Flood Stages and Discharges For Small Streams in Texas

Compilation of Data through September 1972

U.S. GEOLOGICAL SURVEY Open-File Report



Prepared in cooperation with the Texas Highway Department and the U.S. Department of Transportation, Federal Highway Administration

Flood Stages and Discharges For Small Streams in Texas

By E.E. Schroeder

U.S. GEOLOGICAL SURVEY



Research Study 4-5-65-85 Interim Report No. 85-9

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() Numbers in parentheses identify Highway Districts in which the stations are located.

a/ Small watershed streamflow station in the U.S. Geological Survey network financed by funds from agencies other than the Texas Highway Department.

ILLUSTRATIONS

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Figure 1.	Map showing gaging	stations on small streams in	
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TABLES

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FLOOD STAGES AND DISCHARGES FOR SMALL STREAMS IN TEXAS

By

E. E. Schroeder U.S. Geological Survey

INTRODUCTION

Research Study No. 4-5-65-85, "Hydrologic Investigation of Small Drainage Areas in Texas," is a cooperative program between the Texas Highway Department and the U.S. Geological Survey. This program, which began in September 1964, is financed by funds made available for research by the Texas Highway Department and the U.S. Department of Transportation, Federal Highway Administration.

This report is the ninth in a series of interim reports that describe the objectives, planning, instrumentation, progress, and status of the project. The report includes data collected during the 1972 water year.

For the convenience of readers who may want to use metric units, the metric equivalents are given in parentheses following the English units. Data presented in the tables may be converted by using the following conversion factors:

Multiply	By	<u>To obtain</u>		
Miles (mi)	1.609	Kilometres (km)		
Feet (ft)	.3048	Metres (m)		
Square miles (mi ²)	2.59	Square kilometres (km²)		
Cubic feet per second (ft^3/s)	.028317	Cubic metres per second (m^3/s)		
Feet per mile	.19	Metres per kilometre		

Program Objective

The objective of the program is to obtain basic hydrologic data that may be used to define the magnitude and frequency of floods for drainage areas of less than 20 square miles. When sufficient data have been obtained, a magnitude and frequency analysis of floods for streams of less than 20 square miles will be prepared. These data will supplement those used by Patterson (1963).

Program Planning

To accomplish the objective, a network of 150 crest-stage partialrecord gages was established. These gages are distributed throughout the State to sample all hydrologic areas and flood-frequency regions as defined by Patterson (1963) and to obtain a representative sample of physical characteristics. Information for unusual peak discharges at ungaged sites is obtained as the opportunity arises.

The planning of this program is directed toward providing a useful regional flood-frequency relation for small streams as soon as the necessary data are collected. Recognizing that an annual-flood series distribution will be used, rainfall-runoff simulation techniques are being tested for possible use in extending records of annual peaks. These techniques should afford usable relations sooner than would be possible by using routine techniques such as the "index-flood method."

INSTRUMENTATION

Each gage site is equipped with one or more crest-stage gages and a stage-rainfall recorder. The crest-stage gage consists of two modified 2-inch pipe caps attached to an appropriate length of 2-inch pipe that encloses a wooden or metal rod. The upper cap contains a 1/4-inch vent hole to release trapped air, and the lower cap has six 1/4-inch intake holes that allow water to enter. The intake holes in the lower cap are designed to give optimum performance with respect to "drawdown" and "stackup." The gage is mounted in a vertical position on the flood plain.

A small amount of granulated cork is placed inside the 2-inch pipe near the bottom of the inner rod. When a rise occurs, the water entering the pipe floats the cork inside the pipe. At the maximum stage, the cork adheres to the inner rod leaving a distinct "peak mark," the elevation of which is determined from the datum to which the gage was originally set.

A typical installation consists of two crest-stage gages--one headwater gage and one tailwater gage. The headwater gage is located upstream from the culvert at a distance approximately equal to one culvert width in order to record the true water-surface elevation upstream from any drawdown-zone disturbance. The tailwater gage is located downstream from the culvert to record the water-surface elevation at the culvert outlet. The difference between the recorded headwater and tailwater peaks is known as the differential head. A peak rate of flow is determined from the differential head by standard U.S. Geological Survey methods of computation (Bodhaine, 1968). Additional hydrologic data are obtained at each site by a stage and rainfall recorder (S-R recorder). This recorder is a small compact instrument that records, on a circular chart, the time distribution of rainfall and stage. The recorder chart makes one complete revolution each day. The instrument is ideally suited for recording a single storm between visits, but when more than one storm event occurs between visits the record is superimposed. Although the S-R recorder has limitations, sufficient data can be obtained over a period of time to satisfy the needs for the rainfall-runoff analyses.

STATUS OF THE PROGRAM

The construction phase of the program was completed during the 1967 water year. Data are being collected at 82 other small-stream stations for other projects, making a total of 232 stations available for this study. The locations of all these gages are shown on figure 1 (in pocket). All combinations of flood-frequency regions and hydrologic areas have been sampled with the exception of subregion 6-A, a low-lying coastal subregion near the Aransas Bay-Nueces Bay area. No suitable site could be found in that area. A complete list of gaging stations is included in the section "Station Data."

Theoretical stage-discharge ratings have been computed for 142 stations utilizing the culvert geometry and slope in a computer program (Somers and Selner, 1965). These theoretical ratings give the stage-discharge relation from the lowest elevation controlled by the culvert to an elevation at which flow over the roadway begins. Above the roadway, the discharge is a combination of field-determined culvert flow plus the measured or computed flow over the roadway.

The stage-discharge relation for the other eight gages, which are located at bridges, will be defined by current-meter measurements or by indirect methods such as slope-area, contracted-opening, slopeconveyance, flow-over-roadway embankment, or other special studies.

One provision of the cooperative agreement is to obtain peak discharges for floods of unusual magnitude or for floods creating special problems at miscellaneous or ungaged sites. Notable flood events that occurred during the water year are listed in table 1. During the year, six miscellaneous measurements were obtained (table 2). Figure 1

Gaging stations on small streams in Texas, September 30, 1972

(Map is in pocket on back cover of the report)

Table 1.--Notable flood events during the 1972 water year

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Location	Date	Remarks
Dallas, Dallas County	Oct. 3, 1971	Three persons drowned in White Rock Creek at Greenville Ave. Weather Service office at Love Field reported 3.96 inches of rainfall.
Harris County	Mar. 20-21, 1972	Extensive flooding occurred in northern Harris County as a result of high in- tensity rainfall on the afternoon of the 20th. Rainfall totals of more than 7 inches were re- corded. A total of 6.00 inches was recorded in a 2-hour period at the USGS gage at Greens Bayou on U.S. Highway 75. Prop- erty damage was estimated at 5-1/2 million dollars.
San Antonio, Bexar County	May 7, 1972	Three days of heavy rains that totaled more than 7 inches produced flooding in northeast San Antonio on the 7th. Three per- sons were drowned in Olmos Creek in separate incidents.
South Central Texas	May 11-12, 1972	Rainfall ranging up to 16 inches caused severe flooding in the New Braunfels-San Marcos- Seguin area. The highest unit peak discharge known in Texas was recorded from this flood (2,510 ft ³ /s from 0.48 mi ² , which equals 5,230 ft ³ /s/mi ²) at Trough Creek near New Braunfels (08168720).

Table 1.--Notable flood events during the 1972 water year--Continued

Location	Date	Remarks
South Central Texas-Con.		Eighteen deaths were caused by this flood. Seventeen of these oc- curred in or near New Braunfels. Property dam- age in Comal County alone was estimated at over \$10,000,000.
Henrietta, Clay County	May 11-12, 1972	Heavy rains on the Dry Fork of the Little Wichita River caused the worst flood at Henrietta in 20 years.
Snyder, Scurry County	Aug. 13, 1972	Heavy rains, unofficially reported to range from 5 to 12 inches, caused flooding in Snyder. Prop- erty damage was in excess of two million dollars. One person was drowned 18 miles north of town.

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Table 2.--Maximum discharge at miscellaneous sites

Basin	Stream	Location	Drainage area	Date	Dis- charge	Ft ³ /s
Colorado	Deep Creek	Lat 32°47'46", long 100°59'41", Scurry County, at bridge on county road, 4.4 miles south- east of Dermott, 4.6 miles north of Union, and 7.0 miles northwest of courthouse in Snyder, Tex.	53.6	8-13-72	10,600	198
Do	do	Lat 32°42'17", long 100°54'40", Scurry County, at crossing on 37th Street in Snyder, Tex.	140	8-13-72	37,000	264
Guadalupe	Purgatory Creek	Lat 29°52'06", long 97°58'01", Hays County, 2,000 ft up- stream from Farm Road 2439 (Hunter Road) and 2.0 miles southwest of courthouse in San Marcos, Tex.	34.6	5-12-72	38,800	1,121
Do	Cottonwood Creek	Lat 29°41'11", long 97°38'46", Caldwell County, at bridge on U.S. Highway 183 at Luling, Tex.	3.22	5-12-72	6,590	2,046
Do	Blieders Creek	Lat 29°43'47", long 98°07'18", Comal County, at bridge on State Highway 46 (Loop 337), in the north edge of New Braunfels, and about 3.0 miles west of Interstate Highway 35.	15.0	5-11-72	48,000	3,200
Do	Dry Comal Creek	Lat 29°42'10", long 98°07'45", Comal County, at Missouri Pacific Railway Bridge, 800 ft upstream from Landa Street, and 1,200 ft up- stream from mouth in New Braunfels, Tex.	112	5-12-72	56,400	504

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PROGRAM FOR THE YEAR ENDING SEPTEMBER 30, 1973

Data from existing gages will be collected and tabulated. Stagedischarge curves will be defined and extended as the need arises. Operation and maintenance will be performed as required.

Watershed characteristics as follows will be tabulated for each watershed on a 7-1/2-minute series USGS topographic map, scale 1:24,000: (1) Drainage area, (2) main-channel length measured from the gage to the drainage divide, and (3) a slope index.

There is no standard method of determining a slope index; however, the unit slope between points located 85 and 10 percent of the channel length above the gage is a significant factor when used as an independent variable in regression analysis (Benson, 1962). In these analyses, the 85-10 slope index is generally second only to drainage area in statistical significance when correlated with peak discharge.

HYDROLOGIC CONDITIONS

During the 1972 water year, annual runoff was deficient in the east and west parts of the State, near average in the north and central, and excessive in the south.

Excessive rains in December caused record breaking floods on streams in the Sulphur River basin. The recurrence interval discharges at streamflow stations in the storm area ranged from 50 to 100 years.

Flash flooding occurred in Houston during March and again in May. During May, disastrous floods occurred in the Guadalupe River basin below Canyon Dam.

DATA COMPILATION

The "station data" section of this report lists the available annual peak data for watersheds of less than 20 square miles. In addition to the 150 Highway Program stations, 82 other stations are included, thereby grouping all of the available continuous data for small watersheds into one volume. These 82 stations are identified in the table of contents by (a/).

All stations are listed in downstream order by station number, which appears to the left of the station name. The number appearing to the right of the station name identifies the Highway District in which the station is located. All stations are plotted on figure 1 and are identified by number. In addition, symbols are used to identify the type of station.

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Although the State contractual year ends on August 31, the water year ending on September 30 is used as the 12-month period of data collection so that reporting will be continuous with previously collected streamflow data.

Some notable floods that occurred during the period October 1, 1971, to September 30, 1972, are listed in table 1. This list includes only those floods associated with unusual amounts of rainfall or runoff or for which a special request regarding peak discharge was received. Additional details about some of the more destructive floods are contained in various reports prepared by the U.S. Geological Survey, Texas Water Development Board, U.S. Army Corps of Engineers, National Weather Service, U.S. Department of Agriculture, and others.

The measurements of peak discharge at miscellaneous small-area sites obtained during the reporting period are listed in table 2. Additional information concerning these measurements may be obtained from the files of the U.S. Geological Survey district office in Austin, Texas.

Table 3 is a tabulation of runoff and point rainfall data collected at selected gaging stations. Data for the storm that produced the maximum annual rate of runoff and data for other significant storms are listed.

DEFINITION OF TERMS

Some of the terms and abbreviations used in this report are defined as follows:

<u>Gaging station.--a particular site on a stream where systematic</u> observations of gage height or discharge are obtained.

<u>Cubic foot per second (ft^3/s) </u>.--the rate of discharge of a stream whose channel is one square foot in cross-sectional area and whose average velocity is one foot per second.

<u>Gage height</u>.--the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage" although gage height is more appropriate when used with a reading on a gage. When the gage is referred to mean sea level datum, the term "elevation" is commonly used instead of gage height. Drainage area.--area of a stream at a specified location measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the stream above the specified point. Drainage areas given herein include noncontributing areas unless otherwise noted.

<u>Main-channel length.</u>--the distance, in miles, of the main channel, extended to the watershed divide, as measured with a divider, set to a distance equal to 0.05 mile. Mile zero is at the gaging station.

Slope index.--a slope equal to the difference in elevation between the 85 and 10 percent points, in feet, divided by the main-channel distance between these points, in miles, where these points are 10 and 85 percent of the distance along the main channel upstream from the station.

Time of day.--time expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

Water year.--a 12-month period ending on September 30, identified by the year in which it ends; thus, the 12-month period ending September 30, 1972, is identified as the 1972 water year.

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1971, Flood stages and discharges for small streams in Texas 1969: Interim rept. no. 85-5, U.S. Geol. Survey open-file rept.

1972, Flood stages and discharges for small streams in Texas 1970: Interim rept. no. 85-6, U.S. Geol. Survey open-file rept.

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-11-

Table 3.--Incrementa! rainfall and discharges for significant storms.

1

Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
Nov. 6, 1971	0700	0	_
	0715	.55	27
	07:0	.65	34
	0745	.65	48
	0800	.65	55
	0815	.65	62
	0830	.65	55
	0845	.65	55
	0900	.65	48
	0930	.65	41
	1000	.65	34
	1100	.65	27

07343350 Dial Branch near Bagwell, Tex.

Data	Timo	Accumulated	Discharge
	1 Ine	Taimaii (inches)	(11 / 5)
Mar. 2, 1972	1800	0	-
	1845	0	-
	1900	1.00	-
	1915	1.55	-
	1930	1.70	76
	1940	1.70	105
	1945	1.75	274
	1950	1.75	274
	1955	1.75	246
	2000	1.80	237
	2005	1.80	219
	2010	1.80	202
	2015	1.80	193
	2020	1.80	184
	2025	1.80	168
	2030	1.80	152
	2035	1.80	144
	2040	1.80	120
	2045	1.80	105
	2050	1.80	98
	2055	1.80	90
	2100	1.80	83
	2105	1.80	76
	2200	1.80	-
	2200	1.00	_

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07343900 Buck Creek near Cookville, Tex.

		Accumulated	Discharge
Date	Time	rainfall (inches)	(ft^3/s)
Mar. 1, 19	72 1600	0	-
	1645	0	-
	1700	.55	-
	1715	.95	90
	1720	1.10	147
	1725	1.25	206
	1730	1.35	386
	1735	1.40	498
	1740	1.45	554
	1745	1.45	582
	1750	1.45	610
	1755	1.45	582
	1800	1.50	554
	1815	1.50	470
	1830	1.50	330
	1845	1.50	278
	1900	1.50	278
	2000	1.55	278
	2100	1.55	278
	2200	1.55	252
	2300	1.55	206
	2400	1.55	166
Mar. 2	0100	1.55	166
	0200	1.55	128
	0300	1.55	109
	0400	1.55	109
	0430	1.55	90
	0500	1.55	-
Mav 1	0300	0	-
	0330	0	-
	0345	. 10	· –
	0350	.20	109
	0355	.50	147
	0400	.65	186
	0405	.75	228
	0410	.95	304
	0415	1,00	414
	0420	1.00	498

08020800 Grace Creek tributary at Longview, Tex.

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······		Accumulated	Discharge
Date	Time	rainfall (inches)	(ft ³ /s)
May 1 1072 Can	0425	. 1.00	10.9
May 1, 1972Coll.	0425	1.00	498
	0430	1.05	498
	0433	1.05	430
	0440	1.05	442
	0445	1.05	414
	0455	1.05	278
	0400	1.05	270
	0515	1 10	166
	0530	1 10	100
	0545	1 10	109
	0600	1.10	-
May 12	0700	0	_
	0800	. 15	_
	0830	.45	90
	0840	.45	109
	0850	.50	128
	0900	.50	147
	0910	.50	128
	0920	.50	128
	0930	.50	90
	1000	.50	-
July 19	1100	0	_
-	1130	0	-
	1145	.05	-
	1200	.85	109
	1210	.90	128
	1215	.90	186
	1220	.90	252
	1225	.90	358
	1230	.90	386
	1235	.90	386
	1240	.90	386
	1245	.90	358
	1250	.90	278
	1255	.90	228
	1300	.90	186
	1310	.90	147
	1320	.95	109
	1400	1.00	-

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08020800 Grace Creek tributary at Longview, Tex.--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
$I_{\rm UDO} 1/1072$	1000	0	
June 14, 1972	2000	.80	-
June 15	1300	.80	-
	1340	.80	-
	1400	1.90	27
	1430	2.30	38
	1500	2.35	52 *
	1530	2.35	82
	1600	2.35	89
	1700	2.35	82
	1800	2.35	64
	2000	2.35	47
	2200	2.35	42
	2400	2.35	34
June 16	0300	2.35	27

08028505 Moore Branch near Newton, Tex.

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Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
Mar. 20, 1972	1600	0	0
	1700	1.00	2
	1730	1.70	15
	1745	2.50	30
	1800	3.80	56
	1815	3.95	100
	1830	4.10	78
	1845	4.15	30
	1900	4.20	15
	2000	4.40	10
	2100	4.55	6

08033480 Greenwood Creek tributary near Colmesneil, Tex.

-17-

Doto	Time	Accumulated	Discharge
	1	rainfall (inches)	(11-/5)
N 04 1070		<u>^</u>	
Mar. 24, 1972	0100	0	. –
	0130	.05	-
	0200	.70	-
	0205	.70	-
	0210	.80	55
	0215	.80	66
	0220	.80	79
	0225	.80	93
	0230	.85	86
	0235	1.05	79
	0240	1.55	72
	0245	1.60	66
	0250	1.60	60
	0255	1.65	55
	0300	1.65	-
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08059200 Arls Branch near Westminster, Tex.

Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
June 21 1072	1700	0	_
June 21, 1972	1700		-
	1/15	.55	-
	1/30	.95	-
	1745	1.05	-
	1800	1.05	-
	1900	1.10	16
	1915	1.10	20
	1930	1.10	24
	2000 -	1.10	24
	2100	1.10	24
	2200	1.10	24
	2300	1.10	24
	2400	1.10	24
June 22	0100	1.10	24
	0200	1.10	20
	0230	1.10	16
	0300	1.10	-

08063005 Red Oak Branch near Eustace, Tex.

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	Accumulated	Discharge
Time	rainfall (inches)	<u>(ft³/s)</u>
0200	0	-
0230	0	-
0245	.15	-
0300	.75	-
0310	1.05	46
0315	1.25	55
0330	1.45	66
0345	1.55	112
0400	1.55	268
0415	1.55	342
0430	1.55	282
0445	1.55	212
0500	1.55	136
0515	1.55	112
0530	1.55	66
0545	1.55	46
0600	1.55	-
	Time 0200 0230 0245 0300 0310 0315 0330 0345 0400 0445 0400 0415 0430 0445 0500 0515 0530 0545 0600	Accumulated rainfall (inches) 0200 0 0230 0 0245 $.15$ 0300 $.75$ 0310 1.05 0315 1.25 0330 1.45 0345 1.55 0400 1.55 0415 1.55 0445 1.55 0500 1.55 0515 1.55 0545 1.55 0600 1.55

08063550 Alvarado Branch near Alvarado, Tex.

			Accumulated	Discharge
	Date	Time	rainfall (inches)	(ft ³ /s)
M	21 1072	1400	0	
Mar.	21, 1972	1400	0	-
		1500	.05	-
		1600	.20	-
		1700	.25	0
		1745	.75	3
		1800	1.00	8
		1830	1.50	25
		1900	1.60	29
		2000	1.80	25
		2100	2.05	22
		2200	2.15	16
		2300	2.25	11
		2400	2.30	8
Mar.	22	0200	2.30	5
• • • • •		0400	2.30	4
		0700	2.30	3
		1100	2	0
мау	T	1100	0	0
		1130	.10	0
		1200	.85	0
		1230	1.40	3
		1300	1.80	20
		1330	2.10	52
		1400	2.10	46
		1500	2.10	35
		1600	2.10	20
		1700	2.10	8
		1900	2.10	5
		2100	2.10	3
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08066280 Bluff Creek tributary near Livingston, Tex.

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*******		Accumulated	Discharge
Date	Time	rainfall (inches)	(ft^3/s)
Mar. 20, 1972	1300	0	-
	1400	.35	-
	1500	.90	-
	1515	1.00	-
	1530	1.20	-
	1545	1.65	14
	1600	2.25	18
	1615	2.28	44
	1630	2.30	24
	1645	2.30	16
	1700	2.30	14

08067750 Landrum Creek tributary near Montgomery, Tex.

Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
<u></u>		······································	
Dec. 5, 1971	0330	0	-
	0400	.25	10
	0500	.45	30
	0530	.75	100
	0600	1.45	243
	0700	1.90	375
	0800	2.65	417
	0900	2.85	440
	1100	3.15	452
	1300	3.25	476
	1600	3.25	465
	2000	3.25	417
	2400	3.25	398
Dec. 6	0600	3.25	318
	1200	3.25	225
	1800	3.25	175
	2400	3.25	90
May 10, 1972	1400	-	-
	1600	-	-
	1730	-	-
	1800	-	-
	1830	-	195
	1845	-	550
	1900	-	920
	2000	-	1,240
	2030	-	1,320
	2100	-	1,360
	2200	_	1,380
	2400	-	1,340
May 11	0300	-	1,210
	0600	-	1,100
	1200	-	856
	1800	-	718
	2400	_	648

08077550 Cowart Creek near Friendswood, Tex.

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Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
May 12, 1972	0200	-	732
	0500	-	760
	0600	~ .	840
	0700	-	938
	1000	~	956
	1400	-	920
	1800	-	792
	2400	- ·	648
May 13	0600	-	536
	1200	-	390
	1800	~	268
	2400	-	. 195

08077550 Cowart Creek near Friendswood, Tex.--Continued

Data	Timo	Accumulated	Discharge
Date	111110	Taimaii (inches)	(11/5)
Apr. 27, 1972	2100	0	-
	2115	.45	-
	2130	.80	-
	2145	.80	-
	2200	.80	44
	2205	.80	56
	2210	.80	62
	2215	.80	74
	2220	.80	74
	2225	.80	74
	2230	.80	81
	2235	.80	74
	2240	.80	74
	2245	.80	68
	2250	.80	68
	2255	.80	62
	2300	.80	62
	2305	.80	56
	2310	.80	56
	2315	.80	50
	2320	.80	44
	2400	.80	-

08090850 Cidwell Branch near Granbury, Tex.

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Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
May 12, 1972	0500	0	_
	0515	0	3/
	0530	20	24 41
	0545	30	41
	0600	. 40	55
	0615	.60	62
	0630	.90	62
	0645	1.10	62
	0700	1.30	55
	0730	1.40	38
	0800	1.40	38
	0830	1.40	34
	0900	1.40	-

08093200 Bond Branch near Hillsboro, Tex.
Date Time r Dec. 14, 1971 0800 0810 0820 0830	ainfall (inches) 0 .10 .42 .47 .51 .54 .54	(ft ³ /s) - - - - - -
Dec. 14, 1971 0800 0810 0820 0830	0 .10 .42 .47 .51 .54	- - - -
0810 0820 0830	.10 .42 .47 .51 .54	- - -
0820 0830	.42 .47 .51 .54	
0830	.47 .51 .54	-
0000	.51 .54	-
084.0	.54	-
0850	55	
0900		_
0930	.56	_
1000	.69	-
1030	.77	<68
1100	.89	68
1130	.90	110
1135	.90	128
1140	.90	146
1145	.91	164
1150	.91	204
1155	.91	239
1200	.92	250
1215	.92	299
1230	.92	294
1245	.92	287
1300	.92	275
1330	.92	264
1400	.92	251
1430	.92	227
1500	.92	204
1530	.92	194
1600	.92	184
1630	.92	164
1700	.92	146
1730	.92	128
1800	.92	110
1830	.92	96
1900	.92	82
2000	.92	<68

08095220 South Bosque River near McGregor, Tex.

< Less than amount shown.

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Date	Time	rainfall (inches)	(ft^3/s)
	0150	2	4
Jan. 29, 1972	2130	0	-
	2230	.30	-
·	2300	.90	3
	2400	1,05	8
Jan. 31	0100	0 .	22
	0130	.05	26
	0200	.50	34
	0300	.55	126
	0400	.55	177
	0500	.55	175
	0600	.55	166
	0700	.55	157
	0900	.55	149
	1200	.55	142
	1500	.55	105
	1800	.55	70
	2400	.55	43
Feb. 1	0600	1.75	22
	1200	1.75	. 16
	2400	1.75	12
Feb. 10	1900	0	-
	2000	.05	-
	2200	.30	-
	2400	.65	-
Feb. 11	0100	. 80	5
	0200	.90	19
	0300	1.20	43
	0400	1.45	115
	0500	1.65	166
	0600	1.80	212
	0800	1,90	192
	1000	2.05	175
	1200	2.10	149
	1500	2.10	112
	1800	2.10	74
	2400	2 20	52

08114900 Seabourne Creek near Rosenberg, Tex.

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	Date	Time	rainfall (inches)	(ft ³ /s)
Feb.	12. 1972	0600	2.20	34
		1200	2,20	26
		1800	2,20	16
		2400	2.20	10
Apr.	27	0900	0	-
1		1100	.26	_
		1345	.26	_
		1415	.50	-
		1430	1.23	5
		1445	1.56	7
		1500	1.68	18
	1530	1.75	34	
		1600	1.75	112
		1700	1.75	202
		1800	1.75	276
		1900	1.75	300
		2000	1.75	288
		2200	1.75	276
		2400	1.75	230
Apr.	28	0600	1.75	135
		1200	1.75	105
		1800	1.75	68
		2400	1.75	47
Apr.	29	0600	1.75	30
		1200	1.75	22
		1800	1.75	14
	X	2400	1.75	10

08114900 Seabourne Creek near Rosenberg, Tex.--Continued

		Accumulated	Discharge
Date	Time	rainfall (inches)	$(ft^3/s)$
0.4 5 1071	1770	0	
Oct. 5, 1971	1330	0	-
	1400	1.45	0.4
	1430	2.30	3
	1500	2.32	24
	1600	2.40	55
	1700	2.50	106
	1800	2.50	175
	1900	2.50	210
	2000	2.50	210
	2400	2.50	134
Oct. 6, 1972	0400	2.50	90
	1200	2,50	49
	2000	2.50	26
	2400	2.50	20
Jan. 29	1600	0	0
	1700	.10	0 0
	2200	.10	0
	2300	25	0
	2400	.90	0
Jan. 30	0200	1.20	0
	0300	1.98	21
	0400	2.10	190
	0500	2.22	374
	0600	2 26	480
	0700	2 33	508
	0800	2 45	480
	1000	2 58	424
	1200	2.30	362
•	1200	2.00	350
	1500	2.80	200
	1900	2.80	290
	1000	2.80	195
	2100	2.80	142
	2400	2.80	102
Jan. 31	0600	2.80	58
	1200	2.80	33
	1800	2.80	23
	2400	2 80	19

08116400 Dry Creek near Rosenberg, Tex.

	· · · · · · · · · · · · · · · · · · ·	Accumulated	Discharge
Date	Time	rainfall (inches)	(ft ³ /s)
May 10, 1972	1400	0	32
	· 1500	.18	32
	1700	.55	67
	1800	1.10	210
	1900	1.60	438
	2000	2.25	662
	2100	2.35	744
	2200	2.40	766
	2400	2.55	678
May 11	0300	2.55	438
	0600	2.55	270
	0900	2.55	170
	1200	2.62	130
	1800	2.62	62
	2400	2.62	29
May 12	0400	2.62	22
	0500	2.62	44
	0530	2.62	(170)
	0600	3.70	374
	0700	4.55	630
	0900	4.55	720
	1100	4.55	614
	1300	4.60	424
	1500	4.60	326
	2100	4.93	190
	2400	4.93	138
May 13	0600	4.93	68
	1200	4.93	31
	1800	4.93	18
	2400	4.93	15

08116400 Dry Creek near Rosenberg, Tex.--Continued

() Estimated.

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D-4-		Accumulated	Discharge
Date	lime	rainfall (inches)	(ft°/S)
Dec. 4 1071	2720	0	
Dec. 4, 19/1	2320	0	-
	2345	.7	-
Dec. 5	0045	.8	-
	0055	1.1	-
	0145	1.2	-
	0300	1.4	49
	0310	1.4	56
	0320	1.4	62
	0400	1.5	56
	0415	1.5	49
	2200	1.6	-
	2215	1.7	-
	2400	1.7	-
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08168720 Trough Creek near New Braunfels, Tex.

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Dato	Timo	Accumulated	Discharge
	111116		(11 / 5)
May 5, 1972	0000	0	-
-	1345	0	-
	1400	.3	-
	1445	.6	· –
	2400	.6	-
May 6	0130	.6	7.8
	0145	.7	33
	0155	.8	44
	0205	.8	38
	0220	1.0	33
	0230	1.1	20
	0250	1.1	15
	0300	1.2	11
	0315	1.3	49
	0330	1.4	157
	0340	1.4	175
	0400	1.8	127
	0415	2.3	60
	0430	2.7	11
	0445	2.8	7.8
	1015	2.8	-
	1045	2.9	-
	1230	3.3	-
	2400	3.3	-
May 7	0000	0	-
	0200	.1	-
	0330	.5	-
	0345	1.0	-
	0400	1.1	7.8
	0410	1.1	11
	0415	1.1	15
	0420	1.1	20
	0430	1.1	15
	0440	1.2	11
	0445	1.2	7.8
	0515	1.3	-
	1000	1.4	-
	1300	1.7	-
	2400	1.7	-

08169850 East Pecan Branch near Gonzales, Tex.

08169850	East Pecan	Branch near	Gonzales,	TexContinued	

	Time	rainfall (inches)	(f+3/e)
	1 1mC	Talifiall (Inches)	(10 / 3)
May 10, 1972	0845	0	-
	0900	.2	-
	1005	.4	-
	1010	.5	-
•	1030	.5	-
	1035	.7	7.8
	1045	.8	26
	1100	1.9	101
	1105	1.9	106
	1115	1.9	88
	1130	2.0	26
	1145	2.0	17
	1150	2.2	20
	1200	2 3	20
	1215	2 3	15
	1210	2.3	7 8
	1325	2.0	-
	1400	2 7	-
	1445	$\frac{2}{3}$ $\frac{1}{4}$	-
	2400	3.4	-
May 11	1330	-	7.8
	1335	-	11
	1400	-	20
	1425	-	54
	1445	-	101
	1455	-	114
	1525	-	60
	1535	-	38
	1635	-	11
	1645	-	7.8
May 14	0050	0	-
	0055	.2	-
	0100	.3	~
	0130	.3	-
	0135	. 4	-
	0230	.4	7.4
	0240	.7	14
	0255	.9	24
	0315	.9	14
	0335	.9	× 10
	0350	1.0	7.4
	2400	1.0	-

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		Accumulated	Discharge
Date	Time	rainfall (inches)	$(ft^3/s)$
Page 1			
Oct. 17, 1971	0355	0	-
	0400	.01	-
	0410	.02	-
	0415	.08	-
	0420	.08	-
	0430	.15	-
	0435	.17	-
	0445	.18	-
	0450	.25	-
	0455	.28	-
	0600	.28	-
	0645	.28	22
	0655	.28	31
	0700	.28	40
	0715	.28	51
	0720	.29	51
	0730	.29	51
	0800	.32	51
	0815	.35	61
	0825	.37	81
	0830	.39	128
	0835	.41	155
	0845	.42	255
	0900	.43	310
	0915	.48	380
	0930	.52	430
	0955	.54	430
	1000	.55	400
	1010	.56	400
	1100	.56	295
	1200	.58	200
	1300	.59	155
	1400	.60	128
	1500	.61	105
	1600	.61	81
	1800	.61	51
	2000	.61	40
	2100	.62	31
	2245	.62	22
	2330	.62	

08176200 Irish Creek near Cuero, Tex.

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		Accumulated	Discharge
Date	Time	rainfall (inches)	(ft ³ /s)
Oct 18 1971	0015	0.65	· · ·
0000, 10, 10/1	0045	68	_
	0100	71	_
	0130	7/	_
	0100	.74	_
	0200	82	_
	0215	.02	_
	0300	.00	_
	0330	.50	_
	0400	.90	-
	0445	1.00	-
	0500	1.09	-
	0545	1.19	-
	0600	1.20	-
	0615	1.21	-
	0030	1.21	-
	0700	1.20	-
	0730	1.31	-
	0750	1.33	-
	0845	1.3/	-
	0900	1.3/	24
	1000	1.38	32
	1100	1.38	42
	1130	1.40	52
	1135	1.40	52
	1145	1.48	52
	1200	1.55	62
	1600	1.55	62
	1800	1.55	52
	2030	1.55	42
	2130	1.55	32
	2245	1.55	24
	2400	1.55	-
Feb. 10. 1972	1815	0	-
····	1830	.02	-
	1840	.03	-
	1900	.04	-
	1915	.06	-
	1930	.12	_
	1945	.13	_
	2030	.15	_
	2050	.17	_

08176200 Irish Creek near Cuero, Tex.--Continued

Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
Feb. 10, 1972Con.	2130	0.18	-
	2140	.18	-
	2215	. 24	-
	2230	.26	-
	2235	.27	-
	2245	.27	-
	2305	.28	-
	2315	.35	-
	2325	.35	-
	2330	.36	-
	2340	.44	-
	2345	. 44	-
	2400	.50	-
Feb. 11	0010	.50	-
	0025	.51	-
	0030	.52	-
	0035	.52	-
	0045	.53	-
	0100	.62	
	0115	.68	-
	0120	.70	-
	0125	.77	-
	0135	.77	-
	0140	.79	
	0220	.80	-
	0225	.84	17
	0230	.86	22
	0255	.86	28
	0300	.88	34
	0315	.88	41
	0420	.90	49
	0445	.92	57
	0510	.94	65
	0525	.99	74
	0530	.99	85
	0535	.99	85
	0600	1.06	108
	0610	1.06	108
	0615	1.07	120
	0630	1.07	120
	0700	1.07	132
	0800	1.07	147
	0900	1.07	147
	0915	1.07	132

08176200 Irish Creek near Cuero, Tex.--Continued

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			Accumulated	Discharge
	Date	Time	rainfall (inches)	$(ft^3/s)$
Feh	11 1972 - Con	1000	1 07	132
100.	11, 15/2001.	1030	1.07	132
		1030	1.08	120
		1130	1.08	90
		1315	1.08	/4
		1415	1.08	65
		1445	1.08	65
		1455	1.08	57
		1540	1.08	57
		1600	1.09	49
	-	1630	1.09	49
		1730	1.09	41
		1900	1.09	41
		2200	1.09	34
		2400	1.09	34
Feb.	12	0100	1.09	28
		0330	1.09	22
		0430	1.09	17
May	5	1900	0	-
•		1945	.01	_
		2000	.03	-
		2100	. 04	-
		2200	.05	-
May	6	0030	.05	_
•		0100	.07	-
		0115	.09	-
		0220	.10	-
		0255	.25	_
		0305	.26	-
		0310	.29	-
		0330	.30	-
		0335		_
		0400	60	
		0415	200 81	_
		0413	.81	-
		0430	.91	-
		0455	1.03	. –
		0450	1.00	-
		0455	1.10	-
		0510	1.14	-
		0515	1.17	-
		0535	1.18	-
		0610	1.27	-

08176200 Irish Creek near Cuero, Tex.--Continued

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	<u> </u>	Accumulated	Discharge
Date	Time	rainfall (inches)	$(ft^3/s)$
••••••••••••••••••••••••••••••••••••••			
May 6, 1972Con.	1100	1.27	20
	1115	1.27	31
	1130	1.27	37
	1140	1.28	37
	1150	1.35	37
	1155	1.35	37
	1210	1.50	37
	1220	1.60	37
	1230	1.67	44
	1330	1.81	44
	1345	1.82	44
	1445	2.02	44
	1500	2.04	53
	1530	2,08	61
	1545	2.11	61
	1630	2.24	70
	1645	2.26	70
	1700	2.31	70
	1715	2.32	80
	1730	2.36	90
	1800	2.37	103
	1900	2.38	103
	1915	2.38	90
	1945	2.38	80
	2045	2.38	70
	2145	2 38	61
	2330	2 38	44
	2000	2,00	
May 7	0200	2.38	31
•	0245	2.38	31
	0300	2.38	44
	0310	2.38	103
	0330	2.38	200
	0345	2.38	250
	0405	2.38	420
	0410	2.41	475
	0415	2.69	540
	0420	2.75	610
	0430	3.15	1 230
	0440	4.55	1 680
	0500	4.33 4.77	2 850
	0510	4 95	2,000
	0515	5 06	3,300
	0010	0.00	5,500

08176200	Irish	Creek	near	Cuero,	TexContinued

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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Discharge
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$(ft^3/s)$
May 7, 1972Con. 0530 5.08 0600 5.09 0645 5.09 0730 5.10 0800 5.10 0915 5.10 0950 5.11 1000 5.22 1015 5.22 1035 5.23 1045 5.30 1100 6.25 1115 7.30	7 700
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3,300
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2,850
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1,680
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	840
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	610
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	295
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	295
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	295
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	332
1035       5.23         1045       5.30         1100       6.25         1115       7.30	610
1045       5.30         1100       6.25         1115       7.30	780
1100    6.25    1115    7.30	1,230
1115 7.30	1,800
	2,200
1125 7.52	2,500
1135 7.53	2,850
1140 7.54	3,300
1145 7.56	3,500
1155 7.56	3,700
1230 7.57	3,700
1250 7.57	3,500
1300 7.65	3,500
1315 7.65	3,500
1355 7.65	3,050
1400 7.66	2,850
1430 7.66	2.200
1500 7.66	1,470
1600 7.66	645
1700 7.66	375
1800 7.66	270
1900 7.66	200
2000 7.66	152
2200 7.00	103
2200 7.00	70
2400 7.00	70
May 8 0200 7.66	53
0400 7.66	44
0800 7.66	31
1015 7.66	24
1130 7.66	20
May 10 0915 0	_
.01	-

08176200 Irish Creek near Cuero, Tex.--Continued

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		Accumulated	Discharge
Date	Time	rainfall (inches)	$(ft^3/s)$
May 10, 1972Con.	1200	0.02	-
	1300	.03	-
	1310	.04	-
	1330	.10	-
	1335	.12	-
	1350	.14	-
	1415	.53	-
	1430	.96	-
	1445	1.45	-
	1450	1.61	44
	1500	1.92	52
	1515	2.21	78
	1530	2.75	152
	1545	2.80	450
	1600	2.93	1,220
	1615	3.06	2,050
	1630	3.19	2,700
	1645	3.20	3,250
	1650	3.20	3,700
	1655	3.21	4.850
	1700	3.21	5,200
	1705	3.22	6,000
	1730	3.25	6,000
	1845	3.25	6.000
	1900	3,25	6,000
	2000	3,25	4,850
	2030	3.25	4,200
	2100	3.25	3,500
	2115	3.25	3,100
	2130	3.25	2,500
	2145	3 25	2,000
	2200	3 25	1 670
	2300	3 25	780
	2400	3.25	/00 /70
	2400	5.25	470
May 11	0100	3.25	330
-	0200	3.25	250
	0300	3.25	195
	0400	3.25	165
	0500	3,25	150
	0700	3.25	11/
	0900	3, 25	00
	1100	3, 25	20 20
		0.20	00

08176200 Irish Creek near Cuero, Tex.--Continued

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		Accumulated	Discharge
Date	Time	rainfall (inches)	$(ft^3/s)$
N 11 1070 0			
May 11, 19/2Con.	1400	3.25	68
	1530	3.25	58
	1800	3.25	47
	2000	3.25	37
May 12	0100	0	-
	0200	.06	-
	0205	.08	-
	0300	. 09	-
	0330	.09	-
	0400	. 14	-
	0500	. 14	-
	0820	.14	-
	0825	.19	-
	0915	.19	14
	0930	.19	29
	0935	.31	38
	0940	.54	48
	0945	.76	115
	0955	1.10	152
	1000	1.11	270
	1010	1.13	330
	1015	1.17	330
	1025	1.23	330
	1030	1.23	350
	1045	1.24	424
	1100	1.24	650
	1105	1.24	730
	1130	1.24	1.300
	1145	1.24	1,470
	1200	1.24	1,600
	1230	1.24	1,600
	1300	1.24	1,230
	1400	1 24	650
	1500	1.24	400
	1600	1.24	250
	1700	1 24	182
	1800	1 24	1/1
	2100	1 24	-92
	2400	1 24	70

08176200 Irish Creek near Cuero, Tex.--Continued

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Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
May 13, 1972	0400	1.24	48
	0900	1.24	29
	1330	1.24	20
	1600	1.24	14

08176200 Irish Creek near Cuero, Tex.--Continued

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<del></del>		Accumulated	Discharge
Date	Time	rainfall (inches)	<u>(ft³/s)</u>
May 6 1072	0000	0	
May 0, 1972	0000	0	-
	0455	0	-
	0500	.2	-
	0610	.3	-
	0640	.4	· _
	0655	1.3	-
	0830	1.4	-
	2200	1.4	-
	2215	1.6	-
	2230	1.6	-
	2245	1.7	-
	2305	1.8	-
	2315	2.1	-
	2325	2.2	-
	2345	2.3	-
May 7	0025	2.4	-
	0600	2.5	-
	0605	2.6	-
	0610	4.2	-
	0625	5.0	-
	0635	5.1	<45
	0700	5.1	45
	0710	5.1	65
	0715	5.1	250
	0720	5.1	420
	0725	5.1	370
	0730	5.2	260
	0735	5.2	200
	0740	5.2	165
	0745	5.2	105
	0200	5.2	152 QA
	0810	5.2	60 4 E
	0815	5.2	54
	0820	5 2	50 / E
	2400	J.2 E 2	40 ~/E
	2400	5.2	<u>\$45</u>

08179200 Medina River tributary near Pipe Creek, Tex.

< Less than amount shown.

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<u></u>		Accumulated	Discharge
Date	Time	rainfall (inches)	(ft ³ /s)
Aug. 2. 1972	1500	0	-
	1515	.3	-
	1800	.4	-
	1845	.4	15
	1855	.4	21
	1910	.4	29
	1945	.4	32
	2040	.4	32
	2100	.6	32
	2400	.6	32
Aug. 3	0500	.6	32
-	0745	1.0	32
	0800	1.5	32
	2000	1.5	32
	2030	1.5	29
	2230	1.5	25
	2400	1.5	25
Aug. 4	0200	1.5	21
-	0300	1.5	15
	0430	1.5	-

08188400 Baugh Creek at Goliad, Tex.

		Accumulated	Discharge
Date	Time	rainfall (inches)	(ft ³ /s)
Sept. 26, 1972	1745	0	-
-	1750	1.0	-
	1800	1.5	-
	1805	1.9	-
	1830	2.2	-
	1845	2.9	-
	1900	3.0	112
	1915	3.0	128
	1930	3.0	120
	2015	3.1	-
	2030	3.1	-
	2400	3.3	· _

08194550 Plant Creek near Tilden, Tex.

Data	Time	Accumulated	Discharge
	11me	rainfall (inches)	(11-75)
Sept. 14, 1972	1700	0	-
ooper 11, 10,1	1730	.?	-
	1745	7	0.18
	1750	9	26
	1800	1 1	.20
	1810	1.1	.50
	1010	1.2	.04
	1015	1.5	4.3
	1030	1.4	18
	1845	1.4	38
	1900	1.5	102
	1930	1.5	115
	2000	1.5	130
	2030	1.5	115
	2400	1.5	38
Sept. 15	0500	1.5	27
	0900	1.5	18
	1300	1.5	9,0
	2400	1.5	6.2
Sept. 16	0800	1.5	4.3
•	2400	1.5	2.0
Sept. 17	1300	1.5	.84
1	2400	1.5	.37
Sept. 18	0500	1.5	.18
Sept. 23	1600	0	-
•	1625	.1	_
	1640	.4	_
	1650	7	_
	1700	1 1	_
	1705	1.1	- 16
	1715	1 8	.10
	1720	2 2	.25
	1720		2.0
	1730	2.4	33
	1745	2.7	04
	1900	2.9	84
		3.0	98
	1005	3.0	110
	1830	3.1	-
	1845	3.8	-

08207200 Rutledge Hollow Creek at Poteet, Tex.

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		Accumulated	Discharge
Date	Time	rainfall (inches)	$(ft^3/s)$
Sept. 23. 1972Con.	1910	4.0	-
ooper 20, 20,2 dom.	2100	4.0	110
	2400	4.0	64
Sept. 24	0300	4.0	46
-	0600	4.0	35
	1100	4.0	25
	1600	4.0	15
	2400	4.0	15
Sept. 25	0900	4.0	7.4
-	1300	4.0	3.6
	2400	4.0	1.6
Sept. 26	1300	4.0	.72
-	2400	4.0	.34

08207200 Rutledge Hollow Creek at Poteet, Tex.--Continued

Dete	<b>T</b>	Accumulated	Discharge
Date	lime	rainfall (inches)	(It°/S)
May 9, 1972	0000	0	_
•	1230	.1	-
	1245	.2	-
	1300	.3	26
	1305	.4	30
	1310	.8	37
	1320	.9	57
	1325	1.0	60
	1330	1.1	57
	1340	1.2	33
	1345	1.3	26
	1415	2.0	-
	2400	2.0	-
Sept. 26	0000	0	-
-	2020	0	24
	2025	0	27
	2030	0	34
	2035	0	36
	2040	.1	34
	2045	.2	31
	2050	1.7	27
	2055	1.8	24
	2100	1.9	-
	2200	2.2	-
	2330	2.3	-
Sept. 27	0030	2.6	-
	0100	2.7	-
	2400	2.7	-

08212320 North Las Animas Creek tributary near Freer, Tex.

		Accumulated	Discharge
Date	Time	rainfall (inches)	$(ft^3/s)$
Aug 9 1072	1015	0	
Aug. 8, 1972	1015	0	-
	1030	. 2	-
	1045	.4	-
	1100	.0	-
	1145	2.0	-
	1210	2.0	-
	1245	2.0	-
	1300	2.0	-
	1315	2.0	- 70
	1415	2.0	30
	1515	2.0	44 E 1
	1/00	2.6	51
	2035	2.6	51
	2055	2.9	59
	2100	2.9	59
	2145	3.0	59
	2400	3.4	59
Aug. 9	0100	3.5	51
C	0200	3.5	44
	0500	3.5	37
	0600	3.5	30
	0735	3.5	30
	0745	3.5	_
	0800	3.5	-
	0820	3.5	-
	2400	3.5	-
Διισ 10	0900	0	_
10 IV	0910	0	_
	0910	0	_
	0920	0	-
	1000	0	- 27
	1000	0	27
	1050	0	54 71
	1930 2015		24 71
	2015	1.0	34 74
	2045	1.0	54 74
	2115	1.5	54 74
	2200	1.5	54
	2300	2.4	54
	2400	2.5	40

08454900 East Perdido Creek near Brackettville, Tex.

Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
Aug. 11, 1972	0100	2.7	48
	0200	2.8	48
	0230	2.9	48
	0300	3.3	55
	0400	3.3	48
	0600	3.4	48
	0840	3.4	40
	0845	3,4	34
	0855	3.4	-
	0900	3.4	-
	0905	3.4	-
	2400	3.4	-

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08454900 East Perdido Creek near Brackettville, Tex.--Continued

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Data	Time	Accumulated	Discharge
Date	I 1me	rainfall (inches)	<u>(It-/s)</u>
		<u>^</u>	
Apr. 27, 1972	2110	0	-
	2115	.7	-
	2125	1.6	-
	2130	1.7	-
	2150	2.0	-
	2155	2.0	-
	2200	2.1	-
	2215	2.1	-
	2225	2.1	-
	2230	2.1	-
	2245	2.1	-
	2400	2.1	-
Apr. 28	0130	2.1	-
	0200	2.1	-
	0230	2.1	-

08459600 Arroyo San Bartolo at Zapata, Tex.

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Date	Time	Accumulated rainfall (inches)	Discharge (ft ³ /s)
Apr. 27, 1972	0000	0	-
	2150	0	-
	2200	.1	26
	2220	.4	47
	2230	.8	85
	2245	2.2	165
	2250	2.3	185
	2255	2.3	195
	2300	2.3	185
	2320	2.4	155
	2325	2.4	135
	2330	2.4	47
	2335	2.4	26
	2400	2,4	-
Sept. 9	0000	0	-
	1330	0	-
	1335	.1	-
	1340	.2	· _
	1425	.2	26
	1430	.2	28
	1440	.2	32
	1455	.2	28
	1505	.2	26
	2400	.2	-
Sept. 23	1730	0	-
-	1745	.1	-
	1900	.1	27
	1910	.1	40
	1920	.1	52
	1930	.1	60
	1945	.1	56
	2000	.1	60
	2020	.1	40
	2030	.1	33
	2045	.1	30
	2050	.1	27
	2400	.1	-

08466200 Rio Grande tributary at Sullivan City, Tex.

# STATION DATA

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PEAK DISCHARGES AT GAGING STATIONS LISTED BY BASIN AND IN DOWNSTREAM ORDER

# ARKANSAS RIVER BASIN

# 07227460 East Fork Cheyenne Creek tributary near Channing, Tex. (04)

Location.--Lat 35°40'35", long 102°16'55", Hartley County, at culvert on State Highway 354 and 2.5 miles (4.0 km) east of Channing.

Drainage area.--0.86  $mi^2$  (2.23  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.4 miles (3.9 km); slope index, 96.1 ft/mi (18.2 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year 1965	Date June 25, 1965	Gage height (ft) 8.40	$\frac{\text{Discharge (ft}^3/\text{s})}{2,260}$
1966	Aug. 31, 1966	a4.84	520
1967	June 29, 1967	5.18	590
1968	July 6, 1968	3.00	32
1969	July 6, 1969	3.13	36
1970	-	<2.73	<26
1971	-	<2.73	<26
1972	July 22, 1972	4.65	470

< Less than amount shown.

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a Maximum for period Dec. 30, 1965, to Sept. 30, 1966.

#### ARKANSAS RIVER BASIN

07227480 Tecovas Creek tributary near Bushland, Tex. (04)

Location.--Lat 35°15'55", long 102°00'20", Potter County, at culvert on Farm Road 1061 and 5.5 miles (8.8 km) northeast of Bushland.

Drainage area.--1.27  $mi^2$  (3.29  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.6 miles (2.6 km); slope index, 125 ft/mi (24 m/km). (Map scale, 1:24,000)

#### Discharge $(ft^3/s)$ Water year Date Gage height (ft) 1966 1967 Apr. 11, 1967 5.07 105 1968 Aug. 14, 1968 2.59 11 1969 <1.89 <5.5 1970 <1.89 <5.5 1971 <5.5 <1.89 1972 June 29, 1972 3.19 32

#### Annual maximum stage and discharge

< Less than amount shown.

#### ARKANSAS RIVER BASIN

07234150 White Woman Creek tributary near Darrouzett, Tex. (04)

Location.--Lat 36°24'00", long 100°16'30", Lipscomb County, at culvert on State Highway 305, 4.5 miles (7.2 km) southeast of Darrouzett, and 11.9 miles (19.1 km) north of Lipscomb.

Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Aug. 31, 1966	5.20	416
1967	June 10, 1967	2.81	35
1968	June 16, 1968	3.15	62
1969	Sept. 1, 1969	3.21	74
1970	July 31, 1970	2.99	46
1971	-	<2.36	<16
1972	Aug. 25, 1972	2 4.96	384

# Annual maximum stage and discharge

< Less than amount shown.

07297920 Middle Tule Draw near Tulia, Tex. (05)

Location.--Lat 34°31'46", long 101°53'30", Swisher County, at culvert on State Highway 86 and 6.5 miles (10.5 km) west of Tulia.

Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	July 4, 1967	a5.39	230
1968	June 16, 1968	9.03	2,500
1969	May 7, 1969	8.09	1,850
1970	-	<5.40	<230
1971	-	<5.40	<230
1972	June 15, 1972	8.14	1,880

### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Jan. 12 to Sept. 30, 1967.

07298150 Rock Creek tributary near Silverton, Tex. (25)

Location.--Lat 34°28'40", long 101°25'50", Briscoe County, at culvert on State Highway 86 and 6.7 miles (10.8 km) west of Silverton.

Drainage area.--13.7 mi² (35.5 km²), of which 11.5 mi² (29.8 km²) is probably noncontributing.

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

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Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 24, 1966	6.70	48
1967	July 13, 1967	5.27	5.5
1968	May 8, 1968	5.53	10
1969	May 16, 1969	6.33	35
1970	-	<4.99	<3.0
1971	-	<4.99	<3.0
1972	July 18, 1972	7.08	63

### Annual maximum stage and discharge

< Less than amount shown.

07299575 North Groesbeck Creek tributary near Kirkland, Tex. (25)

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Location.--Lat 34°24', long 100°03', Childress County, at culvert on Farm Road 1033, 1.4 miles (2.3 km) north of Kirkland, and 1.5 miles (2.4 km) upstream from North Groesbeck Creek.

Drainage area.--0.16  $mi^2$  (0.41  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.3 mile (0.5 km); slope index, 90.9 ft/mi (17.2 m/km). (Map scale, 1:24,000)

Water year 1965 S	Dat Sept. 1	<u>e</u> 9,	1965	Gage height (ft) a5.32	$\frac{\text{Discharge (ft}^3/\text{s})}{12}$
1966 <i>I</i>	Aug. 2	23,	1966	8.22	74
1967 N	May 2	28,	1967	5.52	16
1968 N	May	8,	1968	5.59	16
1969 A	Aug. 2	26,	1969	5.88	22
1970	-	-		<4.37	<2.5
1971 A	Aug. 1	6,	1971	7.84	62
1972	July	3,	1972	5.47	14

# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period June 4 to Sept. 30, 1965.

07299940 Oklahoma Draw tributary near Hedley, Tex. (25)

Location.--Lat 34°53'12", long 100°37'18", Donley County, at culvert on State Highway 203 and 2.7 miles (4.3 km) northeast of Hedley.

Drainage area.--1.15  $mi^2$  (2.98  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.0 miles (3.2 km); slope index, 53 ft/mi (10 m/km). (Map scale, 1:24,000)

Water year 1965	<u>Date</u> Sept. 19, 19	Gage height (ft) a5.25	Discharge (ft ³ /s) 87
1966	Apr. 25, 19	966 5.20	83
1967	-	<5.09	<73
1968	May 8, 19	968 5.97	162
1969	May 7, 19	5.25	88
1970	-	<5.09	<73
1971		<5.09	<73
1972	-	<5.09	<73

Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period June 5 to Sept. 30, 1965.

07301405 Doodlebug Creek near Wheeler, Tex. (25)

Location.--Lat 35°26'40", long 100°13'50", Wheeler County, at culvert on State Highway 152 and 2.5 miles (4.0 km) southeast of Wheeler.

Drainage area.--0.19  $mi^2$  (0.49  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.7 mile (1.1 km); slope index, 58 ft/mi (11 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge

<u>Water year</u> 1967 1968 1969 1970	Date Aug. 29, 1968 Aug. 26, 1969 Apr. 18, 1970	Gage height (ft) a<6.68 7.70 9.92 8.89	Discharge (ft ³ /s) <120 275 740 505
1971	-	<6.68	<120
1972	July 9, 1972	9.28	600

< Less than amount shown.

a Maximum for period Jan. 11 to Sept. 30, 1967.
07307720 Cottonwood Creek tributary near Afton, Tex. (25)

Location.--Lat 33°44'20", long 100°50'30", Dickens County, at culvert on State Highway 70 and 2 miles (3 km) southwest of Afton.

Drainage area.--1.09  $mi^2$  (2.82  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.9 miles (3.1 km); slope index, 74.8 ft/mi (14.2 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	July 5, 1967	a2.23	245
1968	May 9,1968	3.80	660
1969	June 14, 1969	4.50	890
1970	-	<1.74	<146
1971	Aug. 10, 1971	4.42	860
1972	July 9, 1972	3.84	670

#### Annual maximum stage and discharge

< Less than amount shown. a Maximum for period Dec. 6, 1966, to Sept. 30, 1967.

07308220 Plum Creek near Vernon, Tex. (03)

Location.--Lat 34°06'38", long 99°13'22", Wilbarger County, at culvert on Farm Road 433 and 4 miles (6 km) southeast of Vernon.

Drainage area.--4.99 mi² (12.9 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.55 miles (5.71 km); slope index, 15.0 ft/mi (2.8 m/km). (Map scale, 1:62,500)

## Annual maximum stage and discharge

Water year 1967 1968 1969 1970	Apr. May Mar. Oct	ate 12, 16, 16, 27	1967 1968 1969 1969	Gage height (ft) a6.09 5.79 5.21 6.75	Discharge (ft ³ /s) 265 187 27 445
1971	Sept.	18,	1971	6.23	305
1972	Dec.	2,	1971	7.24	595

a Maximum for period Jan. 10 to Sept. 30, 1967.

07312140 Beaver Creek tributary near Crowell, Tex. (25)

Location.--Lat 33°58'54", long 99°41'30", Foard County, at culvert on U.S. Highway 70 and 2 miles (3 km) east of Crowell.

Drainage area.--3.43 mi² (8.88 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.6 miles (5.8 km); slope index, 19.3 ft/mi (3.7 m/km). (Map scale, 1:24,000)

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1966	Aug.	31,	1966	5.67	385
1967	June	26,	1967	6.37	520
1968	June	1,	1968	4.27	114
1969	Sept.	22,	1969	3.96	72
1970	Oct.	27,	1969	4.50	146
1971		-		<3.56	<38
1972	May	12,	1972	5.74	370

## Annual maximum stage and discharge

< Less than amount shown.

07312300 Wolf Creek near Iowa Park, Tex. (03)

Location.--Lat 33°54'45", long 98°48'30", Wichita County, at culvert on Farm Road 367 and 8.5 miles (13.7 km) southwest of Iowa Park.

Drainage area.--8.13 mi² (21.1 km²).

Gage, -- Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.9 miles (9.5 km); slope index, 19.7 ft/mi (3.7 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 28, 1966	a10.06	(†)
1967	Apr. 12, 1967	10.80	(†)
1968	Apr. 18, 1968	3.66	b124
1969	July 22, 1969	4.95	b300
1970	Apr. 30, 1970	3.40	210
1971	Oct. 17, 1970	4.12	320
1972	Oct. 3, 1971	7.46	(†)

+ Discharge not determined.

a Maximum for period July 20 to Sept. 30, 1966.

b Estimated.

07314200 North Fork Little Wichita River tributary near Archer City, Tex. (03)

Location.--Lat 33°39'50", long 98°43'30", Archer County, at culvert on State Highway 25, 1.3 miles (2.1 km) upstream from North Fork Little Wichita River, and 7.4 miles (11.9 km) northwest of Archer City.

Drainage area.  $-0.10 \text{ mi}^2 (0.26 \text{ km}^2)$ .

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.4 mile (0.6 km); slope index, 234 ft/mi (44 m/km). (Map scale, 1:24,000)

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Water year 1965	Da	ate -		Gage height (ft) -	Discharge (ft ³ /s) a0
1966	Sept.	16,	1966	5.67	215
1967	Apr.	12,	1967	2.95	52
1968	July	7,	1968	4.73	152
1969	June	14,	1969	2.95	52
1970	Sept.	17,	1970	2.54	35
1971	Sept.	5,	1971	4.23	120
1972	May	7,	1972	2.86	49

Annual maximum stage and discharge

a No flow for the period May 25 to Sept. 30, 1965.

07315550 Farmers Creek near Saint Jo, Tex. (03)

Location.--Lat 33°42'45", long 97°33'05", Montague County, at culvert on U.S. Highway 82 and 2 miles (3 km) northwest of Saint Jo.

Drainage area.  $-0.82 \text{ mi}^2$  (2.12 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.85 miles (4.59 km); slope index, 51 ft/mi (10 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 24, 1966	a3.64	31
1967	June 26, 1967	4.02	57
1968	July 1, 1968	4.70	104

# Annual maximum stage and discharge

 1969
 June 14, 1969
 5.30
 145

 1970
 May 30, 1970
 5.65
 173

 1971
 <3.38</td>
 <18</td>

 1972
 Oct. 20, 1971
 9.70
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+ Discharge not determined.

< Less than amount shown.

a Maximum for the period Aug. 4 to Sept. 30, 1966.

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07332602 Cooper Creek near Bonham, Tex. (01)

Location.--Lat 33°32'24", long 96°12'03", Fannin County, at culvert on Farm Road 1629, 1.7 miles (2.7 km) upstream Bois d'Arc Creek, and 2.9 miles (4.7 km) south of Bonham.

Drainage area. -- 6.21  $mi^2$  (16.08  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.8 miles (7.7 km); slope index, 23.3 ft/mi (4.4 m/km). (Map scale, 1:62,500)

Water year	Dat	te		Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 1	19,	1966	19.11	3,100
1967	Sept.	6,	1967	20.26	a3,180
1968	Apr. 1	19,	1968	17.69	2,430
1969	May	7,	1969	17.84	a2,100
1970	Apr. 2	25,	1970	18.72	a2,560
1971	July 2	28,	1971	12.52	450
1972	Dec.	9,	1971	19.45	a3,000

#### Annual maximum stage and discharge

## a Affected by backwater.

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07336940 McKinney Bayou near Leary, Tex. (19)

Location.--Lat 33°31'33", long 94°11'32", Bowie County, at culvert on Farm Road 2253, 1.1 miles (1.8 km) north of Mount Zion, 3.2 miles (5.1 km) north of Farm Road 2148, and 4.3 miles (6.9 km) north of Leary.

Drainage area.-- $3.33 \text{ mi}^2$  (8.62 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.45 miles (10.38 km); slope index, 1 ft/mi (0.2 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 25, 1966	15.23	220
1967	May 31, 1967	12.67	130
1968	May 10, 1968	13.08	90
1969	Jan. 31, 1969	13.06	a145
1970	May 31, 1970	12.69	a130
1971	Mar. 2, 1971	12.59	65
1972	Jan. 2, 1972	b12.20	a60

a Affected by backwater.b Occurred on Dec. 21, 1971.

07342450 Nelson Branch near Leonard, Tex. (01)

Location.--Lat 33°21'20", long 96°13'25", Fannin County, at culvert on U.S. Highway 69, 0.4 mile (0.6 km) southeast of Hunt-Fannin County line, and 2.2 miles (3.5 km) southeast of Leonard.

Drainage area.--0.22  $mi^2$  (0.57  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.78 mile (1.26 km); slope index, 66.6 ft/mi (12.6 m/km). (Map scale, 1:24,000)

#### Discharge $(ft^3/s)$ Water year Date Gage height (ft) 1965 Sept. 21, 1965 a10.93 16 1966 Apr. 28, 1966 16.52 300 30, 1967 17.65 1967 May 340 1968 Apr. 19, 1968 12.38 68 7, 1969 1969 15.35 230 May 1970 25, 1970 12.74 Apr. 83 1971 July 30, 1971 11.33 26 1972 Oct. 19, 1971 14.25 157

#### Annual maximum stage and discharge

a Maximum for period June 23 to Sept. 30, 1965.

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07343350 Dial Branch near Bagwell, Tex. (01)

Location.--Lat 33°37'50", long 95°10'15", Red River County, at culvert on U.S. Highway 82, 1.8 miles (2.9 km) upstream from mouth, and 2.3 miles (3.7 km) south of Bagwell.

Drainage area.--1.00  $mi^2$  (2.59  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.45 miles (2.33 km); slope index, 45 ft/mi (9 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Feb. 9, 1966	16.21	660
1967	Apr. 26, 1967	17.77	880
1968	June 26, 1968	15.92	618
1969	May 8, 1969	15.53	552
1970	Apr. 25, 1970	14.55	420
1971	May 10, 1971	11.97	124
1972	Dec. 9, 1971	16.30	672

07343900 Buck Creek near Cookville, Tex. (19)

Location.--Lat 33°11'10", long 94°52'20", Titus County, at culvert on U.S. Highway 67, 1.0 mile (1.6 km) west of Cookville, and 5.5 miles (8.8 km) east of Mount Pleasant.

Drainage area.--0.78  $mi^2$  (2.02  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.03 miles (1.66 km); slope index, 87.2 ft/mi (16.5 m/km). (Map scale, 1:24,000)

Water year	Date		Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 24,	1966	17.08	590
1967	May 1,	1967	13.30	190
1968	Sept. 18,	1968	14.95	350
1969	May 8,	1969	15.77	440
1970	Apr. 27,	1970	15.48	405
1971	July 26,	1971	13.14	176
1972	Mar. 2,	1972	14.20	274

## Annual maximum stage and discharge

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07344490 Dragoo Creek near Mount Pleasant, Tex. (19)

Location.--Lat 33°09'40", long 95°01'55", Titus County, at culvert on Interstate Highway 30, 1.8 miles (2.9 km) upstream from mouth, and 3.8 miles (6.1 km) west of Mount Pleasant.

Drainage area.  $-4.27 \text{ mi}^2$  (11.06 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.6 miles (5.8 km); slope index, 26.9 ft/mi (5.1 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge

<u>Water year</u>	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	Apr. 13, 1967	a15.03	b1,150
1968	Apr. 1, 1968	15.09	1,170
1969	мау 8, 1969 Apr. 26, 1970	15.70	b1,480 b1,230
1971	Feb. 13, 1971	13.09	585
1972	Dec. 9, 1971	13.67	b650

a Maximum for period Jan. 1 to Sept. 30, 1967.

b Affected by backwater.

07344600 Williamson Creek near Pittsburg, Tex. (19)

Location.--Lat 33°02'55", long 94°52'35", Titus County, at culvert on Farm Road 2348 and 1.3 miles (2.1 km) northeast of Pittsburg.

Drainage area.  $-7.11 \text{ mi}^2$  (18.41 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.8 miles (10.9 km); slope index, 20.3 ft/mi (3.8 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	May <u>31</u> , 1967	a12.94	b310
1968	May 10, 1968	12.96	320
1969	May 8, 1969	13.09	b340
1970	Apr. 27, 1970	15.12	1,010
1971	-	<11.39	<135
1972	Dec. 3, 1971	13.37	b420

## Annual maximum stage and discharge

< Less than amount shown. a Maximum for period Jan. 1 to Sept. 30, 1967. b Affected by backwater.

07346010 Cypress Creek tributary near Jefferson, Tex. (19)

Location.--Lat 32°42'50", long 94°25'52", Marion County, at culvert on Farm Road 2208, 4.3 miles (6.9 km) upstream from Cypress Creek, and 5.5 miles (8.8 km) southwest of Jefferson.

Drainage area.--0.21 mi²  $(0.54 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.75 mile (1.21 km); slope index, 75 ft/mi (14 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

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Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1966	Apr.	24,	1966	13.78	129
1967		-		<10.74	<7
1968	Sept.	4,	1968	11.07	13
1969	Mar.	23,	1969	10.74	6.4
1970	Aug.	23,	1970	11.37	22
1971	Mar.	10,	1971	11.01	12
1972		-		<10.56	<5.6

< Less than amount shown.

07346072 Taylor Branch near Smithland, Tex. (19)

Location.--Lat 32°47'20", long 94°15'02", Marion County, at culvert on State Highway 49 and 6.4 miles (10.3 km) northeast of Jefferson.

Drainage area.--0.73 mi² (1.89 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.40 miles (2.25 km); slope index, 61 ft/mi (12 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 24, 1966	13.33	430
1967	Nov. 10, 1966	10.73	38
1968	May 9,1968	11.30	100
1969	Mar. 23, 1969	11.79	169
1970	Apr. 26, 1970	11.32	102
1971	July 24, 1971	10.80	44
1972	Jan. 3, 1972	11.20	92

# Annual maximum stage and discharge

08017700 Burnett Branch near Canton, Tex. (10)

Location.--Lat 32°32'17", long 95°51'44", Van Zandt County, at culvert on State Highway 19 and 1.3 miles (2.1 km) south of Canton.

Drainage area.--0.33  $mi^2$  (0.85  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile (1.29 km); slope index, 22 ft/mi (4 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 24, 1966	14.49	330
1967	May 31, 1967	11.14	39
1968	Oct. 16, 1967	13.05	184
1969	May 8, 1969	14.60	345
1970	May 26, 1970	11.57	66
1971	Oct. 26, 1970	12.54	135
1972	Dec. 11, 1971	13.61	235

08020800 Grace Creek tributary at Longview, Tex. (10)

Location.--Lat 32°31'02", long 94°44'23", Gregg County, at culvert on U.S. Highway 259, 1.2 miles (1.9 km) north of Longview, and 1.7 miles (2.7 km) upstream from mouth.

Drainage area.--5.05 mi² (13.08 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.15 miles (6.68 km); slope index, 28 ft/mi (5 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	July 4, 1967	a13.02	620
1968	May 9, 1968	13.15	670
1969	Apr. 17, 1969	13.73	870
1970	July 20, 1970	13.41	760
1971	Oct. 27, 1970	13.03	610
1972	June 21, 1972	13.61	814

a Maximum for period Jan. 1 to Sept. 30, 1967.

08022010 Redmon Branch near Hallsville, Tex. (19)

Location.--Lat 32°29'41", long 94°28'47", Harrison County, at culvert on Farm Road 968, 2.6 miles (4.2 km) upstream from Potters Creek, and 5.6 miles (9.0 km) east of Hallsville.

Drainage area.--0.46  $mi^2$  (1.19  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.15 miles (1.85 km); slope index, 108 ft/mi (20 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 24, 1966	15.70	725
1967	July 4, 1967	14.81	150
1968	Apr. 1, 1968	12.90	76
1969	Mar. 23, 1969	13.03	80
1970	Nov. 17, 1969	12.54	61
1971	Oct. 27, 1970	12.90	76
1972	Jan. 3, 1972	14.40	136

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08024290 Dorsey Branch near Milam, Tex. (11)

Location.--Lat 31°30'44", long 93°50'45", Sabine County, at culvert on State Highway 87 and 5.5 miles (8.8 km) north of Milam.

Drainage area.  $-0.70 \text{ mi}^2$  (1.81 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.3 miles (2.1 km); slope index, 2.06 ft/mi (0.39 m/km). (Map scale, 1:62,500)

Water year 1967 1968 1969 1970	<u>Date</u> July 24, 1968 May 7, 1969	Gage height (ft) <1.83 5.72 3.0 <1.83	Discharge (ft ³ /s) <122 382 136 <85
1971	-	<1.83	<85
1972	Mar. 20, 1972	3.98	218

Annual maximum stage and discharge

< Less than amount shown.

08028505 Moore Branch near Newton, Tex. (20)

Location.--Lat 30°53'00", long 93°40'59", Newton County, at culvert on Farm Road 1414 and 5.2 miles (8.4 km) northeast of Newton.

Drainage area.  $-3.77 \text{ mi}^2$  (9.76 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.2 miles (6.8 km); slope index, 31.1 ft/mi (5.9 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	<u> </u>	a<0.88	<18
1967	Apr. 13, 1967	3.13	140
1968	Apr. 9, 1968	2.83	118
1969	Feb. 21, 1969	2.82	117
1970	Dec. 6, 1969	2.63	104
1971	-	<.88	<18
1972	Dec. 2, 1971	2.70	110

Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period July 29 to Sept. 30, 1966.

08030700 Adams Bayou tributary near Deweyville, Tex. (20)

Location.--Lat 30°14'53", long 93°48'56", Newton County, at culvert on State Highway 12 and 5.5 miles (8.8 km) southwest of Deweyville.

Drainage area.--12.39 mi² (32.09 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.6 miles (10.6 km); slope index, 0.28 ft/mi (0.05 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966		a<0.63	(†)
1967	Apr. 14, 1967	1.74	90
1968	June 22, 1968	2.94	195
1969	Feb. 21, 1969	b1.90	c95
1970	-	<.63	<44
1971	Oct. 28, 1970	4.15	c2,000
1972	Dec. 6, 1971	1.76	94

## Annual maximum stage and discharge

+ Discharge not determined.

< Less than amount shown.

a Maximum for period Aug. 2 to Sept. 30, 1966.

b Occurred different time than peak discharge.

c Estimated.

08031100 Bethlehem Branch near Van, Tex. (10)

Location.--Lat 32°29'04", long 95°38'35", Van Zandt County, at culvert on Farm Road 314, 0.7 mile (1.1 km) upstream from mouth, and 3.1 miles (5.0 km) south of Van.

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Drainage area.--1.09  $mi^2$  (2.82 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.9 miles (3.1 km); slope index, 37.8 ft/mi (7.2 m/km). (Map scale, 1:62,500)

Annual maximum stage and discharge

Water vear	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr $\frac{Date}{23}$ 1966	$\frac{\text{dige height (1t)}}{15.83}$	<u>660</u>
1067	$M_{\rm DV}$ 31 1067	14.25	280
1907	May 51, 1967	14.25	280
1968	May 10, 1968	14.22	270
1969	May 8, 1969	13.15	a188
1970	Dec. 28, 1969	11.59	90
	Apr. 25, 1970	11.59	90
1971	Oct. 26, 1970	12.00	132
1972	Dec. 9, 1971	11.33	69

a Affected by backwater.

08032100 Hurricane Creek tributary near Palestine, Tex. (10)

Location.--Lat 31°52'10", long 95°34'20", Anderson County, at culvert on State Highway 155 and 8.5 miles (13.7 km) northeast of Palestine.

Drainage area.  $-0.39 \text{ mi}^2$  (1.01 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.3 miles (2.1 km); slope index, 124 ft/mi (23 m/km). (Map scale, 1:62,500)

Water year .	Date	Gage height (ft)	Discharge (ft ³ /s)
1966		a<0.92	<6
1967	Apr. 13, 1967	1.75	29
1968	May 11, 1968	1.86	32
1969	Mar. 22, 1969	1.92	34
1970	Nov. 7, 1969	2.16	b43
1971	Oct. 23, 1970	2.0	37
1972	Oct. 20, 1971	2.36	50

## Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period July 22 to Sept. 30, 1966.

b Revised.

08032250 One Arm Creek near Maydelle, Tex. (10)

Location.--Lat 31°48'29", long 95°17'19", Cherokee County, at culvert on U.S. Highway 84 and 1.0 mile (1.6 km) east of Maydelle.

Drainage area.--6.01 mi² (15.57 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.45 miles (5.55 km); slope index, 51 ft/mi (10 m/km). (Map scale, 1:62,500)

Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	July 2, 1967	a2.90	158
1968	June 24, 1968	5.9	670
1969	May 6, 1969	12.64	2,750
1970	Apr. 19, 1970	4.04	300
1971	-	<1.92	<23
1972	-	<1.92	<23
1971 1972	- -	<1.92 <1.92	<23 <23

< Less than amount shown.

a Maximum for period Mar. 9 to Sept. 30, 1967.

08032300 Squirrel Creek near Elkhart, Tex. (10)

Location.--Lat 31°37'09", long 95°30'15", Anderson County, at culvert on State Highway 294 and 4.5 miles (7.2 km) east of Elkhart.

Drainage area.  $-1.57 \text{ mi}^2$  (4.07 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.84 miles (2.96 km); slope index, 59.4 ft/mi (11.3 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1967	-	a<1.35	<48
1968	Apr. 8, 1968	8 2.26	136
1969	May 6, 1969	9 3.33	260
1970	Apr. 19, 1970	3.28	256
1971	Aug. 3, 197	1 2.55	170
1972	Dec. 5, 197	1 2.30	140

Annual maximum stage and discharge

< Less than amount shown.
a Maximum for period Mar. 8 to Sept. 30, 1967.</pre>

08033250 Piney Creek tributary near Pennington, Tex. (11)

Location.--Lat 31°12'12", long 95°06'58", Trinity County, at culvert on Farm Road 358 and 7.5 miles (12.1 km) east of Pennington.

Drainage area.--1.17  $mi^2$  (3.03  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.30 miles (3.70 km); slope index, 27 ft/mi (5 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	June 1, 1967	a2.80	134
1968	Apr. 8, 1968	4.35	265
1969	May 6, 1969	6.01	430
1970	-	<.94	<25
1971	Oct. 23, 1970	1.84	71
1972	Jan. 29, 1972	1.46	49

< Less than amount shown.

a Maximum for period Mar. 13 to Sept. 30, 1967.

08033450 Shawnee Creek tributary near Huntington, Tex. (11)

Location.--Lat 31°13'17", long 94°30'51", Angelina County, at culvert on U.S. Highway 69 and 5.3 miles (8.5 km) southeast of Huntington.

Drainage area.  $-0.52 \text{ mi}^2$  (1.35 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.30 miles (2.09 km); slope index, 64 ft/mi (12 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	-	a<1.86	<35
1967	Oct. 4, 1966	2.31	28
1968	Apr. 8, 1968	8.63	310
1969	Mar. 15, 1969	5.56	126
1970	Mar. 4, 1970	2.40	58
1971	-	<1.86	< 35
1972	Jan. 29, 1972	3.48	64

## Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Aug. 3 to Sept. 30, 1966.

08033480 Greenwood Creek tributary near Colmesneil, Tex. (20)

Location.--Lat  $30^{\circ}58'48''$ , long  $94^{\circ}24'22''$ , Tyler County, at culvert on U.S. Highway 69 and 5.2 miles (8.4 km) north of Colmesneil.

Drainage area.--0.15  $mi^2$  (0.39  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.8 mile (1.3 km); slope index, 200 ft/mi (38 m/km). (Map scale, 1:62,500)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	-	a<2.70	<26
1967	Apr. 10, 1967	3.37	50
1968		<2.70	<26
1969	May 6, 1969	3.47	55
1970	May 1, 1970	2.87	32
1971	-	<2.70	<26
1972	Mar. 20, 1972	4.50	100

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< Less than amount shown.

a Maximum for period July 28 to Sept. 30, 1966.

08037300 Gingham Branch near Mount Enterprise, Tex. (10)

Location.--Lat 31°55'14", long 94°33'33", Rusk County, at culvert on U.S. Highway 84 and 7.5 miles (12.1 km) east of Mount Enterprise.

Drainage area.  $-0.90 \text{ mi}^2$  (2.33 km²).

Gage, -- Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.45 miles (2.33 km); slope index, 122 ft/mi (23 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	June 1, 1967	a6.92	20
1968	Apr. 8, 1968	10.31	132
1969	Mar. 15, 1969	8.44	64
1970	Mar. 4, 1970	7.01	25
1971	-	<6.92	<20
1972	Jan. 4, 1972	8.60	70

## Annual maximum stage and discharge

< Less than amount shown. a Maximum for period Mar. 10 to Sept. 30, 1967.

08039900 Little Sandy Creek tributary near Jasper, Tex. (20)

Location.--Lat 30°56'39", long 93°56'16", Jasper County, at culvert on State Highway 63 and 4 miles (6 km) east of Jasper.

Drainage area.--0.46  $mi^2$  (1.19  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.0 mile (1.6 km); slope index, 84 ft/mi (16 m/km). (Map scale, 1:62,500)

Water year 1967 1968 1969 1970	<u>Date</u> - May 6, 1969 -	Gage height (ft) a<2.35 2.5 2.60 <2.35	Discharge (ft ³ /s) <20 20 39 <20
1971	-	<2.35	<20
1972	Dec. 5, 1971	2.35	22

# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Mar. 11 to Sept. 30, 1967.

08041400 Drakes Branch near Spurger, Tex. (20)

Location.--Lat 30°41'02", long 94°15'32", Tyler County, at culvert on Farm Road 1013 and 5.2 miles (8.4 km) west of Spurger.

Drainage area.  $-5.03 \text{ mi}^2$  (13.03 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.4 miles (7.1 km); slope index, 23.9 ft/mi (4.5 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	Apr. 13, 1967	al.87	118
1968	June 21, 1968	2.61	220
1969	May 6, 1969	5.85	1,050
1970	May 1, 1970	2.20	162
1971	Oct. 23, 1970	1.81	111
1972	Apr. 27, 1972	2.29	175

Annual maximum stage and discharge

a Maximum for period Mar. 12 to Sept. 30, 1967.

#### DOUBLE BAYOU BASIN

08042550 West Fork Double Bayou near Anahuac, Tex. (20)

Location.--Lat 29°45'39", long 94°38'00", Chambers County, at bridge on Farm Road 562 and 3 miles (5 km) southeast of Anahuac.

Drainage area.--4.43 mi² (11.47 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

- Topographic characteristics.--Length of main stream, 3.15 miles (5.07 km); slope index, 0.5 ft/mi (0.1 m/km). (Map scale, 1:24,000)
- Remarks.--This site was instrumented with a water-stage recorder during the periods March to July 1963 and November 1963 to February 1965 as part of the Houston Ship Channel Model Study.

#### Annual maximum stage and discharge

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Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 5, 1966	a12.22	(†)
1967	May 21, 1967	13.60	250
1968	Apr. 9, 1968	15.80	300
1969	Apr. 12, 1969	14.30	205
1970	May 15, 1970	13.73	177
1971	Oct. 11, 1970	14.75	230
1972	Dec. 6, 1971	13.52	280

+ Discharge not determined.

a Maximum for period Aug. 5 to Sept. 30, 1966.

08042700 North Creek near Jacksboro, Tex. (02)

Location.--Lat 33°16'55", long 98°17'55", Jack County, on left bank at downstream side of bridge on U.S. Highway 281, 1.5 miles (2.4 km) upstream from Henderson Creek, 9.3 miles (15.0 km) northwest of Jacksboro, and 14 miles (23 km) upstream from mouth.

Drainage area.--21.6  $mi^2$  (55.9  $km^2$ ).

- <u>Gage.--Recording.</u> Datum of gage is 1,016.33 ft (309.78 m) above mean sea level (State Highway Department bench mark).
- Historical data.--Flood of Apr. 28, 1957, was the highest since at least 1915, from information by local resident.
- Remarks.--Three recording and two nonrecording rain gages located in the watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Water year	D	ate		Gage height (ft)	Discharge (ft ³ /s)
1956	May 🗌	3,	1956	21.58	5,700
1957	Apr.	28,	1957	24.45	6,990
1958	Nov.	4,	1957	12.56	1,760
1959	June	26,	1959	14.45	2,500
1960	Oct.	3,	1959	19.65	4,830
1961	July	16,	1961	15.23	2,840
1962	June	10,	1962	18.10	4,130
1963	Apr.	28,	1963	11.55	1,370
1964	May	29,	1964	13.60	1,360
1965	Sept.	18,	1965	16.82	2,250
1966	Apr.	23,	1966	17.38	2,790
1967	May	31,	1967	12.25	1,150
1968	Mar.	20,	1968	10.49	621
1969	May	5,	1969	16.23	2,050
1970	Apr.	30,	1970	13.84	1,670
1971	July	26,	1971	9.25	450
1972	May	12,	1972	16.29	2,640

Annual maximum stage and discharge

08044200 Walker Creek near Boyd, Tex. (02)

Location.--Lat 33°04'32", long 97°34'58", Wise County, at culvert on State Highway 114, 1.1 miles (1.8 km) upstream from Salt Creek, and 1.1 miles (1.8 km) west of Boyd.

Drainage area.--2.95  $mi^2$  (7.64  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.35 miles (5.39 km); slope index, 44 ft/mi (8 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year 1965	Date Sept. 22	<b>,</b> 1965	Gage height (ft) al2.75	Discharge (ft ³ /s) 270
1966	Feb. 8	, 1966	13.83	450
1967	May 30	, 1967	13.23	350
1968	Mar. 19	, 1968	14.50	580
1969	May 7	, 1969	13.48	390
1970	Mar. 2	, 1970	20.11	2,990
1971	-		<11.38	<15
1972	Dec. 8	, 1971	13.30	355

< Less than amount shown.

a Maximum for period June 16 to Sept. 30, 1965.

08047200 West Creek at Fort Worth, Tex. (02)

Location.--Lat 32°40'25", long 97°22'06", Tarrant County, at culvert on Bilglade Road at intersection of West Creek Drive in Fort Worth.

Drainage area.--0.31 mi²  $(0.80 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.85 mile (1.37 km); slope index, 119 ft/mi (23 m/km). (Map scale, 1:24,000)

Water year 1965	Date July 14, 1965	Gage height (ft) al4.18	$\frac{\text{Discharge (ft}^3/\text{s})}{275}$
1966	Aug. 29, 1966	16.30	495
1967	May 30, 1967	13.86	250
1968	June 15, 1968	12.64	127
1969	Feb. 20, 1969	13.65	218
1970	Apr. 25, 1970	12.14	88
1971	July 29, 1971	17.04	857
1972	Oct. 19, 1971	14.37	295

# Annual maximum stage and discharge

a Maximum for period July 2 to Sept. 30, 1965.

08048550 Dry Branch at Blandin Street, Fort Worth, Tex. (02)

Location.--Lat 32°47'19", long 97°18'22", Tarrant County, at culvert on Blandin Street in north Fort Worth and 2.8 miles (4.5 km) upstream from mouth.

Drainage area.--1.08  $mi^2$  (2.80  $km^2$ ).

Gage.--Stage recorder.

Remarks.--This station operated as research project for runoff from urban areas.

## Annual maximum stage and discharge

Water year	$\frac{\text{Date}}{16}$	Elevation (ft)	$\frac{\text{Discharge (ft}^3/\text{s})}{217}$
1970	May 30, 1970	587.75	298
1971	Aug. 15, 1971	587.16	218
1972	Oct. 19, 1971	588.48	422

a Maximum for period February to September 1969.
08048600 Dry Branch at Fain Street at Fort Worth, Tex. (02)

- Location.--Lat 32°46'34", long 97°17'18", Tarrant County, on right bank 30 ft (9 m) upstream from culverts on Fain Street at intersection of Fain and Beach Streets in Fort Worth and 1.1 miles (1.8 km) upstream from the mouth.
- Drainage area.  $-2.15 \text{ mi}^2$  (5.57 km²).
- Gage.--Recording. Datum of gage is 537.51 ft (163.83 m) above mean sea level.
- <u>Remarks</u>.--This station operated as research project for runoff from urban areas.

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1969	May 6, 1	1969	4.58	292
1970	May 30, 1	1970	4.98	338
1971	Aug. 15, 1	1971	4.37	264
1972	Oct. 19, 1	1971	5.10	352

# 08048820 Little Fossil Creek at Interstate Highway 820, Fort Worth, Tex. (02)

Location.--Lat 32°50'22", long 97°19'20", Tarrant County, at culvert on south access road to Interstate Highway 820 and 5.7 miles (9.2 km) north of courthouse, Fort Worth.

Drainage area,  $-5.64 \text{ mi}^2$  (14.61 km²).

Gage.--Stage recorder.

<u>Remarks.--</u>This station operated as research project for runoff from urban areas.

## Annual maximum stage and discharge

Water year	Date		Elevation (ft)	Discharge (ft ³ /s)
1969	May 6, 1	969	a612.55	715
1970	Apr. 25, 1	970	613.00	650
1971	May 29, 1	971	612.71	b258
1972	Dec. 9, 1	971	613.89	632

a Maximum for period April to September 1969.

b Revised.

# 08048850 Little Fossil Creek at Mesquite Street at Fort Worth, Tex. (02)

Location.--Lat 32°48'33", long 97°17'28", Tarrant County, on right bank at intersection of Mesquite Street and Broadway Avenue in Fort Worth, 150 ft (46 m) upstream from bridge on Alta Vista Road (Beach Street), 4.3 miles (6.9 km) northeast of County Courthouse, and approximately 4.3 miles (6.9 km) upstream from Big Fossil Creek.

Drainage area.  $-12.3 \text{ mi}^2$  (31.86 km²).

Gage.--Recording. Datum of gage is 548.62 ft (167.22 m) above mean sea level.

Remarks.--This station operated as research project for runoff from urban areas.

Water year	May <u>Date</u>	Gage height (ft)	Discharge (ft ³ /s)
1969	May <u>6,</u> 1969	8.30	1,530
1970	Apr. 30, 1970	7.68	1,370
1971	Aug. 15, 1971	5.61	603
1972	Dec. 9, 1971	8.90	1,580

08048900 Deer Creek tributary near Crowley, Tex. (02)

Location.--Lat 32°35'06", long 97°21'04", Tarrant County, at culvert on Farm Road 731, 0.7 mile (1.1 km) upstream from mouth, and 0.7 mile (1.1 km) northeast of Crowley.

Drainage area.--5.86 mi² (15.18 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.4 miles (8.7 km); slope index, 23 ft/mi (4 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

<u>Water year</u>	<u>Date</u>	Gage height (ft)	Discharge (ft ³ /s)
1967	-	a<11.51	<170
1968	Apr. 19, 1968	14.98	1,060
1969	May 7, 1969	14.53	910
1970	Mar. 2, 1970	13.64	670
1971	-	<11.51	<170
1972	Oct. 19, 1971	15.66	1,280

< Less than amount shown.

a Maximum for period Jan. 12 to Sept. 30, 1967.

08050200 Elm Fork Trinity River subwatershed No. 6-0 near Muenster, Tex. (03)

Location.--Lat 33°37'13", long 97°24'15", Cooke County, near center of earthfill dam on unnamed tributary of Elm Fork Trinity River, 1.0 mile (1.6 km) west of Farm Road 373, and 2.6 miles (4.2 km) southwest of Muenster.

Drainage area.--0.77 mi² (1.99 km²).

- Gage.--Recording. Datum of gage is 941.75 ft (287.05 m) above mean sea level, datum of 1929 (U.S. Soil Conservation Service bench mark).
- Remarks.--Peak discharge based on maximum inflow (average for 5- or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Date	Discharge (ft ³ /s)
1957	June 1, 1957	449
1958	May 1, 1958	688
1959	Nov. 16, 1958	34
1960	Oct. 3, 1959	842
1961	Mar. 25, 1961	51
1962	June 18, 1962	287
1963	Nov. 26, 1962	221
1964	Sept. 21, 1964	261
1965	Nov. 18, 1964	367
1966	Feb. 9, 1966	476
1967	May 30, 1967	316
1968	Mar. 20, 1968	188
1969	May 6, 1969	477
1970	Sept. 25, 1970	423
1971	Aug. 14, 1971	178
1972	Oct. 19, 1971	220

08052630 Little Elm Creek subwatershed No. 10 near Gunter, Tex. (18)

Location.--Lat 33°24'33", long 96°48'41", Grayson County, near center of dam on Walnut Fork, 1.6 miles (2.6 km) upstream from mouth, and 4.7 miles (7.6 km) southwest of Gunter.

Drainage area.--2.10  $mi^2$  (5.44  $km^2$ ).

- Gage.--Water-stage recorder. Datum of gage is 615.51 ft (187.61 m) above mean sea level, datum of 1929 (U.S. Soil Conservation Service bench mark).
- Topographic characteristics.--Length of main stream, 2.52 miles (4.05 km); slope index, 37.3 ft/mi (7.1 m/km). (Map scale, 1:24,000)
- Remarks.--Peak discharge based on maximum inflow (average for 5- or 15minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Rain gage 3S located 0.25 mile (0.40 km) southeast of dam. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Date	Discharge (ft ³ /s)
1966	Apr. 28, 1966	823
1967	May 30, 1967	3,240
1968	Mar. 20, 1968	635
1969	May 14, 1969	1,370
1970	Apr. 25, 1970	1,570
1971 1972	Aug. 24, 1971 Nov. 17, 1971	80 1,450
	•	•

08053100 Jones Valley Creek tributary near Forestburg, Tex. (03)

Location.--Lat 33°33'15", long 97°37'05", Montague County, at culvert on Farm Road 455, 0.7 mile (1.1 km) upstream from Jones Valley Creek, and 3.8 miles (6.1 km) northwest of Forestburg.

Drainage area.--1.70  $mi^2$  (14.40  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.35 miles (3.78 km); slope index, 78.5 ft/mi (14.9 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year 1965 Se	<u>Date</u> ept. 19, 1965	Gage height (ft) al7.80	$\frac{\text{Discharge (ft}^3/\text{s})}{605}$
1966 Fe	eb. 9, 1966	20.15	860
1967 Se	ept. 7, 1967	14.66	305
1968 Ma	ar. 19, 1968	12.23	122
1969 Ma	ay 6, 1969	16.08	440
1970 Se	ept. 17, 1970	13.17	190
1971 00	ct. 23, 1970	11.56	81
1972 Ma	ay 12, 1972	18.51	680

a Maximum for period June 22 to Sept. 30, 1965.

08054200 Gamble Branch near Argyle, Tex. (18)

Location,--Lat 33°04'53", long 97°11'48", Denton County, at culvert on U.S. Highway 377 and 2.8 miles (4.5 km) south of Argyle.

Drainage area.--0.50 mi²  $(1.30 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.88 mile (1.42 km); slope index, 89 ft/mi (17 m/km). (Map scale, 1:24,000)

Water year 1965	Sept.	<u>ate</u> 22,	1965	Gage height (ft) all.56	Discharge (ft ³ /s) 68
1966	Apr.	29,	1966	14.17	306
1967	May	21,	1967	11.38	57
1968	May	13,	1968	14.18	310
1969	May	16,	1969	12.50	142
1970	Mar.	2,	1970	13.18	204
1971	Oct.	24,	1970	12.11	108
1972	Oct.	3,	1971	12.79	168

#### Annual maximum stage and discharge

a Maximum for period June 18 to Sept. 30, 1965.

08055600 Joes Creek at Dallas, Tex. (18)

Location.--Lat 32°51'33", long 96°53'00", Dallas County, at bridge on State Highway 114, Dallas, and 0.9 mile (1.4 km) upstream from mouth.

Drainage area.  $-7.51 \text{ mi}^2$  (19.45 km²).

<u>Gage</u>.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Since at least 1904, maximum discharge that of Oct. 8, 1962; maximum elevation, 431 ft (131 m) in 1908, backwater from Trinity River.

Remarks.--Urbanizing.

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Water year	D	ate		Elevation (ft)	Discharge $(ft^3/s)$
1962	July	27,	1962	423.6	3,100
1963	Oct.	8,	1962	425.3	7,430
1964	Sept.	21,	1964	420.95	1,440
1965	May	10,	1965	421.30	1,520
1966	Apr.	28,	1966	426.4	6,350
1967	Apr.	21,	1967	418.50	930
1968	Aug.	13,	1968	421.18	1,500
1969	May	7,	1969	423.70	2,350
1970	May	30,	1970	422.51	1,780
1971	Aug.	14,	1971	422.87	1,940
1972	July	12,	1972	422.46	1,850

08055700 Bachman Branch at Dallas, Tex. (18)

- Location.--Lat 32°51'36", long 96°50'12", Dallas County, on left bank on downstream side of bridge on Midway Road in Dallas, 1,400 ft (427 m) south of Northwest Highway, 1.5 miles (2.4 km) upstream from Bachman Lake Dam, and 6 miles (10 km) northwest of Dallas City Hall.
- Drainage area.--9.58 mi² (24.81 km²). Area at site used prior to May 1, 1970, 10.0 mi² (25.9 km²).
- <u>Gage</u>.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.
- Topographic characteristics.--Length of main stream, 6.0 miles (9.7 km); slope index, 31.8 ft/mi (6.0 m/km). (Map scale, 1:24,000)
- Historical data.--Maximum stage known since at least 1900, that of Apr. 28, 1966, from information by local residents. The second greatest flood since 1900 occurred Oct. 8, 1962.
- Remarks.--This watershed is about 75 percent urbanized (1966). Six recording rain gages are located in the watershed above the station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Water year	Da	ite		Elevation (ft)	Discharge (ft ³ /s)
1963	Oct.	8,	1962	465.6	9,200
1964	Sept.	21,	1964	459.30	3,620
1965	May	10,	1965	461.43	5,170
1966	Apr.	28,	1966	467.97	16,000
1967	Apr.	21,	1967	455.21	1,450
1968	Aug.	13,	1968	455.68	1,760
1969	May	6,	1969	464.84	8,360
1970	Sept.	2,	1970	466.24	3,130
1971	Aug.	14,	1971	467.97	3,480
1972	Oct.	19,	1971	469.00	5,650

08056500 Turtle Creek at Dallas, Tex. (18)

Location.--Lat 32°48'26", long 96°48'08", Dallas County, on left bank 68 ft (21 m) upstream from Hall Street Dam, 210 ft (64 m) upstream from Hall Street in Dallas, and 2 miles (3 km) north of Dallas County Courthouse.

Drainage area.  $-7.98 \text{ mi}^2$  (20.67 km²).

- <u>Gage.--Recording.</u> Datum of gage is 428.13 ft (130.49 m) above mean sea level, datum of 1929.
- Topographic characteristics.--Length of main stream, 5.3 miles (8.5 km); slope index, 37 ft/mi (7 m/km). (Map scale, 1:24,000)
- Historical data.--Flood of Apr. 28, 1966, reached the highest stage since at least 1903.
- Remarks.--Five recording rain gages installed in 1961 are located in the watershed above this station and tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office. The watershed is in a highly developed urban area.

Waton ween	D,	•		Case height (ft)	Discharge $(f + 3/c)$
1047	A		1047	Gage height (IL)	Discharge (10-75)
1947	Aug.	27,	1947	0.8	3,350
1948	May	11,	1948	4.68	1,630
1949	May	18,	1949	6.15	2,800
1950	May	1,	1950	5.29	2,060
1051					
1951	Sept.	12,	1951	4.82	1,700
1952	May	17,	1952	5.47	2,220
1953	Apr.	23,	1953	3.54	910
1954	Apr.	12,	1954	6.40	2,980
1955	June	18,	1955	3.44	852
1056	Mart	,	1054		
1950	мау	1,	1956	4.84	1,740
1957	Apr.	26,	1957	7.30	3,850
1958	Apr.	26,	1958	6.54	3,070
1959	Feb.	14,	1959	4.47	1,460
1960	Oct.	1,	1959	8.10	4,650
1961	Oct	13	1960	4 08	1 240
1962	Tulv	27	1062	7.06	1,240
1047	Amm	41, 20	1002	/.90	4,040
1902	Apr.	4 <b>ð</b> ,	1903	1.17	4,290
1964	Sept.	21,	1964	6.79	3,240
1965	May	10,	1965	7.97	4,520

08056500 Turtle Creek at Dallas, Tex. (18)--Continued

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 28, 1966	10.54	12,200
1967	Apr. 21, 1967	5.14	1,790
1968	May 13, 1968	6.77	3,220
1969	May 6, 1969	9.96	8,840
1970	Oct. 12, 1969	6.68	3,130
1971	Aug. 14, 1971	5.87	2,400
1972	Oct. 19, 1971	7.14	3,590

08057020 Coombs Creek at Sylvan Avenue, Dallas, Tex. (18)

Location.--Lat 32°46'01", long 96°50'07", Dallas County, at bridge on Sylvan Avenue, Dallas, and 1.2 miles (1.9 km) upstream from mouth.

Drainage area.--4.75 mi² (12.3 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Remarks.--Urbanizing.

<u>Water year</u> 1965	May <u>Date</u> 10, 1965	Elevation (ft) 426.55	$\frac{\text{Discharge (ft}^{3}/\text{s})}{4,260}$
1966	Apr. 28, 1966	423.33	2,780
1967	June 12, 1967	420.50	1,570
1968	June 16, 1968	423.59	2,900
1969	May 6, 1969	423.72	2,960
1970	Oct. 12, 1969	422.63	2,460
1971	May 29, 1971	423.18	2,700
1972	Oct. 19, 1971	422.85	2,560

08057050 Cedar Creek at Bonnie View Road, Dallas, Tex. (18)

Location.--Lat 32°44'50", long 96°47'44", Dallas County, at bridge on Bonnie View Road, Dallas, and 0.9 mile (1.4 km) upstream from mouth.

Drainage area.--9.42 mi² (24.40 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Remarks.--Urbanizing.

#### Annual maximum stage and discharge

Water year 1965	May 10, 1965	Elevation (ft) 404.15	$\frac{\text{Discharge (ft}^3/\text{s})}{7,300}$
1966	Apr. 28, 1966	404.04	6,260
1967	Apr. 21, 1967	398.04	2,140
1968	June 16, 1968	404.3	7,500
1969	May 6, 1969	a407.14	b4,250
1970	Oct. 12, 1969	402.15	5,290
1971	May 29, 1971	401.66	4,840
1972	Oct. 19, 1971	405.48	6,780

a Occurred May 8, 1969.

b Affected by backwater.

08057120 Spanky Branch at McCallum Lane, Dallas, Tex. (18)

Location.--Lat 32°57'58", long 96°48'11", Dallas County, at bridge on McCallum Lane, Dallas, and 0.5 mile (0.8 km) upstream from mouth.

Drainage area.--6.77 mi² (17.53 km²).

Gage.--Crest stage only. Datum of gage is mean sea level, datum of 1929.

Historical data.--Maximum elevation known since at least 1917, that of Sept. 21, 1964, from information by local residents.

Remarks.--Rural.

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Water year	Date			Elevation (ft)	Discharge (ft ³ /s)	
1962	July	27,	1962	567.03	4,020	
1963	Oct.	8,	1962	564.61	3,000	
1964	Sept.	21,	1964	572.02	7,870	
1965	May	10,	1965	563.91	2,650	
1966	Apr.	28,	1966	569.3	5,000	
1967	May	31,	1967	556.27	635	
1968	Mar.	20,	1968	559.58	1,470	
1969	May	6,	1969	566.69	3,680	
1970	Apr.	25,	1970	560.13	1,630	
1971	Aug.	14,	1971	558.93	1,330	
1972	Dec.	9,	1971	563.91	2,670	

08057140 Cottonwood Creek at Forest Lane, Dallas, Tex. (18)

Location.--Lat 32°54'33", long 96°45'54", Dallas County, at bridge on Forest Lane, Dallas, and 0.2 mile (0.3 km) upstream from Floyd Branch.

Drainage area.--8.50  $mi^2$  (22.0  $km^2$ ).

- Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.
- Historical data.--Maximum elevation known since at least 1892, that of Apr. 28, 1966.

Remarks.--Urban.

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Water year	Da	ate		Elevation (f	t) Discharge (f	$t^3/s$ )
1962	July	27,	1962 🕚	509.90	5,090	
1963	Oct.	8,	1962	511.74	17,400	
1964	Sept.	21,	1964	510.09	6,200	
1965	May	10,	1965	509.49	4,450	
1966	Apr.	28,	1966	512.32	17,600	
1967	May	31,	1967	509.20	4,080	
1968	Aug.	13,	1968	505.51	1,380	
1969	May	6,	1969	509.52	4,530	
1970	May	30,	1970	508.56	3,260	
1971	July	28,	1971	503.82	450	
1972	Oct.	3,	1971	508.49	3,180	

08057160 Floyd Branch at Forest Lane, Dallas, Tex. (18)

Location.--Lat 32°54'33", long 96°45'34", Dallas County, at bridge on Forest Lane, Dallas, and 0.3 mile (0.5 km) upstream from mouth.

Drainage area.--4.17  $mi^2$  (10.8  $km^2$ ).

<u>Gage</u>.--Crest stage only. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1953.

Historical data.--Maximum elevation known since at least 1909, that of Apr. 28, 1966.

Remarks.--Urban.

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Annual maximum stage and discharge

Water year	Da	ate		Elevation (ft)	Discharge (ft ³ /s)
1962	July	27,	1962	509.62	3,200
1963	Oct.	8,	1962	512.63	4,850
1964	Sept.	21,	1964	510.26	3,500
1965	May	10,	1965	508.87	2,850
1966	Apr.	28,	1966	514.19	8,590
1967		-		<503.65	<1,170
1968	Mar.	20,	1968	503.39	1,110
1969	May	6,	1969	509.96	3,350
1970	May	30,	1970	509.40	3,100
1971	July	28,	1971	503.90	1,240
1972	Oct.	3,	1971	507.75	2,460

< Less than amount shown.

08057320 Ash Creek at Highland Road, Dallas, Tex. (18)

Location.--Lat 32°48'18", long 96°43'04", Dallas County, at bridge on Highland Road, Dallas, and 0.4 mile (0.6 km) upstream from mouth.

Drainage area.  $-6.92 \text{ mi}^2$  (17.92 km²).

<u>Gage.--Crest stage only.</u> Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Annual maximum	stage	and	discharge
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Water year	Da	Date		Elevation (ft)	Discharge $(ft^3/s)$	
1963	Apr.	28,	1963	430.99	4,700	
1964	Sept.	21,	1964	<427.28	<3,150	
1965	May	10,	1965	429.74	3,600	
1966	Apr.	28,	1966	431.38	5,180	
1967	May	31,	1967	429.52	3,400	
1968	Apr.	19,	1968	427.58	1,540	
1969	May	6,	1969	423.94	4,330	
1970	May	30,	1970	420.56	1,240	
1971	July	28,	1971	419.75	775	
1972	Oct.	19,	1971	425.47	6,200	

< Less than amount shown.

08057340 Forney Creek at Lawnview Avenue, Dallas, Tex. (18)

Location.--Lat 32°46'45", long 96°43'02", Dallas County, at culvert on Lawnview Avenue, Dallas, and 0.8 mile (1.3 km) upstream from mouth.

Drainage area.--1.84  $mi^2$  (4.77  $km^2$ ).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

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Water year	D	ate		Elevation (ft)	Discharge $(ft^3/s)$
1963	Apr.	28,	1963	431.36	621
1964	Sept.	21,	1964	430.04	245
1965	May	10,	1965	431.21	566
1966	Apr.	28,	1966	435.42	1,090
1967	•	-		_	-
1968	Mar.	20,	1968	428.80	394
1969	May	6,	1969	435.92	1,130
1970	May	30,	1970	429.70	542
1971	Apr.	17.	1971	431.33	756
1972	Oct.	19,	1971	436.26	1,150

08057420 Fivemile Creek at U.S. Highway 77, Dallas, Tex. (18)

Location.--Lat 32°41'15", long 96°49'22", Dallas County, at bridge on U.S. Highway 77, Dallas, 0.2 mile (0.3 km) upstream from Woody Branch, and 8 miles (13 km) upstream from mouth.

Drainage area.--13.2 mi² (34.2 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

Water year 1965	May Date	1965	Elevation (ft) 464.88	$\frac{\text{Discharge (ft}^3/\text{s})}{2,400}$
1966	Apr 28	1966	470.32	7,000
1967	June 12	1967	459.78	1,440
1968	Sept. 24	1968	463.70	2,880
1969	May 6	1969	475.86	11,800
1970	May 30	1970	469.43	6,380
			1 A.	
1971	Oct. 26,	1970	466.78	4,840
1972	Oct. 19,	1971	470.95	7,440

08057425 Woody Branch at U.S. Highway 77, Dallas, Tex. (18)

Location.--Lat  $32^{\circ}40'58''$ , long  $96^{\circ}49'22''$ , Dallas County, at bridge on U.S. Highway 77, Dallas, and 0.4 mile (0.6 km) upstream from mouth.

Drainage area.--11.5  $mi^2$  (29.8  $km^2$ ).

<u>Gage.--Recording</u>. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Remarks.--Urban.

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Water year Date			Elevation (ft)	Discharge $(ft^3/s)$	
1965	May 10	, 1965	469.81	3,230	
1966	Apr. 28	, 1966	473.55	4,540	
1967	June 12	, 1967	464.13	802	
1968	Sept. 4	, 1968	468.50	2,680	
1969	May 6	, 1969	481.50	7,160	
1970	Apr. 25	, 1970	472.34	4,120	
1971	Oct. 26	, 1970	474.56	4,900	
1972	Oct. 19	, 1971	476.30	5,500	

08057430 Fivemile Creek at Lancaster Road, Dallas, Tex. (18)

Location.--Lat 32°40'49", long 96°47'10", Dallas County, at bridge on Lancaster Road, Dallas, and 6.7 miles (10.8 km) upstream from mouth.

Drainage area.--37.9  $mi^2$  (98.2  $km^2$ ).

<u>Gage.--Recording.</u> Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

Water year	Da	ate		Elevation (ft)	Discharge (ft ³ /s)
1965	May —	10,	1965	431.7	2,520
1966	Apr.	28,	1966	437.68	9,150
1967	June	12,	1967	430.85	1,760
1968	Sept.	4,	1968	436.14	6,900
1969	May	6,	1969	442.97	15,900
1970	May	30,	1970	435.96	7,260
1971	Oct.	26,	1970	436.51	7,860
1972	Oct.	19,	1971	438.04	9,550

08057500 Honey Creek subwatershed No. 11 near McKinney, Tex. (18)

Location.--Lat 33°18'12", long 96°41'22", Collin County, near center of dam on unnamed tributary of Honey Creek, 1.5 miles (2.4 km) west of Farm Road 543, and 8.4 miles (13.5 km) northwest of McKinney.

Drainage area.--2.14  $mi^2$  (5.54  $km^2$ ).

Gage.--Recording. Datum of gage is 629.00 ft (191.72 m) above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5- or 30-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

## Annual maximum discharge

Water year		Date	9	Discharge	(ft ³ /s)
1953	May	15,	1953	268	
1954	June	8,	1954	235	
1955	Feb.	19,	1955	42	
1956	Feb.	17,	1956	264	
1957	May	21,	1957	1,630	
1958	May	1,	1958	1,880	
1959	July	24,	1959	156	
1960	Aug.	26,	1960	320	
1961	May	1,	1961	1,320	
1962	Apr.	27,	1962	169	
1963	May	30,	1963	546	
1964	Sept.	21,	1964	1,380	
1965	Nov.	18,	1964	842	
1966	Apr.	30,	1966	3,380	
1967	May	30,	1967	530	
1968	Mar.	20,	1968	827	
1969	May	17,	1969	958	
1970	Apr.	25,	1970	2,000	
1971	July	29,	1971	64	
1972	Dec.	9,	1971	912	

## 08058000 Honey Creek subwatershed No. 12 near McKinney, Tex. (18)

Location.--Lat 33°18'20", long 96°40'12", Collin County, near center of dam on unnamed tributary of Honey Creek, 0.5 mile (0.8 km) west west of Farm Road 543, and 7.8 miles (12.6 km) northwest of McKinney.

Drainage area.--1.26  $mi^2$  (3.26  $km^2$ ).

<u>Gage.--Recording.</u> Datum of gage is 623.00 ft (189.89 m) above mean sea level, datum of 1929.

<u>Remarks.--Peak discharge based on maximum inflow (average for 5- or 30-minute interval)</u>, computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. One nonrecording and two recording rain gages located in the watershed above the station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year		Date	9	Discharge (ft ³ /s	)
1953	Apr.	28,	1953	a423	
1954	June	15,	1954	212	
1955	Oct.	23,	1954	123	
1956	Feb.	17,	1956	295	
1957	May	21,	1957	1,490	
1958	May	1,	1958	1,410	
1959	July	24,	1959	40	
1960	June	8,	1960	286	
1961	May	1,	1961	589	
1962	Apr.	24,	1962	158	
1963	May	30,	1963	663	
1964	Sept.	21,	1964	850	
1965	May	28,	1965	791	
1966	Apr.	30,	1966	1,370	
1967	May	30,	1967	907	
1968	Mar.	20.	1968	624	
1969	May	6.	1969	858	
1970	Apr.	25,	1970	1,270	
1971	July	29,	1971	34	
1972	Dec.	9,	1971	448	

a Unadjusted for rainfall on water surface.

08059200 Arls Branch near Westminster, Tex. (18)

Location.--Lat 33°21'20", long 96°26'35", Collin County, at culvert on State Highway 121 and 1.2 miles (1.9 km) east of Westminster.

Drainage area.--0.52 mi²  $(1.35 \text{ km}^2)$ .

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.00 mile (1.6 km); slope index, 86 ft/mi (16 m/km). (Map scale, 1:24,000)

Water year 1965	D Sept.	<u>ate</u> 21,	1965	Gage height (ft) al3.48	$\frac{\text{Discharge (ft}^3/\text{s})}{170}$
1966	Apr.	28,	1966	14.95	310
1967	May	30,	1967	16.97	500
1968	May	10,	1968	16.13	420
1969	May	7.	1969	14.69	287
1970	Mar.	2,	1970	15.09	325
1971	July	30,	1971	17.97	588
1972	Oct.	9,	1971	16.47	457

## Annual maximum stage and discharge

a Maximum for period June 23 to Sept. 30, 1965.

08061620 Duck Creek at Buckingham Road, Garland, Tex. (18)

Location.--Lat 32°55'53", long 96°39'55", Dallas County, at dam 200 ft (61 m) upstream from Buckingham Road in north Garland and 17.5 miles (28.2 km) upstream from mouth.

Drainage area.--8.05 mi² (20.85 km²).

Gage.--Stage recorder.

Remarks.--This station operated as research project for runoff from urban areas.

## Annual maximum stage and discharge

Water year	May Date	Gage height (ft)	Discharge (ft ³ /s)
1969	May 6, 1969	a564.04	4,640
1970	May 30, 1970	562.63	2,500
1971	July 28, 1971	560.77	650
1972	Oct. 3, 1971	562.87	2,800

a Maximum for period March to September 1969.

08061920 South Mesquite Creek at State Highway 352, Mesquite, Tex. (18)

Location.--Lat 32°46'09", long 96°37'18", Dallas County, at bridge on State Highway 352 in west Mesquite and 9.6 miles (15.4 km) upstream from mouth.

Drainage area.--13.4  $mi^2$  (34.7  $km^2$ ).

Gage.--Stage recorder.

Remarks.--This station operated as research project for runoff from urban areas.

# Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1969	May 6, 1969	a448.12	b4,000
1970	May 30, 1970	442.63	1,170
1971	Oct. 26, 1970	439.41	761
1972	Oct. 19, 1971	447.57	3,120

a Maximum for period March to September 1969.

b Estimated.

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08062850 Bachelor Creek near Terrell, Tex. (18)

Location.--Lat 32°42'42", long 96°17'52", Kaufman County, at culvert on Interstate Highway 20, 1.7 miles (2.7 km) northwest of State Highway 34, and 2.2 miles (3.5 km) southwest of Terrell.

Drainage area.--13.0  $mi^2$  (33.7  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 12.0 miles (19.3 km); slope index, 8 ft/mi (2 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge ( $ft^3/s$ )
1967	May 1, 1967	a13.92	430
1968	Oct. 15, 1967	15.58	1,150
1969	May 6, 1969	18.32	3,600
1970	Mar. 2, 1970	13.98	b465
1971	Oct. 11, 1970	14.71	820
1972	Oct. 19, 1971	16.74	1,600

#### Annual maximum stage and discharge

a Maximum for period Jan. 31 to Sept. 30, 1967.

b Affected by backwater.

08063005 Red Oak Branch near Eustace, Tex. (10)

Location.--Lat 32°18'36", long 95°57'38", Henderson County, at culvert on Farm Road 2709, 1.3 miles (2.1 km) upstream from Clear Creek, and 2.2 miles (3.5 km) east of Eustace.

Drainage area.--0.90  $mi^2$  (2.33  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.66 miles (2.67 km); slope index, 40.3 ft/mi (7.6 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 26, 1966	16.53	1,300
1967	Apr. 22, 1967	10.86	19
1968	May 9, 1968	15.98	700
1969	May 8, 1969	14.50	230
1970	Dec. 12, 1969	12.66	105
1971	Feb. 13, 1971	10.74	14
1972	Nov. 18, 1971	11.26	36

08063180 Briar Creek tributary near Corsicana, Tex. (18)

Location.--Lat 32°02'55", long 96°34'45", Navarro County, at culvert on Farm Road 744, 1.3 miles (2.1 km) upstream from Briar Creek, and 7.7 miles (12.4 km) west of Corsicana.

Drainage area.--0.72  $mi^2$  (1.86  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.28 miles (2.06 km); slope index, 39.6 ft/mi (7.5 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year	Da	te		Gage height (ft)	Discharge (ft ³ /s)
1966	Apr.	23,	1966	13.90	560
1967	Sept.	5,	1967	13.08	390
1968	May	10,	1968	14.39	660
1969	Mar.	17,	1969	12.91	353
1970	Feb.	27,	1970	12.69	320
1971 1972	Oct. Oct.	27, 19,	1970 1971	12.52 13.57	295 505

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08063200 Pin Oak Creek near Hubbard, Tex. (09)

Location.--Lat 31°48'05", long 96°43'10", Hill County, on right bank 85 ft (26 m) downstream from bridge on State Highway 171 and 5.8 miles (9.3 km) southeast of Hubbard.

Drainage area.--17.6  $mi^2$  (45.6  $km^2$ ).

Gage.--Recording. Datum of gage is 463.08 ft (141.15 m) above mean sea level, datum of 1929, supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 8.0 miles (12.9 km); slope index, 14.2 ft/mi (2.7 m/km). (Map scale, 1:24,000)

Historical data.--Maximum stage since at least 1900, about 17 ft (5 m) in August 1919, from information by local resident.

Remarks.--Floodwater-retarding structures partially controlling 7.29 mi² (18.88 km²) above this station were built during 1963. Six rain gages are operated in the watershed above this station. Tabulations of significant rainfall and runoff data are on file in the U.S. Geological Survey District office.

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1958	Aug.	24,	1958	13.86	4,340
1959	June	24,	1959	13.73	4,100
1960	Oct.	4,	1959	11.52	1,810
1961	June	18,	1961	11.60	1.870
1962	Apr.	27,	1962	12.42	2,580
1963	Apr.	28,	1963	4.52	89
1964	Sept.	17,	1964	4.65	126
1965	May	14,	1965	11.15	1,230
1966	Apr.	24,	1966	11.98	2.040
1967	June	12,	1967	9.90	815
1968	May	10,	1968	13.03	3,300
1969	Apr.	4,	1969	10.33	828
1970	Sept.	17,	1970	10.48	896
1971	Oct.	23.	1970	3.51	93
1972	Dec.	9,	1971	10.90	1,080

08063550 Alvarado Branch near Alvarado, Tex. (02)

Location.--Lat 32°24'49", long 97°12'20", Johnson County, at culvert on Farm Road 1706, 0.2 mile (0.3 km) south of U.S. Highway 67, and 0.6 mile (1.0 km) northeast of Alvarado.

Drainage area.--0.84  $mi^2$  (2.18  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.42 miles (2.28 km); slope index, 50 ft/mi (9 m/km). (Map scale, 1:24,000)

Water year 1965	Date		Gage height (ft) a<10.63	Discharge (ft ³ /s) <15
1966	Apr. 25,	1966	14.42	550
1967	Sept. 22,	1967	12.01	170
1968	May 9,	1968	14.63	590
1969	May 7,	1969	16.35	920
1970	Apr. 25,	1970	b16.95	c940
1971	Oct. 23,	1970	13.10	326
1972	Oct. 19,	1971	13.93	454

#### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period July 26 to Sept. 30, 1965.

b Occurred at different time than peak discharge.

c Estimated.

08063620 Kings Branch near Reagor Springs, Tex. (18)

Location.--Lat 32°20'41", long 96°47'02", Ellis County, at culvert on Rock Island and Pacific Railroad, 0.7 mile (1.1 km) upstream from Waxahachie Creek, and 1.8 miles (2.9 km) northwest of Reagor Springs.

Drainage area.--0.62 mi² (1.61 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.18 miles (1.90 km); slope index, 44 ft/mi (8 m/km). (Map scale, 1:24,000)

Water year 1965	May <u>Date</u> 16, 1965	Gage height (ft) 18.50	Discharge (ft ³ /s) 580
1966	Apr. 24, 1966	17.52	470
1967	-	<11.21	<12
1968	Aug. 27, 1968	15.91	305
1969	May 7, 1969	a16.80	395
1970	Apr. 25, 1970	18.92	620
1971	Aug. 26, 1971	13.37	107
1972	Oct. 19, 1971	15.88	302

#### Annual maximum stage and discharge

< Less than amount shown.

a Estimated.

08064630 Saline Branch tributary near Bethel, Tex. (10)

Location.--Lat 31°55'46", long 95°55'58", Anderson County, at culvert on U.S. Highway 287 and 1.0 mile (1.6 km) northwest of Bethel.

Drainage area.--0.22  $mi^2$  (0.57  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.57 mile (0.92 km); slope index, 93 ft/mi (18 m/km). (Map scale, 1:62,500)

## Annual maximum stage and discharge

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1966	Sept. 9,	1966	a4.36	51
1967	Apr. 13,	1967	3.88	36
1968	Mar. 11,	1968	4.65	61
1969	Apr. 12,	1969	5.5	b92
1970	Dec. 5,	1969	4.03	41
1971 1972	July 28, Jan. 4,	1971 1972	3.71 5.83	32 105

a Maximum for period July 20 to Sept. 30, 1966.

b Estimated.

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08065320 Mayes Branch near Latexo, Tex. (11)

Location.--Lat 31°25'58", long 95°28'29", Houston County, at culvert on U.S. Highway 287 and 2.6 miles (4.2 km) north of Latexo.

Drainage area.--4.26 mi² (11.03 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.60 miles (5.79 km); slope index, 36 ft/mi (7 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966		a<1.73	(†)
1967	-	<1.73	(†)
1968	Sept. 5, 1968	5.31	236
1969	Apr. 12, 1969	5.8	335
1970	Oct. 30, 1969	5.12	202
1971	-	<4.96	<173
1972	-	<4.96	<173

## Annual maximum stage and discharge

+ Discharge not determined.

< Less than amount shown.

a Maximum for period July 26 to Sept. 30, 1966.

08066280 Bluff Creek tributary near Livingston, Tex. (11)

Location.--Lat 30°41'52", long 94°46'58", Polk County, at culvert on U.S. Highway 190 and 9.2 miles (14.8 km) east of Livingston.

Drainage area.--0.62  $mi^2$  (1.61  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.38 miles (2.22 km); slope index, 50.5 ft/mi (9.6 m/km). (Map scale, 1:62,500)

Water year 1965	Date	Gage height (ft) a<1.37	Discharge (ft ³ /s) <20
1966	-	<1.37	<20
1967	-	<1.37	<20
1968	June 22, 1968	4.26	145
1969	May 6, 1969	7.75	b170
1970	May 1, 1970	2.61	26
1971	Oct. 23, 1970	2.28	10
1972	May 12, 1972	3.43	75

#### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Aug. 20 to Sept. 30, 1965.

b Estimated.
08067550 Welch Branch near Huntsville, Tex. (17)

Location.--Lat 30°38'33", long 95°40'47", Walker County, at culvert on Farm Road 1791 and 6.9 miles (11.1 km) southwest of Huntsville.

Drainage area.--2.35  $mi^2$  (6.09  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.7 miles (7.6 km); slope index, 20 ft/mi (4 m/km). (Map scale, 1:24,000)

<u>Water year</u> 1965	Dat	e	Gage height (ft) a<2.46	Discharge (ft ³ /s) <12
1966	Apr. 24	. 1966	b5.30	127
1967		,	<2.46	<12
1968	June 21	. 1968	5.09	138
1969	Apr. 12	, 1969	7.83	470
1970	Mar. 17	, 1970	4.34	65
1971	May 11	, 1971	5.87	182
1972	May 12	, 1972	7.19	273

#### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Aug. 19 to Sept. 30, 1965.

b Occurred on Feb. 10, 1966, backwater from log jam in channel downstream from gage.

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08067750 Landrum Creek tributary near Montgomery, Tex. (12)

Location.--Lat 30°21'03", long 95°41'50", Montgomery County, at culvert on State Highway 149 and 2.4 miles (3.9 km) south of Montgomery.

Drainage area.--0.13  $mi^2$  (0.34  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.47 mile (0.76 km); slope index, 171 ft/mi (32 m/km). (Map scale, 1:24,000)

Water year 1965	Date		Gage height (ft) a<1.94	$\frac{\text{Discharge (ft}^3/\text{s})}{(†)}$
1966	Apr. 24,	1966	7.88	114
1967	Sept. 21,	1967	5.13	57
1968	Mar. 10,	1968	8.82	129
1969	Apr. 27,	1969	4.86	51
1970	Apr. 10,	1970	2.74	15
1971	Oct. 11,	1970	7.28	104
1972	Mar. 20,	1972	4.45	44

## Annual maximum stage and discharge

+ Discharge not determined.

< Less than amount shown.

a Maximum for period Aug. 18 to Sept. 30, 1965.

08068300 Mill Creek tributary near Dobbin, Tex. (12)

Location.--Lat 30°15'37", long 95°46'14", Montgomery County, at culvert on Farm Road 1486 and 7.8 miles (12.6 km) south of Dobbin.

Drainage area.  $-4.07 \text{ mi}^2$  (10.54 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.65 miles (5.87 km); slope index, 15 ft/mi (3 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	Sept. 21, 1967	a3.50	19
1968	June 24, 1968	8.25	670
1969	Feb. 21, 1969	7.39	410
1970	-	<2.77	<10
1971	Oct. 11, 1970	5.20	90
1972	Apr. 27, 1972	8.91	1,650

#### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Mar. 16 to Sept. 30, 1967.

08069850 Bear Creek near Cleveland, Tex. (11)

Location.--Lat 30°26'58", long 95°13'11", San Jacinto County, at culvert on Farm Road 1725 and 12.9 miles (20.8 km) northwest of Cleveland.

Drainage area.--1.46  $mi^2$  (3.78  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.25 miles (3.62 km); slope index, 45 ft/mi (9 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year 1967 1968 1969	Date June 24, 1968 May 6, 1969	Gage height (ft) a<2.58 4.71 3.40	Discharge (ft ³ /s) <80 290 156
1970 1971 1972	- Mar. 20, 1972	<2.58 <2.58 3.36	<80 <80 153

< Less than amount shown.

a Maximum for period Mar. 15 to Sept. 30, 1967.

08073750 Stoney Brook Street Ditch at Houston, Tex. (12)

Location.--Lat 29°44'05", long 95°30'22", Harris County, at culvert on Stoney Brook Street in west Houston.

Drainage area.--0.50  $mi^2$  (1.30  $km^2$ ).

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- Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1964.
- Remarks.--Drainage area is urban. Impervious cover was 33 percent as of October 1966.

Water year	Da	ate		Elevation (ft)	Discharge (ft ³ /s)
1967	Sept.	21,	1967	65.78	145
1968	Sept.	14,	1968	67.54	247
1969	Sept.	19,	1969	65.34	144
1970	May	21,	1970	65.68	157
1971	Oct.	11,	1970	67.21	230
1972	May	12,	1972	65.74	160

08073800 Bering Ditch at Woodway Drive, Houston, Tex. (12)

Location.--Lat 29°45'22", long 95°29'44", Harris County, at bridge on Woodway Drive in west Houston.

Drainage area.  $-2.74 \text{ mi}^2$  (7.10 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Water year 1965	Dec.	<u>ate</u> 10,	1964	Elevation (ft) 53.14	Discharge (ft ³ /s) 91
1966	May	18,	1966	55.58	724
1967	Sept.	21,	1967	55.30	535
1968	Sept.	14,	1968	57.81	1,580
1969	Nov.	30,	1968	55.58	694
1970	May	21,	1970	55.15	1,280
1971	Oct.	11,	1970	58.47	1,900
1972	May	12,	1972	57.26	1,240

08074100 Cole Creek at Guhn Road, Houston, Tex. (12)

Location.--Lat 29°51'24", long 95°30'55", Harris County, at bridge on Guhn Road in northwest Houston.

Drainage area.--7.05 mi² (18.26 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

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Water year 1965	Date Feb. 16, 1965	Elevation (ft) 87.06	$\frac{\text{Discharge (ft}^3/\text{s})}{266}$
1966	Apr. 14, 1966	90.39	744
1967	Apr. 13, 1967	85.79	79
1968	May 12, 1968	89.94	503
1969	Feb. 21, 1969	91.30	708
1970	May 1, 1970	89.47	321
1971	Oct. 23, 1970	91.47	522
1972	Mar. 20, 1972	92.44	878

08074150 Cole Creek at Deihl Road at Houston, Tex. (12)

- Location.--Lat 29°51'04", long 95°29'16", Harris County, on downstream side of bridge at Deihl Road in northwest Houston and 1.8 miles (2.9 km) upstream from mouth.
- Drainage area.--At Deihl Road, Apr. 14, 1964, to Apr. 1, 1965, 10.0 mi² (25.9 km²); Apr. 2 to May 17, 1965, 8.81 mi² (22.82 km²). At Antoine Drive, May 18 to Aug. 1, 1965, 9.94 mi² (25.74 km²); Aug. 2, 1965, to Sept. 1, 1966, 10.2 mi² (26.4 km²). At Deihl Road, Sept. 2, 1966, to Sept. 30, 1968, 8.81 mi² (22.82 km²). Drainage area changes caused by changes in storm sewers.
- Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1957.
- Remarks.--Station was established at Deihl Road and was temporarily relocated to Antoine Drive because of bridge construction and channel rectification. On Sept. 2, 1966, station was moved back to Deihl Deihl Road. Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Date	Elevation (ft)	Discharge (ft ³ /s)
1964	May 31, 1964	-	a400
1965	Feb. 16, 1965	78.23	338
1966	Apr. 14, 1966	c71.50	b950
1967	May 29, 1967	d71.84	160
1968	May 10, 1968	75.88	810
1969	Feb. 21, 1969	74.82	966
1970	May 15, 1970	75.38	453
1971	Oct. 23, 1970	77.21	762
1972	Mar. 20, 1972	78.60	2,020

a Maximum for period April to September 1964.

b Estimated.

c Backwater from Whiteoak Bayou.

d Occurred Sept. 21, 1967, backwater from channel vegetation.

# 08074200 Brickhouse Gully at Clarblak Street, Houston, Tex. (12)

Location.--Lat 29°49'53", long 95°31'42", Harris County, at bridge on Clarblak Street in northwest Houston.

Drainage area.--2.05  $mi^2$  (5.31  $km^2$ ).

<u>Gage</u>.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Water year 1965	Feb.	<u>ate</u> 16,	1965	Elevation (ft) 89.46	Discharge (ft ³ /s) 54
1966	Apr.	14,	1966	90.46	121
1967	Sept.	21,	1967	89.78	73
1968	May	10,	1968	92.58	328
1969	Feb.	21,	1969	92.30	294
1970	July	21,	1970	91.66	169
1971	Oct.	23,	1970	93.54	314
1972	Mar.	20,	1972	94.28	399

08074250 Brickhouse Gully at Costa Rica Street at Houston, Tex. (12)

Location.--Lat 29°49'40", long 95°28'09", Harris County, on right bank at downstream side of bridge at Costa Rica Street in northwest Houston and 1.0 mile (1.6 km) upstream from Whiteoak Bayou.

Drainage area.--10.4 mi² (26.9 km²). Prior to May 1965, 10.5 mi² (27.2 km²); May to August 1965, 10.7 mi² (27.7 km²); August 1965 to September 1967, 10.5 mi² (27.2 km²). Drainage area changes caused by changes in storm sewers.

 $\frac{\text{Gage.--Water-stage recorder.}}{\text{of 1929, adjustment of 1957.}}$ 

Remarks .-- Recording rain gage located at station.

Annual maximum stage and discharge

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Water year	Da	ate		Elevation (ft)	Discharge $(ft^3/s)$
1964	Aug.	23,	1964	a60.08	235
1965	Sept.	22,	1965	b64.60	550
1966	Apr.	14,	1966	64.87	1,040
1967	Sept.	21,	1967	59.45	323
1968	May	10,	1968	65.94	2,280
1969	Feb.	21,	1969	61.24	1,370
1970	May	1,	1970	59.48	925
1971 1972	Oct. Mar.	23, 20,	1970 1972	64.70 69.20	2,800 5,800

a Maximum for period August to September 1964.

b Backwater from construction dam.

08074800 Keegans Bayou at Roark Road near Houston, Tex. (12)

- Location.--Lat 29°39'23", long 95°33'43", Harris County, on left bank at downstream side of bridge on Roark Road and about 2 miles (3 km) southwest of city limits of Houston.
- Drainage area.--9.28 mi² (24.04 km²). Prior to Jan. 1, 1967, 9.66 mi² (25.02 km²), due to drainage ditch changes.
- <u>Gage</u>.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929 through 1957 adjustment.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Dat	te		Elevation (ft)	Discharge (ft ³ /s)
1965	Dec.	10,	1964	66.43	140
1966	Apr.	14,	1966	67.64	588
1967	Jan. 13	3-14,	1967	a64.83	43
1968	June	23,	1968	67.89	352
1969	May	3,	1969	67.27	659
1970	May	21,	1970	69.34	547
1971	Oct.	11,	1970	71.88	751
1972	May	12,	1972	72.57	1,060

a Occurred Sept. 21, 1967, backwater from channel vegetation.

08074850 Bintliff Ditch at Bissonnet Street, Houston, Tex. (12)

Location.--Lat 29°41'16", long 95°30'20", Harris County, at bridge on Bissonnet Street in southwest Houston.

Drainage area.  $-4.29 \text{ mi}^2$  (11.11 km²).

Gage.--Recording.

Remarks.--Urban.

Date		Elevation (ft)	Discharge (ft ³ /s)
Sept. 14	, 1968.	62.19	a1,030
Sept. 15	, 1969	61.75	968
May 21	, 1970	60.48	808
Oct. 11	, 1970	62.82	1,120
June 10	, 1972	61.46	930
	Date Sept. 14 Sept. 15 May 21 Oct. 11 June 10	Date Sept. 14, 1968 Sept. 15, 1969 May 21, 1970 Oct. 11, 1970 June 10, 1972	Date Sept. 14, 1968Elevation (ft) 62.19Sept. 15, 196961.75 60.48Oct. 11, 197062.82 61.46

#### Annual maximum stage and discharge

a Maximum for period August to September 1968; probably peak for year.

08074900 Willow Waterhole Bayou at Landsdowne Street, Houston, Tex. (12)

Location.--Lat 29°39'01", long 95°29'11", Harris County, at bridge on Landsdowne Street in southwest Houston.

Drainage area.--11.2  $mi^2$  (29.0  $km^2$ ).

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<u>Gage.--Recording</u>. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

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Water year 1965	Dec. <u>Date</u> Dec. <u>10,</u> 1964	Elevation (ft) 56.88	$\frac{\text{Discharge (ft}^{3}/\text{s})}{350}$
1966	Apr. 14, 1966	60.00	1,300
1967	Aug. 25, 1967	57.90	450
1968	June 23, 1968	60.76	1,680
1969	Feb. 21, 1969	58.96	884
1970	May 21, 1970	59.56	844
1971	Oct. 11, 1970	61.05	1,350
1972	June 10, 1972	59.49	847

08075300 Sims Bayou at Carlsbad Street, Houston, Tex. (12)

Location.--Lat 29°37'33", long 95°29'56", Harris County, at bridge on Carlsbad Street in southwest Houston.

Drainage area.--4.99 mi² (12.92 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957.

Remarks.--Urban.

Water year 1965	June	<u>ate</u> 18,	1965	Elevation (ft) 60.71	Discharge (ft ³ /s) 108
1966	Apr.	14,	1966	62.59	320
1967	Sept.	21,	1967	62.59	314
1968	June	23,	1968	63.45	470.
1969	Feb.	21,	1969	61.52	220
1970	May	21,	1970	62.43	342
1971	Oct.	11,	1970	63.77	454
1972	May	12,	1972	62.68	357

08075400 Sims Bayou at Hiram Clarke Street at Houston, Tex. (12)

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

Drainage area.--20.2  $mi^2$  (52.3  $km^2$ ).

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1929.

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year D	ate	Elevation (ft)	Discharge (ft $^3/s$ )
1964 Sept.	17, 1964	a43.83	96
1965 Dec.	10, 1964	48.70	960
1966 Apr.	14, 1966	51.08	2,280
1967 Sept.	21, 1967	46.77	350
1968 June	23, 1968	52.35	2,200
1969 Feb.	21, 1969	52.08	2,280
1970 May	21, 1970	52.69	2,320
1971 Oct.	11, 1970	52.77	2,230
1972 May	12, 1972	51.30	2,020

a Maximum for period August to September 1964.

08075550 Berry Bayou at Gilpin Street, Houston, Tex. (12)

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

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Drainage area.-- $3.26 \text{ mi}^2$  (8.44 km²).

<u>Gage</u>.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

Water year	Date	Elevation (ft)	Discharge $(ft^3/s)$
1965	Dec. 10, 1964	34.76	290
1966	Feb. 9. 1966	34.48	607
1967	Apr. 13, 1967	31.83	235
1968	May 10, 1968	35.19	738
1969	Feb. 21, 1969	34.03	535
1970	Oct. 30, 1969	32.71	285
1971	Oct. 23, 1970	34.12	339
1972	June 16, 1972	34.27	362

Annual maximum stage and discharge

08075600 Berry Bayou tributary at Globe Street, Houston, Tex. (12)

Location.--Lat 29°39'00", long 95°14'48", Harris County, at bridge on Globe Street in southeast Houston.

Drainage area.--1.58  $mi^2$  (4.09  $km^2$ ).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

## Annual maximum stage and discharge

Water year 1965	Date Dec. 10, 1964	Elevation (ft) 37.89	Discharge (ft ³ /s) 145
1966	Feb. 9, 1966	39.48	308
1967	Apr. 13, 1967	37.27	114
1968	June 22, 1968	39.03	254
1969	Feb. 21, 1969	38.35	198
1970	May 31, 1970	37.15	79
1971 1972	Oct. 23, 1970 May 12, 1972	a38.70 39.38	186 218

a Occurred at different time than peak discharge.

## 08075650 Berry Bayou at Forest Oaks Street at Houston, Tex. (12)

Location.--Lat 29°40'35", long 95°14'37", Harris County, near left bank at downstream side of Forest Oaks Street bridge in southeast Houston, 0.8 mile (1.3 km) upstream from auxiliary gage at mouth of Berry Creek, and 1.7 miles (2.7 km) upstream from Sims Bayou.

Drainage area.--11.1 mi² (28.7 km²).

Gage.--Recording. Datum of gage is mean sea level.

<u>Remarks.--This station operated as research project for runoff from</u> urban areas.

### Annual maximum stage and discharge

Water year 1964 1965	Date Sept. 17, 19	964 Gage height (ft) a5.90	) Discharge (ft ³ /s) 350 b800
1966	Feb. 9, 19	966c16.369679.68968d16.9896917.59970f16.78	2,630
1967	Apr. 13, 19		886
1968	May 16, 19		3,110
1969	Feb. 21, 19		e1,410
1970	May 21, 19		816
1971	Oct. 23, 19	97015.5897213.45	1,540
1972	Apr. 27, 19		1,530

a Maximum for period April to September 1964.

- b Estimated.
- c Occurred Apr. 14, 1966.
- d Occurred June 24, 1968.
- e Affected by backwater from Sims Bayou.
- f Occurred on May 22, 1970.

08075700 Berry Creek at Galveston Road, Houston, Tex. (12)

Location.--Lat 29°40'59", long 95°15'11", Harris County, at bridge on Galveston Road and 0.5 mile (0.8 km) upstream from mouth in southeast Houston.

Drainage area.--4.86  $mi^2$  (12.59  $km^2$ ).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

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	Annual maximum	stage and discharge	
Water year 1965	Dec. <u>Date</u> Dec. <u>10,</u> 1964	Elevation (ft) 17.57	$\frac{\text{Discharge } (\text{ft}^3/\text{s})}{280}$
1966	Apr. 14, 1966	20.47	607
1967	Apr. 13, 1967	16.66	286
1968	May 10, 1968	21.56	789
1969	Feb. 21, 1969	20.29	644
1970	May 21, 1970	18.64	441
1971	Oct. 23, 1970	17.75	370
1972	Apr. 27, 1972	18.68	444

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08075750 Hunting Bayou tributary at Cavalcade Street, Houston, Tex. (12)

 $\frac{\text{Location.--Lat 29°48'00'', long 95°20'02'', Harris County, at bridge on Cavalcade Street in northeast Houston.}$ 

Drainage area.--1.20  $mi^2$  (3.11  $km^2$ ).

Gage.--Recording.

Water year	D	<u>ate</u>	1965	Elevation (ft)	Discharge (ft ³ /s)
1965	Sept.	22,		43.37	109
1966	Apr.	14,	1966	43.63	119
1967	Oct.	4,	1966	44.14	140
1968	May	10,	1968	44.38	149
1969	Jan.	16,	1969	43.10	140
1970	May	15,	1970	43.52	126
1971	Oct.	23,	1970	46.81	275
1972	Mar.	20,	1972	46.19	255

08075760 Hunting Bayou at Falls Street, Houston, Tex. (12)

Location.--Lat 29°48'22", long 95°19'50", Harris County, at bridge on Falls Street in northeast Houston.

Drainage area.-- $3.50 \text{ mi}^2$  (9.07 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urban.

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Water year 1965	Da Sept.	<u>ate</u> 22,	1965	Elevation (ft) 41.95	Discharge (ft ³ /s) 236
1966	Apr.	14,	1966	40.64	485
1967	Oct.	4,	1966	42.46	399
1968	May	10,	1968	42.28	445
1969	Jan.	16,	1969	40.97	380
1970	May	15,	1970	42.24	377
1971	Oct.	23,	1970	49.50	666
1972	Mar.	20,	1972	45.51	660

08075770 Hunting Bayou at U.S. Highway 90-A at Houston, Texas. (12)

Location.--Lat 29°47'43", long 95°16'21", Harris County, on right bank 100 ft (30 m) downstream from bridge on U.S. Highway 90-A, in northeast section of Houston, and 9.2 miles (14.8 km) upstream from mouth.

Drainage area.  $--14.4 \text{ mi}^2 (37.3 \text{ km}^2)$ .

Gage.--Water-stage recorder. Datum of gage is mean sea level, datum of 1929, adjustment of 1959.

Topographic characteristics.--Length of main stream, 7.1 miles (11.4 km); slope index, 1.1 ft/mi (0.2 m/km). (Map scale, 1:24,000)

Remarks.--Recording rain gage located at station.

Annual maximum stage and discharge

Water year	Apr. 17, 1964	Elevation (ft)	Discharge (ft ³ /s)
1965	Dec. 10, 1964	26.60	355
1966	Apr. 14, 1966	31.43	1,150
1967	Oct. 5, 1966	30.44	920
1968	May 10, 1968	32.66	1,460
1969	Feb. 21, 1969	31.03	1,050
1970	May 15, 1970	30.20	880
1971	Oct. 23, 1970	36.88	2,260
1312	Mai. 20, 1972	37.05	3,130

a Maximum for period April to September 1964.

08075780 Greens Bayou at Cutten Road near Houston, Tex. (12)

Location.--Lat 29°56'56", long 95°31'10", Harris County, at bridge on Cutten Road and about 16.5 miles (26.5 km) northwest of Houston.

Drainage area.--8.73 mi² (22.61 km²).

<u>Gage.--Recording</u>. Datum of gage is mean sea level, datum of 1929, supplementary adjustments of 1957 and 1959.

Remarks.--Urbanizing.

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<b>D</b> .	<b>F</b> 1	 10.2	<b>n</b> •

1965 Feb. 16, 1965 115.27 151	
1966 Apr. 14, 1966 117.63 514	
1967 Sept. 21, 1967 118.30 468	
1968 May 12, 1968 117.15 390	
1969 Feb. 21, 1969 118.04 508	
1970May30, 1970117.13268	
1971 Oct. 23, 1970 117.38 318	
<b>1972</b> May 12, 1972 116.06 190	

08076200 Halls Bayou at Deertrail Street, Houston, Tex. (12)

Location.--Lat 29°54'07", long 95°25'21", Harris County, at bridge on Deertrail Street, 0.6 mile (1.0 km) west of U.S. Highway 75, and about 11 miles (18 km) northwest of Houston.

Drainage area.--6.31  $mi^2$  (16.34  $km^2$ ).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1961.

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Remarks.--Urbanizing.

	Annu	<u>al m</u>	aximum	stage and discharge	
Water year 1965	D. Sept.	<u>ate</u> 22,	1965	Elevation (ft) 81.33	Discharge (ft ³ /s) 130
1966	Apr.	14,	1966	83.52	614
1967	Sept.	21,	1967	85.22	710
1968	May	10,	1968	82.65	318
1969	Feb.	21,	1969	84.73	596
1970	May	15,	1970	83.94	618
1971	Oct.	23,	1970	85.14	451
1972	Mar.	20,	1972	85.83	1,180

## 08076500 Halls Bayou at Houston, Tex. (12)

Location.--Lat 29°51'42", long 95°20'05", Harris County, on right bank at downstream side of bridge on Jensen Drive in northeast section of Houston and 11 miles (18 km) upstream from mouth.

# Drainage area.--24.7 mi² (64.0 km²).

<u>Gage.--Recording</u>. Datum of gage is 0.66 ft (0.20 m) below mean sea level, datum of 1929, adjustment of 1957.

Topographic characteristics.--Length of main stream, 19.0 miles (30.6 km); slope index, 4.41 ft/mi (0.84 m/km). (Map scale, 1:24,000)

Remarks.--Channel was rectified in June 1956.

Water year	Da	te	Gage height (ft)	Discharge (ft ³ /s)
1953	May	18, 1953	59.05	2,410
1954	July	30, 1954	60.65	2,020
1955	Feb.	6, 1955	56.62	1,530
1956	Jan.	22, 1956	51.53	357
1957	Apr.	29, 1957	52.51	620
1958	Oct.	15, 1957	57.09	1,280
1959	May	23, 1959	58.10	1,980
1960	June	26, 1960	58.79	2,230
1961	Sept.	12, 1961	60.50	3,400
1962	Nov.	13, 1961	58.28	2,540
1963	Nov.	27, 1962	57.02	1,870
1964	May	31, 1964	55.27	1,470
1965	Sept.	22, 1965	55.02	1,250
1966	Apr.	14.1966	58.93	2,640
1967	Sept.	21, 1967	57.65	1,110
1968	May	10, 1968	58.26	2,340
1969	Feb.	21, 1969	58.93	2,560
1970	May	15, 1970	58.33	2,340
1971	Oct.	23, 1970	58.22	2.300
1972	Mar.	21, 1972	60.70	3,780

#### CLEAR CREEK BASIN

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08077100 Clear Creek tributary at Hall Road, Houston, Tex. (12)

Location.--Lat 29°36'09", long 95°16'41", Harris County, at bridge on Hall Road in south Houston.

Drainage area.--1.33 mi² (3.44 km²). Prior to Oct. 1, 1966, 1.27 mi² (3.29 km²).

Gage.--Recording. Datum of gage is mean sea level, datum of 1929, supplementary adjustment of 1957 and 1959.

Remarks.--Urbanizing.

	Annu	al ma	aximum	stage and discharge	
Water year 1965	Dec.	<u>ate</u> 10,	1964	Elevation (ft) a42.73	Discharge (ft ³ /s) b100
1966	Feb.	9,	1966	c44.91	b150
1967	Apr.	13,	1967	d41.38	132
1968	May	10,	1968	e44.91	390
1969	May	3,	1969	a43.03	294
1970	May	21,	1970	a44.74	b450
1971	Sept.	30,	1971	42.87	291
1972	Apr.	27,	1972	a44.65	249

a Occurred at different time than peak discharge, backwater from Clear Creek.

b Estimated.

c Occurred May 21, 1966, backwater from Clear Creek.

d Occurred Oct. 4, 1966, backwater from vegetation in channel.

e Occurred May 11, 1968, backwater from Clear Creek.

#### CLEAR CREEK BASIN

08077550 Cowart Creek near Friendswood, Tex. (12)

Location.--Lat 29°30'46", long 95°13'21", Brazoria County, at downstream side of bridge on county road and 1.7 miles (2.7 km) southwest of Friendswood.

Drainage area.--18.0  $mi^2$  (46.6  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 8.05 miles (12.95 km); slope index, 4.67 ft/mi (0.88 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge Discharge $(ft^3/s)$ Water year Gage height (ft) Date 1965 a<11.70 <130 1966 Apr. 14, 1966 18.74 948 14.27 1967 Feb. 6, 1967 307 June 21, 1968 21.02 1968 1,280 Oct. 9, 1968 1969 19.10 938 1970 May 21, 1970 19.92 1,090 1971 Nov. 30, 1970 16.06 491 1972 May 11, 1972 21.52 1,380

< Less than amount shown.

a Maximum for period Aug. 25 to Sept. 30, 1965.

## CLEAR CREEK BASIN

08077600 Clear Creek near Friendswood, Tex. (12)

Location.--Lat 29°31'02", long 95°10'42", Galveston County, at bridge on Farm Road 528 and 1.5 miles (2.4 km) southeast of Friendswood.

Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Remarks.--Records are stage only.

Water year	Da	ate	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr.	14, 1966	13.38	
1967		-	10.74	-
1968	June 2	24, 1968	15.93	-
1969	May :	17, 1969	10.92	-
1970	•	-	<10.74	-
1971		_	<10.74	. <del>-</del>
1972	May	13, 1972	12.06	-

Annual maximum stage and discharge

< Less than amount shown.

#### HIGHLAND BAYOU BASIN

08077700 Highland Bayou at Hitchcock, Tex. (12)

Location.--Lat 29°21'12", long 95°01'49", Galveston County, at downstream side of bridge on Farm Road 2004, 0.6 mile (1.0 km) west of Hitchcock, and 7 miles (11 km) from mouth and Jones Bay.

Drainage area.--15.6  $mi^2$  (40.4  $km^2$ ).

Gage.--Recording. Datum of gage is mean sea level.

Remarks.--Stage record only.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1963	Sept. 25, 1963	2.54	-
1964	Feb. 5, 1964	3.33	-
1965	Dec. 10, 1964	7.70	-
1966	Dec. 18, 1965	5.49	-
1967	Nov. 11 or 12,	4.54	-
	1966		
1968	June 21, 1968	8.15	-
1969	Apr. 12, 1969	5.88	~
1970	Mar. 7, 1970	4.60	-
1971	Sept. 10, 1971	6.69	-
1972	May 12, 1972	6.96	-

#### HIGHLAND BAYOU BASIN

08077750 Highland Bayou tributary near Texas City, Tex. (12)

Location.--Lat 29°20'31", long 94°57'03", Galveston County, at Texas City Terminal Railway Company tracks, 600 ft (183 m) downstream from mouth, and 3 miles (5 km) southwest of Texas City.

Drainage area.--1.97  $mi^2$  (5.10  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Remarks.--Records are of stage only.

Water year	Date	(	Gage height (ft)	Discharge $(ft^3/s)$
1966	May 5,	1966 -	3.23	-
1967	Sept. 21,	1967	4.10	-
1968	June 29,	1968	3.74	-
1969	Feb. 14,	1969	4.29	-
1970	Dec. 6,	1969	3.79	-
1971	Sept. 10,	1971	5.08	-
1972	Nov. 23,	1971	3.60	-

08079570 Barnum Springs Draw near Post, Tex. (05)

Location.--Lat 33°16'54", long 101°23'30", Garza County, at culvert on Farm Road 122 and 6.4 miles (10.3 km) north of Post.

Drainage area.--4.99 mi² (12.92 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.8 miles (10.9 km); slope index, 63.1 ft/mi (12.0 m/km). (Map scale, 1:24,000)

Water year	Da	ate		Gage height (ft)	Discharge $(ft^3/s)$
1966	Aug.	10,	1966	3.55	58
1967	Mar.	23,	1967	3.65	63
1968	May	31,	1968	8.40	435
1969	May	6,	1969	4.25	97
1970	May	31,	1970	4.57	117
1971	Aug.	23,	1971	5.39	175
1972	Sept.	8,	1972	4.87	138

08079580 Rattlesnake Creek near Post, Tex. (05)

Location.--Lat 33°13'36", long 101°21'36", Garza County, at culvert on Farm Road 651 and 2.7 miles (4.3 km) north of Post.

Drainage area.--2.75  $mi^2$  (7.12  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.55 miles (7.32 km); slope index, 67.2 ft/mi (12.7 m/km). (Map scale, 1:24,000)

Water year	Dą	ate		Gage height (ft)	Discharge (ft ³ /s)
1966	Aug.	31,	1966	4.58	196
1967	June	27,	1967	5.88	295
1968	June	8,	1968	3.62	106
1969	May	6,	1969	3.09	70
1970	May	31,	1970	3.53	60
1971	Aug.	23,	1971	13.45	1,910
1972	Sept.	15,	1972 [.]	5.47	252

08080510 Guest-Flowers Draw near Aspermont, Tex. (08)

Location.--Lat 33°07'25", long 100°08'15", Stonewall County, at culvert on U.S. Highway 380, 0.2 mile (0.3 km) upstream from Tonk Creek, and 5.3 miles (8.5 km) east of Aspermont.

Drainage area,  $-2.52 \text{ mi}^2$  (6.53 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.9 miles (6.3 km); slope index, 23.6 ft/mi (4.5 m/km). (Map scale, 1:24,000)

Water year 1965 Ju	Date une 21, 1965	Gage height (ft) al7.85	$\frac{\text{Discharge (ft}^3/\text{s})}{155}$
1966 At	ug. 31, 1966	17.25	80
1967 Ji	une 9, 1967	19.57	410
1968 Ma	ay 30, 1968	<16.75	bc5
1969 Se	ept. 22, 1969	18.37	230
1970 Ma	ar. 6, 1970	16.87	b38
1971 Av	ug. 25, 1971	17.25	80
1972 00	ct. 16, 1971	18.05	180

## Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period June 4 to Sept. 30, 1965.

b Revised.

c Estimated.

08080750 Callahan Draw near Lockney, Tex. (05)

Location.--Lat 33°59'48", long 101°32'54", Floyd County, at culvert on Farm Road 784, 7 miles (11 km) upstream from Running Water Draw, and 10.5 miles (16.9 km) northwest of Lockney.

Drainage area.-- $37.5 \text{ mi}^2 (97.1 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 24, 1966	3.01	106
1967	May 31, 1967	3.69	185
1968	May 9,1968	2.95	100
1969	May 6, 1969	3.55	167
1970	-	<2.02	<5.0
1971	-	<2.02	<5.0
1972	Aug. 28, 1972	4.52	295

Annual maximum stage and discharge

< Less than amount shown.

08080918 Red Mud Creek near Spur, Tex. (25)

Location.--Lat 33°19'24", long 100°55'18", Dickens County, at culvert on Farm Road 1081 and 11 miles (18 km) southwest of Spur.

Drainage area.  $-65.1 \text{ mi}^2$  (168.6 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 23 miles (37 km); slope index, 16.1 ft/mi (3.0 m/km). (Map scale, 1:24,000)

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 24,	1966	15.14	4,340
1967	July 4,	1967	11.70	1,850
1968	June 16,	1968	14.13	2,900
1969	May 16,	1969	10.44	1,520
1970	Oct. 27,	1969	8.66	1,100
1971	Sept. 23,	1971	10.12	1,450
1972	May 6,	1972	8.63	1,090

08082900 North Elm Creek near Throckmorton, Tex. (03)

Location.--Lat 33°10'50'', long 99°22'05", Throckmorton County, at culvert on State Highway 24 and 11.3 miles (18.2 km) west of Throckmorton.

Drainage area.  $-3.58 \text{ mi}^2$  (9.27 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.0 miles (4.8 km); slope index, 36.4 ft/mi (6.9 m/km). (Map scale, 1:24,000)

Water year 1965	Date	Gage height (ft) -	$\frac{\text{Discharge (ft}^3/\text{s})}{\text{a0}}$
1966	Apr. 30, 1966	26.28	1,350
1967		<22.84	<160
1968	May 12, 1968	23.21	264
1969	May 5, 1969	24.50	650
1970	-	<23.07	<200
1971	Aug. 15, 1971	23.77	398
1972	May 12, 1972	24.36	600

## Annual maximum stage and discharge

< Less than amount shown.

a No flow for period June 3 to Sept. 30, 1965.
08085300 Humphries Draw near Haskell, Tex. (08)

Location.--Lat 33°10'40", long 99°34'30", Haskell County, at culvert on State Highway 24 and 9.3 miles (15.0 km) east of Haskell.

Drainage area.-- $3.53 \text{ mi}^2$  (9.14 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.27 miles (5.26 km); slope index, 21.8 ft/mi (4.1 m/km). (Map scale, 1:24,000)

Water year 1965 Se	Date pt. 19,	1965	Gage height (ft) al4.38	$\frac{\text{Discharge (ft}^3/\text{s})}{(†)}$
1966 4,1	- ·	1066	16 71	820
1967 Ju	g. 23, 1y 20,	1967	17.29	1,150
1968 Ja:	n. 21,	1968	17.65	1,250
1969 Ma	y 7,	1969	18.80	1,650
1970 Ma	r. 7,	1970	16.93	1,000
1971 Au	g. 15,	1971	19.41	1,840
1972 Se	pt. 21,	1972	15.49	(†)

Annual maximum stage and discharge

+ Discharge not determined.

a Maximum for period June 3 to Sept. 30, 1965.

08086260 Pecan Creek near Eolian, Tex. (23)

Location.--Lat 32°35'01", long 99°01'57", Stephens County, at county road crossing 1.4 miles (2.3 km) east of Farm Road 1853, 3.3 miles (5.3 km) upstream from Battle Creek, and 5.8 miles (9.3 km) south of Eolian.

Drainage area.--25.4  $mi^2$  (65.8  $km^2$ ).

Gage.--Recording. Altitude of gage is 1,274 ft (388 m), from AMS topographic map.

Water year	Date	Gage height (ft)       7     5.85       8     11.26       9     12.78	Discharge (ft ³ /s)
1967	July 19, 196		335
1968	Apr. 18, 196		580
1969	May 6, 196		648
1970	Dec. 28, 196	9 5.49	320
1971	May 29,197	1 7.25   2 6.06	400
1972	May 7,197		348

08088100 Salt Creek at Olney, Tex. (03)

Location.--Lat 33°22'13", long 98°44'40", Young County, on right bank 21 ft (6 m) downstream from bridge on State Highway 199 and 0.5 mile (0.8 km) east of Olney.

Drainage area.--9.6  $mi^2$  (24.9  $km^2$ ).

Gage.--Recording. Datum of gage is 1,164.03 ft (354.80 m) above mean sea level, datum of 1929.

Historical data.--Maximum stage since at least 1908, 16.7 ft (5.1 m) in June 1915, from information by local residents.

Remarks.--Rain gage at site.

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Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1958	Sept. 16, 19	8.18	345
1959	June 22, 19	59 7.30	264
1960	Oct. 3, 19	10.16	1,040
1961	Sept. 12, 19	61 5.95	162
1962	Nov. 22, 19	9.66	485
1963	Nov. 26, 19	62 9.32	360
1964	May 29, 19	64 10.05	498
1965	May 10, 19	65 6.62	148
1966	Apr. 29, 19	66 12.14	11,500
1967	Sept. 18, 19	67 9.74	625
1968	Jan. 21, 19	68 8.83	. 273
1969	May 5, 19	69 11.67	2,640
1970	Apr. 30, 19	9.55	370
1971	Aug. 26, 19	9.41	362
1972	May 12, 19	12.25	12,500

08088300 Briar Creek near Graham, Tex. (03)

Location.--Lat 33°12'40", long 98°37'05", Young County, on downstream side of bridge on Farm Road 1769, 2.5 miles (4.0 km) upstream from mouth, and 7 miles (11 km) northwest of Graham.

Drainage area.--19.7  $mi^2$  (51.0  $km^2$ ).

Gage.--Recording.

Historical data.--Maximum stage since at least 1900, 15.2 ft (4.6 m) in September 1955; flood in May 1957 reached a stage of 15.0 ft (4.6 m), from information by local residents.

<u>Water year</u> 1959 1960	Da June Oct.	<u>ate</u> 23, 3,	1959 1959	Gage height (ft) 4.08 9.02	Discharge (ft ³ /s) 207 649
1961	Oct.	18,	1960	8.42	555
1963	Apr.	27,	1962	5.10	268
1964	May	30,	1964	6.47	390
1965	Nov.	19,	1964	7.14	444
1966	Apr.	23,	1966	11.42	723
1967	July	19,	1967	8.62	516
1968	Mar.	13,	1968	4.50	220
1969	Sept.	23,	1969	8.22	543
1970	Apr.	30,	1970	12.30	2,720
1971	Aug.	24,	1971	11.50	1,840
1972	May	12,	1972	12.20	2,420

08089100 Elm Creek tributary near Graford, Tex. (02)

Location.--Lat 32°54'35", long 98°17'35", Palo Pinto County, at culvert on Farm Road 4, 0.2 mile (0.3 km) upstream from Elm Creek, and 3.2 miles (5.1 km) southwest of Graford.

Drainage area.  $-1.07 \text{ mi}^2$  (2.77 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.9 miles (3.1 km); slope index, 68.5 ft/mi (13.0 m/km). (Map scale, 1:62,500)

Water year 1965	Date	Gage height (ft)	Discharge (ft ³ /s)
1000			
1966	Apr. 30, 1966	12.71	40
1967	May 20, 1967	12.21	33
1968	Mar. 20, 1968	11.15	16
1969	Mar. 23, 1969	11.69	25
1970	Dec. 29, 1969	11.41	21
1971	Oct. 16, 1970	10.21	5.0
1972	June 16, 1972	11.47	22

Annual maximum stage and discharge

a No flow for period June 22 to Sept. 30, 1965.

08090850 Cidwell Branch near Granbury, Tex. (02)

Location.--Lat 32°35'41", long 97°46'24", Hood County, at culvert on State Highway 51 and 10.5 miles (16.9 km) north of Granbury.

Drainage area.  $-3.37 \text{ mi}^2$  (8.73 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.65 miles (9.09 km); slope index, 49 ft/mi (9 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 29, 1966	16.65	540
1967	-	<11.16	<37
1968	May 10, 1968	14.44	290
1969	May 6, 1969	11.36	48
1970	Oct. 11, 1969	13.43	198
1971	July 29, 1971	13.80	230
1972	Oct. 19, 1971	12.52	123

Annual maximum stage and discharge

< Less than amount shown.

08091200 Morris Branch near Bluff Dale, Tex. (02)

Location.--Lat 32°21'25", long 98°00'00", Erath County, at culvert on On U.S. Highway 377 and 1.2 miles (1.9 km) east of Bluff Dale.

Drainage area.--0.06 mi² (0.16 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.23 miles (0.37 km); slope index, 382 ft/mi (72 m/km). (Map scale, 1:24,000)

Water year 1965	Date	Gage height (ft) a<11.44	Discharge (ft ³ /s) <25
1966	Apr. 29, 1966	13.71	107
1967	May 11, 1967	11.76	35
1968	Aug. 14, 1968	12.54	61
1969	Apr. 12, 1969	10.63	7.4
1970	Oct. 11, 1969	11.99	45
1971	July 29, 1971	13.55	104
1972	Oct. 19, 1971	12.73	68

# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period June 10 to Sept. 30, 1965.

08091700 Panter Branch near Tolar, Tex. (02)

Location.--Lat 32°20'59", long 97°51'25", Hood County, at culvert on State Highway 51, 2.5 miles (4.0 km) upstream from mouth, and 4.6 miles (7.4 km) southeast of Tolar.

Drainage area.--7.82  $mi^2$  (20.25  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.0 miles (8.0 km); slope index, 49 ft/mi (9 m/km). (Map scale, 1:24,000).

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#### Annual maximum stage and discharge

Water year	Da	ite		Gage height (ft)	Discharge (ft ³ /s)
1966	Apr.	29,	1966	14.49	880
1967	May	20,	1967	16.9	1,650
1968	May	9,	1968	21.70	a3,650
1969	May	7,	1969	13.50	610
1970	Oct.	11,	1969	13.61	640
1971	July	29,	1971	14.53	890
1972	Sept.	16,	1972	21.88	3,750

a Revised.

08093200 Bond Branch near Hillsboro, Tex. (09)

Location.--Lat 32°02'20", long 97°06'30", Hill County, at culvert on U.S. Highway 77 and 2.3 miles (3.7 km) northeast of Hillsboro.

Drainage area.--0.36  $mi^2$  (0.93  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

<u>Topographic characteristics.--Length of main stream</u>, 0.85 mile (1.37 km); slope index, 70.6 ft/mi (13.4 m/km). (Map scale, 1:24,000)

Water year 1965	Date June 24, 1965	Gage height (ft) 14.19	Discharge (ft ³ /s) 305
1966	Apr. 25. 1966	14.00	285
1967	May 1, 1967	11.0	34
1968	May 9, 1968	15.91	505
1969	May 7, 1969	13.09	197
1970	Mar. 3, 1970	11.18	44
1971	Apr. 17, 1971	12.83	168
1972	Oct. 19, 1971	14.43	328

08093400 Cobb Creek near Abbott, Tex. (09)

Location.--Lat 31°55'11", long 97°05'57", Hill County, at downstream side of bridge on service road on downstream side of Interstate Highway 35, 1.5 miles (2.4 km) downstream from Missouri, Kansas, and Texas Railroad Co. bridge, 2.8 miles (4.5 km) northwest of Abbott, and 9 miles (14 km) upstream from mouth.

Drainage area.--11.7 mi² (30.3 km²).

- Gage.--Recording. Datum of gage is 575.00 ft (175.26 m) above mean sea level, datum of 1929.
- Topographic characteristics.--Length of main stream, 10.7 miles (17.2 km); slope index, 20.7 ft/mi (3.9 m/km). (Map scale, 1:24,000)
- Remarks.--Maximum stage since at least 1932, 11.1 ft (3.4 m), date unknown, from information by Texas Highway Department.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	May <u>31</u> , 1967	7.85	785
1968	May 9, 1968	10.50	2,720
1969	May 7,1969	7.77	880
1970	Mar. 3, 1970	7.45	760
			. •
1971	May 29, 1971	9.65	1,900
1972	Dec. 9, 1971	7.49	780

08094000 Green Creek subwatershed No. 1 near Dublin, Tex. (02)

Location.--Lat 32°09'57", long 98°20'28", Erath County, near center of dam on main headwater channel of Green Creek, 0.9 mile (1.4 km) downstream from county road, 1.3 miles (2.1 km) east of Farm Road 219, and 5.5 miles (8.8 km) north of Dublin.

 $\neg$ Drainage area.--3.34 mi² (8.65 km²).

- <u>Gage.--Recording.</u> Datum of gage is 1,408.00 ft (429.16 m) above mean level, datum of 1929 (levels by U.S. Soil Conservation Service).
- Remarks.--Peaks are based on maximum inflow (average for 5- or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. No adjustment made for reservoir losses. One recording rain gage is located in the watershed above the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Date	Discharge (ft ³ /s)
1955	May 18, 1955	3,630
1956	May 1, 1956	11,500
1957	Apr. 26, 1957	887
1958	July 22, 1958	748
1959	June 26, 1959	498
1960	Oct. 3, 1959	1,540
1961	July 9, 1961	261
1962	Sept. 7, 1962	516
1963	Apr. 28, 1963	621
1964	Sept. 21, 1964	2,090
1965	May 15, 1965	365
1966	Apr. 30, 1966	645
1967	Sept. 14, 1967	102
1968	May 12, 1968	3,540
1969	July 27, 1969	604
1970	Mar. 13, 1970	248
1971	May 29, 1971	4,050
1972	Oct. 19, 1971	960

08095220 South Bosque River near McGregor, Tex. (09)

Location.--Lat 31°23'22", long 97°22'54", McLennan County, on downstream side of bridge on State Highway 317 and 3.8 miles (6.1 km) south of McGregor.

Drainage area.--15.9  $mi^2$  (41.2  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.14 miles (9.88 km); slope index, 28.4 ft/mi (5.4 m/km). (Map scale, 1:24,000)

#### Discharge $(ft^3/s)$ Water year Date Gage height (ft) 1967 Apr. 22, 1967 2.73 178 1968 9.56 3,900 May 10, 1968 1,430 6.05 1969 Apr. 12, 1969 Mar. 6, 1970 1970 1,240 5.69 3,580 1971 July 25, 1971 9.18 Oct. 20, 1971 1972 4.01 532

08095250 Willow Branch at McGregor, Tex. (09)

Location.--Lat 31°26'25", long 97°25'15", McLennan County, at culvert on U.S. Highway 84 and on west edge of McGregor.

Drainage area.--2.52  $mi^2$  (6.53  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.55 miles (5.71 km); slope index, 19.4 ft/mi (3.7 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Sept. 18, 1966	a5.54	367
1967	Apr. 22, 1967	4.90	238
1968	July 8, 1968	5.39	337
1969	Apr. 12, 1969	5.63	385
1970	Mar. 16, 1970	4.98	255
1971	July 30, 1971	6.59	610
1972	-	<4.85	<229

Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period July to September 1966.

08096550 Box Branch at Robinson, Tex. (09)

Location.--Lat 31°29'35", long 97°08'45", McLennan County, at culvert on Loop 340 in Robinson and 4.9 miles (7.9 km) south of Waco.

Drainage area.--0.40  $mi^2$  (1.04  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile (1.29 km); slope index, 60 ft/mi (11 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1905	-	-	au
1966	May 1, 1966	12.90	460
1967	-	<9.78	<20
1968	June 24, 1968	10.93	150
1969	-	<9.78	<29
1970	-	<9.78	<29
1971	July 27, 1971	11.14	179
1972	Nov. 17, 1971	10.35	82

Annual maximum stage and discharge

< Less than amount shown.

08096800 Cow Bayou subwatershed No. 4 near Bruceville, Tex. (09)

Location.--Lat 31°20'10", long 97°15'50", McLennan County, near center of dam on Foster Branch, 1.0 mile (1.6 km) upstream from South Fork Cow Bayou, and 2.1 miles (3.4 km) west of Bruceville.

Drainage area.  $-5.25 \text{ mi}^2$  (13.60 km²).

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<u>Gage.--Recording.</u> Datum of gage is 574.46 ft (175.10 m) above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peak discharge based on maximum inflow (average for 5- or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff are on file in the U.S. Geological Survey District office.

## Annual maximum discharge

Water year	E	ate	Discharge $(ft^3/s)$
1957	May ⁻	11, 1957	6,900
1958	Oct.	14, 1957	1,510
1959	June	23, 1959	1,690
1960	Oct.	4, 1959	1,400
1961	June	8, 1961	628
1962	June	30, 1962	293
1963	Oct.	26, 1962	19
1964	June	16, 1964	151
1965	May	16, 1965	1,780
1966	Feb.	9, 1966	1,830
1967	Sept.	17, 1967	36
1968	May	10, 1968	2,340
1969	Mar.	23, 1969	481
1970	Mar.	16, 1970	550
1971	Apr.	18, 1971	1,680
1972	Nov.	17, 1971	742

08098300 Little Pond Creek at Burlington, Tex. (17)

Location.--Lat 31°01'35", long 96°59'17", Milam County, on left bank 80 ft (24 m) downstream from bridge on U.S. Highway 77, 1.0 mile (1.6 km) north of Burlington, and 2.5 miles (4.0 km) downstream from Keys Creek.

Drainage area.--22.2  $mi^2$  (57.5  $km^2$ ).

- Gage.--Water-stage recorder. Datum of gage is 388.51 ft (118.42 m) above mean sea level, datum of 1929.
- Historical data.--Maximum stage since at least 1938, 17.5 ft (5.3 m) in 1950, from information by local residents.
- Remarks.--Three recording rain gages are located in the watershed. Data from these gages are on file in the U.S. Geological Survey Austin Field Unit office.

#### Annual maximum stage and discharge

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1963	Nov.	27,	1962	7.50	418
1964	Sept.	24,	1964	10.09	745
1965	May	16,	1965	15.61	5,980
1966	Apr.	25,	1966	13.02	2,550
1967	May	ĺ,	1967	9.82	748
1968	May	10,	1968	al4.60	4,250
1969	Apr.	12,	1969	14.72	4,530
1970	Mar.	7,	1970	11.67	1,560
1971	May	9,	1971	13.06	2,600
1972	Dec.	9,	1971	10.00	800

a Occurred June 24, 1968.

08099350 Sabana River tributary near De Leon, Tex. (23)

- Location.--Lat 32°06'44", long 98°33'58", Comanche County, 13 ft (4 m) upstream from culvert on Farm Road 587 and 1.6 miles (2.6 km) west of De Leon.
- Drainage area.--0.52 mi² (1.35 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.02 miles (1.64 km); slope index, 55.8 ft/mi (10.6 m/km). (Map scale, 1:24,000)

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 29,	1966	a7.56	51
1967	Sept. 21,	1967	7.97	68
1968	Jan. 20,	1968	7.22	41
1969	Aug. 25,	1969	3.92	47
1970	Mar. 7,	1970	3.66	36
1971	May 27,	1971	4.15	56
1972	Apr. 27,	1972	3.69	38

## Annual maximum stage and discharge

a Maximum for period February to September 1966.

08100100 Eidson Creek near Hamilton, Tex. (09)

Location.--Lat 31°46'10", long 98°07'25", Hamilton County, at culvert on U.S. Highway 281 and 4.6 miles (7.4 km) north of Hamilton.

Drainage area.--2.91 mi²  $(7.54 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.03 miles (6.48 km); slope index, 55 ft/mi (10 m/km). (Map scale, 1:24,000)

Water year 1965	Da	-		Gage height (ft)	$\frac{\text{Discharge (ft}^3/\text{s})}{a0}$
1966	Oct.	18,	1965	10.06	150
1967	June	12,	1967	10.00	138
1968	May	27,	1968	12.63	900
1969	Aug.	4,	1969	10.08	155
1970	May	31,	1970	10.51	259
1971	Sept.	23,	1971	10.18	180
1972	Dec.	9,	1971	10.67	298

Annual maximum stage and discharge

08100400 Bermuda Branch near Gatesville, Tex. (09)

Location.--Lat 31°32'26", long 97°47'53", Coryell County, at culvert on State Highway 36 and 8 miles (13 km) northwest of Gatesville.

Drainage area.--0.50  $mi^2$  (1.30  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.17 miles (1.88 km); slope index, 168 ft/mi (32 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966		_	a0
1967	-	<5.63	<46
1968	Jan. 21, 1968	5.6	44
1969	Feb. 21, 1969	5.79	60
1970	Nov. 1, 1969	5.74	56
1971	July 25, 1971	6.79	213
1972	Dec. 10, 1971	5.79	57

## Annual maximum stage and discharge

< Less than amount shown.

a No flow for period July to September 1966.

08100800 Hoffman Branch near Hamilton, Tex. (09)

Location.--Lat 31°35'01", long 98°11'45", Hamilton County, at culvert on Farm Road 2414 and 9.3 miles (15.0 km) southwest of Hamilton.

Drainage area.--5.56  $mi^2$  (14.4  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.50 miles (8.85 km); slope index, 49 ft/mi (9 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Sept. 18, 1966	11.71	a50
1967	July 1, 1967	5.59	17
1968	Jan. 21, 1968	9.19	620
1969	May 7,1969	8.04	510
1970	Sept. 2, 1970	12.17	1,570
1971	July 28, 1971	12.75	al,400
1972	Oct. 19, 1971	13.55	2,050

Annual maximum stage and discharge

a Discharge estimated, culvert was partially plugged with debris.

08102900 School Branch near Lampasas, Tex. (23)

Location.--Lat 31°13'48", long 98°09'25", Lampasas County, at culvert on Farm Road 1690 and 11.5 miles (18.5 km) north of Lampasas.

Drainage area.--0.90  $mi^2$  (2.33  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.95 mile (1.53 km); slope index, 58 ft/mi (11 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 12, 1966	a5.36	83
1967	May 1, 1967	4.88	53
1968	May 25, 1968	5.40	88
1969	May 7, 1969	4.95	55
1970	-	<4.76	<50
1971	-	<4.76	<50
1972	-	<4.76	<50

## Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period July to September 1966.

08103450 Fleece Branch near Lampasas, Tex. (23)

Location.--Lat 31°05'46", long 98°12'30", Lampasas County, at culvert on U.S. Highways 183 and 190, 0.7 mile (1.1 km) upstream from Burleson Creek, and 2.8 miles (4.5 km) northwest of Lampasas.

Drainage area.--1.08  $mi^2$  (2.80  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.00 miles (3.22 km); slope index, 100 ft/mi (19 m/km). (Map scale, 1:24,000)

Water year 1965	Date	Gage height (ft) -	$\frac{\text{Discharge (ft}^3/\text{s})}{a0}$
1966	June 19, 1966	15.18	980
1967	-	<9.81	<60
1968	July 8, 1968	10.17	101
1969	Apr. 12, 1969	12.33	425
1970	Mar. 6, 1970	10.57	124
1971	May 9, 1971	12.01	b298
1972	May 7,1972	10.29	116

## Annual maximum stage and discharge

< Less than amount shown.

a No flow for period August to September 1965.

b Discharge estimated, culvert was partially plugged with debris.

08104850 South Fork San Gabriel River near Bertram, Tex. (14)

Location.--Lat 30°43'14", long 98°06'15", Burnet County, on downstream side of bridge on Farm Road 243 and 3.4 miles (5.5 km) southwest of Bertram.

Drainage area.  $-8.84 \text{ mi}^2$  (22.9 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.8 miles (9.3 km); slope index, 40 ft/mi (8 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year 1967 1968 1969 1970	Date May 1, 1967 May 17, 1968 Apr. 12, 1969 Mar. 6, 1970	Gage height (ft) 3.93 12.14 6.68 6.92	Discharge (ft ³ /s) (†) (†) (†) (†) (†)
1971	July 30, 1971	6.28	(†)
1972	Oct. 19, 1971	4.75	(†)

+ Discharge not determined.

08105900 Avery Branch near Taylor, Tex. (14)

Location.--Lat  $30^{\circ}29'11''$ , long  $97^{\circ}27'27''$ , Williamson County, at culvert on Farm Road 973 and 6.4 miles (10.3 km) southwest of Taylor.

Drainage area.-- $3.42 \text{ mi}^2$  (8.86 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.25 miles (6.84 km); slope index, 12.9 ft/mi (2.4 m/km). (Map scale, 1:24,000)

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#### Annual maximum stage and discharge

Water year	D	ate		Gage height (ft)	Discharge (ft ³ /s)
1966	Sept.	27,	1966	a6.20	280
1967	May	2,	1967	7.21	595
1968	Nov.	10,	1967	7.03	535
1969	Apr.	12,	1969	7.55	710
1970	May	15,	1970	7.55	710
1971	Oct.	23,	1970	6.46	352
1972	May	1,	1972	10.11	2,950

a Maximum for period July to September 1966.

08108800 Little Branch near Bryan, Tex. (17)

Location.--Lat 30°45'14", long 96°28'01", Robertson County, at culvert on U.S. Highway 190 and State Highway 6 and 8.3 miles (13.4 km) northwest of Bryan.

Drainage area.--0.14  $mi^2$  (0.36  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.43 mile (0.69 km); slope index, 108 ft/mi (20 m/km). (Map scale, 1:24,000)

Water year 1965	Date	Gage height (ft) -	$\frac{\text{Discharge (ft}^3/\text{s})}{a0}$
1966 Ma	y 1, 1966	13.33	99
1967 Oc	t. 14, 1966	13.03	87
1968 Ju	ıly 9, 1968	13.08	88
1969 Ar	or. 13, 1969	12.36	60
1970 Ma	iy 24, 1970	11.73	39
1971	-	12.01	48
1972	-	<9.79	<1.0

## Annual maximum stage and discharge

< Less than amount shown.

08110350 Plummers Creek at Mexia, Tex. (09)

Location.--Lat 31°40', long 96°30', Limestone County, at culvert on State Highway 14 and at southwest city limits of Mexia.

Drainage area,  $-4.42 \text{ mi}^2$  (11.4 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.2 miles (8.4 km); slope index, 14.8 ft/mi (2.8 m/km). (Map scale, 1:24,000)

Water year 1965	Da	ite		Gage height (ft)	$\frac{\text{Discharge (ft}^3/\text{s})}{a0}$
1966	Apr.	18,	1966	15.34	2,000
1967	Sept.	7,	1967	11.65	570
1968	May	10,	1968	14.92	1,830
1969	Apr.	12,	1969	11.95	680
1970	Dec.	6,	1970	12.49	870
1971	Oct.	12,	1970	14.01	1,450
1972	Oct.	11,	1971	13.18	1,130

Annual maximum stage and discharge

08111100 Winkleman Creek near Brenham, Tex. (17)

Location.--Lat 30°15'19", long 96°15'44", Washington County, at culvert on State Highway 90 and 10.7 miles (17.2 km) northeast of Brenham.

Drainage area.--0.75 mi² (1.94 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.28 miles (2.06 km); slope index, 37.5 ft/mi (7.1 m/km). (Map scale, 1:24,000)

Water year 1965	Date	Gage height (ft)	Discharge (ft ³ /s) a0
	· · · · · · · · · · · · · · · · · · ·		
1966	Feb. 27, 1966	10.53	95
1967	-	<9.81	<30
1968	July 9, 1968	13.27	500
1969	Apr. 12, 1969	12.75	390
1970	Sept. 2, 1970	12.04	270
1971	Oct. 11, 1970	12.58	364
1972	Apr. 27, 1972	11.58	208

## Annual maximum stage and discharge

< Less than amount shown.

08114900 Seabourne Creek near Rosenberg, Tex. (12)

Location.--Lat 29°31'27", long 95°48'29", Fort Bend County, at culvert on State Highway 36 and 2.4 miles (3.9 km) south of Rosenberg.

Drainage area.--5.70  $mi^2$  (14.8  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.3 miles (8.5 km); slope index, 3.24 ft/mi (0.61 m/km). (Map scale, 1:62,500)

## Annual maximum stage and discharge

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1966	Sept.	9,	1966	a4.92	310
1967	Aug.	25,	1967	4.82	160
1968	June	23,	1968	6.21	295
1969	May	16,	1969	6.78	355
1970	May	1,	1970	4.21	112
1971	Sept.	10,	1971	6.37	310
1972	May	10,	1972	6.25	300

a Maximum for period Aug. 12 to Sept. 30, 1966.

08116400 Dry Creek near Rosenberg, Tex. (12)

Location.--Lat 29°30'42", long 95°44'45", Fort Bend County, on right bank, 38 ft (12 m) downstream from county road bridge, 5 miles (8 km) southeast of Rosenberg, and 8.2 miles (13.2 km) upstream from Smithers Lake spillway.

Drainage area.--8.53 mi² (22.1 km²).

Gage.--Recording. Datum of gage is 71.90 ft (21.92 m) above mean sea level, datum of 1929, supplementary adjustment of 1943.

Historical data.--Highest flood since at least 1932, Oct. 31, 1959, from information by local residents.

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1959	Apr.	11,	1959	8.00	504
1960	Oct.	31,	1959	12.66	2,410
1961	June	19,	1961	11.13	1,120
1962	Nov.	13,	1961	6.88	348
1963	Jan.	17,	1963	9.83	762
1964	Mar.	19,	1964	8.13	386
1965	Feb.	16,	1965	10.30	860
1966	Apr.	14,	1966	10.96	900
1967	Aug.	25,	1967	6.56	338
1968	June	24,	1968	10.30	860
1969	May	16,	1969	11.29	975
1970	Sept.	1,	1970	9.10	466
1971	Oct.	12,	1970	12.26	1,400
1972	May	10,	1972	10.12	766

#### SAN BERNARD RIVER BASIN

08117800 Mound Creek tributary at Guy, Tex. (12)

Location.--Lat 29°20'49", long 95°46'30", Fort Bend County, at culvert on State Highway 36 and 0.2 mile (0.3 km) southeast of Guy.

Drainage area.--1.48  $mi^2$  (3.83  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.80 miles (4.51 km); slope index, 3.3 ft/mi (0.6 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	-	a<1.58 <1.58	(†)
1968 1969	· -	<1.58 <1.58	(†)
1970	-	<1.58	(†)
1971 1972	Oct. 11, 1970 May 10, 1972	2.28 2.20	206 195

## Annual maximum stage and discharge

+ Discharge not determined.

< Less than amount shown.

a Maximum for period July 12 to Sept. 30, 1966.

08123620 Sulphur Springs Draw near Wellman, Tex. (05)

Location.--Lat 33°04'36", long 102°27'54", Terry County, at culvert on Farm Road 402 and 3 miles (5 km) northwest of Wellman.

## Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water vear	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Aug. 24, 19	66 7.41	240
1967	June 25, 19	67 4.01	102
1968	July 1, 19	68 3.32	69
1969	-	<2.05	ab<5
1970	-	<2.05	ab<5
1971	June 5,19	71 3.78	91
1972	Sept. 14, 19	72 6.20	98

# Annual maximum stage and discharge

< Less than amount shown.

a Estimate.

b Revised.

08123750 Coahoma Draw tributary near Big Spring, Tex. (08)

Location.--Lat 32°21'17", long 101°24'18", Howard County, at culvert on State Highway 350 and 8.5 miles (13.7 km) northeast of Big Spring.

Drainage area.--2.38  $mi^2$  (6.16  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.42 miles (3.89 km); slope index, 32.4 ft/mi (6.1 m/km). (Map scale, 1:24,000)

Water year 1965	Da Sept.	<u>ite</u> 21,	1965	Gage height (ft) a4.05	Discharge (ft ³ /s) 265
1966	Apr.	30,	1966	3.47	185
1967	July	20,	1967	5.54	480
1968	June	15,	1968	4.47	328
1969	June	9,	1969	6.12	870
1970	May	30,	1970	6.11	840
1971	Aug.	8,	1971	5.89	520
1972	Sept.	2,	1972	6.20	1,110

Annual maximum stage and discharge

a Maximum for period June to September 1965.

08123760 Bull Creek tributary near Forsan, Tex. (08)

Location.--Lat 32°08'23", long 101°10'53", Howard County, at culvert on Farm Road 2183 and 11.4 miles (18.3 km) east of Forsan.

Drainage area.  $-0.40 \text{ mi}^2$  (1.04 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.9 mile (1.4 km); slope index, 128 ft/mi (24 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 30, 1966	a8.23	140
1967	-	-	0
1968	-	<6.02	bc<5
1969	-	<6.02	bc<5
1970	-	<6.02	bc<5
1971	Aug. 11, 1971	8.74	175
1972	May 5, 1972	9.69	253

#### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period February to September 1966.

b Estimate.

c Revised.

08123920 Bitter Creek near Silver, Tex. (07)

Location.--Lat 31°58'48", long 100°42'52", Coke County, at culvert on Farm Road 2059, 2.5 miles (4.0 km) upstream from mouth, and 6.4 miles (10.3 km) south of Silver.

Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	July 19, 1967	3.24	98
1968	May 10, 1968	6.42	370
1969	-	<2.10	ab<5
1970	-	<2.10	ab<5
1971	June 22, 1971	10.42	850
1972	Oct. 4, 1971	2.73	66

## Annual maximum stage and discharge

< Less than amount shown.

a Estimate.

b Revised.

08125450 Salt Creek tributary near Hylton, Tex. (08)

Location.--Lat 32°07'57", long 100°14'02", Nolan County, at culvert on Farm Road 1170 and 1.8 miles (2.9 km) west of Hylton.

Drainage area.--0.25 mi²  $(0.65 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.72 mile (1.16 km); slope index, 185 ft/mi (35 m/km). (Map scale, 1:24,000)

Water year	Date		Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. <u>30</u> ,	1966	a5.14	36
1967	July 19,	1967	8.18	155
1968	Aug. 14,	1968	7.41	120
1969	May 4,	1969	7.40	119
1970	Sept. 26,	1970	5.32	41
1971	Aug. 1,	1971	6.84	96
1972	Sept. 3,	1972	<4.82	<5

#### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period February to September 1966.

08127100 Dry Creek near Christoval, Tex. (07)

Location.--Lat 31°05'21", long 100°20'56", Tom Green County, at culvert on Farm Road 2084 and 11.4 miles (18.3 km) southeast of Christoval.

Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year 1965	Aug.	<u>ate</u> 12,	1965	Gage height (ft) al.77	$\frac{\text{Discharge } (\text{ft}^3/\text{s})}{\text{b}^{<51}}$
1966	Sept.	18,	1966	3.64	285
1967	July	20,	1967	4.64	470
1968		-		<1.41	b<10
1969		-		<1.41	b<10
1970	Dec.	29,	1969	1.73	b<48
1971	May	29,	1971	7.26	1,050
1972	May	14,	1972	1.64	42

Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period June to September 1965.

b Revised.
08133300 Quarry Creek near Sterling City, Tex. (07)

Location.--Lat 31°50'48", long 101°09'18", Sterling County, at culvert on State Highway 158 and 9.8 miles (15.8 km) west of Sterling City.

Drainage area.-- $3.25 \text{ mi}^2$  (8.42 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

<u>Topographic characteristics.--Length of main stream</u>, 3.0 miles (4.8 km); slope index, 95 ft/mi (18 m/km). (Map scale, 1:24,000)

Water year 1965	Date Sept. 18,	<u>Ga</u> 1965	ge height (ft) a4.73	$\frac{\text{Discharge } (\text{ft}^3/\text{s})}{170}$
1966	Oct. 17,	1965	4.81	190
1967 .	June 2,	1967	4.83	195
1968	May 10,	1968	4.57	130
1969	Sept. 9.	1969	5.65	420
1970	Sept. 14,	1970	4.50	116
1971	Sept. 21,	1971	5.48	380
1972 I	May 12,	1972	5.44	370

# Annual maximum stage and discharge

a Maximum for period June to September 1965.

08133800 Broome Creek near Broome, Tex. (07)

Location.--Lat 31°46'05", long 100°51'09", Sterling County, at culvert on U.S. Highway 87 and 1.1 miles (1.8 km) northwest of Broome.

# Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year 1965	Da Sept.	ite 18,	1965	Gage height (ft) a2.81	Discharge (ft ³ /s) 150
1966	Oct.	17,	1965	2.87	160
1967	Mar.	20,	1967	2.60	115
1968	Apr.	10,	1968	<2.37	c<5
1969	Apr.	12,	1969	2.60	107
1970	Dec.	29,	1969	<2.37	c<5
1971	Apr.	16,	1971	<2.37	bc10
1972	Apr.	20,	1972	<2.37	<5

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# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period June to September 1965.

b Estimated.

c Revised.

08134300 Nolke Station Creek near San Angelo, Tex. (07)

Location.--Lat 31°31'34", long 100°33'46", Tom Green County, at culvert on Farm Road 2288 and 8.6 miles (13.8 km) northwest of San Angelo.

Drainage area.  $-0.59 \text{ mi}^2 (1.53 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.72 miles (2.77 km); slope index, 67 ft/mi (13 m/km). (Map scale, 1:24,000)

Water year 1965	Da May	<u>ate</u> 17,	1965	Gage height (ft) 7.58	$\frac{\text{Discharge (ft}^3/\text{s})}{281}$
1966	Anr	30.	1966	6.16	170
1967	Mar.	22.	1967	3.89	42
1968	June	17,	1968	<2.74	a<5
1969	Aug.	26,	1969	3.01	a<5
1970	Oct.	27,	1969	<2.74	a<5
1971	Aug.	10,	1971	7.80	300
1972	Sept.	9,	1972	<2.74	<5

# Annual maximum stage and discharge

< Less than amount shown.

a Revised.

08134400 Gravel Pit Creek near San Angelo, Tex. (07)

Location.--Lat 31°27'54", long 100°31'17", Tom Green County, at culvert on Farm Road 2288 and 5 miles (8 km) west of San Angelo.

Drainage area.--0.19  $mi^2$  (0.49  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.55 mile (0.89 km); slope index, 80 ft/mi (15 m/km). (Map scale, 1:24,000)

#### Discharge $(ft^3/s)$ Water year Gage height (ft) Date 1965 a2.09 24 June 4, 1965 24, 1966 2.79 1966 41 Aug. Sept. 4, 1967 25 1967 2.15 10, 1968 1968 Apr. 1.63 15 1969 26, 1969 1.30 b<18 Aug. 28, 1969 b<18 1970 Dec. 1.07 1, 1971 3.49 62 1971 Aug. Sept. 9, 1972 18 1972 1.80

# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period May to September 1965.

08136200 Puddle Creek near Veribest, Tex. (07)

Location.--Lat 31°30'38", long 100°09'31", Tom Green County, at culvert on Farm Road 1692 and 6.2 miles (10.0 km) northeast of Veribest.

Drainage area.--12.05 mi² (31.21 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.7 miles (9.2 km); slope index, 15.5 ft/mi (2.9 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	July 31, 1966	a5.70	72
1967	July 19, 1967	5.46	50
1968	May 9, 1968	5.11	b<25
1969	Sept. 9, 1969	6.35	115
1970	Mar. 7, 1970	5.63	67
1971	July 25, 1971	6.38	127
1972	Oct. 3, 1971	5.87	85

# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period February to September 1966.

08136300 Frog Pond Creek near Eden, Tex. (07)

Location.--Lat 31°14'21'', long 99°59'54'', Concho County, at culvert on U.S. Highway 87 and 9.4 miles (15.1 km) west of Eden.

Drainage area.--1.96  $mi^2$  (5.08  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.8 miles (4.5 km); slope index, 53.8 ft/mi (10.2 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	Aug. 17, 190	57 3.69	318
1968	Apr. 9, 190	58 2.52	86
1969	Sept. 11, 190	69 4.82	490
1970	Oct. 10, 190	⁵⁹ 1.77	b5
1971	July 26, 19 [.]	71 <1.77	ab<2
1972	Oct. 19, 19'	71 4.35	420

< Less than amount shown.

a Estimated.

08136900 Mukewater Creek subwatershed No. 10A near Trickham, Tex. (23)

Location.--Lat 31°39'01", long 99°13'30", Coleman County, near center of dam on Mukewater Creek, 1.8 miles (2.9 km) upstream from East Fork, and 4.3 miles (6.9 km) north of Trickham.

Drainage area.--21.8 mi² (56.5 km²).

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Gage.--Recording. Datum of gage is 1,462.00 ft (445.62 m) above mean sea level, datum of 1929.

Remarks.--Peak discharge based on maximum inflow (average for 5-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are eight rain gages (two recording and six nonrecording) located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Date	Discharge (ft ³ /s)
1966	Sept. 9, 1966	806
1967	Sept. 15, 1967	1,300
1968	Mar. 20, 1968	1,540
1969	Sept. 11, 1969	649
1970	Aug. 31, 1970	429
1971 1972	Sept. 23, 1971 Oct. 18, 1972	1,030 511

08137000 Mukewater Creek subwatershed No. 9 near Trickham, Tex. (23)

Location.--Lat 31°41'40", long 99°12'18", Coleman County, near center of dam on tributary to East Fork Mukewater Creek, 1.5 miles (2.4 km) upstream from mouth, 4.5 miles (7.2 km) southwest of Bangs, and 7.1 miles (11.4 km) north of Trickham.

Drainage area.  $-4.02 \text{ mi}^2$  (10.41 km²).

- Gage.--Recording. Datum of gage is 1,500.01 ft (457.20 m) above mean sea level, datum of 1929.
- Topographic characteristics.--Length of main stream, 3.6 miles (5.8 km); slope index, 20.4 ft/mi (3.9 m/km). (Map scale, 1:24,000)
- Remarks.--Peak discharge based on maximum inflow (average for 5- or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Date	Discharge $(ft^3/s)$
1961	June 5, 1961	a1,440
1962	Oct. 9, 1961	44
1963	May 22, 1963	186
1964	Apr. 23, 1964	1,170
1965	Nov. 17, 1964	838
1966	Nov. 8, 1965	267
1967	Sept. 15, 1967	b380
1968	Mar. 20, 1968	853
1969	Sept. 10, 1969	460
1970	June 1, 1970	205
1971	Sept. 23, 1971	621
1972	Apr. 21, 1972	203

a Maximum for period January to September 1961.

b Estimated.

08139000 Deep Creek subwatershed No. 3 near Placid, Tex. (23)

Location.--Lat 31°17'10", long 99°09'25", McCulloch County, near right of dam on tributary to Deep Creek and 2.8 miles (4.5 km) southeast of Placid.

Drainage area.-- $3.42 \text{ mi}^2$  (8.86 km²).

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Gage.--Water-stage recorder. Datum of gage is 1,500.00 ft (457.20 m) above mean sea level, datum of 1929. Prior to Dec. 1, 1953, staff gage at same site and datum.

Remarks.--Peak discharge based on maximum inflow (average for 5- or 15-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. Recording rain gage located at station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year		Date		Discharge $(ft^3/s)$
1954	Oct.	4,	1953	742
1955	May	18,	1955	1,800
1956	Aug.	28,	1956	218
1957	May	12,	1957	1,160
1958	Mar.	6,	1958	448
1959	June	3,	1959	938
1960	Oct.	4,	1959	a280
1961	June	5,	1961	235
1962	June	26,	1962	154
1963	May	30,	1963	208
1964	Sept.	27.	1964	681
1965	Feb.	8,	1965	322
1966	Sept.	15.	1966	280
1967	May	20.	1967	203
1968	Jan.	20,	1968	315
1969	Mav	6.	1969	736
1970	Oct.	4,	1970	109
1971	July	26.	1971	3,060
1972	Oct.	19,	1971	464

a Estimated.

08141100 McCall Branch near Coleman, Tex. (23)

Location.--Lat 31°50'57", long 99°33'12", Coleman County, at culvert on State Highway 53, 1.0 mile (1.6 km) upstream from Hords Creek, and 8.2 miles (13.2 km) west of Coleman.

Drainage area.--2.17  $mi^2$  (5.62  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.33 miles (3.75 km); slope index, 54.3 ft/mi (10.3 m/km). (Map scale, 1:24,000) 1

#### Annual maximum stage and discharge

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1966	June 18,	1966	a4.78	440
1967	Sept. 15,	1967	3.97	230
1968	Jan. 20,	1968	5.24	710
1969	June 12,	1969	4.76	605
1970	June 1,	1970	4.46	b535
1971	Sept. 22,	1971	3.85	410
1972	Oct. 19,	1971	4.10	460

a Maximum for period March to September 1966.

08143700 Brown's Creek tributary near Goldthwaite, Tex. (23)

Location.--Lat 31°31'01", long 98°34'00", Mills County, at culvert on State Highway 16 and 4.6 miles (7.4 km) north of Goldthwaite.

Drainage area.--2.48  $mi^2$  (6.42  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.75 miles (4.42 km); slope index, 90.8 ft/mi (17.2 m/km). (Map scale, 1:62,500)

Water year	Date		Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 29,	1966	a4.48	230
1967	July 1,	1967	<3.36	bc10
1968	May 10,	1968	3.46	76
1969	Sept. 11,	1969	4.55	241
1970	Oct. 4,	1969	6.34	600
1971	Aug. 2,	1971	3.86	136
1972	Oct. 19,	1971	3.58	90

# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period February to September 1966.

b Estimated.

c Revised.

08145100 Brady Creek tributary near Brady, Tex. (23)

Location.--Lat 31°05'05", long 99°17'33", McCulloch County, at culvert on Farm Road 734 and 4.3 miles (6.9 km) southeast of Brady.

Drainage area.--4.05 mi² (10.49 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.76 miles (6.05 km); slope index, 29.9 ft/mi (5.7 m/km). (Map scale, 1:24,000)

Water year 1967 1968 1969 1970	Date May 20, Jan. 20, Sept. 10, Mar. 6,	1967 1968 1969 1970	Gage height (ft) 4.14 3.51 2.84 2.66	Discharge (ft ³ /s) 218 140 60 40
1971	Sept. 24,	1971	14.73	3,970
1972	Oct. 4,	1971	3.01	78

08150200 Llano River tributary near London, Tex. (07)

Location.--Lat 30°38'22", long 99°35'52", Kimble County, at culvert on U.S. Highway 377 and 2.7 miles (4.3 km) south of London.

Drainage area.--0.58 mi² (1.50 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.3 miles (2.1 km); slope index, 168 ft/mi (32 m/km). (Map scale, 1:24,000)

Water year	Da	te	Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr.	28, 1966	a5.21	10
1967	July	20, 1967	5.49	21
1968	Jan.	20, 1968	5.38	b15
1969	Aug.	27, 1969	5.52	b23
1970	Feb.	24, 1970	5.03	b<6
1971	July	26, 1971	6.44	84
1972	Sept.	21, 1972	5.22	11

# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period February to September 1966.

08150900 Stone Creek tributary near Art, Tex. (14)

Location.--Lat 30°44'17", long 99°03'29", Mason County, at culvert on State Highway 29, 3.2 miles (5.1 km) east of Art, and 10.6 miles (17.1 km) east of Mason.

Drainage area.--0.40  $mi^2$  (1.04  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.25 miles (2.01 km); slope index, 45.7 ft/mi (8.7 m/km). (Map scale, 1:24,000)

Water year	Dat	e	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 1	1, 1966	a3.88	45
1967		-	<2.98	bc5
1968	May 1	1, 1968	4.66	82
1969	July 2	27, 1969	5.44	127
1970	Oct.	4, 1969	6.43	194
1971	Sept. 2	22, 1971	6.78	218
1972	Sept. 2	22, 1972	6.78	218

Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period February to September 1966.

b Estimated.

c Revised.

c Reviseu.

08151300 Johnson Creek near Valley Spring, Tex. (14)

Location.--Lat 30°51'38", long 98°49'52", Llano County, at culvert on Farm Road 734, 0.8 mile (1.3 km) west of Valley Spring, and 12 miles (19 km) west of Llano.

Drainage area.  $-5.66 \text{ mi}^2$  (14.66 km²).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 5.72 miles (9.20 km); slope index, 68.8 ft/mi (13.0 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	May 20, 196	7 3.22	190
1968	July 9, 196	8 4.96	750
1969	May 15, 196	9 3.56	270
1970	Sept. 16, 197	0 4.36	520
1971	May 8,197	1 3.67	330
1972	Oct. 19, 197	1 4.30	500

08152700 Little Flatrock Creek near Marble Falls, Tex. (14)

Location.--Lat 30°30'52", long 98°18'44", Burnet County, at culvert on State Highway 71 and 4.8 miles (7.7 km) southwest of Marble Falls.

Drainage area.-- $3.20 \text{ mi}^2$  (8.29 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.2 miles (6.8 km); slope index, 37.9 ft/mi (7.2 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge ( $ft^3/s$ )
1966	-		a0
1967	-	<4.80	<50
1968	Jan. 21, 1968	7.15	680
1969	May 7, 1969	5.26	126
1970	May 26, 1970	9.72	1,690
1971	-	<4.80	<50
1972	June 17, 1972	5.27	129

< Less than amount shown.

a No flow for period July to September 1966.

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08152800 Spring Creek near Fredericksburg, Tex. (14)

Location.--Lat 30°18'10", long 99°03'20", Gillespie County, on downstream side of bridge on U.S. Highway 290 and 11 miles (18 km) west of Fredericksburg.

Drainage area.--15.2  $mi^2$  (39.4  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.15 miles (9.9 km); slope index, 43.8 ft/mi (8.3 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1967	May 21, 1967	3.38	110
1968	May 10, 1968	4.37	620
1969	May 8, 1969	4.36	610
1970	Oct. 12, 1969	4.37	615
1971	Aug. 13, 1971	3.68	200
1972	Oct. 19, 1971	5.43	2,100

08153100 Cane Branch at Stonewall, Tex. (14)

Location.--Lat 30°14'07", long 98°39'21", Gillespie County, at culvert on U.S. Highway 290 at Stonewall and 0.6 mile (1.0 km) upstream from Pedernales River.

Drainage area.--1.37  $mi^2$  (3.55  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.35 miles (5.39 km); slope index, 59 ft/mi (11 m/km). (Map scale, 1:24,000)

	Allitua	1 111.	A LINUM 3	scage and discharge	
Water year 1965	D	ate -		Gage height (ft) -	Discharge (ft ³ /s) a0
1966	Sept.	10,	1966	9.91	24
1967	Sept.	15,	1967	10.92	74
1968	July	13,	1968	11.78	135
1969	Apr.	10,	1969	9.88	22
1970	_	-		<9.82	<20
1971		-		<9.82	<20
1972	Oct.	19,	1971	13.45	275

Annual maximum stage and discharge

< Less than amount shown.

a No flow for period August to September 1965.

08157000 Waller Creek at 38th Street at Austin, Tex. (14)

Location.--Lat 30°17'49", long 97°43'36", Travis County, on right bank 200 ft (61 m) upstream from bridge on East 38th Street at Austin, 1.1 miles (1.8 km) upstream from West Branch of Waller Creek, and 3.3 miles (5.3 km) upstream from Colorado River.

Drainage area.--2.31 mi² (5.98 km²).

Gage.--Recording. Datum of gage is 555.44 ft (169.30 m) above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.

Topographic characteristics.--Length of main stream, 4.3 miles (6.9 km); slope index, 45.8 ft/mi (8.7 m/km). (Map scale, 1:24,000)

<u>Remarks.--This station operated as research project for runoff from</u> urban areas. Two standard and one recording rain gages located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

D	ate		Gage height (ft)	Discharge (ft ³ /s)
May	1,	1956	3.94	a108
May	26,	1957	5.75	596
Oct.	14,	1957	5.54	518
Sept.	23,	1959	5.41	468
Oct.	4,	1959	4.67	251
Oct.	29,	1960	7.77	1,970
June	10,	1962	7.11	1,420
June	18,	1963	4.72	263
Sept.	27,	1964	7.01	1,340
May	16,	1965	6.15	805
Aug.	11,	1966	5.75	618
Apr.	23,	1967	5.72	604
Oct.	15,	1967	6.03	745
Aug.	14,	1969	5.07	361
May	15,	1970	5.31	444
Aug.	4,	1971	5.68	587
May	2,	1972	7.09	1,400
	May May Oct. Sept. Oct. June June Sept. May Aug. Apr. Oct. Aug. May Aug. May	May 1, May 26, Oct. 14, Sept. 23, Oct. 4, Oct. 29, June 10, June 18, Sept. 27, May 16, Aug. 11, Apr. 23, Oct. 15, Aug. 14, May 15, Aug. 4, May 2,	May 1, 1956 May 26, 1957 Oct. 14, 1957 Sept. 23, 1959 Oct. 4, 1959 Oct. 4, 1959 Oct. 29, 1960 June 10, 1962 June 18, 1963 Sept. 27, 1964 May 16, 1965 Aug. 11, 1966 Apr. 23, 1967 Oct. 15, 1967 Aug. 14, 1969 May 15, 1970 Aug. 4, 1971 May 2, 1972	Date Gage height (ft)   May 1, 1956 3.94   May 26, 1957 5.75   Oct. 14, 1957 5.54   Sept. 23, 1959 5.41   Oct. 4, 1959 4.67   Oct. 29, 1960 7.77   June 10, 1962 7.11   June 18, 1963 4.72   Sept. 27, 1964 7.01   May 16, 1965 6.15   Aug. 11, 1966 5.75   Apr. 23, 1967 5.72   Oct. 15, 1967 6.03   Aug. 14, 1969 5.07   May 15, 1970 5.31   Aug. 4, 1971 5.68   May 2, 1972 7.09

Annual maximum stage and discharge

a Maximum for period Apr. 1 to Sept. 30, 1956.

08157500 Waller Creek at 23d Street at Austin, Tex. (14)

Location.--Lat 30°17'08", long 97°44'01", Travis County, on San Jacinto Boulevard, 50 ft (15 m) upstream from bridge on East 23d Street at Austin, and 2.1 miles (3.4 km) upstream from Colorado River.

Drainage area.--4.13  $mi^2$  (10.7  $km^2$ ).

- Gage.--Recording. Datum of gage is 509.95 ft (155.43 m) above mean sea level, datum of 1929, Fort Worth supplementary adjustment of 1942.
- Topographic characteristics.--Length of main stream, 5.3 miles (8.5 km); slope index, 45.5 ft/mi (8.6 m/km). (Map scale, 1:24,000)
- Remarks.--Three recording and three nonrecording rain gages located in watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1951	June	12,	1951		a2,010
1954	Oct.	23,	1953	8.0	-
1955	Мау	18,	1955	b5.40	1,640
1956	May	1,	1956	3.90	615
1957	June	12,	1957	5.85	2,050
1958	Apr.	26,	1958	5.47	1,700
1959	Sept.	23,	1959	5.71	1,910
1960	Oct.	4,	1959	4.11	726
1961	Oct.	29,	1960	7.96	3,710
1962	June	3,	1962	6.40	2,270
1963	June	18,	1963	4.70	1,070
1964	Sept.	27,	1964	7.08	2,280
1965	May	16,	1965	7.12	2,320
1966	Aug.	11,	1966	6.25	1,680
1967	Apr.	23,	1967	4.96	900
1968	May	27,	1968	5.54	1,220
1969	May	8,	1969	5.75	1,350
1970	May	15,	1970	4.35	610
1971	June	21.	1971	6.08	1,560
1972	May	2,	1972	6.91	2,160

- a Peak discharge determined by slope-area measurement half a mile downstream from gage.
- b Maximum for period January to September 1955.

08158900 Fox Branch near Oak Hill, Tex. (14)

Location.--Lat 30°14'00", long 97°52'25", Travis County, at culvert on State Highway 71, near intersection with U.S. Highway 290, 0.2 mile (0.3 km) upstream from Williamson Creek, and 1.0 mile (1.6 km) west of Oak Hill.

Drainage area.--

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year 1965	Date	Gage height (ft) -	Discharge (ft ³ /s) a0
1966	Sept. 8, 1966	10.15	11
1967	Sept. 4, 1967	13.81	249
1968	Oct. 15, 1967	11.53	82
1969	Aug. 27, 1969	10.71	34
1970	Oct. 12, 1969	11.11	56
1971	July 26, 1971	10.72	34
1972	Nov. 17, 1971	10.81	39

#### Annual maximum stage and discharge

a No flow for period August to September 1965.

08159150 Wilbarger Creek near Pflugerville, Tex. (14)

Location.--Lat 30°27'16", long 97°36'02", Travis County, on left bank 131 ft (40 m) downstream from county road (Pfluger Lane), 800 ft (244 m) downstream from Farm Road 685, 1.6 miles (2.6 km) northeast of Pflugerville, and 1.9 miles (3.1 km) downstream from Missouri-Kansas-Texas Railroad.

Drainage area.--4.61 mi² (11.94 km²).

- Gage.--Water-stage recorder. Datum of gage is 670.61 ft (204.40 m) above mean sea level, datum of 1929.
- Remarks.--Three recording rain gages located in the watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1964	June 16, 1964	6.92	1,760
1965	Feb. 16, 1965	4.75	737
1966	Apr. 24, 1966	3.67	396
1967	May 1, 1967	3.76	418
1968	Jan. 18, 1968	4.27	559
1969	Apr. 12, 1969	4.03	488
1970	May 15, 1970	4.48	633
1971	Oct. 23, 1971	4.42	611
1972	Nov. 18, 1971	4.28	563

08159450 Reeds Creek near Bastrop, Tex. (14)

Location.--Lat 30°00'26", long 97°15'03", Bastrop County, on downstream side of bridge on Farm Road 2571 and 8.3 miles (13.4 km) southeast of Bastrop.

Drainage area.  $-5.22 \text{ mi}^2$  (13.52 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.65 miles (7.48 km); slope index, 38.4 ft/mi (7.3 m/km). (Map scale, 1:24,000)

Water year 1965	<u>Date</u> May <u>11</u> , 1965	Gage height (ft) 9.4	$\frac{\text{Discharge (ft}^3/\text{s})}{\text{a4,000}}$
1967	Sept. 21, 1967	3.28	600
1968	Jan. 22, 1968	4.16	1,060
1969	-	<2.28	<330
1970	-	<2.38	<660
1971	-	<2.38	<660
1972	-	<2.38	<660

# Annual maximum stage and discharge

< Less than amount shown.

a Computation of flow through culvert and over roadway.

08160800 Redgate Creek near Columbus, Tex. (13)

Location.--Lat 29°47'56", long 96°31'55", Colorado County, on left bank, 68 ft (21 m) downstream from bridge on Farm Road 109, 1.8 miles (2.9 km) upstream from Cummins Creek, and 7 miles (11 km) north of Columbus.

Drainage area.--17.3 mi² (44.8 km²).

Gage.--Recording. Datum of gage is 210.82 ft (64.26 m) above mean sea level.

Remarks.--No known diversion above station.

Water year	Da	ite		Gage height (ft)	Discharge (ft ³ /s)
1962	June	30,	1962	6.95	1,060
1963	Feb.	18,	1963	4.45	391
1964	Mar.	19,	1964	4.95	508
1965	Jan.	22,	1965	14.20	3,990
1966	Nov.	8,	1965	5.75	655
1967	Sept.	15,	1967	7.68	1,130
1968	May	27,	1968	12.03	2,900
1969	Feb.	21,	1969 .	11.12	2,630
1970	Sept.	2,	1970	7.89	1,260
1971	Oct.	23,	1971	14.60	4,200
1972	Mar.	20,	1972	13.21	3,490

08161580 Dry Branch tributary near Altair, Tex. (13)

Location.--Lat 29°34'39", long 96°28'16", Colorado County, at culvert on State Highway 71 and 0.9 mile (1.4 km) northwest of Altair.

Drainage area.  $-0.68 \text{ mi}^2$  (1.76 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.15 miles (1.85 km); slope index, 20 ft/mi (4 m/km). (Map scale, 1:24,000)

Water year 1966	Dat	<u>e</u>	$\frac{\text{Gage height (ft)}}{a<0.13}$	$\frac{\text{Discharge (ft}^3/\text{s})}{(\texttt{t})}$
1967	Sept. 2	1, 1967	1.45	54
1968	June 2	3, 1968	2.27	188
1969	Feb. 2	21, 1969	1.59	75
1970	Mar. 1	7, 1970	.54	<20
1971	Sept. 1	0, 1971	2.61	240
1972	May 1	2, 1972	2.62	282

# Annual maximum stage and discharge

+ Discharge not determined.

< Less than amount shown.

a Maximum for period Aug. 10 to Sept. 30, 1966.

08166300 Turtle Creek tributary near Kerrville, Tex. (15)

Location.--Lat 29°58'11", long 99°11'02", Kerr County, at culvert on Farm Road 2771 and 5.9 miles (9.5 km) south of Kerrville.

Drainage area.--0.46  $mi^2$  (1.19  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.02 miles (1.64 km); slope index, 191 ft/mi (36 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	May 22, 1966	a8.82	81
1967	Sept. 15, 1967	8.81	80
1968	Oct. 14, 1967	8.66	74
1969	Apr. 12, 1969	6.47	20
1970	Oct. 5, 1969	10.67	(†)
1971	Aug. 12, 1971	10.80	(†)
1972	Oct. 4, 1971	8.70	76

+ Discharge not determined.

a Maximum for period Mar. 17 to Sept. 30, 1966.

08167600 Rebecca Creek near Spring Branch, Tex. (15)

Location.--Lat 29°55'06", long 98°22'10", Comal County, on right bank 72 ft (22 m) upstream from private road crossing, 2.9 miles (4.7 km) upstream from mouth, and 3.7 miles (6.0 km) northeast of Spring Branch.

Drainage area.--10.9  $mi^2$  (28.2  $km^2$ ).

Gage.--Recording. Datum of gage is 985.55 ft (300.40 m) above mean sea level, datum of 1929.

Topographic characteristics.--Length of main stream, 3.9 miles (6.3 km); slope index, 45.5 ft/mi (8.6 m/km). (Map scale, 1:24,000)

Historical data.--Maximum stage since at least 1885, 25.5 ft (7.8 m) in September 1952, from information by local residents.

Remarks.--Rain gage at site.

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Water year	Date	•	Gage height (ft)	Discharge (ft ³ /s)
1961	Oct. 29	<b>5</b> , 1960	6.18	4,340
1962	Apr. 27	, 1962	2.12	3.8
1963	Apr. 5	5, 1963	6.20	4,340
1964	Mar. 18	3, 1964	2.99	249
1965	May 11	, 1965	7.70	8,500
1966	Oct. 18	8, 1965	7.97	9,300
1967	Sept. 4	, 1967	4.09	1,130
1968	Jan. 18	8, 1968	6.00	3,970
1969	Apr. 12	2, 1969	3.16	357
1970	May 23	5, 1970	4.22	1,270
1971	Oct. 23	<b>5,</b> 1971	2.28	14
1972	June 17	, 1972	5.38	2,890

08168720 Trough Creek near New Braunfels, Tex. (15)

Location.--Lat 29°46'20", long 98°15'55", Comal County, at culvert on State Highway 46 and 11 miles (18 km) northwest of New Braunfels.

Drainage area.--0.48  $mi^2$  (1.24  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.25 miles (2.01 km); slope index, 152 ft/mi (29 m/km). (Map scale, 1:24,000)

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Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1965	May 16, 1965	a10.0	386
1966	Dec. 2, 1965	8.59	236
1967	-	<6.47	<20
1968	Jan. 18, 1968	8.73	255
1969	_	<6.47	<20
1970	Mar. 6, 1970	7.08	86
1971	- · · ·	<6.47	<20
1972	May 11, 1972	12.39	2,510
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# Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Aug. 17 to Sept. 30, 1965.

# 08168750 West Prong Dry Comal Creek tributary near New Braunfels, Tex. (15)

Location.--Lat 29°42'48", long 98°17'26", Comal County, at culvert on Farm Road 1863 and 10.3 miles (16.6 km) west of New Braunfels.

Drainage area.--0.32  $mi^2$  (0.83  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.95 mile (1.53 km); slope index, 206 ft/mi (39 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	June 18, 1966	a6.37	<100
1967	-	<6.37	<100
1968	Jan. 18, 1968	6.71	140
1969	-	<6.37	<100
1970	-	<6.37	<100
1971	-	<6.37	<100
1972	May 11, 1972	10.45	1,090

< Less than amount shown.

a Maximum for period June 18 to Sept. 30, 1966.

08169750 Walnut Branch at Seguin, Tex. (15)

Location.--Lat 29°34'47", long 97°58'46", Guadalupe County, at culvert on U.S. Highway 90 (West Kingsbury Street) at Seguin.

Drainage area.--5.46 mi² (14.14 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.75 miles (7.64 km); slope index, 14 ft/mi (3 m/km). (Map scale, 1:24,000)

Annual maximum stage	and	discharge
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Water year	D	ate		Gage height (ft)	Discharge $(ft^3/s)$
1967	Sept.	21,	1967	6.08	1,030
1968	Jan.	19,	1968	5.60	780
1969	Feb.	14,	1969	4.07	180
1970	May	27,	1970	4.61	345
1971	Aug.	3,	1971	4.50	300
1972	May	11,	1972	7.50	1,750

08169850 East Pecan Branch near Gonzales, Tex. (13)

Location.--Lat 29°29'58", long 97°31'36", Gonzales County, at culvert on U.S. Highway 90-A and 3.7 miles (6.0 km) west of Gonzales.

Drainage area.--0.24  $mi^2$  (0.62  $km^2$ ).

Gage,--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.87 mile (1.40 km); slope index, 111 ft/mi (21 m/km). (Map scale, 1:24,000)

Water year	Da	te		Gage height (ft)	Discharge $(ft^3/s)$
1966	May	4,	1966	6.88	73
1967	Sept.	22,	1967	8.91	165
1968	June	23,	1968	6.02	43
1969	Apr.	11,	1969	5.71	33
1970	Oct.	5,	1969	7.72	110
1971	June	28,	1971	6.19	48
1972	May	7,	1972	9.14	175

08172100 West Elm Creek near Niederwald, Tex. (14)

Location.--Lat 29°59'04", long 97°44'39", Caldwell County, at culvert on Farm Road 2001 and 2.3 miles (3.7 km) southwest of Niederwald.

Drainage area.--0.44 mi² (1.14 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.84 mile (1.35 km); slope index, 106 ft/mi (20 m/km). (Map scale, 1:24,000)

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1966	Dec.	2,	1965	6.84	261
1967	Sept.	21,	1967	4.45	40
1968	Jan.	20,	1968	5.57	127
1969	May	14,	1969	7.39	330
1970	May	15,	1970	9.96	700
1971	Mar.	12,	1971	4.82	65
1972	Sept.	16,	1972	8.62	500

08176200 Irish Creek near Cuero, Tex. (13)

Location.--Lat 29°08'02", long 97°12'10", DeWitt County, at bridge on Farm Road 1447 and 6.2 miles (10.0 km) northeast of Cuero.

Drainage area.--15.5  $mi^2$  (40.1  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.8 miles (10.9 km); slope index, 15 ft/mi (3 m/km). (Map scale, 1:24,000)

<u>Water year</u> 1967 1968 1969 1970	Da Sept. May Apr. May	te 21, 12, 9, 15,	1967 1968 1969 1970	Gage height (ft) 7.86 8.01 6.83 2.86	Discharge (ft ³ /s) 4,650 (†) (†) (†) (†)
1971	Sept.	11,	1971	3.19	(†)
1972	May	10,	1972	8.21	(†)

# Annual maximum stage and discharge

+ Discharge not determined.

08176600 Threemile Creek near Cuero, Tex. (13)

Location.--Lat 29°02'00", long 97°20'52", DeWitt County, at culvert on Farm Road 2718 and 5.2 miles (8.4 km) southwest of Cuero.

Drainage area.--0.48  $mi^2$  (1.24  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.80 mile (1.29 km); slope index, 37 ft/mi (7 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1966	May 5	, 1966	a6.62	22
1967	Sept. 21	, 1967	11.71	1,140
1968	May 11	, 1968	8.70	116
1969	-		<6.32	<9
1970	Mar. 15	, 1970	6.65	22
1971	Sept. 11	, 1971	7.40	50
1972	May 7	, 1972	10.42	. 219

< Less than amount shown.

a Maximum for period Feb. 9 to Sept. 30, 1966.

08177600 Olmos Creek tributary at Farm Road 1535, Shavano Park, Tex. (15)

Location.--Lat 29°34'35", long 98°32'45", Bexar County, at culvert on Farm Road 1535 at Shavano Park.

Drainage area.--0.33 mi²  $(0.85 \text{ km}^2)$ .

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Gage.--Stage-rainfall (dual-digital) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.33 miles (2.14 km); slope index, 75.8 ft/mi (14.4 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1969	May 16, 1969	2.94	27
1970	May 26, 1970	3.05	42
1971	-	<3.04	<40
1972	May 7, 1972	3.75	107

< Less than amount shown.

08177700 Olmos Creek at Dresden Drive at San Antonio, Tex. (15)

Location.--Lat 29°29'56", long 98°30'36", Bexar County, on right bank 30 ft (9 m) downstream from low-water bridge on Dresden Drive at San Antonio, 0.15 mile (0.24 km) west of intersection of Blanco Road and Dresden Drive, and 4 miles (6 km) upstream from Olmos Dam.

Drainage area.--21.2  $mi^2$  (54.9  $km^2$ ).

- Gage.--Recording. Datum of gage is 726.10 ft (221.32 m) above mean sea level.
- Topographic characteristics.--Length of main stream, 11.63 miles (18.71 km); slope index, 26.9 ft/mi (5.1 m/km). (Map scale, 1:24,000)
- <u>Remarks.--</u>This station operated as research project for runoff from urban areas.

# Annual maximum stage and discharge

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1968	Sept.	5,	1968	a4.76	154
1969	Aug.	24,	1969	6.86	620
1970	Oct.	5,	1969	6.53	519
1971	Aug.	3,	1971	6.20	282
1972	May	7,	1972	13.20	5,420

a Maximum for period June to September 1968.
# 08178300 Alazan Creek at St. Cloud Street, San Antonio, Tex. (15)

Location.--Lat 29°27'29", long 98°32'59", Bexar County, at bridge on St. Cloud Street at San Antonio.

Drainage area.-- $3.26 \text{ mi}^2$  (8.44 km²).

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Gage.--Stage-rainfall (dual-digital) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.45 miles (5.55 km); slope index, 63.7 ft/mi (12.1 m/km). (Map scale, 1:24,000)

Remarks.--This station operated as research project for runoff from urban areas.

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1969	Aug. 24, 1969	11.59	1,560
1970	Oct. 5, 1969	11.64	1,590
1971	Sept. 22, 1971	8.0	406
1972	Apr. 27, 1972	11.50	1,520

08178600 Panther Springs Creek at Farm Road 2696 near San Antonio, Tex. (15)

Location.--Lat 29°37'31", long 98°31'06", Bexar County, at culvert on Farm Road 2696 and 5.5 miles (8.8 km) north of San Antonio.

Drainage area.--9.54 mi² (24.71 km²).

Gage.--Stage-rainfall (dual-digital) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.55 miles (10.54 km); slope index, 41.6 ft/mi (7.9 m/km). (Map scale, 1:24,000)

<u>Remarks.--This station operated as research project for runoff from</u> <u>urban areas.</u>

Water year	D	ate	Gage height (ft)	Discharge (ft ³ /s)
1969	May –	16, 1969	9.84	4,450
1970	May	26, 1970	5.92	245
1971	Aug.	4, 1971	6.55	457
1972	May	11, 1972	9.53	8,610

08178690 Salado Creek tributary at Bitters Road, San Antonio, Tex. (15)

Location.--Lat 29°31'36", long 98°26'25", Bexar County, at culvert on Bitters Road at San Antonio.

Drainage area.--0.26  $mi^2$  (0.67  $km^2$ ).

Gage.--Stage-rainfall (dual-digital) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.68 mile (1.09 km); slope index, 29.6 ft/mi (5.6 m/km). (Map scale, 1:24,000)

Remarks.--This station operated as research project for runoff from urban areas.

Water year	Da	te		Gage height (ft)	Discharge ( $ft^3/s$ )
1969	June	4,	1969	3.89	46
1970	May	26,	1970	7.60	238
1971	Sept.	22,	1971	3.87	45
1972	May	7,	1972	7.88	253

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08178900 Bandera Creek tributary near Bandera, Tex. (15)

Location.--Lat 29°50'51", long 99°06'12", Bandera County, at culvert on Farm Road 689 and 10 miles (16 km) north of Bandera.

Drainage area.--0.27  $mi^2$  (0.70  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.92 mile (1.48 km); slope index, 244 ft/mi (46 m/km). (Map scale, 1:24,000)

# Annual maximum stage and discharge

Water year	Date		Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 25	, 1966	a6.29	<80
1967	Sept. 15	, 1967	6.38	<80
1968	Oct. 15	, 1967	6.98	116
1969	June 24	, 1969	<6.26	<80
1970	Oct. 12	, 1969	6.98	116
1971	Aug. 12	, 1971	6.48	<80
1972	Oct. 3	, 1971	6.76	88

< Less than amount shown.

a Maximum for period Mar. 16 to Sept. 30, 1966.

08179200 Medina River tributary near Pipe Creek, Tex. (15)

Location.--Lat 29°38'12", long 98°56'13", Bandera County, at culvert on Farm Road 1283 and 6.8 miles (10.9 km) south of Pipe Creek.

## Drainage area.--

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. <u>17</u> , 1966	a4.12	<30
1967	Sept. 3, 1967	7.17	220
1968	Apr. 1, 1968	4.59	150
1969	Apr. 12, 1969	4.28	<30
1970	Oct. 5, 1969	4.50	60
1971	Sept. 21, 1971	7.83	270
1972	May 7, 1972	9.84	420

## Annual maximum stage and discharge

< Less than amount shown. a Maximum for period Mar. 17 to Sept. 30, 1966.

08181000 Leon Creek tributary at Farm Road 1604, San Antonio, Tex. (15)

Location.--Lat 29°35'14", long 98°37'40", Bexar County, at culvert on Farm Road 1604, at San Antonio.

Drainage area.  $-5.57 \text{ mi}^2$  (14.43 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

 $\frac{\text{Remarks.--This station operated as research project for runoff from urban areas.}$ 

# Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1969	<del>-</del> .	<3.04	<23
1970	May 26, 1970	7.93	1,200
1971	Aug. 2, 1971	2.95	11
1972	May 11, 1972	6.83	901

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< Less than amount shown.

08181200 French Creek tributary near Helotes, Tex. (15)

Location.--Lat 29°33'43", long 98°39'26", Bexar County, at culvert on Farm Road 1604 and 2.2 miles (3.5 km) east of Helotes.

Drainage area.--1.08  $mi^2$  (2.80  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.07 miles (3.33 km); slope index, 76.8 ft/mi (14.5 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 27, 1966	a5.91	107
1967	-	<5.89	<104
1968	Jan. 17, 1968	7.03	255
1969	May 16, 1969	5.86	54
1970	May 26, 1970	6.81	223
1971	June 19, 1971	6.92	240
1972	May 7, 1972	10.26	1,030

## Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Mar. 15 to Sept. 30, 1966.

08181400 Helotes Creek at Helotes, Tex. (15)

Location.--Lat 29°34'42", long 98°41'29", Bexar County, on left bank 13 ft (4 m) downstream from centerline of bridge on State Highway 16, 0.1 mile (0.2 km) northwest of Helotes, and 8.6 miles (13.8 km) upstream from mouth.

Drainage area.--14.9 mi² (38.6 km²).

- Gage.--Recording. Datum of gage is 1,014.82 ft (309.32 m) above mean sea level.
- Topographic characteristics.--Length of main stream, 9.35 miles (15.04 km); slope index, 49.5 ft/mi (9.4 m/km). (Map scale, 1:24,000)

Annual	maximum	stage	and	discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1968	June 2, 1968	a2.18	47
1969	May 16, 1969	3.10	184
1970	May 26, 1970	5.43	3,180
1971	Aug. 13, 1971	3.24	346
1972	May 7, 1972	5.10	2,350

## 08182400 Calaveras Creek subwatershed No. 6 near Elmendorf, Tex. (15)

Location.--Lat 29°22'53", long 98°17'34", Bexar County, near center of dam on Chupaderas Creek, tributary to Calaveras Creek, 0.4 mile (0.6 km) north of Sayer, 9.1 miles (14.6 km) north of Elmendorf, and 9.2 miles (14.8 km) upstream from mouth.

Drainage area.--7.01  $mi^2$  (18.16  $km^2$ ).

<u>Gage.--Recording</u>. Datum of gage is 516.06 ft (157.30 m) above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peak discharge based on maximum inflow (average for 5-minute intervals), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are two recording rain gages, one at the station and one in the watershed. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Date	Discharge $(ft^3/s)$
1957	Sept. 25, 1957	3,750
1958	May 3, 1958	1,900
1959	Apr. 11, 1959	266
1960	Oct. 4, 1959	443
1961	June 18, 1961	827
1962	Nov. 13, 1961	385
1963	Apr. 4, 1963	13
1964	Feb. 3, 1964	1,810
1965	May 18, 1965	3,330
1966	Dec. 3, 1965	501
1967	Sept. 22, 1967	1,500
1968	Jan. 18, 1968	4,270
1969	Feb. 14, 1969	327
1970	May 28, 1970	725
1971	Aug. 3, 1971	994
1972	May 10, 1972	3,520

08187000 Escondido Creek subwatershed No. 1 near Kenedy, Tex. (16)

Location.--Lat 28°46'41", long 97°53'41", Karnes County, near center of dam on unnamed fork of Panther Creek, 900 ft (274 m) upstream from State Highway 72, and 3.9 miles (6.3 km) southwest of Kenedy.

Drainage area.-- $3.29 \text{ mi}^2$  (8.52 km²).

Gage.--Recording. Datum of gage is 350.00 ft (107.00 m) above mean sea level, datum of 1929 (levels by U.S. Soil Conservation Service).

Remarks.--Peaks are based on maximum inflow (average for 5- or 15-minute interval), computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. No adjustment made for reservoir losses. There are two recording rain gages located in the watershed, one of which is at the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Date	Discharge (ft ³ /s)
1955	Aug. 11, 1955	2,100
1956	June 19, 1956	486
1957	May 27, 1957	al,800
1958	May 3, 1958	1,700
1959	Sept. 29, 1959	181
1960	July 17, 1960	a817
1961	Oct. 25, 1960	4,990
1962	June 1, 1962	745
1963	Nov. 27, 1962	1,300
1964	Aug. 8, 1964	809
1965	Jan. 21, 1965	1,550
1966	Oct. 18, 1965	. 157
1967	Sept. 21, 1967	2,910
1968	May 7, 1968	1,640
1969	May 4, 1969	401
1970	May 31, 1970	605
1971	Sept. 10, 1971	407
1972	Sept. 26, 1972	428

a Not adjusted for rainfall on water surface.

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08187900 Escondido Creek subwatershed No. 11 (Dry Escondido Creek) near Kenedy, Tex. (16)

Location.--Lat 28°51'39", long 97°50'39", Karnes County, near center of dam on Dry Escondido Creek, 0.5 mile (0.8 km) upstream from bridge on Farm Road 792, 3 miles (5 km) north of Kenedy, and 5 miles (8 km) upstream from Escondido Creek.

Drainage area.--8.43 mi² (21.83 km²).

- Gage.--Water-stage recorder. Datum of gage is 285.12 ft (86.90 m) above mean sea level, datum of 1929.
- Remarks.--Peak discharge based on maximum inflow (average for 5- or 15-minute intervals) computed from outflow and change in reservoir contents, adjusted for rainfall on the reservoir surface during time of peak inflow. There are two recording rain gages located in the watershed, one of which is at the station. Tabulations of significant storm rainfall and runoff data are on file in the U.S. Geological Survey District office.

#### Annual maximum discharge

Water year	Ι	Date		Discharge (ft ³ /s)
1958	Sept.	22,	1958	1,540
1959	June	5,	1959	122
1960	Oct.	4,	1959	54
1961	Oct.	25,	1960	750
1962	June	2,	1962	722
1963	June	26,	1962	1,190
1964	Feb.	3,	1964	435
1965	May	19,	1965	4,950
1966	Sept.	17,	1966	334
1967	Sept.	21,	1967	8,030
1968	May	12,	1968	765
1969	May	4,	1969	175
1970	June	1,	1970	1,310
1971	Sept.	12.	1971	36
1972	May	14,	1972	77

08188400 Baugh Creek at Goliad, Tex. (16)

Location.--Lat 28°39'50", long 97°25'05", Goliad County, at culvert on U.S. Highway 59 and 1.5 miles (2.4 km) west of Goliad.

Drainage area.-- $3.02 \text{ mi}^2$  (7.82 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.85 miles (6.19 km); slope index, 32 ft/mi (6 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 20, 1966	5.50	360
1967	Sept. 21, 1967	7.73	1,000
1968	Oct. 15, 1967	5.79	460
1969	Apr. 11, 1969	4.66	250
1970	June 25, 1970	5.54	150
1971	Sept. 10, 1971	5.38	, 130
1972	Apr. 27, 1972	11.17	3,510

#### ARANSAS RIVER BASIN

08189600 Olmos Creek tributary near Skidmore, Tex. (16)

Location.--Lat 28°15'27", long 97°44'15", Bee County, at culvert on Farm Road 797 and 3.4 miles (5.5 km) west of Skidmore.

Drainage area.--0.58  $mi^2$  (1.50  $km^2$ ).

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а Ц Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.4 miles (2.3 km); slope index, 8.57 ft/mi (1.62 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Da	ite		Gage height (ft)	Discharge (ft ³ /s)
1966	Apr.	25,	1966	a8.00	235
1967	Sept.	22,	1967	8.71	325
1968	May	11,	1968	9.01	b629
1969	Oct.	3,	1968	6.56	80
1970	May	24,	1970	6.52	78
1971	Sept.	12,	1971	9.01	b629
1972	May	10,	1972	9.27	902

a Maximum for period Feb. 8 to Sept. 30, 1966. b Not previously published.

08194550 Plant Creek near Tilden, Tex. (15)

Location.--Lat 28°24'04", long 98°32'58", McMullen County, at culvert on State Highway 16 and 4 miles (6 km) south of Tilden.

Drainage area.--0.36  $mi^2$  (0.93  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.66 mile (1.1 km); slope index, 77.6 ft/mi (14.7 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1966	Nov. 11,	1965	7.30	32
1967	Sept. 22,	1967	10.06	220
1968	May 7,	1968	7.36	34
1969	Apr. 11,	1969	<7.28	<5
1970	May 15,	1970	7.79	60
1971	Sept. 11,	1971	7.60	44
1972	Sept. 26,	1972	8.93	144

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< Less than amount shown.

08198900 East Elm Creek near Sabinal, Tex. (15)

Location.--Lat  $29^{\circ}18'36''$ , long  $99^{\circ}23'50''$ , Medina County, at bridge on U.S. Highway 90 and 4 miles (6 km) east of Sabinal.

Drainage area.--10.58 mi² (27.40 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 7.8 miles (12.6 km); slope index, 16.9 ft/mi (3.2 m/km). (Map scale, 1:24,000)

Water year	D	ate		Gage height (ft)	Discharge $(ft^3/s)$
1967	Sept.	3,	1967	a1.09	b6.7
1968	Jan.	19,	1968	1.81	. 150
1969	May	3,	1969	1.89	195
1970	May	15,	1970	2.29	400
1971	Aug.	13,	1971	7.18	5,600
1972	Aug.	10,	1972	1.86	175

## Annual maximum stage and discharge

a Maximum for period Dec. 22, 1966, to Sept. 30, 1967.

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08200900 Bone Creek near Hondo, Tex. (15)

Location.--Lat 29°33'16", long 99°06'12", Medina County, at culvert on Farm Road 689 and 14 miles (23 km) north of Hondo.

Drainage area.--0.19  $mi^2$  (0.49  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.42 mile (0.68 km); slope index, 291 ft/mi (55 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 25, 196	3.22	<10
1967.	Sept. 22, 196	3.97	29
1968	Jan. 19, 196	3.49	15
1969	May 16, 196	9 4.14	36
1970	Oct. 5, 196	5.76	102
1971	Aug. 12, 197	<b>9.77</b>	350
1972	May 6,197	^{'2} 5.29	82

## Annual maximum stage and discharge

< Less than amount shown.

08203500 Leona River tributary near Uvalde, Tex. (22)

Location.--Lat 29°17'30", long 99°45'31", Uvalde County, at culvert on U.S. Highway 83 and 5.2 miles (8.4 km) north of Uvalde.

Drainage area.--1.21 mi²  $(3.13 \text{ km}^2)$ .

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.03 miles (3.27 km); slope index, 20.4 ft/mi (3.9 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 13, 1966	a6.67	<20
1967	Apr. 13, 1967	6.69	<20
1968		<6.65	<20
1969	-	<6.65	<20
1970	Oct. 5, 1969	6.85	39
1971	Aug. 12, 1971	6.80	34
1972	-	<6.65	<20

Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Feb. 3 to Sept. 30, 1966.

08207200 Rutledge Hollow Creek at Poteet, Tex. (15)

Location.--Lat 29°02'29", long 98°34'41", Atascosa County, at culvert on Farm Road 476 (School Road) at Poteet.

Drainage area.--9.33  $mi^2$  (24.16  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.25 miles (10.06 km); slope index, 27.6 ft/mi (5.2 m/km). (Map scale, 1:24,000)

## Annual maximum stage and discharge

Water year 1967 1968 1969 1970	Sept. May Nov. May	ate 22, 11, 30, 28.	1967 1968 1968 1970	Gage height (ft) 8.69 8.95 4.31 5.30	Discharge (ft ³ /s) 1,800 2,300 52 215
1970 1971 1972	Aug. May	12, 6,	1970 1971 1972	8.56 4.68	1,650 96

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08207700 Lucas Creek near Pleasanton, Tex. (15)

Location.--Lat 29°00'52", long 98°22'47", Atascosa County, at bridge on State Highway 97 and 8 miles (13 km) northeast of Pleasanton.

Drainage area.--32.8 mi² (85.0 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 10.7 miles (17.2 km); slope index, 13.6 ft/mi (2.6 m/km). (Map scale, 1:24,000)

Water year	D	ate		Gage height (ft)	Discharge (ft ³ /s)
1967	Sept.	22,	1967	12.97	2,970
1968	May	11,	1968	13.25	3,500
1969	May	12,	1969	11.56	1,550
1970	May	28,	1970	11.67	1,520
1971	Aug.	12,	1971	11.75	1,650
19/2	UCL.	э,	19/1	10.02	050

#### PETRONILLA CREEK BASIN

08211550 Pintas Creek tributary near Banquete, Tex. (16)

Location.--Lat 27°42'36", long 97°49'57", Nueces County, at culvert on Farm Road 666 and 7 miles (11 km) south of Banquete.

Drainage area.-- $3.28 \text{ mi}^2$  (8.50 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 3.6 miles (5.8 km); slope index, 6.87 ft/mi (1.3 m/km). (Map scale, 1:62,500)

## Annual maximum stage and discharge

Water year	Date		Gage height (ft)	Discharge $(ft^3/s)$
1966	May 5,	1966	a8.43	84
1967	Sept. 21,	1967	10.40	1,300
1968	July 11,	1968	8.07	37
1969	Feb. 13,	1969	8.93	130
1970	Aug. 3,	1970	<7.90	<5
1971	Sept. 12,	1971	10.10	568
1972	Oct. 16,	1971	10.10	568

< Less than amount shown.

a Maximum for period Mar. 8 to Sept. 30, 1966.

## SAN FERNANDO CREEK BASIN

08212300 Tranquitas Creek at Kingsville, Tex. (16)

Location.--Lat 27°31'33", long 97°52'02", Kleberg County, at bridge on U.S. Highway 77, Business Route at Kingsville, 4.9 miles (7.9 km) upstream from San Fernando Creek, and 5.9 miles (9.5 km) downstream from Tranquitas Dam.

Drainage area.--48.5 mi² (125.6 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Remarks.--Stage only station.

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# Annual maximum stage and discharge

<u>Water year</u> 1965	May <u>Date</u> 16, 1965	Gage height (ft) a3.9	Discharge (ft ³ /s) -
1966	Apr. 8, 1966	3.6	-
1967	Sept. 23, 1967	4.51	-
1968	May 6, 1968	3.36	-
1969	Oct. 4, 1968	2.53	-
1970	May 13, 1970	3.73	-
1971	Aug. 5, 1971	2.96	-
1972	Feb. 29, 1972	4.16	-

a Maximum for period April to September 1965.

#### SAN FERNANDO CREEK BASIN

08212320 North Las Animas Creek tributary near Freer, Tex. (21)

Location.--Lat 27°47'07", long 98°37'03", Duval County, at culvert on State Highway 16 and 6.8 miles (10.9 km) south of Freer.

Drainage area.--0.07  $mi^2$  (0.18  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 0.40 mile (0.64 km); slope index, 56.7 ft/mi (10.7 m/km). (Map scale, 1:62,500)

#### Annual maximum stage and discharge

Water year	Da	te	Gage height (ft)	Discharge (ft ³ /s)
1969		-	<3.74	a<20
1970	June	14, 1970	<3.74	a<20
1971	Sept.	11, 1971	4.61	52
1972	May	9, 1972	4.81	60

< Less than amount shown.

a Revised.

#### 08365600 McKelligon Canyon at El Paso, Tex. (24)

Location.--Lat 31°49'20", long 106°28'09", El Paso County, on left bank 120 ft (37 m) south of McKelligon Canyon Drive, 0.2 mile (0.3 km) west of Alabama Avenue, 0.5 mile (0.8 km) south of crest of Sugarloaf Mountain, 1.6 miles (2.6 km) west of U.S. Highway 54, and 4.5 miles (7.2 km) north of El Paso Post Office.

Drainage area.--2.3 mi² (6.0 km²), approximately.

- Gage.--Recording. Altitude of gage is 4,257.33 ft (1,297.63 m) above mean sea level (levels by city of El Paso).
- <u>Topographic characteristics.--Length of main stream, 3.2 miles (5.1 km);</u> slope index, 440 ft/mi (83 m/km). (Map scale, 1:24,000)

Remarks.--No flow except Sept. 11, 12, 1958. Floodflow controlled by four small reservoirs upstream, with a total capacity of about 95 acre-feet (117,135 m³).

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1958	Sept. 11, 1958		a76
1959			0
1960			0
1961			0
1962			0
1963			0
1964			0
1965			0
1966			0
1967			0
1968			0
1969			0
1970			0
1971			0
1972			Ō

Annual maximum stage and discharge

a Maximum for period June to September 1958.

08365800 Government Ditch at El Paso, Tex. (24)

Location.--Lat 31°47'02", long 106°26'04", El Paso County, at intersection of Montana and Houston Streets and 2 miles (3 km) northeast of the business center of El Paso.

Drainage area.--6.4  $mi^2$  (16.6  $km^2$ ), approximately.

- <u>Gage</u>.--Recording. Altitude of gage is 3,740 ft (1,140 m), from topographic map.
- Topographic characteristics.--Length of main stream, 3.5 miles (5.6 km); slope index, 106 ft/mi (20 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1958	Sept. 11, 1958	a2.64	550
1959	Aug. 5, 1959	.70	. 58
1960	July 14, 1960	.84	78
1961	Sept. 8, 1961	2.18	374
1962	Sept. 2, 1962	1.93	299
1963	Aug. 18, 1963	.66	53
1964	Sept. 11, 1964	2.06	338
1965	Sept. 6, 1965	1.44	179
1966	Sept. 23, 1966	2.03	329
1967	July 29, 1967	1.46	184
1968	July 6, 1968	2.13	359
1969	May 22, 1969	.86	81
1970	July 25, 1970	1.35	162
1971	July 2, 1971	2.60	540
1972	July 19, 1972	2.35	430

a Maximum for period June to September 1958.

08370200 Camp Rice Arroyo tributary near Fort Hancock, Tex. (24)

Location.--Lat 31°17'51", long 105°48'52", Hudspeth County, at culvert on Interstate Highway 10 and 1.6 miles (2.6 km) east of Fort Hancock.

Drainage area.--2.35  $mi^2$  (6.09  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.5 miles (7.2 km); slope index, 74 ft/mi (14 m/km). (Map scale, 1:62,500)

# Annual maximum stage and discharge

Water year	Da	te		Gage height (ft)	Discharge (ft ³ /s)
1966	June	27,	1966	a5.35	62
1967	Sept.	17,	1967	6.31	165
1968	Aug.	22,	1968	6.03	130
1969	Aug.	22,	1969	<5.06	bc2
1970	Aug.	4,	1970	5.59	85
1971	Aug.	31,	1971	<5.06	bc5
1972	Sept.	14,	1972	5.73	98

< Less than amount shown.

a Maximum for period April to September 1966.

b Estimated.

c Revised.

08370800 Wildhorse Creek tributary near Van Horn, Tex. (24)

Location.--Lat 31°02'55", long 104°40'12", Culberson County, at culvert on U.S. Highway 80 and 9.5 miles (15.3 km) east of Van Horn.

Drainage area.--0.74  $mi^2$  (1.92  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 2.28 miles (3.67 km); slope index, 100 ft/mi (19 m/km). (Map scale, 1:24,000)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Aug. 22, 1966	a5.38	190
1967	June 30, 1967	<4.37	bc5
1968	July 6, 1968	<4.37	bc5
1969	July 9, 1969	4.86	104
1970	June 7, 1970	5.81	260
1971	July 24, 1971	4.87	105
1972	Oct. 12, 1971	<4.37	b5

Annual maximum stage and discharge

< Less than amount shown.

- a Maximum for period April to September 1966.
- b Estimated.
- c Revised.

08377600 Rio Grande tributary near Langtry, Tex. (22)

Location.--Lat 29°48'17", long 101°29'01", Val Verde County, at culvert on U.S. Highway 90 and 4.7 miles (7.6 km) east of Langtry.

Drainage area.--0.32  $mi^2$  (0.83  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.0 mile (1.6 km); slope index, 133 ft/mi (25 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Sept. 9, 1966	a7.05	120
1967	July 20, 1967	<4.18	bc5
1968	July 2, 1968	8.08	59
1969	Apr. 17, 1969	9.60	141
1970	Sept. 25, 1970	8.10	59
1971	Aug. 15, 1971	8.92	98
1972	Sept. 11, 1972	8.36	70

#### Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period January to September 1966.

b Estimated.

c Revised.

08407800 Delaware River tributary near Orla, Tex. (24)

Location.--Lat 31°55'46", long 104°28'52", Reeves County, at culvert on State Highway 652 and 36 miles (58 km) west of Orla.

Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year Date Gage height (ft) Dischart	rge (ft ³ /s)
dage height (it) bischa	
1966 Aug. 21, 1966 11.52	1,700
1967 - <3.11	a0
1968 - <3.11	a0
1969 Sept. 22, 1969 4.17	a25
1970 Oct. 21, 1969 4.46	a32
1971 Aug. 15, 1971 5.26	54
1972 - <3.11	0

# Annual maximum stage and discharge

< Less than amount shown.

a Revised.

## 08436800 Courtney Creek tributary near Fort Stockton, Tex. (06)

Location.--Lat 31°00'28", long 103°04'20", Pecos County, at culvert on Farm Road 1776, 0.2 mile (0.3 km) north of U.S. Highway 285, and 14 miles (23 km) northwest of Fort Stockton.

# Drainage area.---

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	June 12, 1966	a2.82	45
1967	June 14, 1967	2.49	31
1968	Aug. 30, 1968	2.79	44
1969	Apr. 12, 1969	2.28	23
1970	Oct. 6, 1969	2.91	50
1971	May 28, 1971	2.44	29
1972	May 29, 1972	4.16	116

## Annual maximum stage and discharge

08437550 Lake Leon tributary near Fort Stockton, Tex! (06)

Location.--Lat 30°54'04", long 103°02'50", Pecos County, at culvert on U.S. Highway 290 and 10 miles (16 km) west of Fort Stockton.

Drainage area.--1.59  $mi^2$  (4.12  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.6 miles (2.6 km); slope index, 45.8 ft/mi (8.7 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge

Water year	Da	ate	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr.	24, 1966	a7.25	740
1967	May	29, 1967	8.01	980
1968	Aug.	30, 1968	6.27	360
1969	July	22, 1969	5.51	230
1970	Oct.	27, 1969	6.16	170
1971	Aug.	15, 1971	7.37	770
1972	Sept.	20, 1972	5.31	235

08437650 Monument Draw tributary at Pyote, Tex. (06)

Location.--Lat  $31^{\circ}33'33''$ , long  $103^{\circ}07'43''$ , Ward County, at culvert on Spur 247 and 2.1 miles (3.4 km) northwest of Pyote.

## Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Da	ate		Gage height (ft)	Discharge (ft ³ /s)
1966	July	12,	1966	a3.22	30
1967	July	20,	1967	1.71	5.5
1968	cJuly	2,	1968	c<1.10	bc1
1969	Apr.	12,	1969	2.02	9.4
1970	June	22,	1970	1.39	c2
1971	Aug.	15,	1971	2.37	15
1972		-		-	0

## Annual maximum stage and discharge

< Less than amount shown.

- b Estimated.
- c Revised.

# 08444400 Three Mile Mesa Creek near Fort Stockton, Tex. (06)

Location.--Lat 30°50'16", long 102°50'26", Pecos County, at culvert on State Highway 285 and 4.6 miles (7.4 km) southeast of Fort Stockton.

Drainage area.--1.04  $mi^2$  (2.69  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.95 miles (3.14 km); slope index, 87 ft/mi (16 m/km). (Map scale, 1:24,000)

#### Annual maximum stage and discharge

Water year	Da	ate		Gage height (ft)	Discharge $(ft^3/s)$
1965	June	10,	1965	a2.84	76
1966	Apr.	24,	1966	2.71	69
1967	May	29,	1967	2.43	45 .
1968	Sept.	21,	1968	2.88	84
1969	Apr.	12,	1969	2.77	74
1970	May	14,	1970	3.02	96
1971	Aug.	15,	1971	3.21	b140
1972	Sept.	20,	1972	2.79	90

a Maximum for period June to September 1965.

b Not previously published.

08447200 Howards Creek tributary near Ozona, Tex. (07)

Location.--Lat 30°41'18", long 101°20'51", Crockett County, at culvert on U.S. Highway 290 and 8.7 miles (14.0 km) west of Ozona.

Drainage area.--7.53  $mi^2$  (19.5  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 7.75 miles (12.47 km); slope index, 39.6 ft/mi (7.5 m/km). (Map scale, 1:24,000)

Water year	Da	ate	Gage height (ft)	Discharge (ft ³ /s)
1967	June	13, 1967	a4.20	c260
1968	May	11, 1968	3.32	c84
1969	Apr.	12, 1969	4.95	c590
1970	Oct.	27, 1969	<2.97	bc20
1971	Aug.	1, 1971	6.54	1,460
1972	Sept.	20, 1972	3.42	100

## Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Jan. 11 to Sept. 30, 1967.

b Estimated.

c Revised.

08448750 Dry Devils River tributary near Sonora, Tex. (07)

Location.--30°36'13", long 100°38'20", Sutton County, at culvert on U.S. Highway 277, 1.9 miles (3.1 km) north of Sonora.

Drainage area.--

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1971	Aug. 15, 1971	11.65 16.72	145
1972	Aug. 13, 1972		465

08449470 Rough Canyon tributary near Del Rio, Tex. (22)

Location.--Lat 29°35'50", long 100°51'51", Val Verde County, at culvert on U.S. Highway 277 and 16 miles (26 km) north of Del Rio.

Drainage area.--7.90  $mi^2$  (20.5  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 6.3 miles (10.1 km); slope index, 44.2 ft/mi (8.4 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)           1967         6.80           1968         5.80	Discharge (ft ³ /s)
1967	Sept. 2, 1		710
1968	Apr. 18, 1		240
1969	Oct. 3, 1	1968     4.13       1969     12.70	115
1970	Oct. 4, 1		2,800
1971	Aug. 11, 1	1971 13.08	2,950
1972	Sept. 11, 1	1972 24.19	8,540

08449600 Evans Creek tributary near Del Rio, Tex. (22)

Location.--Lat 29°33'00", long 101°04'58", Val Verde County, at culvert on U.S. Highway 90 and 16 miles (26 km) northwest of Del Rio.

Drainage area.--0.39  $mi^2$  (1.01  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.1 miles (1.8 km); slope index, 112 ft/mi (21 m/km). (Map scale, 1:62,500)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 25, 1966	a3.49	48
1967	Oct. 5, 1966	2.81	17
1968	June 17, 1968	3.95	78
1969	Apr. 11, 1969	4.76	138
1970	Oct. 27, 1969	4.93	154
1971	Aug. 11, 1971	6.73	313
1972	Aug. 13, 1972	5.98	254
08453100 Zorro Creek near Del Rio, Tex. (22)

Location.--Lat 29°19'52", long 100°49'54", Val Verde County, at culvert on U.S. Highway 277 and 4.7 miles (7.6 km) southeast of Del Rio.

Drainage area.--10.02 mi² (25.95 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 7.9 miles (12.7 km); slope index, 18.4 ft/mi (3.5 m/km). (Map scale, 1:62,500)

Water year	Date	Gage height (ft)	Discharge (ft ³ /s)
1966	Apr. 24, 1966	a9.53	800
1967	Sept. 17, 1967	<7.28	<100
1968		<7.28	<100
1969	Apr. 11, 1969	11.85	2,000
1970	Oct. 5, 1969	8.30	300
1971	Aug. 12, 1971	7.50	400
1972	-	<7.28	<100

Annual maximum stage and discharge

< Less than amount shown.

a Maximum for period Feb. 2 to Sept. 30, 1966.

08454900 East Perdido Creek near Brackettville, Tex. (22)

Location.--Lat 29°20'50", long 100°34'32", Kinney County, at culvert on U.S. Highway 90 and 9.7 miles (15.6 km) northwest of Brackettville.

Drainage area.-- $3.39 \text{ mi}^2$  (8.78 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 4.15 miles (6.68 km); slope index, 24.1 ft/mi (4.6 m/km). (Map scale, 1:62,500)

## Annual maximum stage and discharge

Water year	Date	Gage height (ft)	Discharge $(ft^3/s)$
1966	Apr. 24, 1966	6.84	200
1967	-	<5.29	<30
1968	-	<5.29	<30
1969	Apr. 12, 1969	7.47	234
1970	Oct. 27, 1969	5.72	57
1971	Aug. 12, 1971	10.51	630
1972	Aug. 10, 1972	5.68	55

< Less than amount shown.

08459600 Arroyo San Bartolo at Zapata, Tex. (21)

Location.--Lat 26°55'39", long 99°17'20", Zapata County, at culvert on U.S. Highway 83 and 1.0 mile (1.6 km) north of Zapata.

Drainage area.--0.61 mi² (1.58 km²).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.1 miles (1.8 km); slope index, 119 ft/mi (23 m/km). (Map scale, 1:62,500)

#### Discharge $(ft^3/s)$ Water year Date Gage height (ft) Apr. 14, 1966 1966 a5.64 550 1967 10.9 570 May 16, 1967 1968 Apr. 29, 1968 2.40 118 1969 May 11, 1969 8.41 620 1970 23, 1970 6.38 May 420 5.22 300 1971 Aug. 5, 1971 1972 Aug. 16, 1972 4.67 300

Annual maximum stage and discharge

a Maximum for period Feb. 17 to Sept. 30, 1966.

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## 08466100 Rio Grande tributary near Rio Grande City, Tex. (21)

Location.--Lat 26°18'58", long 98°39'45", Starr County, at culvert on U.S. Highway 83 and 10.7 miles (17.2 km) southeast of Rio Grande City.

Drainage area.--1.20  $mi^2$  (3.11  $km^2$ ).

Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.23 miles (1.98 km); slope index, 62.4 ft/mi (11.8 m/km). (Map scale, 1:24,000)

### Annual maximum stage and discharge

Water year	Date		Gage height (ft)	Discharge (ft ³ /s)
1966	June 19,	1966	a4.61	100
1967	Sept. 22,	1967	4.79	125
1968	-		<3.99	<50
1969	-		<3.99	<50
1970	Aug. 23,	1970	4.67	108
1971	Sept. 12,	1971	4.34	64
1972	May 3,	1972	4.72	115

< Less than amount shown.

a Maximum for period Feb. 16 to Sept. 30, 1966.

## 08466200 Rio Grande tributary near Sullivan City, Tex. (21)

Location.--Lat 26°17'12", long 98°35'16", Starr County, at culvert on U.S. Highway 83 and 1.6 miles (2.6 km) northwest of Sullivan City.

Drainage area.--0.40  $mi^2$  (1.04  $km^2$ ).

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Gage.--Stage-rainfall (S-R) recorder and crest-stage gage.

Topographic characteristics.--Length of main stream, 1.4 miles (2.3 km); slope index, 39.4 ft/mi (7.5 m/km). (Map scale, 1:24,000)

#### Discharge $(ft^3/s)$ Water year Date Gage height (ft) 19, 1966 1966 20 Apr. a6.63 24, 1967 47 1967 7.42 Aug. 22 1968 19, 1968 6.69 June 1969 June 3, 1969 8.23 81 1970 May 15, 1970 7.16 37 25, 1971 100 1971 Feb. 8.69 195 1972 27, 1972 Apr. 10.43

# Annual maximum stage and discharge

a Maximum for period Feb. 16 to Sept. 30, 1966.