12	0.15
26	0.20	0.20	0.19	0.10	0.24	0.10	0.18	0.15	0.33	0.40	0.20	0.20	0.20	0.30	0.25	0.20	0.20	0.20	0.25	0.22
29	0.00	0.00	0.05	0.10	0.06	0.10	0.06	0.07	0.12	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.25
30	0.60	0.60	0.66	0.40	0.78	0.60	0.28	0.28	0.33	0.40	0.10	0.30	0.20	0.40	0.74	0.20	0.20	0.20	0.28	0.35
MTOT	6.10	6.70	6.36	6.50	6.25	7.98	6.57	6.20	5.33	6.70	5.90	5.40	6.70	5.80	6.32	5.62	6.10	6.10	6.19	6.33

MTOT=MONTHLY TOTALS
CTOT=CALENDAR YEAR TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER 4910	4850	4800	4780	308R	303R	39R	32R	12R	5500	5470	5400	305R	304R	31R	5650	5550	403R	402R	401R
FEB																				
2	0.20	0.20	0.27	0.40	0.36	0.38	0.25	0.36	0.21	0.10	0.10	0.25	0.20	0.30	0.21	0.10	0.20	0.20	0.15	0.15
3	0.20	0.10	0.18	0.10	0.26	0.10	0.15	0.21	0.20	0.20	0.20	0.20	0.10	0.20	0.23	0.20	0.20	0.20	0.20	0.20
4	0.80	0.70	0.63	0.70	0.76	0.80	0.70	0.70	0.64	0.85	0.60	0.80	0.80	0.80	0.77	0.80	1.00	0.90	0.90	0.85
5	1.00	1.10	0.97	0.80	0.97	1.00	1.10	0.97	0.77	1.00	1.00	1.00	1.00	1.00	0.97	0.90	1.00	1.10	1.00	1.00
6	0.60	0.50	0.54	0.60	0.64	0.70	0.44	0.52	0.15	0.70	0.60	0.60	0.70	0.40	0.62	0.70	0.80	0.70	0.74	0.77
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.10	0.00	0.00	0.04	0.00	0.00	0.00	0.05	0.10	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.05	0.05
17	0.20	0.20	0.19	0.40	0.26	0.54	0.38	0.35	0.39	0.15	0.10	0.25	0.20	0.30	0.20	0.10	0.20	0.20	0.25	0.32
20	0.00	0.00	0.02	0.00	0.03	0.00	0.02	0.00	0.03	0.00	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.05	0.10	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.10	0.10	0.07	0.40	0.08	0.46	0.25	0.40	0.10	0.05	0.00	0.05	0.00	0.10	0.07	0.20	0.10	0.20	0.11	0.07
24	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTOT	3.10	3.00	2.87	3.40	3.45	3.98	3.29	3.57	2.56	3.20	3.10	3.30	3.10	3.20	3.07	3.10	3.50	3.60	3.40	3.41
MAR																				
2	0.00	0.00	0.02	0.10	0.04	0.14	0.00	0.00	0.03	0.10	0.10	0.10	0.00	0.10	0.08	0.00	0.00	0.00	0.11	0.00
3	0.10	0.10	0.04	0.10	0.06	0.16	0.10	0.15	0.09	0.10	0.10	0.00	0.10	0.00	0.14	0.10	0.10	0.10	0.07	0.05
10	0.00	0.00	0.00	0.10	0.05	0.09	0.10	0.05	0.06	0.00	0.00	0.10	0.00	0.10	0.08	0.10	0.00	0.10	0.00	0.13
15	0.00	0.00	0.00	0.10	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.04	0.00	0.08	0.00	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.07	0.00
19	1.70	1.70	1.67	1.20	2.02	1.62	1.40	1.14	1.19	5.50	3.70	3.30	3.20	3.40	2.87	3.93	2.60	2.60	2.85	3.05
20	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
21	0.70	0.70	0.76	0.80	0.99	0.89	0.89	0.78	0.88	0.90	0.90	0.90	0.90	1.00	1.03	1.10	1.40	1.40	1.10	1.58
22	1.10	0.60	0.46	0.50	0.80	0.80	0.69	0.68	0.90	1.00	0.90	1.00	0.80	1.20	0.95	1.13	1.10	0.90	1.14	1.06
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.10
29	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
31	0.20	0.10	0.12	0.10	0.11	0.15	0.11	0.06	0.00	0.10	0.10	0.40	0.20	0.40	0.60	0.00	0.20	0.20	0.22	0.00
MTOT	3.80	3.20	3.11	3.10	4.18	4.00	3.29	2.94	3.21	7.70	5.80	5.80	5.20	6.30	5.81	6.46	5.40	5.30	5.56	5.97

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER																		
	4910	4850	4800	4780	308R	303R	39R	32R	12R	5500	5470	5400	305R	304R	31R	5650	5550	403R	402R	401R
APR																				
1	0.00	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
2	0.40	0.50	0.28	0.20	0.37	0.50	0.38	0.35	0.49	0.70	0.40	0.40	0.40	0.40	0.45	0.20	0.40	0.30	0.35	0.20
3	1.20	2.00	2.25	2.20	1.10	2.15	2.57	1.60	0.86	1.50	1.40	1.20	1.60	0.80	1.40	0.61	0.40	0.40	0.23	0.50
7	0.00	0.00	0.00	0.00	0.02	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00
17	0.10	0.10	0.05	0.10	0.08	0.00	0.00	0.05	0.03	0.00	0.10	0.10	0.10	0.10	0.11	0.00	0.10	0.10	0.02	0.21
18	0.60	0.70	0.80	0.80	0.91	0.88	0.80	0.65	1.62	0.80	0.80	0.90	1.00	0.80	0.38	0.83	1.10	1.00	1.03	1.19
19	5.50	4.30	1.95	2.60	7.99	4.02	3.91	2.23	5.86	2.30	2.40	2.80	2.40	3.20	2.75	2.04	1.60	1.60	1.45	1.63
20	1.00	0.50	2.30	0.80	0.40	0.32	0.25	0.39	0.21	0.60	0.80	1.00	0.60	1.40	1.12	0.71	0.60	0.70	0.58	0.88
21	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.05
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.80	0.80	0.88	1.00	0.96	1.17	0.88	0.77	0.92	0.90	0.70	0.80	0.80	0.80	1.17	1.10	1.00	1.00	0.87	0.90
MTOT	9.60	8.90	8.55	7.70	11.85	9.04	8.87	6.04	10.02	6.90	6.70	7.20	6.90	7.70	7.38	5.59	5.20	5.20	4.64	5.56
MAY																				
1	0.20	0.20	0.34	0.40	0.28	0.38	0.30	0.30	0.17	0.30	0.30	0.30	0.30	0.30	0.35	0.20	0.20	0.30	0.27	0.10
2	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.13
4	1.40	1.40	1.67	1.70	1.15	1.82	1.35	1.09	1.21	0.90	1.40	1.50	1.40	1.50	1.69	1.11	1.20	1.10	1.26	1.02
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.20	0.20	0.28	0.40	0.39	0.50	0.22	0.35	0.31	0.20	0.30	0.30	0.40	0.30	0.36	0.20	0.50	0.40	0.38	0.75
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.60	0.60	0.54	0.80	0.55	0.95	0.90	0.70	0.52	0.50	0.60	0.41	0.60	0.60	0.65	0.52	0.50	0.50	0.55	0.40
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	1.00	0.80	0.88	0.80	0.98	0.83	0.93	0.11	0.90	0.90	0.70	0.92	0.80	1.00	0.77	0.92	1.00	1.00	0.87	0.79
30	0.70	0.50	0.25	0.40	1.17	0.28	0.65	0.27	0.92	0.50	0.90	0.92	0.60	0.60	0.90	0.70	0.50	0.50	1.01	0.22
31	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTOT	4.10	3.70	3.96	4.50	4.56	4.76	4.35	2.82	4.05	3.50	4.20	4.35	4.10	4.30	4.72	3.85	3.90	3.80	4.36	3.41

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER																		
	4910	4850	4800	4780	308R	303R	39R	32R	12R	5500	5470	5400	305R	304R	31R	5650	5550	403R	402R	401R
JUN																				
1	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.08	1.00	0.80	0.00	1.40	0.00	0.00	2.06	0.10	0.30	0.32	0.30
2	3.80	2.50	2.76	1.20	2.87	0.75	3.42	1.66	1.40	1.10	1.50	2.14	3.60	2.70	3.16	1.01	1.10	1.00	0.87	0.90
3	0.00	0.00	0.40	0.00	0.03	0.00	0.00	0.00	0.46	0.30	0.30	0.00	0.00	0.10	0.09	1.03	0.80	0.90	0.55	0.50
4	0.10	0.10	0.04	0.10	0.66	0.00	0.33	0.42	0.95	0.80	0.60	0.61	0.30	0.40	0.22	0.61	0.80	0.80	0.81	0.30
5	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.20	0.10	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.11	0.00
6	0.10	0.10	0.05	0.10	0.04	0.05	0.25	0.00	0.04	0.50	0.30	0.10	0.20	0.20	0.00	0.30	0.50	0.50	0.55	0.40
18	0.10	0.10	0.00	0.00	0.20	0.00	0.10	0.12	0.42	0.20	0.10	0.10	0.10	0.00	0.10	0.31	0.10	0.20	0.50	0.18
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.00	0.22	0.60
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.71	0.00	0.00	0.00	0.10	0.00	0.00	0.62	0.20	0.40	0.02	0.10
26	1.00	1.40	1.40	2.20	0.22	1.65	0.30	3.65	0.20	1.60	0.50	0.52	0.20	1.10	1.78	0.93	0.10	0.20	0.96	0.22
27	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTOT	5.20	4.20	4.98	3.60	4.76	2.45	4.40	6.08	4.27	5.70	4.20	3.47	5.90	4.50	5.35	7.07	3.90	4.30	4.91	3.50
JUL																				
3	0.10	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.40	0.50	0.00	0.00	0.09	0.18	0.75	0.10	0.00	0.00	0.10	0.10	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
5	0.20	0.20	0.62	1.00	0.08	0.42	0.23	0.95	0.02	0.20	0.00	0.41	0.20	0.50	0.50	0.30	0.20	0.25	0.20	0.28
6	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.08
7	0.00	0.00	0.00	0.00	0.03	1.18	0.25	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.36	0.00	0.10	0.31	0.00	0.00	0.00	0.00	0.40	0.30	0.04	0.10
9	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.01	0.58	0.00	0.00	0.00	0.20	0.50	0.00	0.20	0.20	0.07	0.31	0.10	0.15	0.03	0.11
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.40	0.05	0.00	0.00	0.00	0.00	0.06
12	0.00	0.00	0.08	0.40	0.03	0.00	0.00	1.06	0.01	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.20	0.20	0.22	0.10	0.52	0.28	0.10	0.25	1.77	0.50	0.40	0.83	0.70	0.40	0.34	0.52	1.20	1.00	0.92	1.94
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.20	0.00	0.23
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
17	0.50	0.10	0.00	0.00	0.70	0.00	0.00	0.00	0.55	1.10	1.10	0.61	1.20	0.00	0.00	0.51	1.80	1.50	2.10	1.10
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.40	0.20	0.62	1.40	0.00	0.53	0.42	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
20	0.00	0.10	0.74	0.50	0.12	0.80	0.66	3.43	0.05	1.60	0.30	0.00	0.60	0.00	0.00	0.40	0.50	0.50	0.88	0.05
21	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.40	0.20	0.47	0.40	0.04	0.00	0.00	0.10	0.05	0.90	0.60	0.62	0.50	0.30	0.40	0.73	0.10	0.10	0.05	0.10
23	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.06	0.10	0.10	0.00	0.00	0.00	0.00	0.10	0.20	0.20	0.12	0.26
24	0.00	0.00	0.12	0.20	0.01	0.18	0.00	0.25	0.21	0.20	0.20	0.00	0.00	0.00	0.16	0.71	0.80	0.80	0.30	0.52
25	3.00	1.80	2.13	2.00	1.99	2.35	1.26	1.40	1.89	3.90	3.30	2.56	3.10	2.50	2.52	4.21	5.80	5.50	4.74	5.84
26	1.10	0.10	0.72	0.20	0.67	0.18	0.00	0.27	0.30	3.60	4.30	2.96	4.50	2.20	1.17	4.64	5.90	5.50	6.48	5.75
27	0.20	0.10	0.08	0.20	0.42	1.00	0.24	0.00	0.34	0.30	0.70	0.81	1.00	0.50	0.16	0.30	0.50	0.40	0.00	0.32
28	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00
MTOT	6.50	3.50	5.80	6.40	5.25	8.40	3.91	8.61	5.83	13.30	12.20	9.21	12.20	7.10	5.42	12.93	17.70	16.40	15.86	16.94

MTOT=MONTHLY TOTALS

HOUSTON URBAN HYDROLOGY STUDY

DAILY AND MONTHLY RAINFALL SUMMARY FOR GAGES SOUTH OF BUFFALO BAYOU — PERIOD : 1979 WATER YEAR

DATE	GAGE NUMBER 4910	4850	4800	4780	308R	303R	39R	32R	12R	5500	5470	5400	305R	304R	31R	5650	5550	403R	402R	401R
AUG																				
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.70	0.00	0.50	0.12	1.60	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.37	0.40	0.00	0.54	0.00	0.00	0.10	0.50	0.00	0.00	0.10	0.00	0.25	0.20	0.20	0.20	0.38	0.05
7	0.00	0.00	0.00	0.10	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.10	0.10	0.00	0.04
9	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.10	0.00	0.61	0.10	0.00	0.00	0.10	0.20	0.20	0.34	0.30
11	0.20	0.40	0.22	0.40	0.04	0.90	0.20	0.45	0.02	0.00	0.00	0.10	0.10	0.20	0.35	0.00	0.00	0.00	0.05	0.00
12	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.12	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.00	0.20	0.20	0.04	0.19
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.30	0.00	0.00	0.00	0.04	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00
16	1.40	1.40	1.36	1.30	2.00	0.95	0.80	2.36	0.75	0.60	0.30	0.41	0.60	0.40	0.29	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.20	0.20	0.00	0.10	0.98	0.15	0.30	0.00	0.62	0.50	0.20	0.10	0.00	0.20	0.07	0.10	0.00	0.00	0.00	0.12
20	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.60	0.00	0.00	0.10	0.31	0.10	0.40	0.15	1.03	0.20	0.40	0.37	0.50
21	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.10	0.10	0.08	0.40	0.06	0.10	0.10	0.10	0.92	0.10	0.10	0.10	0.10	0.20	0.10	0.10	0.10	0.10	0.05	0.15
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	1.77	0.70	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.21	0.00	0.55	0.00	0.70	0.20	0.00	0.10	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00
28	0.10	0.10	0.17	0.20	0.09	0.10	0.00	0.11	0.04	0.00	0.10	0.30	0.10	0.60	0.70	0.52	0.20	0.30	1.70	0.52
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.07	0.00
30	0.00	0.00	0.00	0.00	0.03	0.00	0.14	0.13	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.40	0.40	0.00	0.38
31	0.00	0.20	0.00	0.00	0.08	0.14	0.04	0.15	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MTOT	2.00	3.10	2.32	3.70	4.01	4.58	2.52	4.10	5.38	2.50	1.50	2.03	1.40	2.90	2.41	4.44	2.50	2.10	3.04	2.25
SEPT																				
1	2.60	2.90	1.49	0.70	3.33	0.36	3.85	0.67	4.61	1.50	1.10	0.30	0.30	1.30	1.10	3.21	4.10	3.80	1.71	3.75
2	0.00	0.10	0.00	0.00	0.01	0.00	0.00	0.10	0.05	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.10	0.05	0.00	0.03
5	0.60	0.50	0.18	0.10	0.46	0.27	0.10	0.00	0.29	0.40	0.00	0.30	0.00	0.40	0.30	0.41	0.20	0.30	0.34	0.05
6	0.10	0.10	0.28	0.10	0.09	0.25	0.00	0.54	0.18	0.55	0.30	1.85	0.70	2.60	0.37	0.92	0.40	0.45	0.22	0.10
7	0.00	1.00	1.54	2.40	0.21	1.98	0.80	0.00	1.33	0.45	0.10	0.10	0.10	0.30	0.07	0.83	0.20	0.35	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
17	0.70	0.80	0.88	1.20	0.61	0.65	0.75	0.87	0.72	0.60	0.70	0.71	0.70	0.80	1.40	0.70	0.50	0.50	0.53	0.83
18	1.60	2.00	2.12	3.60	1.69	4.30	1.80	1.90	1.42	1.70	1.40	1.20	1.30	1.70	3.12	1.71	2.90	2.50	2.37	2.24
19	5.60	5.80	5.15	4.80	6.68	5.60	6.00	5.59	6.16	6.60	6.70	5.58	5.60	5.80	5.55	8.00	6.10	6.50	7.72	8.96
20	0.20	0.20	0.31	0.10	0.27	0.05	0.15	0.12	0.14	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.15	0.72	0.20
MTOT	11.40	13.40	11.95	13.00	13.35	13.46	13.45	9.79	14.90	12.10	10.50	10.34	8.90	13.20	12.11	15.98	14.60	14.60	13.61	16.16
WTOT	62.20	60.20	59.38	62.80	67.07	69.57	61.22	61.06	64.82	69.90	63.70	61.07	64.20	66.00	63.47	72.36	70.80	69.50	71.09	71.48

MTOT=MONTHLY TOTALS
WTOT=WATER YEAR TOTAL

MONTHLY RAINFALL-DATA SUMMARY IN THE HOUSTON METROPOLITAN AREA,
NATIONAL WEATHER SERVICE STATIONS, 1979 WATER YEAR

	Nonrecording rain-gage numbers															
Month	10S	12R	13S	20R	22R	23S	24S	32R	33R	34S	35S	36S	42S	201S	202S	404S
Oct. 1978	0.60	0.01	0.20	0.05	0.86	0.13	0.09	0.46	0.59	0.05	0.84	0.05	0.00	0.00	0.01	0.00
Nov.	8.44	7.15	7.71	5.99	7.08	7.07	7.76	7.84	6.07	6.54	e/8.60	7.85	7.88	7.65	8.04	7.78
Dec.	2.90	2.11	2.83	2.60	2.84	2.79	2.77	2.61	2.47	2.78	2.80	2.44	2.23	1.84	1.66	1.44
Annual	45.84	33.28	42.79	44.93	34.40	43.91	44.02	35.63	45.27	43.10	48.82	38.26	44.47	47.77	45.01	34.13
Jan. 1979	7.83	5.33	11.27	6.30	4.46	5.89	6.79	6.20	5.03	6.19	7.23	7.94	5.54	6.76	6.05	7.97
Feb.	3.79	2.56	3.80	5.23	2.66	4.39	5.49	3.57	3.05	3.56	3.64	3.95	4.53	5.92	4.29	3.53
Mar.	2.40	3.21	2.86	2.88	3.59	2.84	2.75	2.94	3.19	3.79	5.38	4.15	7.93	2.61	3.42	6.74
April	11.09	10.02	8.84	7.79	5.59	5.98	8.28	6.04	4.95	5.82	11.42	7.33	5.87	7.01	15.13	8.18
May	4.43	4.05	4.56	3.78	4.20	4.60	3.93	2.82	4.42	5.60	4.70	4.80	4.99	5.89	4.61	4.69
June	3.65	4.27	1.38	1.88	1.33	1.37	6.47	6.08	1.80	1.22	4.67	2.39	6.75	2.42	4.65	8.78
July	5.13	5.83	4.70	8.10	4.44	7.12	7.11	e/8.36	6.25	6.37	8.31	5.56	17.26	8.11	13.15	19.22
Aug.	6.04	5.38	4.68	4.57	2.70	3.26	7.05	4.10	3.05	4.54	2.97	3.47	5.49	3.35	3.54	5.79
Sept.	e/11.40	14.90	13.56	9.83	9.14	10.82	11.06	12.24	10.87	13.95	11.77	14.35	15.00	11.08	13.72	14.69
Totals	67.70	64.82	66.39	59.00	48.89	56.26	69.55	63.26	51.74	60.41	72.33	64.28	83.47	62.64	78.27	88.81

e/ Incomplete, total estimated.